control regimes is increasingly cracking down on non-compliance[107], but sustained success still remains an exception.

To add to that, other problems pertaining to the marine environment and its biodiversity still remain. The state of the marine environment is generally deteriorating, with vessel-source pollution being just one part of the problem.[108] The desolate overall picture is largely a result of continuing land-based pollution, which IMO has no powers to deal with. Yet it is clear that even within IMO a lot of work is still to be done. Whether the PSSA regime is a mechanism that could possibly contribute to strengthening measures aimed at curbing vessel-source environmental damage by expanding coastal states' competences to legislate and enforce respective rules will be examined in the following chapters.

Chapter 7: Development and Structure of the PSSA Concept: Implementation and Coordination of Protective Measures

The previous chapters have illustrated the deteriorating state of the marine environment and how far states are allowed, under international law, to respond by deploying regimes that subject specific marine areas to enhanced protection. While the PSSA concept was still being drafted, Friends of the Earth International, who were strongly involved in and dedicated to the process, noted that the PSSA regime should "be developed as a means of harmonizing existing international conventions and other legal instruments relating to the protection of marine areas with protective measures provided by IMO Conventions."[109] Even though it is not a premature observation to note that these demands have been met, it is the aim of this treatise not just to sum up the concept roughly but also to reveal its subtle strengths and weaknesses. Thus, in the following sections, I shall shed light on the main components of the PSSA concept as it was developed by IMO within the last two decades. It will become clear that this remarkably open concept stands out for a number of reasons, even though it is restricted in that it only addresses vessel-source environmental threats.

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 attributes where such attributes may be vulnerable to damage by

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[107] Regional MOUs also develop inter-institutional ties on administrative and technical levels, cf. Tokio MOU, *Annual Report on Port State Control in the Asia-Pacific Region* (2005), available from <http://www.tokyo-mou.org/ANN05.pdf>; (accessed on 30 September 2006), p. 8 et seq.

[108] See, *supra*, Chapters 1 and 2, further SRU (ed.), *Marine Environment Protection for the North and Baltic Seas – Special Report* (Baden-Baden: Nomos-Verlagsgesellschaft 2004), p. 33 et seq.

[109] MEPC 23/16/1, as cited by Gerard Peet, "Particularly Sensitive Sea Areas – A Documentary History", 9 *IJMCL* (1994), pp. 469-507, at 476.

international shipping activities."[110] Details concerning proposal, assessment and designation of a site are administered by guidelines that have been adopted by the IMO Assembly. The experience of states when applying these guidelines, first established in 1991, have led to two major revisions, the second of which led to the adoption of the current guidelines in December 2005. The content of the guidelines as well as the history of their development (to the extent that it is beneficial for the understanding of the current version) shall be illustrated in the first section of this chapter. In a second section, emphasis will be put on procedural aspects, i.e. what the guidelines require to be included in a proposal, against which criteria and how PSSA proposals are assessed, and in what way IMO committees collaborate in this procedure. A third section is devoted to the legal consequences of a designation. Questions that will be addressed in this regard include whether the designation as such can have a protective effect and whether it entails additional responsibilities for proponents outside the PSSA regime.

It should not be forgotten that to make the concept work in practice, it is necessary to ensure efficient implementation of protective measures. These issues will not be dealt with in the present chapter, but in Chapter 8.

I. IMO Assembly Resolution A.982(24): Implementing the Concept

As was pointed out in Chapter 6, IMO instruments are always adopted as resolutions of either the Assembly or one of the committees. The PSSA Guidelines are contained in Resolution A.982(24), which was adopted at the 24th meeting of the Assembly in November 2005. The adoption by the Assembly was, however, not more than a formal placet to a text that was negotiated within MEPC and various correspondence groups before it was agreed to forward the draft as a proposal to the Assembly. The full title of the resolution is "Revised Guidelines for the Identification and Designation of Particularly Sensitive Sea Areas."

1. Content and Structure of the Guidelines

The structure of the PSSA Guidelines resembles an international convention with a preamble-like first section, followed by two sections dealing with the substantive and the procedural aspects of the subject matter. As is expressly stated in Paragraph 1.4 of the guidelines, their purpose is, first, to provide guidance for those governments wishing to designate an area as a PSSA; secondly, to ensure a balanced consideration of all interests at stake; and thirdly, to provide mechanisms for IMO's assessment of applications. They also indicate the three main elements of a PSSA, which are inextricably linked:[111] attributes of the area, vulnerability of

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[110] Res. A.982(24), *Revised Guidelines for the Identification and Designation of Particularly Sensitive Sea Areas*, adopted on 1 December 2005, para. 1.2. The guidelines are reproduced in the annex of this treatise. Hereafter PSSA Guidelines.

[111] PSSA Guidelines, para. 1.5.

the area to damage by international shipping and so-called associated protective measures (APMs) available to address identified threats. With respect to the subject of protection, the guidelines acknowledge that ships are a source of threats to the marine environment by operational, accidental or intentional release of hazardous substances, as well as by physically damaging marine habitats.

On the basis of this observation, the guidelines lay down criteria to identify areas that are to be adequately protected by specifically tailored measures. Corresponding to the definition of a PSSA, to attain this status, areas must have exceptional features which are under serious threat from international shipping. The criteria for particular sensitivity are divided into ecological, socio-economic and scientific, although this division has no legal relevance: the area must meet at least one of the criteria, while "one of the criteria [must] exist throughout the entire proposed area, […] the same criterion need not be present throughout the entire area."[112] When the PSSA concept was drafted, states were reluctant to grant special protective status to an area just for its own good. Therefore, in addition to its outstanding characteristics, an area must also be vulnerable to threats posed by international shipping. To facilitate assessment of this question, the guidelines list both vessel traffic characteristics and natural factors that should be taken into account in the decision-making process.

Once an area is approved as meeting the required parameters, it needs to be sufficiently protected. Metaphorically speaking, a PSSA is an empty vessel, since its designation entails no automatic protective instrument. In fact, its regime resembles a management mechanism that provides for housing all kinds of different protective measures under a single administrative roof. APMs thus need to be applied on a case-by-case basis. The guidelines contain detailed provisions on what sort of APMs are allowed to be deployed and what legal basis they need to have.[113] Moreover, they oblige applying states to indicate possible impacts of APMs on both vessel safety and vessel traffic. The final major part of the guidelines' text sets forth criteria for the assessment of applications and, in particular, a thoroughly designed procedure elaborating on the role of MEPC and other committees and sub-committees of IMO.

2. Development of the Guidelines and Adoption by the Assembly in 1991

Although IMO had put in place navigational measures that could be used to protect environmentally sensitive areas in the 1960s and early 1970s[114], it was in February 1978, through the adoption of Resolution 9 at the International Conference on Tanker Safety and Pollution Prevention (TSPP), that the issue of protected areas was for the first time formally addressed within the global shipping

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[112] *Ibid.*, para. 4.4.
[113] *Ibid.*, para. 6 and 7.
[114] Cf. Gerard Peet, "Particularly Sensitive Sea Areas – An Overview of Relevant IMO Documents", 9 *IJMCL* (1994), pp. 556-576, at 563 et seqq.

community.[115] While the resolution had invited IMO to explore whether and, if so, how such areas should be protected, the organisation did not address the issue until 1986, when MEPC 23 decided to commence deliberation on the concept.[116]

During the years of 1986 to 1991, the mandate was intensively pursued in MEPC, which received numerous contributions from other organs (MSC and NAV), other international bodies (IOC and LDC)[117] and various NGOs (such as IUCN and FoEI).[118] As an important intermediate occasion, in 1990 an International Seminar on the Protection of Particularly Sensitive Sea Areas was held in Malmö, Sweden. Participants adopted a Declaration containing several recommendations regarding the implementation of the PSSA regime[119], most of which were later integrated into the final instrument. With assistance of the aforementioned entities, MEPC elaborated a lengthy document that addressed both Special Areas under MARPOL and PSSAs.[120] It was accepted by the Assembly in November 1991 as Resolution A.720(17).[121] These guidelines consisted of a general chapter on marine protected areas and threats posed by international shipping, a chapter on MARPOL special areas and a chapter on PSSAs. In trying to assist states to draw up proposals, the guidelines included several tables and a voluminous appendix, containing existing MARPOL special areas, existing routeing measures and other existing IMO measures. The length of the original guidelines would later prove to be one of its main shortcomings.

3. Review 2001 and 2005: Reasons and Results

Shortly after the original guidelines were put in place, the first PSSA,[122] the Great Barrier Reef (GBR) off the Northwest Australian Coast, was identified.[123] How-

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[115] The wording is reproduced in Res. A.720(17), *Guidelines for the Designation of Special Areas and the Identification of Particularly Sensitive Sea Areas*, adopted on 6 November 1991, annex, p. 2.

[116] See MEPC 23/22, *Report on the Marine Environment Protection Committee on its Twenty-Third Session*, 25 July 1986, para. 16.

[117] For cooperation of IOC and IMO, see remarks in the IOC Secretary's Report on Intersessional Activities, in IOC, *Thirteenth Session of the Assembly, Paris, 12-28 March 1985* (Paris: UNESCO Publication 1985), p. 20 et seq.

[118] For an overview of submissions on that subject to MEPC, see Gerard Peet, *supra*, note 114, p. 557 et seqq.

[119] See Ryan P. Lessmann, "Current Protections on the Galapagos Islands are Inadequate: The International Maritime Organization Should Declare the Islands a Particularly Sensitive Sea Area", 15 *Colo. J. Int'l Envtl. L. & Pol'y* (2004), pp. 117-151, at 146 et seq.; Peter Ottesen, Stephen Sparkes and Colin Trinder, "Shipping Threats and Protection of the Great Barrier Reef Marine Park – The Role of the Particularly Sensitive Sea Area Concept", 9 *IJMCL* (1994), pp. 507-522, at 519 et seq.

[120] MEPC 30/19/1, *Draft Guidelines for the Designation of Special Areas and the Identification of Particularly Sensitive Areas*, 17 August 1990; and MEPC 30/19/1/Corr.1 of 12 October 1990.

[121] See, *supra*, note 115.

