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***NET**work of experts on the legal aspects of*
***MAR**itime **SAFE**ty and security*
IS 1105 COST ACTION

MARITIME SAFETY AND ENVIRONMENTAL PROTECTION IN EUROPE.

MULTIPLE LAYERS IN REGULATION AND COMPLIANCE

EDITED BY
MARTA CHANTAL RIBEIRO
ERIK J. MOLENAAR

Proceedings of the MARSAFENET Open Conference, Porto, 23 May 2014

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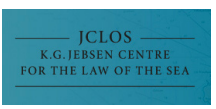

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IS 1105 COST ACTION

NETwork of experts on the legal aspects of MARitime SAFEty and security

MARSAFENET – the acronym for NETwork of experts on the legal aspects of MARitime SAFEty and security – aims to bring together experts in international law of the sea in order to increase the knowledge on maritime security and safety and to develop a common conceptual and methodological framework with the goal of contributing to fill the legal gaps and of transforming scientific results into feasible solutions. The network is intended to foster the identification and exploitation of synergies between EU policies on maritime safety and security. In terms of societal implications, it is aimed at facilitating the detection of solutions for old and new issues and criticalities, that may be implemented within the public realm (decision-makers, international institutions, international and national tribunals, EU institutions, etc.) and within the private sector (shipping sector, civil society, NGOs, etc.).

This Cost Action takes an in-depth look at current urgent maritime matters focusing on four main issues, shipping and marine environmental protection, new developments of economic activities at sea, international maritime security and border surveillance and, finally, protection of fragile and semi-enclosed seas.

MARSAFENET is currently composed of more than 70 legal experts from 22 different countries.

More information about Cost Action IS 1105 is available at www.marsafenet.org

COST – European Cooperation in Science and Technology – is a pan-European intergovernmental framework. Its mission is to enable break-through scientific and technological developments leading to new concepts and products and thereby contribute to strengthening Europe's research and innovation capacities.

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Acknowledgments

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MARTA CHANTAL RIBEIRO

Marta Chantal Ribeiro is Assistant Professor of European Union Law, International Law and Law of the Sea at the Faculty of Law of the University of Porto. She holds a position as principal researcher at the Interdisciplinary Centre of Marine and Environmental Research (University of Porto), being the coordinator of the Law of the Sea Research Group. She holds a degree and master in Law (University of Coimbra) and completed her PhD at the University of Porto in the field of Law of the Sea (protection of marine biodiversity through protected areas; national, European and international legal regimes). She has a long experience of cooperation with the Task Group for the Extension of the Portuguese Continental Shelf (Portugal) and the University of Azores. She is member of the IUCN World Commission on Environmental Law. Currently her research is focused on conservation of marine biodiversity, including the ABNJ, fisheries, deep-sea mining and marine spatial planning. Marta Chantal Ribeiro has been Co-Leader of MARSAFENET Working Group 1 on 'Shipping and Marine Environmental Protection' since October 2012.

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FOREWORD

This ebook contains the proceedings of the MARSAFENET Open Conference on 'Maritime Safety and Environmental Protection in Europe. Multiple Layers in Regulation and Compliance', held at the Faculty of Law of the University of Porto, on 23 May 2014.

The Conference was a joint initiative of the Faculty of Law of the University of Porto and the K.G. Jebsen Centre for the Law of the Sea of the University of Tromsø. We are particularly grateful to Cândido da Agra and Tore Henriksen, respectively, for their institutional and financial support to the Conference. We express our recognition also to the Rectory of the University of Porto, as a co-funder of the Conference, and to Dr. Gemma Andreone for her continuous efforts as Chair of the MARSAFENET.

MARSAFENET- the acronym for NETwork of experts on the legal aspects of MARitime SAFEty and security – is a Cost Action (IS 1105) whose research activities are undertaken by the following four working groups:

- Working Group 1: Shipping and Marine Environmental Protection
- Working Group 2: New Developments of Economic Activities at Sea
- Working Group 3: International Maritime Security and Border Surveillance
- Working Group 4: Protection of Fragile and Semi-Enclosed Seas

The co-leader and leader of Working Group 1 had the pleasure of hosting, in Porto, meetings of the MARSAFENET Management Committee and all its Working Groups, along with the organization of the annual Open Conference, which marked the end of a year of several scientific MARSAFENET initiatives developed in different countries of Europe. The Conference brought together eminent members of the Working Groups and distinguished invited speakers from academia, legal practice, the OSPAR Commission, the European Maritime Safety Agency and the International Tribunal for the Law of the Sea.

The program of the Conference was divided in two sessions. The morning session was dedicated to global, regional and national regulation related mainly to shipping and fisheries. The goal was to discuss the interactions and divisions of competence, as a consequence of different levels of regulatory activity. The afternoon session focused on compliance, starting with monitoring and closing with international dispute settlement. The difficulties of

effective surveillance and enforcement systems were examined and several technologies and tools were presented as essential for the strengthening of the international legal framework applicable to human activities at sea. Finally, given its importance for the interpretation and enforcement of international law and European Union law, the plethora of mechanisms for the settlement of disputes, with emphasis on international courts and tribunals, was described and discussed.

This ebook contains contributions by eight of the presenters at the Porto Conference, who kindly agreed to develop their presentations into full-blown academic publications. We are very grateful for all the effort they put into this. The editors also want to express their gratitude to Ms. Wen Liu for her invaluable help with the editing during her internship at the Netherlands Institute for the Law of the Sea (NILOS) and, as well, to Mr. Rui Veríssimo for his kind cooperation with the publishing process.

The organizers, presenters and other participants in the Porto Conference enjoyed and benefited from an insightful and stimulating exchange of ideas on 23 May 2014. Through this ebook, we hope many others will share this experience with us.

Marta Chantal Ribeiro
Erik J. Molenaar

Porto, Utrecht, 20 April 2015

AUTHORS

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Nuno Marques Antunes is currently 'Of Counsel' at the leading Portuguese law firm Miranda Correia Amendoeira & Associados, where his legal practice concentrates primarily on the oil and gas sector. With a multidisciplinary academic background, which includes licentiate degrees in Naval Military Sciences (Portuguese Naval Academy) and in Law (University of Lisbon, Faculty of Law), as well as an M.A. in international boundaries and a Ph.D. in the International Law of maritime boundary delimitation (Durham University, U.K.), he has amassed an experience on ocean affairs that reflects public and private sector drivers. Nuno Marques Antunes has previously worked in Timor-Leste as Prime Minister legal adviser for the petroleum sector and the petroleum fund, having also been adviser in the negotiations of the Timor Sea maritime boundaries and petroleum resources. He was Legal Coordinator of the Portuguese Task Group for the Extension of the Continental Shelf, appointed expert to the Portuguese Strategic Commission on the Oceans, and member of Portuguese delegations to various international meetings on ocean affairs. He is currently appointed by Portugal for the list of arbitrators of the 1982 United Nations Convention on the Law of the Sea. As a Navy officer, he served as a seagoing officer and at the Portuguese Naval Academy and Hydrographic Office, retiring at the rank of Commander. Nuno Marques Antunes taught Public International Law and Constitutional Law at university level, and is an invited speaker in post-graduation courses and international conferences. He is a published author, particularly on law of the sea and ocean affairs.

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Miguel García García-Revillo is a senior lecturer on Public International Law and European Union Law at the University of Córdoba (Spain). He holds a PhD from the same University on the topic of the International Tribunal for the Law of the Sea. He promoted the creation of and co-chaired the Law of the Sea Interest Group of the American Society of International Law (LOSIG) and also promoted and currently co-chairs the Law of the Sea Interest Group of the European Society of International Law (LAWSEA IG) with professors Maria Gavouneli and Seline Trevisanut. He was also the Delegate of Communications and Organization of the Association Internationale du Droit de la Mer. As an expert in Law of the Sea, he has attended several international meetings in this field, like, inter alia, the IX UNICPOLOS on safety and security matters (2008) and the XXI Meeting of States Parties in the Law of the Sea Convention for the election of seven judges of International Tribunal for the Law of the Sea (2011), both at the United Nations Headquarters in New York, as well as participated as speaker in a number of international symposia devoted to the same branch of Public International Law. Miguel G. García-Revillo has also acted as adviser for public and private entities and Governments in Law of the Sea issues. Apart from his work on ITLOS' jurisdiction, Miguel G. García-Revillo is currently focused on environmental issues, like, among others, the problem of alien invasive species.

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Markku Mylly started his maritime career in the Finnish Merchant Shipping 1973. He attended Rauma Maritime College of the Satakunta University of Applied Science, obtaining a Bachelor of Science in maritime studies and qualifying as an Officer and Master Mariner in 1980. He sailed on Finnish ships until 1987 when he joined the Finnish Maritime Administration (FMA). Markku Mylly held various positions in the FMA between 1987 and 2010. He was appointed Director General of FMA in April 2004. He served in this position until the end of 2009 when a merger of Finnish transport agencies took place. Markku Mylly was the tenth and last Director General in the FMA. He also gained significant experience in EU cooperation projects in various European countries. He was responsible manager in several EU twinning projects assisting beneficiary countries to develop modern and efficient administrations in maritime sector. He acted as project leader in a number of projects in Bulgaria, Croatia and Estonia. Markku Mylly was nominated to the position of Executive Director of The European Maritime Safety Agency in 2012.