[122] Res. MEPC.44(30), *Identification of the Great Barrier Reef as a Particularly Sensitive Sea Area*, adopted on 16 November 1990.

ever, this should not be considered as an indication that the guidelines were easy to apply. On the contrary, the GBR Marine Park had been used as a blueprint for the development of the 1991 guidelines and the Australian government was more than ready to submit a proposal for identification to IMO.[124] From 1992 to 1994, the University of Hull hosted three meetings of legal experts that aimed at exploring, in particular, the relationship between the guidelines and certain UNCLOS provisions. As no additional application for a PSSA designation had been submitted to IMO, the third meeting in Texel (Netherlands) was largely devoted to this issue and concluded that states were unwilling to utilise the 1991 guidelines.[125] The reason soon became apparent: "they were too long, too complicated and very difficult to understand."[126] Building on the work of the legal experts, a revised draft Assembly resolution was submitted to MEPC for further consideration in September 1995.[127] However, these endeavours ended in talk. Eventually, the review process was instigated in 1997 by MEPC 40, because the original Guidelines were not only perceived to be too bulky to really assist in making proposals for a designation; the information on marine protected areas and measures applicable under MARPOL had also become outdated.[128] Before culminating in the adoption of the 2001 Guidelines, the review process also led to minor modifications in 1999. These amendments only changed the identification procedure, because states could not find common ground with respect to revising the substance of the original guidelines.

When the review was commenced, all delegations were in favour of a complete redraft, except for the United States, which insisted that it would be sufficient merely to adopt new procedural rules. MEPC 41 in 1998 decided to establish a drafting group to work on both the Guidelines as a whole and the US proposal for new procedures. It assembled a progress report for MEPC 43.[129] While several delegations commented on this document, it was IUCN's paper that had the most

[123] The first guidelines used the term "identification" instead of "designation" as in subsequent versions. It is thus used here in the text, too. The change of terms is not of legal significance.

[124] Augustín Blanco-Bazán, "The IMO Guidelines on Particular Sensitive Sea Areas (PSSAs) – Their Possible Application to the Protection of Underwater Cultural Heritage", 20 *Marine Policy* (1996), pp. 343-349, at 345; Peter Ottesen, Stephen Sparkes and Colin Trinder, *supra*, note 119, p. 519. In fact, Australia submitted its proposal before the 1991 Guidelines were approved; cf., *infra*, Sec. V.1. of Chapter 8.

[125] See Report from the Third Meeting of Legal Experts on Particularly Sensitive Sea Areas, held at Texel (The Netherlands), 1994; reproduced in Kristina Gjerde and David Freestone, "Particularly Sensitive Sea Areas – An Important Environmental Concept at a Turning-point?: Introduction by the Editors", 9 *IJMCL* (1994), pp. 431-468, Appendix 3, para. 8.

[126] Louise de la Fayette, "The Marine Environment Protection Committee: The Conjunction of the Law of the Sea and International Environmental Law", 16 *IJMCL* (2001), pp. 155-238, at 187.

[127] Augustín Blanco-Bazán, *supra*, note 124, p. 346.

[128] Louise de la Fayette, *supra*, note 126, p. 187.

[129] MEPC 43/6, *Revision of resolution A.720(17) – Report of the Drafting Group*, 3 December 1998.

far-reaching impact.[130] To assist the drafting group in revising the long document, IUCN had elaborated draft revised guidelines that suggested retaining the base elements concerning MARPOL special areas and PSSAs while dividing them into two separate yet coherent documents, as well as deleting the explanatory material.[131] An updated draft was submitted to MEPC 44, where its recommendations received widespread support from member states' delegations and the drafting group's terms of reference were formulated accordingly.[132]

Meanwhile, the US maintained their stance. It was thus agreed first to change the procedure, as this was considered to be of prime importance, and to leave the substantive issues to a separate negotiating endeavour.[133] The amendments to the guidelines, which were finalised during MEPC 43, were adopted by the Assembly as Resolution A.885(21).[134] It did not bring about drastic changes to the procedure; the actual achievement of the new provisions was to distillate procedural requirements that had been hidden behind a cloak of words and – in addition – were scattered throughout the 1991 Guidelines, mixed with other requirements for, in particular, the adoption of routeing measures. Whereas Resolution A.720(17) had established separate procedures for assessing the PSSA as such and its APMs and left it to the proposing governments to decide whether to submit an application to either MEPC or MSC, Resolution A.885(21) provided for MEPC to "bear primary responsibility within IMO for considering PSSA applications."[135] These provisions are very similar to the procedures envisaged by the current version of the guidelines, explained *infra* in the following section. It also contained information on a second PSSA, the Sabana-Camagüey Archipelago off Cuba that was identified in 1997.[136] However, as of 2000, no additional proposals had been submitted to IMO. Concerns about the usability of the Guidelines thus remained and delegates were under considerable pressure to finish the review process. Work on the substantive aspects continued in 2000 and 2001, when the Correspondence Group was finally able to present a report to MEPC 46.[137] The text the committee agreed to was, in the event, substantially shorter than the previous one and shorn of most of the explanatory material. It divided the rules on MARPOL special areas

[130] MEPC 43/6/3, *Identification and Protection of Special Areas and Particularly Sensitive Sea Areas*, 2 April 1999.

[131] A revised draft was submitted to MEPC 44. For an invaluable recount of the Committee's work, see Louise de la Fayette, *supra*, note 126, p. 188 et seqq.

[132] Cf. MEPC 44/20, *Report of the MEPC on its forty-fourth Session*, 12 April 2000, para. 7.8, and Annex 14, para. 2.

[133] Louise de La Fayette, "The Protection of the Marine Environment – 1999", 30 *EPL* (2000), pp. 51-60, at 55.

[134] Res. A.885(21), *Procedures for the Identification of Particularly Sensitive Sea Areas and the Adoption of Associated Protective Measures and Amendments to the Guidelines contained in Resolution A.720(17)*, adopted on 4 February 2000.

[135] Para. 4.3 of Res. A.885(21).

[136] Res. MEPC.74(40), *Identification of the Sabana-Camagüey Archipelago as a Particularly Sensitive Sea Area*, adopted on 25 September 1997.

[137] MEPC 45 had already decided several questions that were contentious among members of the correspondence group, cf. MEPC 45/6, *Report of the Correspondence Group on the Revision of Resolution A.720(17)*, 3 June 2000.

and PSSAs into two separate sections, the latter of which consisted of ecological and other criteria that were decisive for the scientific assessment of a proposal, provisions on APMs, as well as procedural requirements incorporating provisions of the 1999 amendments. In November 2001, the Assembly adopted the new guidelines in Resolution A.927(22) and revoked both previous resolutions.[138]

It was hoped that the updated instrument would lead to an increasing number of PSSA applications. To that end, the instrument may have proven to be *too* successful. After 2001, within four years, nine additional PSSAs were designated.[139] The designation of small, pristine areas such as Malpelo Island in 2002 and the Paracas National Reserve in 2003 did not evoke notable opposition, as they had long since been recognised for their exceptionally valuable and vulnerable marine ecosystems. The harmonious tone within MEPC changed significantly in the aftermath of the *Prestige* accident, which left large parts of the Spanish and French coastline polluted.[140] The accident was perceived to be the result of the vessel's insufficient design for choppy seas and its general condition, because she was a single-hull tanker over 25 years old. Those states affected by the spill responded domestically by tightening their laws on vessel safety, but also pressed for more stringent rules on the European and global level.[141] Accordingly, five European countries submitted a proposal to designate vast parts of the Western European Atlantic as a PSSA with the aim of banning single-hull oil tankers from sailing through the area by introducing a correspondingly tailored APM.[142] The application prompted intense discussions within IMO. Several maritime states and industrial NGOs fiercely opposed the proposal, because, in their view, it would, if it was approved, violate the traditional freedom of navigation and the right to transit passage as reflected in UNCLOS.[143] Proponents eventually withdrew the

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[138] Res. A.927(22), *Guidelines for the Designation of Special Areas under MARPOL 73/78 and Guidelines for the Identification and Designation of Particularly Sensitive Sea Areas*, adopted on 29 November 2001.

[139] Malpelo Island (Columbia, 2002); Florida Keys (USA, 2002); Wadden Sea (The Netherlands, Germany, Danmark, 2002); Paracas National Reserve (Peru, 2003); Galapagos Islands (Ecuador, 2005); Canary Islands (Spain, 2005); Torres Strait (Australia and Papua New Guinea, 2005) Baltic Sea Area (All Baltic Sea coastal states except Russian Federation, 2005); and the Western European Waters (Portugal, Spain, France, Belgium, UK, Ireland, 2005). For detailed information on the individual PSSAs and APMs approved for their protection, see, *infra*, Sec. V. of Chapter 8.

[140] For an account of the background to the incident, see Markus Detjen, "The Western European PSSA – testing a unique international concept to protect imperilled marine ecosystems", 30 *Marine Policy* (2006), pp. 442-453, at 443 et seq.; and Thomas Höfer, "Tanker Safety and Coastal Environment: Prestige, Erika, and what else?", 10 *ESPR* (2003), pp. 1-5.

[141] Developments following the incident have been studied by Veronica Frank, "Consequences of the *Prestige* Sinking for European and International Law", 20 *IJMCL* (2005), pp. 1-64, at 6 et seqq.

[142] MEPC 49/8/1, *Designation of a Western European Particularly Sensitive Sea Area*, 11 April 2003, Annex 1, para. 5.1.

[143] See, e.g., LEG 87/16/1, *Designation of a Western European PSSA – Comments on MEPC 49/8/1*, 15 September 2003, submitted by Liberia, Panama, the Russian Fede-

controversial APM[144] and merely retained the second APM obliging ships carrying certain hazardous cargo to give notice to authorities 48 hours before entering the area to put the coastal states in the position to respond adequately to a possible accident.[145] They also agreed to reduce the size of the area east of the Shetland Isles to bring the easterly line to 0° longitude.[146]

Two parallel developments should be recalled to understand the dynamic of the process. First, Baltic Sea coastal states during MEPC 51 proposed that the Baltic Sea should be designated a PSSA without any further APMs being put in place.[147] As in the case of the Wadden Sea PSSA, existing IMO measures were merely reaffirmed and it was announced that additional measures would be prepared for proposal at a later date. The Russian Federation did not support the proposal, because it was afraid of signing a blank cheque for future measures contradicting its shipping interests. It requested to have its reservations recorded that the designation of most parts of the Baltic Sea violated cooperation obligations allegedly enshrined in the PSSA Guidelines.[148] Secondly, Australia and Papua New Guinea applied for approval of an extension to the GBR PSSA to include the Torres Strait.[149] APMs would include compulsory pilotage as was introduced for the GBR PSSA on 1 October 1991. Opponents claimed that such a measure would violate the right to transit passage as envisaged in UNCLOS, while Australia and Papua New Guinea maintained the opposite view.[150] Eventually, four committees (MEPC, LEG, NAV, and MSC) were involved in dealing with questions arising from this APM.

These developments amounted to allegations that loosely drafted terms in the 2001 Guidelines could be easily misused, may lead to a proliferation of PSSAs and, in the event, would devalue the whole concept.[151] Therefore, several dele-

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ration and various shipping industry lobby groups (BIMCO, Intertanko, Intercargo, ICS, and IPTA).

[144] The withdrawal was not least due to the fact that IMO member states managed to agree to the tightening of requirements in Regulation 13G of MARPOL Annex I, resulting in a faster phase-out of single-hull oil tankers.