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Valentina Rossi is researcher in International Law at the Italian National Research Council (CNR), since 2008 (Institute for Research on Innovation and Services for Development, from 2014; Institute for International Legal Studies – Naples, 2008–2014). She is also teaching assistant at the University of Naples "L'Orientale" (Chair of International Law and Chair on Human Rights Protection in the European Union), since 2006, and she collaborates as a consultant with the Centre for Research on Energy and Environmental Economics and Policy (IEFE) of the Bocconi University of Milan (since 2005). Graduated in law from the University of Naples "Federico II", she attended the Bocconi University of Milan (Master's Program in Environmental Economics and Management, 2002). Since 2003, she has been carrying out her research activities on international law, with specific experience on international environmental law. Since 2006, she broadened her research field with International human rights law. In 2010, she obtained a PhD in International Law at the University of Siena, with a research program concerning environmental procedural rights and obligations. In recent years, her research interests focused, *inter alia*, on issues related to the protection of the marine environment, like, among others, the problem of ship recycling. From March 2012, Valentina Rossi is MC member (substitute) and STSMs Coordinator within the COST Action MARSAFENET.

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PART ONE

GLOBAL, REGIONAL AND NATIONAL REGULATION: INTERACTIONS AND DIVISIONS OF COMPETENCES

SHIPPING, MARINE ENVIRONMENTAL PROTECTION AND ALIEN INVASIVE SPECIES [*]

Miguel G. García-Revillo [†]

The Problem of Alien Invasive Species (AIS) and the Sea

The Problem of AIS

The displacement of animal and plant species from the site where they naturally live to locations outside of their normal range of distribution is something that has occurred since the beginning of life on Earth. It also happens that human activities have been forcing, voluntarily or involuntarily, such displacement. Sometimes, the introduction of alien species has been beneficial for human society, for instance as a way to combat starvation through the introduction of species more resilient or prolific

* This work has been written within the framework of the two following research projects: MARSAFENET (IS 1105 COST ACTION) Network of Experts on the Legal Aspects of Maritime Safety and Security, and EURO-MAR (DER 2013-47863-P) La Unión Europea y el Derecho del Mar (Ministerio de Economía y Competitividad, Spain).

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than local ones, or even by introducing species to combat plagues of other species. However, in many situations the introduction of alien invasive species (AIS)[1] has been catastrophic. The introduction of AIS can expel or destroy local species, cause harm to habitats, and even jeopardize human health.

Despite the longstanding nature of this phenomenon,[2] the introduction of AIS has not received states' full attention until recent times. Only in the last decades, the magnitude and seriousness of this phenomenon, coinciding with an exponential increase in the displacement of AIS as a consequence of globalization, has compelled states to take action locally and at an international level. As Shine recalls, at the global level, AIS are now considered the second largest cause of biodiversity loss after direct habitat destruction.[3] This explains why a number of relevant international programs, institutions and organizations (governmental and non-governmental) are now involved in

[1] Defining the term "alien invasive species" is a complex task that surpasses the goals of this paper, even when limited to the context of the law of the sea. See, in this respect: C. Shine, N. Williams and L. Gündling *A Guide to Designing Legal and Institutional Frameworks on Alien Invasive Species* (IUCN, Gland, Cambridge and Bonn: 2000), pp. 1–4 and 44–48. One of the difficulties with defining AIS is the existence of the so-called "cryptogenic" species, which are species that science is unable to determine whether they are native or not to a particular area (see J.T. Carlton "Biological invasions and cryptogenic species"(1996) 77 *Ecology* 1653–1655, as quoted by A.M.H. Blakeslee "Invasive or Native? The Case History of the Common Periwinkle Snail (Littorina littorea) in Northeast North America" in D.J. Starkey, P. Holm and M. Barnard (eds) *Oceans Past: management insights from the history of marine animal populations* (Earthscan, London, UK and and Steerling,VA: 2008) 7–23.

[2] In respect to cases of AIS in the 19th Century, see Short Communications 6 to 25 (2009) 4(2) *Aquatic Invasions* 349–427. See also, in respect to the Mediterranean: A. Demetropoulos "L'histoire des especes exotiques envahissantes" (2002) 47 *Medondes (La Revue du Plan d'action pour la Mediterranée)* 6–8.

[3] Shine, Williams and Gündling, note 1 at 10.

addressing this colossal problem. International institutions such as the International Maritime Organization (IMO), the Food and Agriculture Organization of the United Nations (FAO), the United Nations Environment Program (UNEP), the Intergovernmental Oceanographic Commission of the United Nations Educational, Scientific and Cultural Organization (UNESCO), the International Union for the Conservation of Nature (IUCN), the European Union (EU) and the European Council have focused on addressing the problem of AIS through individual and joint programs and projects. Notable undertakings include the Global Invasive Species Programme (GISP), an international network of policy and scientific experts established under the auspices of UNEP that has produced a number of significant publications on this issue and the Global Invasive Species Database (GISD),[4] and the Global Ballast Water Management Programme (Globallast) established jointly by the Global Environment Facility (GEF), the United Nations Development Programme (UNDP) and the IMO.[5]

AIS and the Law of the Sea

The relationship between AIS and the law of the sea runs two ways. On the one hand, AIS harm or may harm the marine environment, either by altering habitats or by displacing (and even eradicating) local aquatic species that form part of the biodiversity in a particular area. On the other hand, the issue is not confined to considerations for the marine environment as numerous terres-

4 This comprehensive database is managed by the Invasive Species Specialist Group (ISSG) of the IUCN Species Survival Commission, available at <www.issg.org>. Other valuable databases include those created by DAISIE (Delivering Alien Invasive Species Inventories for Europe), available at <www.europe-aliens.org> and NOBANIS (North-European and Baltic Network on Invasive Alien Species), available at <www.nobanis.org>.

5 Available at <www.globallast.imo.org>.

trial AIS are also transported by ships, either as cargo or by other means. Therefore, measures that states adopt unilaterally or through international organizations that expressly or implicitly target AIS could affect one or the other.

Pathways of Introduction

The introduction of AIS into the marine environment or transported by sea may occur in different ways.[6] One of the most common pathways of introduction is transport and discharge of AIS through ballast water by ships. Vessels use ballast water to stabilize themselves by compensating the instability that the cargo, or the lack thereof, may cause.[7] For centuries, this balancing function has been carried out by using stones or sand. However, since the utilization of metallic hulls, such materials have been replaced by water, which is far cheaper and easier to use. In ballast water and its sediments are animals, plants and/or other organisms that might become invasive when transported by the vessel from one site to another.[8] There are many examples of the

[6] A practical and extensive list of the introduction pathways used to be available on the GISP website but regrettably, the website is no longer available. Shine, Williams and Gündling (note 1) also mentions several pathways. See also: J.T. Carlton "Bioinvasion Ecology: Assessing Invasion Impact and Scale" in E. Leppäkoski, S. Gollasch and S. Olenin *Invasive Aquatic Species of Europe: Distribution, Impacts and Management* (Kluwer, Boston: 2002) 7–19; "Special Issue: Alien Species in European Coastal Waters" (2007) 2(4) *Aquatic Invasions*, available at <www.aquaticinvasions.net>; I. Valiela *Global Coastal Change* (Blackwell Publishing, Oxford: 2006) ch. 10.

[7] Obviously, ballast water is not only used by merchant vessels but also fishing vessels, warships and other vessels. Nevertheless, as will be further discussed in this paper, the principal concern of states appears to be focused on the former.

[8] As Shine *et al.* recall: "Ballast water and sediment probably constitute the most important vector for trans-oceanic and inter-oceanic movements of shallow-water coastal and marine organisms. About 10 billion tonnes of ballast water are transferred each year (…)": Shine, Williams and Gündling, note 1 at 8.

devastating effects of AIS suspected to have been transported by means of ballast water, such as the Zebra Mussel (*Dreissena polymorpha*) native to the Black Sea and introduced in the Great Lakes area of North America and in Western Europe; the Chinese Mitten Crab (*Eriocheir sinensis*), native to Northern Asia, and introduced in Western Europe and the Pacific Coast of the United States; the European Green Crab (*Carcinus maenus*), native to the European Atlantic Coast and introduced in the Eastern coast of Asia and in Australia; the North American Comb Jelly (*Mnemiopsis leidyi*) native to the Eastern Seaboard of the Americas and introduced in the Black, Azov and Caspian Seas; and Cholera (*Vibrio cholerae*) introduced in South America and the Gulf of Mexico.[9]

Vessels also transport AIS through hull fouling. In this case, the alien species such as mussels, sponges, and algae adhere to the hull and/or other submerged parts of the vessel, such as the helm or the screw, and are ultimately transported to distant parts of the world where they are released.[10] In terms of the seriousness of this threat, introduction by hull fouling has not received the same level of attention afforded to ballast water. However, in view of the sig-

[9] These are classic examples of the devastating effect of AIS transported by ballast water. All of them are listed among the *Ten of the Most Unwanted* marine biological invasions by the IMO Globallast Programme, available at <http://globallast.imo.org/poster4_english.pdf>. In respect to AIS introductions by the use of ballast water, see also: J.T. Carlton and J.B. Geller "Ecological Roulette: The Global Transport of Nonindigenous Marine Organisms" (1993) 261 *Science* 78–82; M.G. Garcia-Revillo and C. Fernandez Delgado *La introducción por mar de especies exóticas invasoras a través del agua de lastre de los barcos. El caso de Doñana* (Servicio de Publicaciones de la Universidad de Córdoba, Spain: 2009) 15–47.

[10] See, in this respect: J.M. Drake and D.M. Lodge "Hull fouling is a risk factor for intercontinental species exchange in aquatic ecosystems"(2007) 2(2) *Aquatic Invasions* 121–131; F. Mineur, M.P. Johnson, C.A. Maggs and H. Stegenga "Hull fouling on commercial ships as a vector of macroalgal introduction" (2007) 151(4) *Marine Biology* 1299–1307.

nificant number of vessels (of all types) making long-range displacements every day in the world, its potential as a pathway for the introduction of AIS should be also considered as a major one.

Aquaculture of alien species may also become a pathway for the introduction of AIS if such species are voluntarily or involuntarily released into the natural environment. For instance, the Mozambique Tilapia (*Oreochomis mossambicus*), a very popular fish in aquaculture, is listed among the 100 of the World's Worst Invasive Alien Species.[11] This exotic and invasive species has spread into the ecosystems worldwide due to its release from aquaculture farms.[12] Aquaculture has also served as a method for involuntary introduction of AIS that attach themselves to traded species. This is the case for the *Crepidula fornicata*, a mollusk from the Atlantic Coast of North America which was introduced into different points of the European coasts, from Sweden to the Mediterranean, causing harm particularly to French oysters and scallops. Similarly, fishing activity in itself may serve as a pathway for introduction of AIS, for example when exotic species are used

[11] S. Lowe, M. Browne, S. Boudjelas, M. de Poorter *100 of the World's Worst Invasive Alien Species A selection from the Global Invasive Species Database* (ISSG: 2000), updated version available at:www.issg.org/booklet.pdf>.

[12] See R. Naylor, S.L. Williams and D.R. Strong "Aquaculture, a Gateway for Exotic Species" (2001) 294(5547) *Science* 1655-1656; W.N. Courtenay and J.D. Williams "Dispersal of Exotic Species from Aquaculture Sources, with Emphasis on Freshwaters Fishes" in A. Rosenfield and R. Mann (eds) *Dispersal of Living Organisms into Aquatic Ecosystems* (Maryland Sea Grant College, US:1992); and the Global Invasive Species Database at <http://www.issg.org/database/species/ecology.asp?si=131>. See also, in relation to other species: Shine, Williams and Gündling, note 1 at 6; *Workshop Monographs No. 32 Impact of mariculture on coastal ecosystems* (CIESM, Monaco:2007); and M.H. Davis and M.E. Davis "First record of *Styela clava* (Tunicata, Ascidiacea) in the Mediterranean region" (2008) 3(2) *Aquatic Invasions* 125-132 at 128.

as live bait or when introduced to enlarge populations in a particular area in which native species have decreased.[13]

Likewise, marine scientific research activities and aquariums, or similar natural or scientific facilities may become pathways for unintentional introduction. This was the case with the so-called "killer algae" *Caulerpa Taxifolia*, which was suspected to have been involuntarily released from the tanks of the Oceanographic Museum in Monaco during the 1980s and spread rapidly in the South Coast of France and other areas of the Mediterranean Sea, in turn destroying the local algae *Posidonia*.[14] A similar effect may occur when foreign species are introduced as pets or for ornamental purposes.[15]

The mixing of waters that were previously separate has also caused the introduction of AIS. One of the most studied pathways is displacement of species through the creation of international channels. The best known case is that of the *Lessepsian* migration, which is the movement of marine organisms through the Suez Canal. Since its opening in 1869, the Suez Canal has served as the pathway for an endless number of animal and plants introductions between the Red Sea and the Mediterranean Sea.[16]

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[13] Shine, Williams and Gündling, note 1 at 5-6.

[14] See "Dossier: le point sur l'expansion de l'algue *caulerpa taxifolia* en Méditerranée" *MedOndes* printemps 1997 at 11-13; B.X. Semmens, E.R. Buhle, A.K. Salomon and C.V. Pattengill-Semmens "A hotspot of non-native marine fishes: evidence for the aquarium trade as an invasion pathway" (2004) 266 *Marine Ecology Progress Series* 239-244.

[15] Shine, Williams and Gündling, note 1 at 6. See also E.R. Larson and J.D. Olden "Do Schools and golf courses represent emerging pathways for crayfish invasions?" (2008) 3(4) *Aquatic Invasions* 465-468.

[16] See: J. Godeaux (ed) *A propos des migrations lessepsiennes (Numéro spécial 7, Bulletin de l'Institut océanographique)* (Musée océanographique, Monaco: 1990); P. Lasapidis, P. Peristeraki, G. Tserpes and A. Magoulas "A new record of the Lessepsian invasive fish *Etrumeus teres* (Osteichthyes: Clupeidae) in the Mediterranean Sea (Aegean, Greece)" (2007) 2(2) *Aquatic Invasions* 152-154; Demetropoulos, note 2.

This is not the only case of such phenomena.[17]

One of the most serious threats that amplifies the effects of AIS is climate change.[18] To underline one significant consequence of climate change, the expansion of warmer waters is causing, and will continue to further cause, the spread of warm water species to zones currently populated by cold water species. Not only could this bring about a significant reduction of the natural habitat of cold water marine species, but it also creates undesired interactions with species from warmer habitats and increases the risk of AIS introductions. This phenomenon is particularly harmful for polar species. In particular, with the loss of the natural protection barriers offered by ice in the polar regions, the opening of new routes for navigation and other human activities both on the seabed and along the surface of the sea would also bring with it new threats to the marine ecosystem and further AIS introductions.

Lastly, in recent times other forms of human activities are becoming subjects of concern for the introduction of AIS. In this respect, humanitarian activities such as humanitarian aid operations introduce products for supplying population or armed forces through which AIS may be introduced to the natural environment. A further example is the impact that tourism may have on the natural ecosystem of Antarctica.

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[17] See, *inter alia*, S. Gollasch and S. Nehring "National checklist for aquatic alien species in Germany" (2006) 1(4) *Aquatic Invasions* 254–269, in which Ponto-Caspian species invasions to German rivers as well as displacements between the Baltic and the North Sea via the Kiel Channel are analyzed.

[18] See, in this respect: S.J. Hawkins *et al.* "Conserving Biodiversity of Seas and Coasts in a Rapidly Changing World" (2007) 14 *Biologia Marina Mediterranea (Atti XXXVIII Congresso SIBM)* 3–19.

International Legal Regime

Conventional Law[19]

At the global level, only one international treaty has been approved for combating a specific pattern for the introduction of AIS to date. Nevertheless, there are a number of global and regional treaties not specifically focused on AIS but contain one or several provisions regulating aspects of this serious problem. Finally, AIS may qualify as pests or noxious agents, and can fall within the ambit of international and regional treaties that contain provisions dealing with such organisms or substances.

Treaties Dealing Specifically With Alien Invasive Species

To date, only one international treaty specifically focused on alien invasive species has been adopted at a global level: the Ballast Water Convention[20] concluded under the *aegis* of the IMO in 2004. The other patterns for introduction of AIS have not received similar attention or regulation. Despite being a major vector, there is no specific instrument on hull fouling. Paradoxically, the Anti-fouling Convention,[21] also concluded under the auspices of IMO – on 5 October 2001 and in force since 17 September 2008 – focuses not on AIS but on the use of paints with noxious effects on

[19] To date, there have been several attempts at listing the international treaties that deal with AIS. The most complete one, in my view, has been carried out by Shine, Williams and Gündling (note 1) for the IUCN. There is also a remarkable effort to make a compilation of relevant instruments at the NOBANIS site (International Legal Instruments <www.nobanis.org>. Another useful tool is the IUCN legal database TEMATEA <www.tematea.org>.

[20] International Convention for the Control and Management of Ships' Ballast Water and Sediments of13 February 2004 (IMO Doc. BWM/CONF/36).

[21] International Convention on the Control of Harmful Anti-fouling Systems on Ships of 5 October 2001 (IMO Doc. AFS/CONF/26).

marine environment.[22] Accordingly, protection against AIS ensured by hull fouling remains dependent on national legislation and private sector regulation, to whom combating hull fouling is convenient for economic reasons. The remaining patterns of introduction have not been dealt with by a specific international treaty, although there are treaties of a more general character that include some provisions addressing AIS.

Ballast Water Convention[23]

The only pathway that has received specific attention by means of an international global treaty is the introduction of AIS by ballast water and sediments. Under the *aegis* of IMO, at an international conference held in London in 2004, states adopted the Ballast Water Convention on 13 February 2004. The Ballast Water Convention had not yet entered into force at the time of writing. The Convention will enter into force 12 months after formal consent

[22] The Convention is mainly focused on combating the use of organotin compounds which act as biocides in anti-fouling systems, particularly on ships of 400 gross tonnage and above, and ships 24 meters or more in length, both engaged in international voyages.

[23] On the ballast water problem, see, *inter alia*, M.L. McConnell *Globallast Legislative Review-Final Report* (IMO, London: 2002); M.H. Fonseca de Soza Rolim *The International Law on Ballast Water. Preventing Biopollution* (Nijhoff, Leiden, Boston: 2008); L. de La Fayette 'The Marine Environment Protection Committee: The Conjunction of the Law of the Sea and International Environmental Law' (2001) 16(2) *IJMCL* 155–238; M. Tsimplis 'Alien Species Stay Home: The International Convention for the Control and Management of Ships' Ballast Water and Sediments 2004' (2004) 19(4) *International Journal of Marine and Coastal Law* 411–482; J. Firestone and J.J. Corbett 'Coastal and Port Environments: International Legal and Policy Responses to Reduce Ballast Water Introductions of Potentially Invasive Species' (2005) 36(3) *Ocean Development and International Law* 291–316; and D. Vidas and M.M. Kostelac "Ballast Water and Alien Species: Regulating Global Transfers and Regional Consequences" in D. Vidas and P.J. Schei (eds.) *The World Ocean in Globalisation* (Nijhoff, Leiden, Boston: 2011) 371–392.

by 30 states, the combined fleet of which constitutes not less than 35 % of the gross tonnage of the world's merchant shipping.[24] As of December 2014, 43 states had consented to be bound by this Convention, representing 32.54 % of the world's gross tonnage.