[145] MEPC 49/22, *Report of the MEPC on its Forty-Ninth Session*, 8 August 2003, para. 8.23.

[146] *Ibid.* This was done at the request of Norway, which feared that too many single-hull tankers would choose an alternative route near the Norwegian coast.

[147] MEPC 51/8/1, *Designation of the Baltic Sea Area as Particularly Sensitive Sea Area*, 19 December 2003.

[148] MEPC 51/22, *Report of the MEPC on its Fifty-First Session*, 22 April 2004, Annex 8. Whether proposing governments are under an obligation to cooperate with neighbouring states is examined, *infra*, in Sec. II.5.b) of this chapter.

[149] MEPC 49/8, *Extension of Existing Great Barrier Reef PSSA to include the Torres Strait Region*, 10 April 2003.

[150] Cf. NAV 50/3/12, *Torres Strait PSSA Associated Protective Measure – Compulsory Pilotage*, 14 May 2004, submitted by the ICS; and NAV 50/3, *Torres Strait PSSA Associated Protective Measure – Compulsory Pilotage*, 22 March 2004.

[151] MEPC 51/8/4, *Comments on the Guidelines for the Designation of Special Areas under MARPOL 73/78 and the Guidelines for the Identification and Designation of Particularly Sensitive Sea Areas*, 4 February 2004, para. 8. The paper was submitted by

gations called for a review to be conducted by MEPC. However, as there were no specific proposals for a review, the chairman of the committee asked for proposals to be submitted to its next session.[152] Consequently, at MEPC 52 the US presented a draft revised text of IMO Resolution A.927(22) in order to clarify and strengthen its wording.[153] Several delegations responded to this initiative by submitting comments and further proposals for modification of the guidelines.[154] The committee, after having considered the issue in plenary and in an informal technical group[155], agreed to establish an intersessional correspondence group which was instructed

> "1. to review, with the objective of clarifying, and, where appropriate, strengthening the Guidelines for the Identification and Designation of Particularly Sensitive Sea Areas, as contained in Annex 2 of Assembly Resolution A.927(22), using document MEPC 52/8 by the United States as the base document, taking into account documents MEPC 52/8/1, MEPC 52/8/2, MEPC 52/8/3, and MEPC 52/8/4, and the discussions and direction given in the report of the Committee;
> 2. to prepare a draft Assembly resolution and a draft text of the amended PSSA Guidelines; and
> 3. to submit a report to MEPC 53."[156]

The report of the correspondence group to MEPC 53 was included in a voluminous 45-page document that managed to clear away a number of problems.[157] Still, the most contentious subjects remained unresolved and, therefore, delegates had to decide, apart from a few minor issues, on three overriding issues, namely the two-phase designation, the inclusion of APMs in the initial proposal of a PSSA and the legal basis for APMs. To that end, the committee after an intense debate agreed that "all PSSA applications should identify proposals for at least one APM", that "proponents should be allowed to propose additional APMs at a later stage" and that "the language currently given in the base text and closely mirroring Resolution A.927(22) should be retained, which allows for APMs to be

those industry NGOs mentioned in note 143 together with OCIMF. The Russian Federation concurred with that opinion, see MEPC 52/8/1, *Proposed amendments to Guidelines for the Identification and Designation of Particularly Sensitive Sea Areas (Annex 2 to IMO Assembly resolution A.927(22))*, 6 August 2004, para. 4.

[152] Cf. MEPC 51/22, *supra*, note 148, para. 8.11.

[153] MEPC 52/8, *Proposed Amendments to Assembly Resolution A.927(22) to Strengthen and Clarify the Guidelines for the Identification and Designation of Particularly Sensitive Sea Areas*, 9 July 2004.

[154] The Russian Federation (MEPC 52/8/1, *supra*, note 151), ICS and Intertanko (MEPC 52/8/2, *Proposed Amendments to Assembly Resolution A.927(22) on the Identification and Designation of Particularly Sensitive Sea Areas (PSSAs)*, 6 August 2004), as well as WWF (MEPC 52/8/4, *Proposed Amendments to Assembly Resolution A.927(22) to Strengthen and Clarify the Guidelines for the Identification and Designation of Particularly Sensitive Sea Areas (PSSAs) – Comments on MEPC 52/8*, 18 August 2004).

[155] See MEPC 52/WP.12, *Report of the Informal Group on the PSSA Guidelines*, 14 October 2004.

[156] MEPC 52/24, *Report of the MEPC on its Fifty-Second Session*, 18 October 2004, para. 8.27 and para. 8.32.1.

[157] MEPC 53/8/2, *Report of the Correspondence Group*, 15 April 2005.

adopted under an existing IMO instrument […]; APMs to be adopted after the amendment or development of a new IMO instrument, or APMs to be adopted based on specific language of UNCLOS delegating such authority to IMO."[158] A drafting group was established to align the text of the intersessional group with the decisions taken by the plenary. The final text was subsequently adopted and forwarded to the Assembly for adoption, although a number of delegations expressed their disappointment with the outcome of the review process.[159] The PSSA Guidelines are now an autonomous document, which has been completely decoupled from the guidelines for the identification of MARPOL special areas that are still to be found in Annex 1 of Resolution A.927(22).

As has become apparent, the review processes in 2001 and 2005 addressed distinct problems in response to the application of the guidelines in force at the time. The 2001 revision was carried out since many states held the view that the instrument was not appropriately utilised, whereas the 2005 revision was due to the perception of some states that vaguely drafted provisions of the Guidelines might lead to their misuse and a proliferation of protected areas, which could eventually restrict navigation in too many parts of the sea. Whether these expectations have been met will be seen in the following sections.

II. Designation: Requirements and Procedures

The actual designation of a PSSA is done in the form of a resolution adopted by MEPC. However, prior to this formal act several steps have to be taken within IMO. One or more states submit an application for an area to be designated, which subsequently needs to be assessed by the competent bodies.[160] The following sections will deal with, first, the criteria that IMO must take into account when determining whether the area is particularly sensitive and whether it is under considerable stress from international shipping, and, secondly, the procedure designed to accommodate these tasks, viz. the interwoven responsibilities of the committees and sub-committees, as well as detailed requirements for the individual application.

1. Criteria for Particular Sensitivity

To be designated a PSSA, an area first of all has to meet certain criteria that render it particularly sensitive. The Guidelines list 17 criteria, which are compartmentalised into three different sub-sections: *ecological, socio-economic and*

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[158] MEPC 53/24, *supra*, note 28, para. 8.25.11.

[159] In particular, the Russian Federation complained that tightening of the guidelines had not been successful, MEPC 53/24, *supra*, note 28, para. 8.30. See also Hugh O'Mahony, "Russian Federation states case on developing PSSA Guidelines", *Lloyd's List*, 21 July 2005, p. 3.

[160] See, *infra*, table 1.

cultural criteria.[161] It is sufficient for an area to meet one of the 17 criteria. In that regard, while at least one criterion must exist throughout the entire proposed area, it need not necessarily be the same.[162] It should be noted that all PSSAs designated so far feature most of the listed criteria signifying their unique status. Furthermore, as paragraph 4.5 indicates, criteria for MARPOL special areas and PSSAs are not mutually exclusive. PSSAs may thus be designated in parts of the sea that have been given the special area status and *vice versa*.

With a view to the scope of this study, I shall put particular emphasis on the ecological criteria. However, to exemplify the breadth of the PSSA Guidelines' scope, socio-economic and scientific criteria should at least be mentioned briefly here. The former are economic importance for people living in coastal areas, significance of the area for subsistence food production of local communities and the existence of cultural heritage sites;[163] while the latter encompass high scientific interest in the area, suitable baseline conditions for monitoring studies and exceptional possibilities for demonstrating natural phenomena.[164]

The criteria generally dwell upon certain characteristics for which a marine area stands out against others. The eleven ecological criteria have been formulated in varying detail; some are detailed and include examples (4.4.1, 4.4.3, 4.4.10), others are defined by a single sentence. The complete list consists of

(1) Uniqueness or rarity
(2) Critical habitat
(3) Dependency
(4) Representativeness
(5) Diversity
(6) Productivity
(7) Spawning or breeding grounds
(8) Naturalness
(9) Integrity
(10) Fragility; and
(11) Bio-geographic importance.

When the guidelines were drafted for the first time, these criteria were taken from the IUCN list of attributes and definitions for marine protected areas.[165] However, the PSSA guidelines' wording has departed somewhat from that of the IUCN list, since in both the 2001 and 2005 revisions drafters always sought to reflect appropriately the distinctive characteristics of global shipping in the criteria's language. Nevertheless, the criteria still seem to be quite broad, especially in the light of the fact that an area – in order to qualify for designation – only has to meet them.[166]

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[161] Para. 4.4.1 to 4.4.17.
[162] Para. 4.4.
[163] Para. 4.4.12 to 4.4.14.
[164] Para. 4.4.15 to 4.4.17.
[165] Cf. Graeme Kelleher, *Guidelines for Marine Protected Areas* (Gland and Cambridge: IUCN 1999), p. 40 et seq.
[166] This approach poses questions as to the practicability of the concept, which will be addressed, *infra*, in Sec. II.1. of Chapter 11.

For the sake of lucidity, the development of the criteria should be examined more closely by recourse to "spawning and breeding grounds" in 4.4.7 and "naturalness" in 4.4.8, both of which give also vivid example of the scope of the criteria. Paragraph 4.4.7 defines as particularly sensitive "an area that is a critical spawning or breeding ground or nursery area for marine species which may spend the rest of their life-cycle elsewhere, or is recognised as migratory routes for fish, reptiles, birds, mammals, or invertebrates."

This criterion highlights the importance of specific areas as the origin of marine life. It is designed to protect those marine parts of the oceans which play a crucial role in maintaining the existence of animals throughout entire oceans. This is why it is not only breeding or spawning sites that are protected but also areas that are used as migratory routes by all kinds of marine animals. In the 2005 revision, it was agreed to delete the term "scientific," that was used as a qualifier for "recognised," to acknowledge recognition outside the traditional realm of science, such as the local knowledge of indigenous communities.[167] Moreover, and more generally, it was believed that developing countries, in particular, would have difficulties maintaining adequate resources to obtain hard scientific evidence.[168] Nonetheless, migratory routes still require to be recognised in some way, which signifies additional rigour to that end.

As for paragraph 4.4.8, an area may qualify as a PSSA if it "[…] has experienced a relative lack of human-induced disturbance or degradation."