In my opinion, the justifications for an international treaty of this kind are apparent in the combination of factors raised in its preamble. First, the undeniable and serious damage that "the transfer of [h]armful [a]quatic [o]rganisms and [p]athogens" as a result of "the uncontrolled discharge of [b]allast [w]ater and [s]ediments from ships" is causing "to the environment, human health, property and resources". Second, the need to "avoid unwanted side-effects" caused by the control and management of ships' ballast water and sediments. Although it is not explained by the Preamble, in my view these two factors act in two directions: on the one hand, they act on the safety and operation of the vessel; and on the other hand, they act on costs both of the navigation itself and of the adoption of such control and management measures. Finally, the recognition that neither the "individual action" taken by "several States" in respect to vessels "entering their ports", by its very nature discretional and heterogeneous, nor the resolutions adopted by the IMO Assembly in 1993[25] and 1997,[26] which are non-binding in nature, are sufficient tools for tackling the problem compared to "action based on globally applicable regulations together with guidelines for their effective implementation and uniform interpretation" as introduced "by the conclusion of an [specific] international convention".[27]

24 Ballast Water Convention, art. 18.

25 Res.A.774(18) of 4 November 1993.

26 Res.A.868(20) of 20 November 1997, revoking Res.774(18).

27 Ballast Water Convention, Preamble.

Technically inspired by MARPOL 73/78[28], the Ballast Water Convention is composed of 22 articles and an Annex containing "Regulations for the Control and Management of Ships' Ballast Water and Sediments". It is open to the participation of any state.[29] Materially speaking, the Convention utilizes a broad definition of "ship" to include "a vessel of any type whatsoever operating in the aquatic environment and includes submersibles, floating craft, floating platforms, FSUs (Floating Storage Units) and FPSOs (Floating Production Storage and Offloading Units).[30] The Convention applies both "to ships entitled to fly the flag of a Party" and "ships not entitled to fly the flag of a Party but which operate under the authority of a Party".[31] Even ships of non-Parties to the Convention will be subject of its requirements "as may be necessary to ensure that no more favorable treatment is given to such ships".[32] In fact, besides ships that do not pose a real danger of transferring alien invasive species,[33] the only exception is for State vessels to a certain degree. In this respect,

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28 International Convention for the Prevention of Pollution from Ships, London of 2 November 1973 (as modified by the 1978 Protocol (London, 1 June 1978) and the 1997 Protocol (London, 26 September 1997) and as regularly amended). Originally, the text that later became the Ballast Water Convention was intended to be an addition to MARPOL 73/78, either as an Annex (Res. MEPC.50(31) of 4 July 1991, Res.A.774(18) and Res.A.868(20)) or as an amendment to one of its Annexes (MEPC/IMO 43/4/1 of 22 February 1999, as quoted by Fonseca, note 23 at 97) but most of delegations at the MEPC preferred to give the issue separate treatment (see: de La Fayette, note 23). The inspiration (and imitation) of MARPOL 73/78 in Ballast Water Convention has not always been fortunate. See, in this respect, M.G. Garcia--Revillo 'Les espèces exotiques envahissantes et le droit de la mer. Entre la protection du milieu marin et les droits à la navigation' (2008) XII *Annuaire du Droit de la mer* 163-207, 175ss.

29 Ballast Water Convention, art. 17.

30 Ibid., art. 1(12); c.f. art. 2(4) of MARPOL 73/78.

31 Ibid., art. 3(1).

32 Ibid., art. 3(3).

33 Ibid., art. 3(2)(a)-(d).

while the Ballast Water Convention does not apply to "any warship, naval auxiliary or other ship owned or operated by a State and used, for the time being, only on government non-commercial service", states parties are required to adopt "appropriate measures [...] that such ships act in a manner consistent, so far as is reasonable and practicable, with this Convention".[34]

The Ballast Water Convention establishes a set of provisions aimed at tackling the serious problems posed by AIS introductions.[35] In this regard, the main contribution of the Convention is the inclusion of the control and management of ballast water in navigation matters, as it was done previously for example, in their respective times, with rules concerning safety and security. To this

34 Ibid., art. 3(2)(e); c.f. art. 3 of MARPOL 73/78. The Ballast Water Convention applies even to "pleasure craft used solely for recreation or competition or craft used primarily for search and rescue, less than 50 meters in length overall, and with a maximum Ballast Water capacity of 8 cubic meters". In this case, the "equivalent compliance with [the] Annex [of the Convention] shall be determined by the Administration taking into account Guidelines developed by the [International Maritime] Organization" (Annex, reg. A-5; see, for a definition of "Administration", art. 1(1)).

35 The Ballast Water Convention affirms, in a somehow enigmatic way, that "[n]othing in this Convention shall prejudice the rights and obligations of any State under customary international law as reflected in the United Nations Convention on the Law of the Sea" (art. 16). In my view, it carries with it a significant amount of legal uncertainty by subordinating the content of this treaty to norms whose determination is not always easy. In this respect, the text of art. 16 establishes a distinction (without a clear reason) between customary international law as reflected in the LOS Convention, to which the Ballast Water Convention is subordinated, and customary international law not reflected in the treaty, in respect to which the Ballast Water Convention says nothing. Furthermore, art. 16, whose heading is none other than "Relationship to International Law and Other Agreements", says nothing as regards its relationship with other international treaties. Nothing is said as regards its relation with the LOS Convention or other international treaties. This uncertainty is also perceptible, in my view, in reg. C-1.3.3 of the Annex ("A Party or Parties intending to introduce additional measures in accordance with paragraph 1 shall (...) to the extent required by customary international law as reflected in the United Nations Convention on the Law of the Sea, as appropriate, obtain the approval of the Organization").

end, the Convention takes a practical approach, by aiming to "ensure that Ballast Water Management practices used to comply with this Convention do not cause greater harm than they prevent (...)".[36]

As a starting point, to implement a control system, the Convention requires the documentation of the activities related to ballast water. According to its Annex, "[e]ach ship shall have on board a Ballast Water record book that may be an electronic record system, or that may be integrated into another record book or system". In the record book "each operation concerning Ballast Water shall be fully recorded without delay".[37] On the other hand, as regards management, the Convention establishes in general that:

> each ship shall have on board and implement a Ballast Water Management plan. Such a plan shall be approved by the Administration taking into account [Ballast Water] Guidelines[38] developed by the [International Maritime] Organization. The Ballast Water Management plan shall be specific to each ship.[39]

Moreover, depending on both the ballast water capacity of the ship and the date on which it was built, regulation B-3 of the

[36] Ballast Water Convention, art. 2(7).

[37] Ballast Water Convention, Annex, regs. B-2.1 and B-2.5.

[38] The Guidelines currently in force are the 'Guidelines for the Control and Management of Ships' Ballast Water to Minimize the Transfer of Harmful Aquatic Organisms and Pathogens' adopted by the IMO Assembly in Resolution A.868(20) of 27 November 1997.

[39] Ballast Water Convention, Annex, reg. B-1. In addition, "ships of 400 gross tonnage and above to which this Convention applies, excluding floating platforms, FSUs and FPSOs, shall be subject to" several surveys for verifying that the Ballast Water Management plan as well as any associated structure, equipment, systems, fitting, arrangements and material or processes comply fully with the requirements of the Convention. Such compliance shall be credited by the issuance of a Certificate (Annex, reg. E-1).

Convention establishes an agenda for the progressive implementation of the two main management systems:

1. The Ballast Water Exchange Standard,[40] with an efficiency of at least 95 percent (whenever possible, to be carried out at least 200 nautical miles from the nearest land and in water at least 200 meters in depth, taking into account the Ballast Water Guidelines developed by IMO)[41].
2. The Ballast Water Performance Standard.[42] This refers to the management of ballast water on board by applying

[40] Ballast Water Convention, Annex, reg. D-1.

[41] Ibid., Annex, reg. B-4, para. 1.1. Reg. B-4(1)(2) stipulates

> "in cases where the ship is unable to conduct Ballast Water exchange in accordance with paragraph 1.1, such Ballast Water exchange shall be conducted taking into account the Guidelines described in paragraph 1.1 and as far from the nearest land as possible, and in all cases at least 50 nautical miles from the nearest land and in water at least 200 meters in depth".

Nevertheless, the remaining paragraphs of Reg. B-4 allow exceptions to an extent that somewhat denaturalizes the possibilities of this rule. These paras. stipulate:

> "2. In sea areas where the distance from the nearest land or the depth does not meet the parameters described in paragraph 1.1 or 1.2, the port State may designate areas, in consultation with adjacent or other States, as appropriate, where a ship may conduct Ballast Water exchange, taking into account the Guidelines described in paragraph 1.1;
> 3. A ship shall not be required to deviate from its intended voyage, or delay the voyage, in order to comply with any particular requirement of paragraph 1;
> 4. A ship conducting Ballast Water exchange shall not be required to comply with paragraphs 1 or 2, as appropriate, if the master reasonably decides that such exchange would threaten the safety or stability of the ship, its crew, or its passengers because of adverse weather, ship design or stress, equipment failure, or any other extraordinary condition;
> 5. When a ship is required to conduct Ballast Water exchange and does not do so in accordance with this regulation, the reasons shall be entered in the Ballast Water record book".

[42] Ballast Water Convention, Annex, reg. D-2.

> management systems approved by the Administration taking into account the Ballast Water Guidelines developed by the IMO or directly approved by this international organization when those systems make use of Active Substances[43] (or preparations containing them).[44]

On the other hand, the management standards in regulations D-1 and D-2 may be dispensed with by discharging ballast water at a reception facility designed in accordance with IMO guidelines. Furthermore, the management onboard the vessel can also be compatible with other management methods provided that such methods ensure at least the same level of protection to the environment, human health, property or resources, and are approved in principle by the IMO's Marine Environment Protection Committee.[45]

Finally, the above does not prevent states parties from taking, individually or jointly with other parties, more stringent measures than those established by the Ballast Water Convention with respect to the prevention, reduction or elimination of the transfer of harmful aquatic organisms and pathogens through the control and management of ships ballast water and sediments, as long as such measures are consistent with international law.[46]

To ensure the efficiency of ships' management systems, the Convention establishes a set of regulations, ranging from the inspection of ships to determine whether a ship is in compliance with the Convention as regards its certificate and other documents, to the application of sanctions, warnings, detention or

[43] According to reg. A-1(7), ""Active Substance" means a substance or organism, including a virus or a fungus, that has a general or specific action on or against Harmful Aquatic Organisms and Pathogens".