This criterion is reflective of the desire to grant special protection to the few remaining marine areas that have not yet been subject to adverse human activities. The PSSA concept aims to contribute to their naturalness by avoiding that vessels impact on these areas. What is evident from the language used in paragraph 4.4.8 is that the interpretation of the wording employed may prove to be a crucial issue. In this particular context, it is the meaning of "relative lack." Would it be reasonable to assume that every area without hotels for mass tourism is understood as an "area that has experienced a relative lack of human-induced disturbance or degradation"? The purpose of the guidelines suggests otherwise – interpretation and assessment of its criteria need to ensure that their result remains a benchmark for having an area defined as *particularly* sensitive. In addition, the mentioning of "international significance" in paragraph 4.4.1 implies that interpretation of the criteria is restricted with a view to international significance on a global level compared in contrast to mere domestic importance of marine areas.

What is already obvious from these examples is the absence of any detailed guidelines in terms of exactly what information needs to be assembled by states so as to prove the proposed area's sensitivity.[169] States interested in having parts of their waters designated as PSSAs are left with a very brief description of every criterion, which is open to interpretation. As will be seen in Chapter 9 below, other protective regimes provide voluminous accompanying documents to guide

[167] MEPC 53/8/2, *supra*, note 157, annex, p. 13, annotation to para. 4.4.7 of the draft guidelines.
[168] *Ibid.*, annex, p. 38, annotation to para. 8.3.6 of the draft guidelines.
[169] Procedural obligations are dealt with in more detail, *infra*, in Sec. II.5.b) of this chapter.

proposing states and ease assessment of whether an area meets criteria that are set out by the respective regime: for instance, by determining the kinds of species that must be found in an area as evidence that it serves as a habitat for a species under threat. It may readily be assumed that lack of guidance with respect to ecological criteria makes the concept particularly prone to political pressure.[170]

Having mentioned two examples of ecological criteria, it should be noted that there is a further general legal issue, which was debated at some length during the 2005 review. The 1991 Guidelines, as well as the 2001 Guidelines, used the term "an area that may be" at the beginning of most of the criteria's definitions. While Resolution A.927(22) was under scrutiny by the Correspondence Group, it was strongly argued to have this phrase replaced by "an area that is." Those in favour of the revised language held that it would ease uniform application of the criteria.[171] Those opposing the replacement contended that substitution of the original text would violate the precautionary principle.[172]

2. Risks Posed by International Shipping

To reflect the aim of the PSSA concept, the guidelines require sensitive areas additionally to meet a further criterion. As IMO measures may merely grant protection from threats posed by vessels navigating near or in an area, respective areas must be at risk from international shipping ("vulnerability"). This requirement is amplified by seven factors, which should be taken into account in determining the area's vulnerability.[173] Four of them dwell upon the vessel traffic characteristics of the area; the others set out natural factors which may cause navigational problems. As regards the former, "operational factors" (5.1.1) address the types of marine activities already occurring in the area and "vessel types" (5.1.2) concern the vessels passing through the area, while "traffic characteristics" (5.1.3) and "harmful substances carried" (5.1.4) make recourse to the quantity and interaction of vessels passing through the area and the possibly dangerous substances they carry respectively. Natural factors comprise hydrographical, meteorological and oceanographic factors (5.1.5 to 5.1.7). Hydrographical factors include those calling for increased navigational prudence, such as water depth or unusual coastline topography. Meteorological factors encompass prevailing weather conditions; relevant oceanographic factors may be tidal streams, ocean

[170] This assumption and its likely consequences are addressed, *infra*, in Sec. II.1. of Chapter 11.

[171] MEPC 52/8, *Proposed Amendments to Assembly Resolution A.927(22) to Strengthen and Clarify the Guidelines for the Identification and Designation of Particularly Sensitive Sea Areas*, 9 July 2004, para. 3.

[172] MEPC 52/8/4, *supra*, note 154, para. 8. Whether the current wording adequately reflects the precautionary principle will be dealt with in Sec. I.4. of Chapter 11.

[173] This fact is seemingly overlooked by Jürgen Schmidt-Räntsch, "§ 38 Geschützte Meeresflächen", in E. Gassner, G. Bendomir-Kahlo, and J. Schmidt-Räntsch (eds.), *BNatSchG*, Second Ed. (München: C.H. Beck 2003), para. 11, since he argues that protected zones may not be designated by virtue of domestic law if MEPC rejects a PSSA proposal.

currents or ice. Both meteorological and oceanographic factors must be able to trigger an “increase [of] the risk of collision and grounding and also the risk of damage to the sea area from discharge.”[174]

States wishing to have an area protected by the PSSA mechanism are under the obligation to submit sufficient information to IMO in order to enable it to take a decision mindful of all issues involved. Hence, they need to present adequate evidence that proves that at least one of the criteria for particular sensitivity is met and that the area is at risk from shipping. In addition, paragraph 5.2 lists information that helps IMO in assessing the application, inasmuch as it further illustrates the description of the area and its features. Additional information include evidence that vessel accidents may cause harm to the attributes of the area; historic data on groundings, collisions and spills; measures already applied and their actual or anticipated benefits; and stresses from other sources on the environment.

With respect to documented information that states submit to IMO, it should be noted that in contrast to paragraph 4.4 (“the area should meet at least one of the criteria listed below”), paragraph 5.1 merely notes that “the area should be at risk from international shipping activities [which] *involves* consideration of the following factors” (italic emphasis added). The last phrase of paragraph 5.1, in particular, is indicative of a non-exhaustive list. The choice of language implies that governments in their applications are free to add more factors which may be able to prove an area’s vulnerability. In that respect, they are not constrained by paragraph 5.2, which does not have more than a guiding function. Thus far, states have always tried to submit to IMO as concise information as possible. Even though there is no obligation to do so, there seems to be a general perception that it is helpful for the outcome of the assessment if states in that way prove their sincere interest in pursuing the designation.

3. Size and Biogeographical Characteristics of the Area

While the two previous sections have addressed requirements for PSSA designations that are expressly mentioned in the PSSA Guidelines, the criteria referred to in this section may not exist at all. It is doubtful whether the guidelines expressly or implicitly require an area to be of a particular size or to be defined as a coherent ecosystem. I have already argued elsewhere that neither criterion adequately reflects the wording of the PSSA Guidelines.[175] *Roberts* et al[176], as well as *Ünlü,*[177] raise the issue but are reluctant to voice an opinion.

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[174] Para. 5.1.6 and 5.1.7.

[175] Markus Detjen, *supra*, note 140, p. 452. This view is shared by Veronica Frank, *supra*, note 141, pp. 1-64, at 34 et seq.

[176] Cf. Julian Roberts et al, “The Western European PSSA Proposal: a ‘politically sensitive sea area’”, 29 *Marine Policy* (2005), pp. 431-440, at 439 et seq.

[177] Nihal Ünlü, “Particularly Sensitive Sea Areas: Past, Present and Future”, 3 *WMU Journal of Maritime Affairs* (2004), pp. 159-169, at 166 et seq.

The question of the size of a PSSA became a contentious issue within IMO in the debate on the Western European PSSA, which is very large and contains different ecosystems; it is also not a biologically functional unit.[178] Especially during deliberations at the 49th and the 51st sessions of MEPC, some states held that only well-defined small marine areas were eligible for designation.[179] In their opinion, other types of areas violated paragraph 1.2 of the PSSA Guidelines that defines a PSSA as "an area that needs special protection." This view was mainly based on the perception that Article 211(6) constitutes the legal basis for PSSAs – an argument to which I will come back later in this treatise.[180] Irrespective of the legal basis issue, a more compelling systematic argument can be deployed to show that the guidelines are not restrictive in terms of size. Paragraph 6.1.1 of the guidelines provides for, *inter alia*, the designation of a MARPOL Special Area within a PSSA. In fact, these Special Areas usually encompass large areas.[181] It can thus be reasoned that this also applies to PSSAs.

A related question – that of whether an area is only eligible for designation if it constitutes a "coherent ecosystem" – also warrants some attention.[182] Again, based on the assumption that PSSA Guidelines flesh out Article 211(6), which requires "clearly defined areas", some IMO member states opposed designation of the Western European PSSA, as well as the Baltic Sea Area PSSA on the grounds that PSSAs must be clearly defined by biogeographical criteria.[183] The guidelines do not expressly exclude areas that contain various different ecosystems. Therefore, it needs to be established how the term "area that needs special protection [...] because of its significance" in paragraph 1.2 of the guidelines has to be understood: it might reflect the desire to protect only coherent ecosystems in which all parts are equally vulnerable. Most PSSAs designated so far seem to endorse such an interpretation, because they are small unique areas known for their rich flora and fauna. However, the most commonly cited example, the Great Barrier Reef off the coast of Queensland (Australia), is of similar size to the Western European PSSA and the Baltic Sea Area PSSA. As has been mentioned above[184], it was designated as the first PSSA in 1991 and is said to have served as a role model for

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[178] MEPC 49/WP.10, *Report of the Informal Technical Group*, 16 July 2003, Annex 1, para. 2.1.4.

[179] This view was voiced by Liberia, Panama, the Russian Federation and some shipping industry NGOs, see LEG 87/16/1, *supra*, note 143, para. 1. See further MEPC 49/22, *supra*, note 145, para. 8.24.3; and Kristina M. Gjerde, "Report on PSSAs at MEPC 51", available from <http://www.iucn.org/themes/marine/Word/PSSA_MEPC%2051_report.doc>; (accessed on 30 September 2006), p 2.

[180] Cf. Sec. I.2.a) of Chapter 10.

[181] E.g. the Baltic Sea or the Mediterranean Sea.

[182] Markus Detjen, *supra*, note 140, p. 452.

[183] With respect to the Western European PSSA, it is widely accepted that its parts are not equally vulnerable. WWF, for example, called for an additional APM to develop a risk map with the "areas of highest sensitivity/vulnerability (in ecological and socio-economic terms) within the PSSA"; cf. MEPC 49/8/4, *Designation of a Western European PSSA – Comments on MEPC 49/8/1*, 23 May 2003, para. 5.

[184] Cf., *supra*, Sec. I.3. of this chapter.

the development of the PSSA concept. Even the Great Barrier Reef can hardly be considered a single ecosystem.[185] Within its boundaries, more than 100 biogeographically distinct zones have been identified, including coral reefs and mangroves, as well as seagrass beds and tiny islands.[186] To add to that, the level of vulnerability varies: the Australian government is to introduce so-called marine environment high risk areas[187] reflecting different protective needs. The same is arguably true of the Florida Keys PSSA. However, no state would oppose the view that both areas constitute PSSAs in accordance with the guidelines. This comes as no surprise as it merely indicates that the ocean by its nature is interconnected and that for some commentators certain marine areas evoke the mere perception that they represent coherent ecosystems. But on the contrary, it is very difficult to determine biologically on what geographical level an ecosystem has to be "coherent." As has been pointed out in Chapter 3, the notion ecosystem is applicable on every scale (global, regional, local, down to microbial communities)[188] and is thus not confined to a "region". Hence, the guidelines do not require PSSAs to consist of a "coherent ecosystem."