[44] Ballast Water Convention, Annex, reg. D-3.

[45] Ibid., Annex, reg. B-3.6-3.7.

[46] Ibid., art. 2(3).

exclusion of non-compliant vessels.[47] The distribution of competences between the relevant states (flag, port, coastal, etc.) for ensuring the application of these measures is regulated through provisions heavily inspired by those of the MARPOL 73/78. In my view, this transposition, sometimes literal, was unfortunate.[48]

Although this important convention is not yet in force, nothing prevents IMO member states from applying the Ballast Water Guidelines adopted by this international organization on this matter. In this respect, Resolution A.868(20) of the IMO Assembly adopted the Ballast Water Guidelines, which contain several measures that are also included in the Ballast Water Convention, including *inter alia*, the requirements for a ballast water management plan and the use of ballast water reception facilities. The Ballast Water Guidelines are non-binding and the wording adopted by the IMO within the instrument is consistently recommendatory in nature.[49] However, its importance must not be ignored as the Ballast Water Guidelines constitute both an exhortation by the plenary organ of the global international intergovernmental organization of reference in this subject, to its states members, for complying them and, simultaneously, a basis for the legitimacy of measures adopted by those states. Therefore, states members of IMO are invited to apply without delay measures that many of them will be obliged to implement once the Ballast Water Convention enters into force.

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47 Ibid., arts. 8-10.

48 Due to space limit, it is not possible to analyze this problem here. See in this respect: Garcia-Revillo, note 27.

49 See, for example, Chapters 3 and 4.3: "In order that the Guidelines may be implemented in a standard and uniform manner, all Member State Governments, ship operators, other appropriate authorities and interested parties are requested to apply these Guidelines." In the Spanish version, the verb is even softer: "se ruega".

Treaties containing Provisions that Deal Specifically with AIS

There are a number of international treaties that contain provisions dealing specifically with AIS. Two major global conventions containing provisions of this type are the CBD[50] and the LOS Convention.[51] Other significant treaties, both at a global and at a regional level, will also be mentioned in this section.

CBD

As a general rule, the 193 states (plus the European Union) that are parties to the CBD "[shall] as far as possible and as appropriate (...) prevent the introduction of, control or eradicate those alien species which threaten ecosystems, habitats or species".[52] To this end, the Conference of Parties (COP) to this treaty has taken a number of significant decisions relating to AIS. In fact, since 2000 the COP has consistently adopted decisions to deal with various aspects of this issue for both marine and terrestrial environments.[53]

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50 Convention on Biological Diversity of 22 May 1992 (1760 UNTS 143, available at <www.cbd.int>).

51 United Nations Convention on the Law of the Sea of 10 December 1982 (1833 UNTS 3). Note 33.

52 CBD, art. 8(h).

53 See: COP 4 (Bratislava, 1998) Decision IV/5 (Conservation and sustainable use of marine and coastal biological diversity, including a programme of work) as mentioned in the Preamble of the Ballast Water Convention; COP 5 (Nairobi, 2000) Decision V/8, COP 6 (The Hague, 2002) Decision VI/23 and COP 7 (Kuala Lumpur, 2004) Decision VII/13 (the three on the subject of Alien species that threaten ecosystems, habitats or species); COP 8 (Curitiba, 2006) Decision VIII/27 (Alien species that threaten ecosystems, habitats or species: further consideration on gaps and inconsistencies in the international regulatory framework); COP 9 (Bonn, 2008) Decision IX/4 (In-depth review of ongoing work on alien species that threaten ecosystems, habitats or species); COP 10 (Nagoya, 2010) Decision X/38 (Invasive alien species); COP 11 (Hyderabad, 2012) Decision XI/28 (Invasive alien species) and COP 12 (Pyeongchang, 2014) Decision XII/16 (Invasive alien species: management of

LOS Convention

Relating in particular to the oceans, the 166 states and the European Union that are parties to the LOS Convention are obliged not only to "protect and preserve the marine environment" in general terms[54] but also to act against AIS in particular. According to article 196 (entitled "Use of technologies or introduction of alien or new species"):

1. States shall take all measures necessary to prevent, reduce and control pollution of the marine environment resulting from the use of technologies under their jurisdiction or control, or the intentional or accidental introduction of species, alien or new, to a particular part of the marine environment, which may cause significant and harmful changes thereto.
2. This article does not affect the application of this Convention regarding the prevention, reduction and control of pollution of the marine environment.

In examining the first paragraph, one may wonder whether the introduction of species (alien or new) might be considered as a form of pollution under the LOS Convention. That is to say, one may interpret the wording of article 196(1) in the following manner:

risks associated with introduction of alien species as pets, aquarium and terrarium species, and as live bait and live food, and related issues). In addition, in 2009 the International Day for Biological Diversity was devoted to Invasive Alien Species.

[54] LOS Convention, art. 192.

A. States shall take all measures necessary to prevent, reduce and control *pollution* of the marine environment resulting from:

   a. the use of technologies under their jurisdiction or control, or

   b. the intentional or accidental introduction of species, alien or new, to a particular part of the marine environment, which may cause significant and harmful changes thereto.

Or, on the contrary:

B. States shall take all measures necessary to prevent, reduce and control

   a. *pollution* of the marine environment resulting from the use of technologies under their jurisdiction or control, or
   b. the intentional or accidental introduction of species, alien or new, to a particular part of the marine environment, which may cause significant and harmful changes thereto.

In the first case (A), the introduction of 'alien or new species' (in LOS Convention terminology) might be considered as a form of pollution. If so, provisions of LOS Convention Part XII regarding pollution to the marine environment (including articles 211 and 218, among the most relevant) would be applicable. On the other hand, in the second formulation (B), as the introduction of alien and new species would not be categorized as a form of pollution, the provisions of Part XII would not be directly applicable.

The definition of "pollution" in article 1(1)(4) of the LOS Convention appears to suggest that the introduction of alien species is not a form of pollution. This provision stipulates that:

> "pollution of the marine environment" means the introduction by man, directly or indirectly, of substances or energy into the marine environment, including estuaries, which results or is likely to result in such deleterious effects as harm to living resources and marine life, hazards to human health, hindrance to marine activities, including fishing and other legitimate uses of the sea, impairment of quality for use of sea water and reduction of amenities.

Assuming that alien species may not be considered as "energy", it seems that the term "substances" does not encompass either things that are plants or animals or, at least, some form of living organism.[55] This interpretation would be more coherent with article 196(2) and with the legislative history of this paragraph.[56] It appears, therefore, that the LOS Convention has es-

[55] The term "living organisms" is used by LOS Convention art. 77(4).

[56] M.H. Nordquist (ed. in chief), S. Rosenne and A. Yankov (vol. eds.) *United Nations Convention on the Law of the Sea 1982, A Commentary Volume IV* (Martinus Nijhoff: 1990), para. 196. In a different view, Fonseca finds that "the term pollution of the marine environment adopted in [the LOS Convention] comprises the alien species and pathogens transferred from one marine ecosystem to another through ballast water and sediments up take and discharge": note 23 at 28. See also, among those that consider the introduction of AIS as a form or pollution under art. 196 of the LOS Convention: Tsimplis, note 23 at 414. Conversely, Firestone and Corbett (note 23 at 302–304 and footnote 134) analyze some of the consequences that might arise as a result of considering introductions of AIS as pollution within the meaning of art. 1(1)(4) of the LOS Convention. In an earlier opinion, Molenaar affirmed that "[t]he expression 'substances' would also comprise the introduction of 'alien organisms' into the marine environment caused by ships deballasting" (E.J. Molenaar, *Coastal State Jurisdiction Over Vessel-Source Pollution* (Kluwer, The Hague: 1998), 17). Nevertheless,

tablished a relatively narrow formulation for regulating the introduction of AIS.

Nevertheless, the fact that the introduction of AIS is not a form of pollution under the LOS Convention does not necessarily affect the operation of other relevant international instruments. Nor does it exempt states from their duty to protect and preserve the marine environment established in article 192, as well as other obligations set out in Part XII of the LOS Convention that are not limited to marine pollution. For instance, among the latter, article 197 provides:

> States shall cooperate on a global basis and, as appropriate, on a regional basis, directly or through competent international organizations, in formulating and elaborating international rules, standards and recommended practicesand procedures consistent with this Convention, for the protection and preservation of the marine environment, taking into account characteristic regional features.

This reference to the cooperation of states through competent international organizations provides some weight to the IMO Ballast Water Guidelines adopted in Resolution A.868(20). However, the fact that the Ballast Water Guidelines fall within the scope of this provision does not confer them with a juridical nature that they lack. Firstly, as discussed above, the Guidelines are not binding by nature; they are just recommendatory. Secondly, the LOS Convention merely compels states to cooperate in formulating and elaborating rules, standards, practices and procedures, not to create legally binding rules, standards, practices and procedures.

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his opinion is under review. See, in this respect: E.J. Molenaar, "Chapter 14: Shipping – Vessel-Source Pollution", in R. Warner and S. Kaye (eds), *Handbook on Maritime Regulation and Enforcement* (Routledge: forthcoming in 2015) (manuscript provided by Molenaar to the author).

Other Relevant Treaties

In addition to the two major conventions described above, there are a number of notable international treaties containing provisions that deal with AIS at a global or at a regional level.
At a global level:

- Convention on the Conservation of Migratory Species;[57]
- Convention on the Law of Non-navigational Uses of International Watercourses;[58]
- Convention on the Conservation of Antarctic Marine Living Resources;[59] and
- Protocol on Environmental Protection to the Antarctic Treaty.[60]

At a regional level:[61]

- North American Agreement on Environmental Cooperation;[62]
- Protocol Concerning Specially Protected Areas and Wildlife to the Convention for the Protection and Development of the Marine Environment of the Wider Caribbean Region;[63]

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57 Convention on the Conservation of Migratory Species of 23 June 1979 (1651 UNTS 355). See arts. III(4)(c) and V(5)(e).

58 Convention on the Law of Non-navigational Uses of International Watercourses of 21 May 1997 (UNGA Res. 51/229). See art. 22.

59 Convention on the Conservation of Antarctic Marine Living Resources of 20 May 1980 (1329 UNTS 47). See art. II(3)(c).

60 Protocol on Environmental Protection to the Antarctic Treaty of 4 October 1991. See art. 4.1 of Annex II.

61 This list does not intend to be exhaustive.

62 North American Agreement on Environmental Cooperation of 14 September 1993 (32 ILM 1482). See art.10.

63 Protocol Concerning Specially Protected Areas and Wildlife to the Convention for the Protection and Development of the Marine Environment of the Wider Caribbean Region of 18 January 1990 (available at <www.cep.unep.org>). See arts. 5(2)(f) and 12.

- Convention for the Conservation of the Biodiversity and the Protection of Wilderness Areas in Central America;[64]
- Protocol for the Conservation and Management of Protected Marine and Coastal Areas of the South-East Pacific;[65]
- ASEAN Agreement on the Conservation of Nature and Natural Resources;[66]
- Agreement on the Conservation of African-Eurasian Migratory Waterbirds;[67]
- African Convention on the Conservation of Nature and Natural Resources;[68]
- Protocol concerning Protected Areas and Wild Fauna and Flora in the Eastern African Region;[69]
- Protocol concerning Mediterranean Specially Protected Areas;[70] and

64 Convention for the Conservation of the Biodiversity and the Protection of Wilderness Areas in Central America of 5 June 1992 (available at <www.ecolex.org>). See art. 24.

65 Protocol for the Conservation and Management of Protected Marine and Coastal Areas of the South-East Pacific of 21 September 1989 (available at <www.ecolex.org>). See art. VII(2)(c).

66 Agreement on the Conservation of Nature and Natural Resources of 9 July 1985 (available at <www.ecolex.org>). See arts. 3(3) and 13(5)(a).

67 Agreement on the Conservation of African-Eurasian Migratory Waterbirds of 16 June 1995 (available at <www.unep-aewa.org>). See art. II.

68 African Convention on the Conservation of Nature and Natural Resources of 15 September 1968 (1976 UNTS 4). See arts III(4)(a)(ii)-(b).

69 Protocol concerning Protected Areas and Wild Fauna and Flora in the Eastern African Region of 21 June 1985 (available at <www.unep.org>). See arts. 7 and 10(f).

70 Protocol concerning Mediterranean Specially Protected Areas of 3 April 1982 (as revised by Protocol Concerning Specially Protected Areas and Biological Diversity in the Mediterranean of 10 June 1995; OJ L322/3). See arts. 6(d) and 13.

- Convention on the Conservation of European Wildlife and Natural Habitats, done under the aegis of the Council of Europe.[71]

International Treaties that Deal with AIS Indirectly

The international regime regarding AIS and the law of the sea is further supplemented by instruments that regulate AIS insofar as the species fall within relevant definitions as pests, or dangerous to habitats, or as threatened or endangered species to be protected from international trade.

At a global level, these treaties are:

- Agreement Concerning Co-Operation in the Quarantine of Plants and their Protection Against Pests and Diseases;[72]
- WTO Agreement on the Application of Sanitary and Phytosanitary Measures;[73]
- International Plant Protection Convention, done under the *aegis* of FAO;[74]
- International Health Regulations, adopted within the World Health Organization;[75]

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71 Convention on the Conservation of European Wildlife and Natural Habitats of 19 September 1979 (ETS No. 104). See art.11(2)(b). In parallel to the activities of the Council of Europe in this field, the involvement of the European Union by means of secondary law should also be underlined. This work will be the subject of a future paper.

72 Agreement Concerning Co-Operation in the Quarantine of Plants and their Protection Against Pests and Diseases of 14 December 1959 (1 SMTE 153). See art. 1.

73 WTO Agreement on the Application of Sanitary and Phytosanitary Measures of 15 April 1994 (1867 UNTS 493). See art. 2 and Annex A.

74 International Plant Protection Convention of 6 December 1951 (150 UNTS 67; as revised, consolidated version available at <www.ippc.int>). See arts. IV(2)(c) and VII.

75 International Health Regulations of 23 May 2005 (available at <http://www.who.int>). See art. 2 in relation to Annexes 1(B) and 8.

- Biological Weapons Convention;[76]
- Cartagena Protocol on Biosafety to the Convention on Biological Diversity;[77]
- Convention on International Trade in Endangered Species of Wild Fauna and Flora;[78]
- Convention on Wetlands of International Importance especially as Waterfowl Habitat;[79] and
- Convention Concerning the Protection of the World Cultural and Natural Heritage, done under the *aegis* of UNESCO.[80]

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76 Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on their Destruction of 10 April 1972 (1015 UNTS 163). See art. 1.

77 Cartagena Protocol on Biosafety to the Convention on Biological Diversity of 29 January 2000 (2226 UNTS 208). Alien by its very nature, genetically modified organisms may also become invasive in the site where they are introduced. Although most are land organisms, their use as feed for aquaculture and the fact that they are mostly transported by sea make this an issue of significance in dealing with AIS and the law of the sea. In respect to the Cartagena Protocol, see articles 1, 6.1, 7 (in relation to article 11) and 2.3.

78 Convention on International Trade in Endangered Species of Wild Fauna and Flora of 3 March 1973 (993 UNTS 243). See: J. Barzdo 'CITES and invasive alien species' (speech to the *European Conference on Alien Invasive Species*, Madrid: 15–16 January 2008). See also, among other CITES activities, Conf. 13.10 (Rev.COP.14) "Trade in alien invasive species".

79 Convention on Wetlands of International Importance especially as Waterfowl Habitat of 2 February 1971 (996 UNTS 245) (Ramsar Convention). The issue of AIS has been a constant issue of concern for the Conference of Parties in the Ramsar Convention. See for example, COP 7, Res.14 (Invasive Species and Wetlands), COP 8, Res. 18 and CoOP 9, Res. 4.

80 Convention Concerning the Protection of the World Cultural and Natural Heritage of 23 November 1972 (1037 UNTS 151). It is also noteworthy the interest of the World Heritage Committee in the impact of this threat on the conservation of Natural Heritage sites. See for example its Decisions 29COM 7A.7 (Djoudj National Bird Sanctuary, Senegal) and 7B.1 (Ngorongoro Conservation Area, Tanzania).

At the regional level, treaties that fall within this category include:

- Agreement for the Establishment of the Near East Plant Protection Organization;[81]
- Plant Protection Agreement for the Asia and Pacific Region;[82]
- Convention for the Establishment of the European and Mediterranean Plant Protection Organization;[83]
- Phyto-Sanitary Convention for Africa;[84] and
- North American Free Trade Agreement.[85]

Customary International Law

Outside of the international treaties examined above, this section considers whether customary international norms apply to regulate matters relating to AIS introduced into the marine environment or transported by sea.

States have the right to protect their environment against any type of harm, including the threats posed by AIS. Generally, international law recognizes that states possess permanent sovereignty over their natural resources not only for the purpose of exploiting them but also to preserve and protect the environ-

[81] Agreement for the Establishment of the Near East Plant Protection Organization of 18 February 1993. See art. III.

[82] Plant Protection Agreement for the Asia and Pacific Region of 26 November 1955 (247 UNTS 400, as amended). See art. III .

[83] Convention for the Establishment of the European and Mediterranean Plant Protection Organization of 18 April 1951 (UKTS 44, as amended). Within its framework, a List of Invasive Alien Plants has been developed, available at <www.eppo.int/INVASIVE_PLANTS/ias_plants.htm>.

[84] Phyto-Sanitary Convention for Africa of 13 September 1967 (available at <www.au.int>). See art. III.

[85] North American Free Trade Agreement of 17 December 1992 (32 ILM 289). See section B, arts. 709-723.

ment.[86] Furthermore, coastal states have sovereignty over their territorial sea, internal waters and ports,[87] and enjoy sovereign rights over resources located in the exclusive economic zone.[88] In my opinion, the sovereignty and sovereign rights that form part of international customary law not only empower but also oblige states to adopt appropriate measures for the protection of the environment against the introduction of AIS. The question then arises as to the particular content and scope of these norms as regards specifically AIS. Are states authorized to adopt rules against the introduction of AIS that also impact on traditional and well-established customary rights and freedoms such as the freedom of navigation or the right of innocent passage? What about the jurisdiction and rights of flag states as recognized in several international treaties? In my view, with the sole exception of the ballast water regime, no special customary norm has emerged as yet regarding specifically the introduction of AIS into the marine environment or their transport by sea.