4. Establishment of Protected Area Networks

A related issue concerns the establishment of protected area networks. It is today widely accepted that the most suitable way of protecting vulnerable marine ecosystems is to establish networks of jointly managed individual protected areas, since the viability of an ecosystem in one place often depends upon the sound protection of other places.[189] However, the PSSA Guidelines envisage neither the development of a PSSA network nor the integration of PSSAs in existing or proposed networks under other regimes. While they arguably do not prohibit their integration into networks – because the Guidelines foresee parallel protection under other instruments –, they obviously lack an obligation at least to consider the issue of protected area networks. This omission may be explained by recourse to the predominant characteristics of PSSAs. Their focus is on shipping threats rather than on ecological necessities. Although the environmental status of an area designated as a PSSA may be dependent upon conditions in other areas, these areas would only qualify as PSSAs if vessel traffic and natural factors amounted to a risk from international shipping, as defined in Section 5 of the PSSA Guidelines. In addition, the establishment of MPA networks only makes sense if areas included in the network are managed in a manner that takes account of the

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[185] The GBR is arguably a special case. It was already designated a "prohibited zone" under the 1954 OILPOL Convention in 1971, cf. IMCO Res. A.232(VII), *Protection of the Great Barrier Reef*, adopted on 12 October 1971.

[186] Kristina M. Gjerde, *supra*, note 179, p 2.

[187] Cf. Australian Maritime Safety Authority, *Review of Ship Safety and Pollution Prevention Measures in the Great Barrier Reef* (July 2001), available from <http://www.amsa.gov.au/Shipping_Safety/Great_Barrier_Reef_Review/GBR_Review_Report/Documents/gbr.pdf>; (accessed on 30 September 2006), figure 5.2.

[188] Refer to Sec. I.2. of Chapter 3.

[189] Cf. Sec. II.1. of Chapter 3.

ecological interdependencies. The PSSA concept does not envisage proactive management. Hence, proposing governments are not under any obligation to address the potential of a proposed PSSA to be included into a protected area network.

5. Designation Procedure within IMO

As has been said, the designation of an area as a PSSA must be proposed by one of IMO's member states. The application is to be addressed to the MEPC that oversees the assessment procedure and coordinates the participation of other committees and sub-committees in decision-making. The PSSA Guidelines stipulate requirements for assessing the admissibility of an application;[190] complementary assistance being given in a guidance document issued by MEPC.[191] This section should illuminate the differing responsibilities of the committees involved and the procedural requirements governments have to be aware of when submitting an application.

a) Course of the Procedure

The guidelines set forth the PSSA designation procedure in paragraphs 7 and 8. Its main structure is illustrated in Table 1. MEPC, after having received an application from one or more of its member states, considers its aspects during the committee's meeting prior to which the application has been submitted. If no general objections are raised against the proposal, the committee establishes an informal technical group (ITG), to which the proposal is referred. The ITG assesses the pure technical and scientific aspects of the application. If it concludes that the guidelines' criteria are met, it recommends to the plenary how to proceed with the application. For ease of assessment, the ITG uses a so-called PSSA Proposal Review Form, which rephrases into checklist questions all requirements set forth by the guidelines[192] and thereby tends to endorse a binary yes/no inquiry. Doubts have been uttered as to the appropriateness of the current design of the review form; complex applications for large areas would be better facilitated by a more holistic and deliberate technical review.[193] MEPC embraced that view[194] and a revised form is due to be considered at MEPC 55.[195]

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[190] Para. 8.

[191] MEPC/Circ.398, *Guidance Document for Submission for PSSA Proposals to IMO*, 27 March 2003. The document complements the 2001 version of the PSSA Guidelines. Its value may thus be limited in the light of the revised Guidelines.

[192] Cf. MEPC 51/WP.9, *Report of the Informal Technical Group*, 1 April 2004, Annexes 1 to 3, assessing the Canary Islands, the Galapagos Archipelago and the Baltic Sea Area respectively.

[193] See personal statement given by *Jim Osborne* of Canada, Chairman of the ITG at MEPC 49, in the plenary; reproduced in MEPC 49/22, *supra*, note 145, para. 8.22; also statement by the U.S. in MEPC 52/8, *supra*, note 153, para. 4.

[194] MEPC 52/24, *supra*, note 156, para. 8.24.

[195] MEPC 55/8, *Particularly Sensitive Sea Area Proposal Review Form*, 16 June 2006, annex.

Subsequently, two steps need to be taken by MEPC. First, the committee should approve the designation of the area "in principle."[196] This term reflects IMO's identification of the area's particular sensitivity, while indicating that approval of the APMs is still pending. Second, accompanying APMs must be identified and referred to the competent committee, which may be MSC, MEPC itself, NAV[197] or the Assembly[198] – depending on the responsibility for the instrument pursuant to which the APM should be introduced. The respective organ examines whether the instrument's prerequisites are met and informs MEPC accordingly (on the criteria for the adoption of APMs, see Chapter 8[199]). Generally speaking, it is autonomous in its decision. A notable exception to this principle is the NAV sub-committee. According to paragraph 8.3.5, where measures require approval of MSC, it merely adopts a recommendation for approval or rejection of the APM. It is then a matter for MSC to take a definitive decision, while taking into account NAV's position. If the proposed APMs are not approved by the competent organ, MEPC has two options. It may either reject the application and notify the proposing government by providing a statement of reason, or request the government to submit additional information that might eventually lead to an approval of the application.[200] In the case of at least one APM being approved, the MEPC is able to designate the area as a PSSA. Designation of the area "in principle" will then merge into a definitive designation.

Earlier versions of the PSSA guidelines recognised a second category of designations "in principle," which was abolished during the 2005 revision. Revoked provisions allowed for a more radical understanding of this two-phase concept. Whereas currently areas may only be designated in principle if APMs have already been examined, under the old guidelines applications for designation could be submitted – and approved "in principle" – without any accompanying APMs. Proposing governments had merely to promise to apply for respective measures at a later date. The approach of the current guidelines, which inextricably links proposals for PSSA designation and adoption of APMs (as will be explained in more detail in the following chapter), does not leave any leeway for this approach to be maintained. During the 2005 revision process, it was suggested that the "in principle" designation should be repealed completely and only the possibility of adopting a final designation be upheld.[201] The Correspondence

[196] Para. 8.3.2 of the PSSA Guidelines.
[197] As a sub-committee, NAV is not allowed to take decisions. If MEPC refers an issue to NAV, the latter may only recommend a decision on a specific issue.
[198] See para. 8.3.2 of the PSSA Guidelines. Neither the 1991 Guidelines nor the 2001 Guidelines envisaged participation of the Assembly in that process. This was changed to reflect the possibility that the Assembly may adopt APMs, cf. MEPC 53/8/2, *supra*, note 157, annex, p. 37, annotation to para 8.3.2 of the draft guidelines.
[199] Sec. II.
[200] Para. 8.3.6. of the PSSA Guidelines.
[201] MEPC 52/8/1, *supra*, note 151, para. 20 et seq.

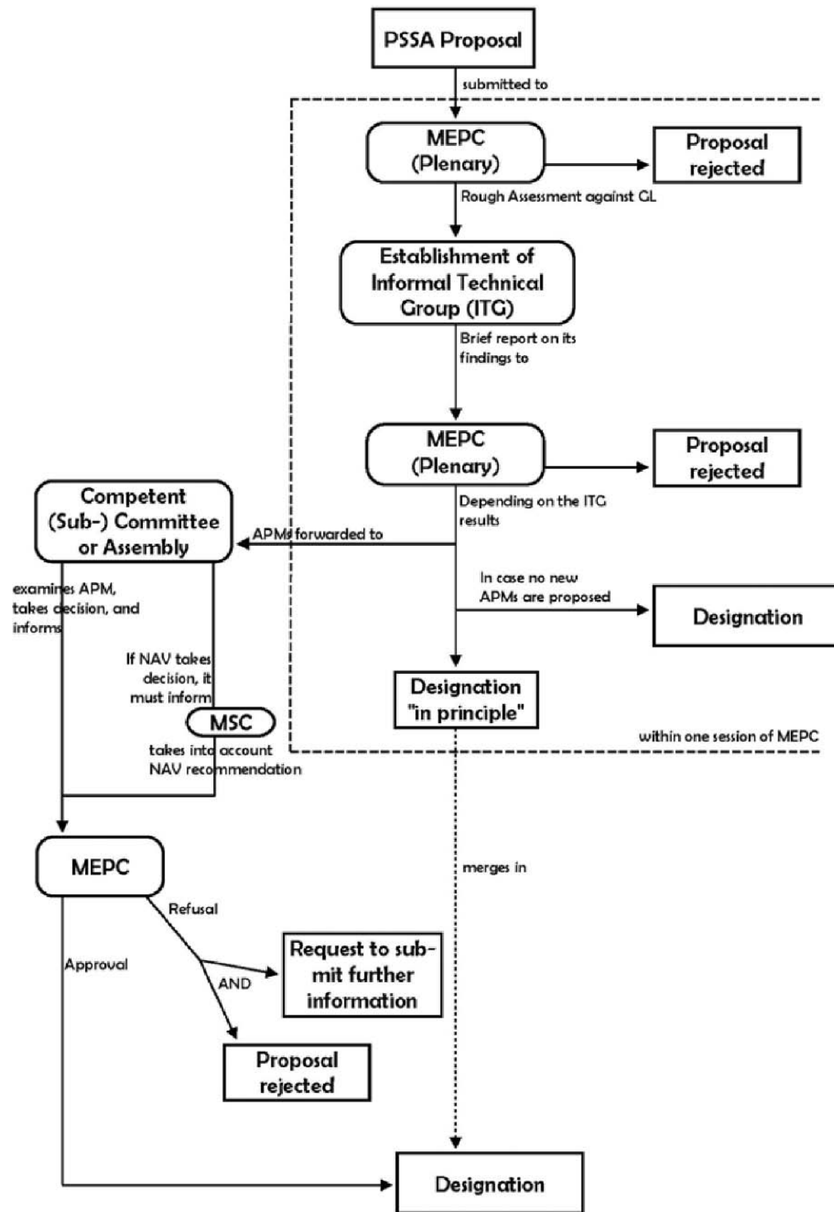

Fig. 1: The Procedure for Identification and Designation of PSSAs

Group recognised that PSSA applications submitted without APM were inconsistent with the guidelines, because without an APM to be examined several relevant provisions of the guidelines could not be considered.[202] However, the general approach was eventually retained as it was perceived valuable to expose an area's exceptional value and vulnerability even before final approval of APMs is given. In that way, it was argued, IMO is able to contribute to precautionary protection of the area.[203]