In my opinion, a specific customary norm might be emerging in relation to the right of states, in the exercise of their sovereignty over their territory (including ports), internal waters, archipelagic waters and territorial sea to impose certain limitations or restrictions to navigation or the operations associated with navigation for the purpose of preventing harm to the environment caused by AIS introduction by ballast water or its sediments. As regards the material aspects of establishing the emergence of customary international law, there has been constant state practice over the last decades both at the international institutional level and the domestic level. Firstly, the IMO, by way of issuing guidelines such

86 For instance, see art. 3 of the CBD and art. 193 of the LOS Convention.

87 LOS Convention, art.2.

88 Ibid., art. 56.

as those adopted in Resolution A.868(20), recognizes states' right to adopt certain measures in respect to ballast water.[89] Secondly, several States have taken individual action in respect to AIS transported through ships entering their ports, and the right to take individual action is recognized (and assumed) in the preamble of the Ballast Water Convention.[90] To my knowledge, no state has raised any objections to such practice. On the other hand, the *opinio iuris* (the belief that states are empowered by international law to adopt this kind of measures regarding AIS) would result not only from IMO guidelines and the lack of objections by other states but also from the numerous and constant calls states make themselves in the multilateral arena for adopting regulations in this respect. It should be born in mind that several of the above-mentioned global treaties containing provisions regarding AIS such as the CBD and LOS Convention have universal or near-universal participation, strengthening the existence of a universal belief that states have the right to take action to deal with this problem.

Questions remain as to the specific concrete measures that may be taken in reliance on this customary norm, and the scope of the norm. The rights of navigation and the flag State's jurisdiction recognized by customary and treaty law, along with the rights granted under international trade law such as freedom of transit,[91] act as

[89] In particular, according to Chapter 11.2 of the Guidelines: "Member States have the right to manage ballast water by national legislation. However, any ballast discharge restrictions should be notified to the Organization".

[90] Examples include Argentina, Australia, Belgium, Brazil, Canada, Chile, Israel, New Zealand, Portugal and the United States (See McConnell, note 23 at 68); C. Miller, M. Kettunen and C. Shine *Scope Options for EU Action on invasive alien species (IAS), Final Report for the European Commission* (IEEP, Brussels: 2006), p. xxiii. As regards Chinese legislation, see: N. Liu 'Prevention of Invasive Species from Ballast Water' (2013) 28(1) *International Journal of Marine and Coastal Law* 171–187.

[91] See art. V(3) of the 1994 General Agreement on Tariffs and Trade (GATT).

clear limitations to measures states may take unilaterally or multilaterally to regulate ballast water management by foreign vessels. This scenario invites states to take unilateral measures only regarding their ports and sovereign waters (internal waters, archipelagic waters and territorial sea). Nevertheless, regardless of the extent of powers of the state in any maritime zone, any measures adopted for combating the introduction of AIS through ballast water, either at a unilateral, regional or institutional level, should seek a reasonable balance between these rights.

AIS, Law of the Sea and International Responsibility

Compared to the invocation of state responsibility from a breach by a state party to one of the international instruments mentioned above, establishing state responsibility based solely on the damaged caused by the introduction AIS is much more difficult for an injured state. Applying the well-established principle of *alterum non laedere,* only when introductions are the consequence of intentional or, at least, negligent behavior from a state can international responsibility could be established. Hypothetically, situations that may suffice include the introduction of organisms as a biological weapon or the absolute abandonment by a state of its duties regarding the behavior of vessels flying its flag with the consequence of these vessels introducing AIS with complete disregard for the environment of the coastal or port state. However, quantitatively speaking, these situations are less relevant. The vast majority of cases arise from non-intentional introductions (ballast water or hull fouling) or from introductions in which the harmful consequences to the injured state cannot be attributed to the state of origin of the AIS (aquaculture, scientific research, aquariums, pets, etc.). These are largely cases of objective responsibility whose concrete profiles are still under consideration. Nevertheless, as far as international cus-

tomary and/or treaty law might recognize the right of coastal and port states to impose legislative measures (at least in respect of their ports, internal waters, archipelagic waters and territorial sea) in relation to ballast water to protect the marine environment, such port and coastal states could invoke the international responsibility of a flag state for violations of the formers' legislation when such a violation is attributable to the flag state.

Concluding remarks

Introduction of AIS constitutes a serious environmental problem. From the law of the sea perspective, this problem manifests itself in two main ways: on the one hand, introduction of AIS causes serious harm to the marine environment by destroying or degrading ecosystems and endangering local species; on the other hand, the introduction of AIS by sea (including their transportation as cargo) also constitutes a major pathway for the introduction of these species also into the terrestrial and aerial environment. In both cases, the introduction of AIS may pose a risk to human health.

Only one of the main ways of introduction of AIS into the marine environment has received specific treatment in the form of a global treaty: the Ballast Water Convention, which was adopted under the *aegis* of IMO in 2004 and is close to entering into force. Nevertheless, the absence of specific global treaties does not mean an absolute lack of regulation. Although disperse and fragmented, the international conventional regime regarding AIS introduced into the marine environment or transported by sea comprises a number of global and regional treaties with provisions either specifically targeted at AIS (e.g. the CBD and LOS Convention) or at least indirectly dealing with AIS as pests.

Customary international law also offers some answers to the AIS problem, although its relevance is even more limited than

conventional law. In general terms, states have the right (and the obligation) to protect their environment against threats, including AIS. However, the precise scope of this right is difficult to determine, insofar as the rights of coastal and port states have to coexist with other rights and freedoms, such as freedom of navigation, the right of innocent passage and the rights guaranteed in the WTO Agreements. Either way, there might be sufficient state practice and *opinio iuris* for the emergence of a new customary norm conferring states, as a consequence of their sovereignty over their land (including ports), internal waters, archipelagic waters and territorial sea, the right to regulate and impose measures to protect their marine environment against AIS transported by ballast water. How this customary norm could be harmonized with well-established rights such as the freedoms of navigation and commerce remains to be further examined.

Violation of conventional and customary law regarding the introduction of AIS would entail international state responsibility. However, most introductions are non-intentional and, accordingly, fall under the scope of objective responsibility, whose regulation is still in formation.

Protection of marine and land (and aerial) environments against the introduction of AIS transported by sea may lead to negative impacts when measures are adopted individually by states. This undesirable effect is particularly visible in the regulation of ballast water, as disperse national legislation requiring different and frequently incompatible systems may affect the shipping industry, and navigation in general, by imposing a multiplicity of requirements that cannot be simultaneously fulfilled by a single vessel. There is a need to strike a fair balance between the right to protect and the traditional freedoms of navigation, passage and those ensured by international trade law which can only be guaranteed by multilateral and coordinated action.

THE EU REGULATION ON SHIP RECYCLING: INTERACTION AND TENSION BETWEEN DIFFERENT LEGAL REGIMES AT GLOBAL AND REGIONAL LEVELS

Valentina Rossi*

Introduction

European Union (EU) Regulation 1257/2013 on ship recycling entered into force on 30 December 2013 and will be applicable within five years.[1] The Regulation is the only international mandatory instrument currently in force aimed specifically at ship recycling. It aims to contribute to the quick implementation of the legal regime outlined in the Hong Kong Convention,[2] adopted under the auspices of the International Maritime Organization

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[1] EU Regulation no. 1257/2013 of the European Parliament and of the Council on ship recycling and amending Regulation (EC) no.1013/2006 and Directive 2009/16/EC [2013] OJ L 330/1. (Hereafter "the Regulation" or "EU Ship Recycling Regulation"). According to art. 32, many items within the Regulation will not be applicable until various criteria are met.

[2] IMO, Hong Kong International Convention on the Safe and Environmentally Sound Recycling of Ships of 19 May 2009, Doc. SR/CONF/45.

(IMO) in 2009, thus fostering its entry into force at the global level. At the same time, in order to avoid the risk of a duplication of requirements applicable to ships destined to be recycled, the EU Ship Recycling Regulation exempts ships falling under its scope from the provisions of the EU Shipments of Waste Regulation;[3] this choice raises questions with reference to EU's obligations under the Basel Convention.[4]

This paper intends to analyze the new Regulation in the perspective of its interaction with existing international instruments at the global level. The EU legislation on ship recycling is framed by several international instruments concerning mainly two issues, the protection of the marine environment and the transboundary movement of waste. In particular, its capability to promote the ratification of the Hong Kong Convention and hasten its entry into force will be assessed, also taking into consideration that the Regulation provides for some requirements that are stricter than those foreseen by the Convention and that a few of its provisions will also have a binding effect on foreign ships visiting EU ports. On the other hand, possible conflicts with the Basel Convention regime on the control of transboundary movements of hazardous wastes will be examined.

The analysis will move from a brief description of the actual status of ship recycling activities worldwide and of the role that the EU and its member states play in this scenario, in order to contextualize the new EU legislation.

[3] EU Regulation no. 1013/2006 of the European Parliament and of the Council on shipments of waste [2006] OJ L 190/1.

[4] Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal of 22 March 1989 (1673 UNTS 176, as amended; consolidated version available at <www.basel.int>).

Ship Recycling Activities Worldwide and the Role of the EU

Ship recycling is a highly complex and controversial issue. Nowadays, most ship dismantling activities take place in India, Pakistan or Bangladesh,[5] in substandard facilities that lack the technology needed to ensure the safe and environmentally sound management and disposal of hazardous materials contained in ships. Frequently, ships are dismantled directly on beaches (so called 'beaching'), under unacceptable conditions from the point of view of work safety and environmental protection. From a different perspective, ship dismantling represents a sustainable method of disposing of end-of-life vessels; it provides employment opportunities and leads to reuse and recycling of large amounts of valuable resources, playing a vital role in the economy of the major ship breaking nations. In addition, ship recycling is a growing industry[6] and the number of ships sent for dismantling is expected to increase as a result of the global phase-out of single hull tankers[7] and, in general, of stricter international safe-

[5] In 2013, ships dismantled in India, Bangladesh and Pakistan accounted for 59% of the total, by unit, and 70%, by tonnage of metal recycled: Association Robin des Bois, "Ship-breaking: Bulletin of information and analysis on end-of-life ships" (available at <www.robindesbois.org/english/ship-breaking/shipbreaking.html>).