The duration of the whole designation procedure is difficult to determine. It usually takes at least one year before MEPC has received the necessary approval from other committees regarding the admissibility of APMs. If it decides, at its subsequent session, to designate the area, there is a further delay before regulations enter into force to allow sufficient time for all interested parties to adapt to new measures. Pursuant to paragraph 8.5, IMO is to ensure "that the effective date of implementation is as soon as possible based on the rules of IMO and consistent with international law."

b) Requirements for Proposing Governments

The designation procedure, although governed by MEPC, to a great extent depends on the proposing government's ability to assemble sufficient data, as well as to cooperate if information on an issue is seen as deficient. The PSSA Guidelines set out various obligations for governments with respect to the drawing up and submission of applications. However, even before governments submit an application to IMO, they should contemplate a mere domestic designation of MPAs. Only if it is considered necessary to request action on a global level may they act accordingly.[204]

Generally speaking, "[a]n application for PSSA designation should address all relevant considerations and criteria in these Guidelines, and should include relevant supporting information for each such item."[205] The proposal must, first of all, contain a summary of the objectives of the proposed PSSA designation.[206] According to paragraph 7.5, an application generally consists of two parts. As concerns the first part, by virtue of paragraph 7.5.1, it should encompass a description of the area's location by using, *inter alia*, appropriate nautical charts. Furthermore, it should be sufficiently stated why the area is significant with respect to the criteria set out in the guidelines. This requirement is in line with paragraph 4.4, which stipulates that "information and supporting documentation should be provided to establish that at least one criterion exists throughout the entire area." Finally, in taking account of natural factors listed in paragraph 5, the proposal should contain information on the nature and extent of the risks

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[202] MEPC 53/8/2, *supra*, note 157, para. 9.

[203] See remarks by the Correspondence Group, MEPC 53/8/2, *supra*, note 157, para. 7 et seq.; and comments on earlier drafts by WWF, cf. MEPC 52/8/4, *supra*, note 154, para. 20.

[204] Cf. MEPC/Circ.398, *supra*, note 191, para. 2.1.

[205] Para. 7.7 of the PSSA Guidelines.

[206] Para. 7.4.

international shipping poses in the area, as well as a description of shipping activities that may contribute to causing harm.[207] As to state practice, it can be duly noted that proposing governments have so far always sought to assemble as concise information as possible.[208]

The second part should address the APMs proposed, especially IMO's competence in adopting these measures. At least one APM, which may already exist, must be appended to the PSSA proposal. If the proposal contains new APMs, it should set out how they are going to be implemented, in particular with respect to the legal basis. If no new APMs are being proposed, it should be stated how the area is already being protected by the existing IMO measures. Issues relating to APMs will be dealt with in more detail in the next chapter. Further documentation that needs to be provided concerns possible impacts of proposed measures on the safety and efficiency of navigation (paragraph 7.6), in particular on existing traffic patterns or usage of the proposed area. Moreover, proposals should illustrate action taken under domestic law against ships failing to comply with protective measures (paragraph 7.9).

Another issue that should be mentioned here is that of cooperation of countries bordering the same maritime area. Under the terms of paragraph 3.1, governments that have a common interest in an area "should formulate a co-ordinated proposal." As coastal states of a particular region mostly share environmental problems related to shipping off their coasts, this phrase may seem to state the obvious. However, in the case of the Baltic Sea Area PSSA it became relevant, inasmuch as all states bordering the Baltic Sea sponsored the respective PSSA application – except the Russian Federation. Sweden, speaking on behalf of the proponents, informed MEPC that it had tried to get Russia involved as a co-sponsor, but it declined even to start deliberations on this issue.[209] The Russian Federation, on the contrary, contended that – regardless of any efforts on the side of the proponents – a designation of the Baltic Sea as a PSSA against its will constituted a violation of paragraph 3.1 of the PSSA Guidelines and furthermore amounted to an infringement of IMO's fundamental decision-making principles, namely openness, transparency and consensus.[210] The MEPC ignored Russia's remarks, allegedly embracing the view that the wording of paragraph 3.1 is recommendatory and does not represent an obligation to cooperate. This interpretation is thought-provoking, since paragraph 3.1 aims at encouraging states to seek participation with one another to allow data included in the application to be more concise. To subject

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[207] This includes information called for by para. 5.2.

[208] See applications referred to in footnotes of Sec. V.1. of Chapter 8.

[209] MEPC 51/22, *supra*, note 148, para. 8.51. See further MEPC 51/8/1, *supra*, note 147, para. 1.1.

[210] Cf. Statements by the Russian Federation concerning the designation of the Baltic Sea as a PSSA, reproduced in MEPC 51/22, *supra*, note 148, Annex 8. A similar view was held by Israel in response to an Egyptian proposal to designate the Gulf of Aqaba and the Strait of Tiran as a PSSA, cf. MEPC 45/6/1, *Identification and Protection of Special Areas and Particularly Sensitive Sea Areas*, 3 July 2000, para. 5.

applications of one IMO member state to the factual approval of another prior to IMO's assessment would be an unnecessary complication. Each application is judged on its merits within IMO; if it is approved, it shows that the area in question is qualified to be designated a PSSA and that the application does not conflict with international law. In the 2005 revision process, the Russian Federation had tried to amend the Guidelines so as to reflect its appeal that "applications for a PSSA affecting several countries should only be made on the basis of consensus of these countries."[211] It called for replacing "should" in paragraph 3.1 with "shall", as well as adding a paragraph, which would have further illustrated its stance[212], but in the event MEPC did not concur with this proposal.

If governments have submitted a correct application and MEPC or other organs of IMO have approved the application's admissibility, MEPC may finally designate the area as a PSSA. This is done by adopting a formal resolution. The immediate consequences of the designation will be dealt with in the next section.

III. Consequences of a Designation

Apparent consequences of a PSSA designation are its inclusion in nautical charts and the control of compliance with its APMs by the respective coastal state. In the following section, I shall set out in more detail how this is going to be carried out. In addition, I shall examine whether PSSAs may entail protective effects beyond what is explicitly provided for by APMs. Moreover, it should be asked if a PSSA designation may give rise to further obligations for coastal states to protect the area outside the PSSA regime.

1. Charting of PSSAs and APMs

As a practical necessity, after designation, mariners must be informed about the new status of an area. The PSSA Guidelines are reflective of that inasmuch as they call for identification of all APMs "on charts in accordance with symbols and methods of the International Hydrographic Organization (IHO)."[213] Carrying "adequate and up-to-date charts" to assist in navigation is required by SOLAS.[214]

Although the guidelines' wording suggests otherwise, IHO charting standards were not available at the time the PSSA instrument was introduced. Quite on the contrary, it has taken the IHO a long while to elaborate adequate charting standards, in particular for PSSAs as such and APMs that had not been available in IMO instruments before. The work was carried out by the Chart Standardization and Paper Chart Working Group (CSPCWG) of the Committee on Hydrographic

[211] MEPC 53/24, *supra*, note 28, para. 8.22.3.
[212] MEPC 52/8/1, *supra*, note 151, para. 9 et seq.
[213] Para. 9.1.
[214] Regulation V/20.

Requirements for Information Systems (CHRIS) of IHO. CSPCWG provides a core of expertise on the basic concepts of charting, whatever physical form the chart or publications may take. It has only very recently finalised new standards.

With respect to paper charts, CHRIS 17 in October 2005 agreed to update the regulations for international charts and chart regulation of the IHO (INT1).[215] Regulation B-437 of INT1 now provides chart specifications for Environmentally Sensitive Sea Areas (ESSAs), a generic term used by IHO for marine protected areas, whether national or international, IMO- or non-IMO- approved. According to paragraph 6 lit. b of Regulation B-437, the limits of an ESSA should be charted using a broken line with a tinted band, both in green or magenta.[216] Furthermore, a suitably worded note should be inserted on the relevant chart, indicating, in particular, that the designation is approved by IMO. As for APMs, regulations differentiate between those that are based on a measure for which IHO specifications exist and others.[217] With respect to the former, they should be included in accordance with existing specifications.[218] As regards the latter, national hydrographic offices should consider combining the PSSA note with a note detailing the APM.

Taking a look at the practice of the German Federal Maritime and Hydrographic Agency (BSH – *Bundesamt für Seeschifffahrt und Hydrographie*)[219], it becomes apparent how difficult it is adequately to reflect the complex PSSA regime in nautical charts. Only the Wadden Sea PSSA (comprising parts of the Dutch, German and Danish territorial sea) has yet been included in paper charts in full accordance with the IHO INT1 regulations. With respect to the Western European PSSA, BSH has not yet charted the area, but merely issued the complete IMO Resolution MEPC.121(52) in the weekly Notices to Mariners (NfS – *Nachrichten für Seefahrer*)[220], which was considered sufficient for the time being, since it includes an overview chart of the designated area. The Baltic Sea Area PSSA has not yet been charted at all. This is due to the fact that almost the whole of the Baltic Sea was designated as a PSSA, which triggered charting problems that have not yet been resolved.

[215] Edition 3.003 of August 2006, available from <http://www.iho.shom.fr/publicat/free/files/M4-v3003.pdf>; (accessed on 5 December 2005).

[216] In nautical charts, green is used for environmental matters, magenta for superimposed information.

[217] Regulation B-437.6 lit. c of INT1.

[218] Examples include symbols for basic elements of routeing measures in para. 9.3 of the General Provisions on Ships' Routeing; reproduced in IMO, *Ships' Routeing*, Seventh Ed. (London: IMO Publication 1999, looseleaf collection, updated to 2003), Part A. Hereafter GPSR.

[219] This part is based on personal information obtained from *Dr. Mathias Jonas*, Head of Nautical Information Service, Federal Maritime and Hydrographic Agency, Rostock/Germany. I am very thankful for his kind cooperation.

[220] NfS, 2005, No. 12.

With regard to electronic charting standards, their establishment is of even more recent nature. Generally, Regulation V/19 of the annex of SOLAS stipulates that so-called Electronic Chart Display and Information Systems (ECDIS) are accepted as meeting the chart carriage requirements of Regulation V/20.[221] ECDIS standards have been developed in close cooperation by IMO and IHO and respective systems are already used by many vessels voluntarily.[222] It is quite certain that, in the near future, most vessels will be obliged to be equipped with ECDIS systems.[223] ECDIS is not only used to present electronic nautical charts (ENCs); it is also an information system. Thus, ECDIS enables the user to retrieve information on the items displayed in addition to the graphical presentation.[224] IHO is responsible for standardising the digital chart objects for ECDIS. Those standards have been published in IHO's Special Publication No. 57 (S-57). However, S-57 standards do not contain any information about the presentation of symbols on the screen. For generating the appropriate symbolisation, ECDIS refers to the second important IHO standard, the presentation library (PRESLIB), published in the Special Publication No. 52 (S-52).

Standards contained in both S-57 and S-52 are not yet able adequately to encode ESSAs/PSSAs, but work on updated standards is progressing within IHO. In September 2005, CHRIS 17 decided to update current standards within one

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221 For an instructive overview, see IMO, *Electronic Charts*, available from <http://www.imo.org/Safety/mainframe.asp?topic_id=350>; (accessed on 30 September 2006); and Peter Ehlers, "Die internationale Entwicklung der hydrographischen Dienste", 7 *NuR* (2003), pp. 414-418, at 416.

222 ECDIS performance standards are contained in IMO Resolution A.817(19), Performance Standards for Electronic Chart Display and Information System (ECDIS), adopted on 23 November 1995; as amended by Res. MSC 64(67) of 4 December 1996 and Res. MSC 86(70) of 8 December 1998. Cf. Peter Ehlers and Horst Hecht, "Stand und Aussichten von ECDIS", 54 *Schiff & Hafen* No.4 (2002), pp. 11-14, at 12.

223 NAV 51 in July 2005 was divided on whether it was within its remit to discuss the establishment of a mandatory ECDIS requirement. Nonetheless, one of its WGs has already developed a phase-in approach for different types of ships. Cf. NAV 51/19, *Report to the Marine Safety Committee on its Fifty-First session*, 4 July 2005, para. 6, and NAV 51/WP.4/Rev.1, *Evaluation of the Use of ECDIS and ENC development*, 10 June 2005, para. 6. MSC 81 agreed to instruct NAV 53 to work on carriage requirements for ECDIS equipment, see MSC 81/25, *Report of the Maritime Safety Committee on its Eighty-First Session*, 24 May 2006, para. 23.39 et seq. following a proposal by Norway and Denmark that also summarised positive results of a cost-benefit analysis, as well as of a risk assessment, see MSC 81/23/13, *Proposal for a new work programme item for the NAV Sub-Committee on carriage requirements for ECDIS, and for the STW Sub-Committee on ECDIS training and familiarization*, 19 December 2005. NAV 52 already considered the matter and invited member states to submit proposals and comments to NAV 53; cf. NAV 52/18, *Report to the Maritime Safety Committee*, 15 August 2006, para. 17.50 et seqq.

224 For basic information on ECDIS, see Wikipedia, "Electronic Chart Display and Information System", available from <http://en.wikipedia.org/wiki/ECDIS>; (accessed on 30 September 2006).

year.[225] The Transfer Standard Maintenance and Applications Development (TSMAD) WG in November 2005 discussed proposals to update S-57 edition 3.1 to 3.1.1 by including data standards for ESSAs/PSSAs, as well as for Archipelagic Sea Lanes. After finalisation of this work, the Colours and Symbols Maintenance Working Group (C&SMWG) of CHRIS will be able to develop appropriate symbolisation to be included in S-52. It is expected that in late September 2006 CHRIS 18 will adopt revised S-57 and S-52 standards.

As has become apparent, the charting of PSSAs and their APMs on either electronic or paper charts is a very complex issue. It should be kept in mind, however, that charting is only envisaged "[w]hen a PSSA receives final designation." Consequently, tentative measures that have merely received initial approval must not be placed on a chart, until they actually need to be complied with by users of the area.

2. Enforcement of Protective Measures

Once a PSSA designation and accompanying APMs are approved by IMO, all vessels navigating through the area are forced to comply with its protective measures. Responsibility for enforcement of applicable APMs lies with both the coastal states in whose territorial sea or EEZ the PSSA, or parts of it, are situated, as well as with the flag states.[226] Competence is determined by recourse to respective UNCLOS provisions on enforcement:[227] the coastal state is only allowed to act within the confines of these provisions. Where it lacks competence to enforce protective measures, the vessels' flag states have to ensure that adequate non-compliance mechanisms are in place to punish those violating APMs through their authorities. If it is up to the flag state to act, under the provisions of paragraph 9.3, it should provide a report to the "[g]overnment which has reported the offence" (hence not necessarily the coastal state bordering the PSSA) on follow-up action concerning the reported alleged non-compliance with an APM.

Scovazzi held the view that APMs "have no mandatory character, as the use of the conditional tense ('should') clearly discloses."[228] He referred to ex-paragraph 5.3 (now 9.3) that stipulates that IMO member governments "should take all appropriate steps to ensure that ships flying their flag comply with the [APMs] adopted to protect the area." Without anticipating any results of Chapter 10, which will analyse APMs and their legal effect in more detail, it can be said that *Scovazzi*'s contention cannot be maintained in the light of the context of the provision and the purpose of the guidelines. Indeed, member governments are encouraged (not obliged) to promote compliance with the APMs approved for the

[225] Cf. minutes of CHRIS 17, available from <http://www.iho.shom.fr/COMMITTEES/CHRIS/CHRIS/CHRIS17/CHRIS17_Minutes.pdf>; (accessed on 30 September 2006), para. 5.1.
[226] Para. 9.2.
[227] For an overview, see, *supra*, Sec. III.2. of Chapter 4.
[228] Tullio Scovazzi, "Marine Protected Areas on the High Seas: Some Legal and Policy Considerations", 19 *IJMCL* (2004), pp. 1-17, at 9.

PSSA. However, where APMs are adopted as mandatory measures, it is for the coastal state and the flag state to join forces in enforcing APMs in a manner set out above. In this respect, the flag state is under the obligation to ensure compliance as far as it has jurisdiction.

3. Protection without Protective Measures

It has been said before that PSSAs are protected by associated protected measures. Even though APMs are addressed in detail in the following chapter, it should here be asked whether the PSSA designation as such has a protective effect. PSSA status, some have argued, grants an "added value" to an area subject to its regime.[229] As early as 1993, international experts on PSSAs meeting on Texel (The Netherlands) to assist IMO in developing the concept further, assembled a long list of issues that may be influenced by conferral of PSSA status. Quite generally, they noted that a designation would tend to trigger an immediate effect of altering perceptions of the area, may thus raise the profile of the area as an environmentally sensitive zone requiring special measures of protection and, in the event, result in changes of the behaviour of users.[230] In addition, the designation of a PSSA may provide an opportunity for the introduction of protective measures with respect to other maritime activities, which can be particularly important in multi-use areas.[231]

More specifically, it has been argued that mapping of PSSAs on charts serves to notify mariners of the environmental vulnerability of the area and hence of the rationale for the applicable protective measures. As a result, their attitudes towards measures in place and the way in which they navigate may change. The scant evidence that is obtainable suggests that these expectations have been met. Concerning the Great Barrier Reef PSSA, for instance, it has been noted from early on that global approval of existing national legislation by IMO through the PSSA scheme has substantially increased awareness by users of the area.[232] The same is observed outside the PSSA regime with respect to Marine Environment High Relevance Areas (MEHRAs) introduced by the UK in the aftermath of the

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[229] Cf. Report from the Third International Meeting of Experts on PSSAs, *supra*, note 125, para. 10 et seqq. Erik Jaap Molenaar, *Coastal State Jurisdiction over Vessel-Source Pollution* (The Hague: Kluwer Law International 1998), p. 440 et seq. has expressed slight scepticism with respect to intrinsic value.

[230] Report from the Third International Meeting of Experts on PSSAs, *supra*, note 125, para. 13 et seqq.

[231] *Ibid.*

[232] Peter Ottesen, Stephen Sparkes and Colin Trinder, *supra*, note 119, p. 518 et seqq. Interestingly, IHO's INT1 regulations in B-437.6 state that "[i]n the case of the Great Barrier Reef, the charting of the PSSA is itself considered to be a protective measure." The GBR is the only PSSA that has been included in nautical charts for a longer time. As detailed, *supra*, in Sec. III.1. of this chapter, charting standards for PSSAs are of very recent nature and few PSSAs are yet marked on existing charts.

Braer accident.[233] Although compliance with its regulations is entirely voluntary for third-state vessels, big shipping companies tend not to permit their ships to sail through them, since they are aware of the fragility of their reputation in the context of transport of oil by sea and possible spills.[234] Of course, loss of reputation can only be feared by those whose policy is to seek a high reputation.[235] Hence, sub-standard ships that even violate binding legal requirements are most likely not to comply with voluntary regulations or behave more cautiously than is required by APMs in a PSSA.

With respect to the awareness-raising character of a PSSA designation, consideration may be given to a recent designation of a considerably large marine area off the west coast of the North Island of New Zealand as a precautionary area[236], where mariners should be required to navigate with particular caution because of the environmental importance of the area and offshore industrial installations.[237] The proposal, which still needs to be endorsed by MSC 81, has provoked opposition by Danish delegates, who argued that the area was too large.[238] Indeed, precautionary areas are usually established at the termination of other routeing measures and not for purely environmental purposes.[239] This particular approval of a "precautionary area" may have repercussions for the PSSA concept in the long run. New Zealand, that had already decided against proposing a PSSA in another case and instead relied on the designation of an Area to be

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[233] The MEHRA concept was elaborated by Lord Donaldson in his inquiry into the prevention of pollution from merchant shipping entitled *Safer Ships, Cleaner Seas* (London: HMSO 1994) in the aftermath of the *Braer* disaster: see Lynda M. Warren and Mark W. Wallace, "The Donaldson Inquiry and its Relevance to Particularly Sensitive Sea Areas", 9 *IJMCL* (1994), pp. 523-534. Only in early 2006 did the UK start actually to designate MEHRAs: see information available from the Department of Transport's website at <http://www.dft.gov.uk/stellent/groups/dft_shipping/documents/page/dft_shipping_611167.hcsp>; (accessed on 30 September 2006).

[234] Personal information obtained from *Alan Simcock*, General-Secretary, OSPAR Commission, in a discussion on 19 July 2005 in the commission's headquarters in London.

[235] For instance, British Petroleum (BP) Shipping was established within the BP Group for the sole purpose of providing for safe transport of oil. It is the only part of the BP Group that is not obliged to earn profits. Cf. BP, *BP Sustainability Review 2004, Making the Right Choices*, available from <http://www.bp.com/liveassets/bp_internet/globalbp/STAGING/global_assets/downloads/S/Sustainability_Report_2004.pdf>; (accessed on 30 September 2006), p. 14.

[236] Approval has already been given by NAV: see NAV 52/18, *supra*, note 223, Annex 2, p. 2. A "precautionary area" is a routeing method available from the General Provisions on Ships' Routeing, to which I will refer in more detail, *infra*, in Sec. II.1.a) of Chapter 8.

[237] See proposal submitted by New Zealand, NAV 52/3/11, *[Proposal for a Precautionary Area off the West coast of the North Island of New Zealand]*, 16 May 2006. Note, however, that it is doubtful whether mariners attach the same importance to a precautionary area as they arguably would to a PSSA.

[238] NAV 52/WP.5, *Report of the Working Group*, 20 July 2006, para. 5.6. Denmark argued that New Zealand should instead deploy so-called recommended routes.

[239] Cf. Sec. II.1.a) of Chapter 8.

Avoided[240], expressly referred to PSSA criteria in its proposal[241] to justify approval of the precautionary area. It has to be seen in the future whether experience in this specific marine area will lead other governments to follow the route that New Zealand has followed. It is not a premature observation to contend that this will not least depend upon whether PSSA status offers additional rights for coastal states or merely raises awareness of the ecological sensitivity of a clearly defined part of the sea.[242]

A related observation, made by representatives of NGOs, is that a PSSA designation strongly increases political pressure on coastal states to develop and propose additional APMs for implementation in the respective PSSA.[243] In order to respond to the public demand, some coastal state authorities tend to allocate more resources to the development of APMs, as well as to awareness-raising projects to highlight the area's vulnerable character.

In the context of added value, two further issues have been pointed out on which a PSSA designation may have an impact.[244] First, higher standards of care may be expected by courts in assessing claims for damage that occurred in PSSAs; this might have an impact on findings of negligence or gross negligence in relation to establishing liability. This argument, in theory, sounds plausible. It is, however, hard to verify without time-consuming efforts because courts' awards to that end are likely to vary as applicable domestic law differs. A related question – whether coastal states may have additional obligations by applying for a PSSA designation – will be dealt with in the next section. Secondly, the PSSA mechanism provides for an umbrella regime that is able to accommodate and implement other mechanisms, e.g. parts of the CBD or regional conventions. This is indeed an express feature of the PSSA regime and not merely "added value." In subsequent sections of this treatise, several issues relating to this general problem will be addressed.

4. Additional obligations for the Applying State to Protect the PSSA

Coastal states obviously have an interest in gaining as much control as possible over potentially dangerous vessel traffic off their coasts. Certain navigational prescriptions available through conferral of PSSA status may prove to be helpful in expanding their competence in this respect. However, one should also take a look at the other side of that very coin, namely obligations that emerge with respect to the coastal state that has applied for a PSSA designation. States are

[240] Refer to note 299 in Chapter 8.

[241] Reference was made to "uniqueness or rarity", "critical habitat", as well as "productivity, vulnerability & dependency"; cf. NAV 52/3/11, *supra*, note 237, para. 10 et seqq.

[242] This question is addressed, *infra*, in Sec. II.2.a) of Chapter 10.

[243] Based on a discussion with directors of the International WWF Centre for Marine Conservation, Hamburg, on 25 July 2006. I greatly appreciate the time and personal commitment they devoted to our conversation.

[244] Report from the Third International Meeting of Experts on PSSAs, *supra*, note 125, para. 15 et seq.

multi-faceted entities and hence do not always have coherent interests. The promotion of stricter protection of a marine area may thus collide with the activities of a state (or permitted or supported by it) in this area that have an adverse effect on the marine environment. In discussions leading to the 2005 revision of the PSSA Guidelines, "[…] the observer of ICS reminded the Committee that the adoption of a PSSA places certain obligations, at least of a moral nature, on the coastal States concerned. For example, following designation of the PSSA, certain types of activities may appear inappropriate in an area where the ecosystem has been recognised to be particularly sensitive."[245] More specifically, Russia, Panama, Liberia and shipping industry groups stated in a joint submission that "[t]he designation of a PSSA also implies that coastal States should take into consideration other activity that should not be conducted within such a sensitive ecological area. Examples of activities that might be considered inappropriate in a PSSA are mineral and oil exploration and extraction, large wind farm developments, commercial fishing activity and military training and exercises. It is understood that such activities do not occur in those PSSAs already designated by IMO and should be considered inappropriate if the area is particularly sensitive to ecological threat."[246] This statement was arguably driven by political considerations in the debate on the Western European PSSA[247] to discourage proposing states from maintaining their tough stance. Nevertheless, I shall briefly examine whether these assumptions hold true. It is worth highlighting this issue, since it has not received much, if any, attention from scholars.

The problem may be exemplified by recourse to the Western European PSSA, whose designation was mainly initiated by France and Spain, but was eventually co-sponsored by Portugal, Belgium, Ireland and the United Kingdom. Interestingly, the two last-mentioned states have gone to court over a dispute that largely concerned the state of the marine environment of the Irish Sea. The Irish Sea, part of the Western European PSSA, suffers from considerable pollution by nuclear materials that have allegedly been, and are still being, released by several plants housed on a site near Sellafield in the North-West of England. In 2001, the UK had authorised the operation of a new plant that was built to produce a particular nuclear fuel called MOX. In an attempt to reduce the nuclear contamination of the Irish Sea, the Republic of Ireland has lodged a case against the United Kingdom before the International Tribunal for the Law of the Sea (ITLOS).[248] Ireland chiefly relied on UNCLOS Part XII in its request to shut down

[245] MEPC 49/22, *supra*, note 145, para. 8.24.5.
[246] LEG 87/16/1, *supra*, note 143, para. 17.
[247] For details, see, *infra*, Sec. V.1. of Chapter 8.
[248] Ireland also lodged a case before an arbitration tribunal because of alleged violation of Art. 9 of the OSPAR Convention. The dispute concerned the interpretation of that provision, pursuant to which parties need to exchange information with respect to the state of the marine environment. Ireland argued that the UK had held back reports on possibly adverse environmental effects of the nuclear plant. The arbitration tribunal's finding was to the contrary; see *Dispute Concerning Access to Information Under Article 9 of the Ospar Convention (Ireland v. United Kingdom)*, PCA, Award of 2 July 2003, 42 *ILM* (2003) 1118, para. 106 et seqq.

the MOX plant. In particular, it argued that the UK had violated Articles 192, 197 and 206 of UNCLOS.[249] The UK, in contrast, contended that Ireland relied on a misapprehension of the facts, since the UK "does not have reasonable grounds for believing that the operation of the MOX Plant may cause substantial pollution or significant and harmful changes to the marine environment. The evidence is to the contrary."[250] It might legitimately be asked whether the fact that the UK has applied for PSSA status is part of state practice just like any other state practice which might be used as evidence in an international dispute settlement context; in other words, whether the UK's conduct within IMO is a confession of the general vulnerability of the area. In the application to IMO for designation of the Western European PSSA, the Irish Sea, in particular its large cold-water coral reefs, was described as being exceptionally vulnerable and supporting a rich and diverse fauna.[251] However, in the present case, the UK has not argued that the Irish Sea did not deserve to be protected but rather that it was not threatened by the operation of the MOX plant. The UK's arguments advanced in the ITLOS response to Ireland's claims would therefore not be altered in the light of statements made in the PSSA application.

Even assuming the contrary, though, the problem remains that the PSSA Guidelines require a differentiation to be made between threats from international shipping and other factors. Paragraph 4.1 of the guidelines requires that "the following criteria apply to the identification of PSSAs only with respect to adoption of measures to protect such areas against damage, or the identified threat of damage, from international shipping." Although the environmental criteria enshrined in paragraph 4.4 of the guidelines indicate a *general* particular sensitivity, paragraph 4.1 constitutes a safeguard clause to protect states from being bound by their submissions outside the PSSA regime in that it stipulates that – in a legal sense – the criteria do not indicate a general particular sensitivity. Since the criteria are only to be taken into account "with respect to adoption of measures to protect such areas against damage [...] from international shipping," it implies that they may not be relied upon in other contexts or fora – at least not automatically. But in the light of the precautionary principle, I would contend that states have a responsibility to act in a prudent manner when carrying out certain potentially hazardous activities in the respective area.

A different conclusion can be drawn with respect to obligations towards prevention of pollution threats from shipping activities. To that end, there are

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[249] *The MOX Plant Case*, ITLOS, Request for Provisional Measures and Statement of Case of Ireland, 9 November 2001, available from <http://www.itlos.org/case_documents/2001/document_en_191.pdf>; (accessed on 30 September), para. 55 et seqq.

[250] *The MOX Plant Case (Ireland v. United Kingdom), Provisional Measures*, ITLOS, Request for Provisional Measures, Written Response of the United Kingdom, 15 November 2001, available from <http://www.itlos.org/case_documents/2001/document_en_192.pdf>; (accessed on 30 September 2006), para. 220. The final judgment is still pending. The tribunal forwarded the case to the ECJ to seek initial clarification as to whether disputes arising from international law between EU member states are a matter solely for the ECJ to decide.

[251] Cf. MEPC 49/8/1, *supra*, note 142, para. 3.2.1.7 et seq.

numerous measures that states may enact outside the PSSA regime and without prior approval by IMO. Examples include accident-management systems together with the allocation of sufficient tug capacity, as well as adequate ports of refuge.[252] It is my contention that where additional measures are necessary for protecting the area sufficiently from shipping threats, the acknowledgment of *particular sensitivity* places an obligation on the applying state to ensure that these measures are implemented. Otherwise, the applicant would contradict its conduct in the process of seeking PSSA status within IMO.

IV. Concluding Remarks

It has obviously taken the PSSA concept more than two decades to emerge in full force on the international policy level. From the first diplomatic initiatives in 1978 to recent revisions in late 2005, changes have not been dramatic; however, states seem to be increasingly aware of the potential impact a PSSA designation might have. This development is arguably stimulated by the fact that marine areas only have to meet one of the many PSSA criteria in order to qualify for designation. Nevertheless, PSSA designations follow an elaborate procedure, in which many organs of IMO are involved.

Even though charting standards have only recently been finalised within IHO, some have argued that PSSAs elevate the level of protection for an area by highlighting its significant ecological value to mariners navigating in the area. While these effects may arguably occur, it must be seen whether states in the future rely more on the establishment of precautionary areas to achieve these ends. Whatever the outcome of this development will be, APMs remain the key elements for the protection of PSSAs. The following chapter is thus devoted to an in-depth analysis of measures that may employed to protect sensitive areas identified by MEPC.

Chapter 8: Associated Protective Measures as the Essential Part of a PSSA

The previous chapter has already identified Associated Protective Measures (APMs) as the core feature of every PSSA. APMs define the means by and the extent to which a PSSA is protected against environmental threats posed by inter-

[252] For an excellent survey of the last issue, see Inken von Gadow-Stephani, *Der Zugang zu Nothäfen und sonstigen Notliegeplätzen für Schiffe in Seenot* (Berlin Heidelberg: Springer 2006), p. 70 et seqq. She demonstrates that coastal states are under the obligation to provide ports of refuge by virtue of Art. 192 and 194(1) of UNCLOS, as well as by virtue of customary obligations to prevent cross-border harm to the environment (*sic utere ut alienum non laedas*). What can be drawn from that is that if an area in which a vessel has come into distress is designated as a PSSA, coastal states are under an even greater obligation to provide adequate places of refuge.