[6] Ibid: According to the available data, the scrapped metal amounted to 1.8 million tons in 2006, 8 million in 2011, 11 million in 2012 and 9 million in 2013; whereas the number of the ships dismantled rose from 293 in 2006 to 1020 in 2011, 1328 in 2012 and 1119 in 2013.

[7] Legal obligations under the amended Annex I of the International Convention for the Prevention of Pollution from Ships of 2 November 1973 (1340 UNTS 61, as amended) (MARPOL 73/78), and under the EU Regulation no. 530/2012 of the European Parliament and of the Council on the accelerated phasing-in of double-hull or equivalent design requirements for single-hull oil tankers [2012] OJ L 172/3. See European Commission, *Oil Tanker Phase Out and the Ship Scrapping Industry*, June 2004. All the official documents and studies of the European Commission on ship recycling mentioned in the present work are available at <http://ec.europa.eu/environment/waste/ships/>.

ty regulations and more stringent inspections in ports.[8] Finally, the ship recycling market is characterized by fierce and unfair competition among the major ship breaking nations, all of them developing countries, which discourages any technical or regulatory improvement.[9] Competitors with higher technical standards, promoting 'green demolition', are actually only able to occupy market niches for special types of ships.[10]

Member states and companies in the EU play a major role in international shipping[11] and they bear a substantial share of responsibility for the ongoing ship recycling practices.[12] Notwithstanding that ensuring that "ships with a strong link to the EU in terms of flag or ownership are dismantled only in safe and environ-

8 Undeniably, port state controls are playing their role in the 'cleansing' of the world fleet; about 60% of the ships dismantled in 2013 had been previously detained in ports worldwide for non-compliance to the international safety regulations. See Association Robin des Bois, note 5.

9 Actually, the decision to sell a vessel and the choice of the dismantling location depend mainly upon the price offered to the ship owner by the facility, which then sells the recycled materials. Substandard facilities, where operating costs are extremely low thanks to inexistent or unenforced labor and environmental standards, can offer better prices for end-of-life vessels, allowing ship owners to maximize their profits. This leads to a 'race to the bottom' among recycling facilities/countries that is difficult to control if legal and financial disincentives are not created.

10 See European Commission, *Impact Assessment accompanying the document Proposal for a regulation of the European Parliament and of the Council on ship recycling*, Doc. SWD(2012)47 final of 23 March 2012 at para. 2.1.

11 Ibid., 10: About 17% of the international merchant fleet tonnage flies EU flags and about 37% of the tonnage belongs to EU owners.

12 In 2013, the percentage of EU vessels beached as opposed to those dismantled in pier-side recycling yards was 64%. NGO Shipbreaking Platform, *Annual Report 2013* (available at <www.shipbreakingplatform.org/platform-news-ngo-shipbreaking-platform-presents-annual-report-2013>) at 7.

mentally sound facilities"[13] is a priority for the EU, in the last few years the European normative framework has proven ineffective in putting an end to the widespread unsustainable ship dismantling practices.

Until the entry into force of the new Regulation, the only applicable legislation was the EU Shipments of Waste Regulation, which has implemented in EU law the Basel Convention as well as its so-called Ban Amendment, even though it has not yet entered into force globally.[14]

Under the Basel Convention (and thereby under the EU Shipments of Waste Regulation), ships containing hazardous materials and wastes have to be considered hazardous waste themselves at the time of their disposal.[15] As a consequence, the export of end-

[13] European Commission, *An EU strategy on better ship dismantling*, Doc. COM(2008)767final of 19 November 2008 at para. 4.

[14] Ban Amendment to the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal of 22 September 1995. Not in force (at 16 February 2015), Doc. UNEP/CHW.3/35. The Ban Amendment, when in force, will introduce in the Basel Convention a new article 4a providing that Parties listed in Annex VII (members of the EU and Organization for Economic Co-operation and Development (OECD) and Liechtenstein) shall prohibit all transboundary movement of hazardous wastes to states not listed in Annex VII. See P. Birnie and A. Boyle *International Law and the Environment* (Oxford University Press, New York: 2002) 428- 438; N. W. van Aelstyn "North-South controversy mounts around the international movement of hazardous waste" (1992) 1 *Review of European Community and International Environmental Law* 340-345; A. Andrews "Beyond the Ban – can the Basel Convention adequately Safeguard the Interests of the World's Poor in the International Trade of Hazardous Waste?" (2009) 5 *Law, Environment and Development Journal* 167-184.

[15] The classification of end-of-life ships as hazardous waste, and their consequent inclusion under the scope of the Basel Convention, has its legal basis in decision VII/26 of the Conference of the Parties (COP) to the Basel Convention, which recognized that "a ship may become a waste as defined in article 2 of the Basel Convention and that at the same time it may be defined as a ship under other international rules": COP to the Basel Convention, Decision VII/26 *Environmentally sound management of ship dismantling*, Doc. UNEP/CHW.7/33 of 25 January 2005 at 63.

of-life ships to developing countries for recycling has to be considered a transboundary movement of hazardous waste and it is subject to strict requirements pursuant to the Basel regime. Precisely, it is only possible in accordance with the prior informed consent procedure, the environmentally sound management principle and the overarching objective of the minimization of transboundary movements of hazardous wastes.[16]

Differently, under the EU Shipments of Waste Regulation, which has provided for the early implementation within the EU of the Basel Ban Amendment, the export of end-of-life ships to developing countries, even for recycling, is entirely prohibited. In principle, all ships flagged to EU member states are supposed to be dismantled within OECD countries only; their export to non-OECD countries for recycling is only possible after pre-cleaning, i.e. the cleaning and removal of hazardous wastes and materials (including fuels and oils).[17] In practice, as per the Basel Convention at the global level, the EU legislation has hardly proven enforceable and the export ban has never worked in the context of

16 See Birnie and Boyle, note 14, 431–434.

17 Nowadays, end-of-life ships are rarely pre-cleaned before their arrival in ship breaking countries despite the fact that both the Indian and Bangladeshi Supreme Courts affirmed that end-of-life vessels should be properly decontaminated of their hazardous substances prior to export for dismantling. The Supreme Court of Bangladesh stressed that this pre-cleaning requirement is in accordance with Bangladesh's domestic legislation as well as its responsibilities as a Party to the Basel Convention: Supreme Court of Bangladesh, High Court Division, *Bangladesh Environmental Lawyers, Association (BELA) v. Ministry of Shipping and Others*, Writ Petition no. 7260 of 2008, Judgment on 5 March 2009. operative portion of order available at <https://www.elaw.org>. On the other hand, ship owners underline that pre-cleaning is costly and raises safety concerns because the resulting 'ship' would have to be towed to its place of recycling: European Commission, *Ship dismantling and pre-cleaning of ships*, June 2007 (available at <http://ec.europa.eu/environment/waste/ships/pdf/ship_dismantling_report.pdf>).

end-of-life ships.[18] The difficulty to determine when a ship becomes waste and the ease of changing flag[19] have been employed by ship owners to circumvent the ban and use more profitable facilities outside OECD countries.

According to the European Commission, the lack of sufficient recycling capacity within OECD, especially for the largest commercial ships, is one of the main reasons leading to the lack of implementation of EU legislation and, consequently, one of the main issues to be resolved.[20] However, it is a fact that ship owners make a profit from selling their obsolete ships and they can maximize this profit by selling them to substandard facilities while, in contrast to the polluter pays principle, they externalize to workers and the environment in developing countries the costs of ensuring the safe and environmentally sound disposal of hazardous materials contained in end-of-life ships.

Aware that "the EU has greater political and economic weight to ensure better ship dismantling",[21] following the adoption

[18] If the ship owner does not declare the intention to dismantle its ship when leaving a port, the national authorities cannot intervene. In general, this decision is taken while the ship is in international waters or in waters under the jurisdiction of the recycling state making the notions and obligations of the EU Shipments of Waste Regulation difficult to apply. See K. Paul "Exporting Responsibility. Shipbreaking in South Asia. International Trade in Hazardous Waste" (2004) 34 *Environmental Policy and Law* 73-78; A.E. Moen "Breaking Basel: The elements of the Basel Convention and its application to toxic ships" (2008) 32 *Marine Policy* 1053-1062; V. Rossi "Ship-Recycling: Environmental and Human Rights Impact" in G. Andreone, A. Caligiuri and G. Cataldi (eds) *Law of the Sea and Environmental Emergencies* (Editoriale Scientifica, Napoli: 2012) 219-243.

[19] In 2009, EU flagged ships represented 17,6% of the active fleet but only 8% of the ships at the time of dismantling. European Commission Doc. SWD(2012)47, note 10 at 21.

[20] Ibid., 13.

[21] European Commission, *Impact Assessment for an EU strategy on better ship dismantling*, Doc. SEC(2008)2846 of 19 November 2008 at 18.

of the Hong Kong Convention, the EU decided to act without waiting for its entry into force, expected at the earliest in 2020. Indeed, the Hong Kong Convention has stringent requirements for its entry into force, both in terms of percentage of the world merchant tonnage represented and percentage of the world's ship recycling capacity. Even though the combination of these conditions aims at providing a solid basis for the implementation of the envisaged regime, it may in practice impede its entry into force. As a matter of fact, the major flag states are currently made up mostly of developing countries, lacking interest in adopting environmentally progressive agreements. On the other hand, the trends of the ship recycling market show that the participation of two of the three major ship recycling countries may be sufficient but could also be necessary for the fulfillment of the related requirement.[22] This situation may possibly ease entry into force of the treaty and, at the same time, make it "hostage to the decision" of those states.[23] Moreover, from a purely economic perspective, the Hong Kong Convention is not attractive to the states it addresses. Ship recycling represents an example of market failure on a global scale, resulting from an extreme externalization of costs, at the expense of workers' health and the environment. Actually, there are almost no economic incentives which could encourage an individual state, be it either a flag state or a recycling state, to ratify the treaty individually.[24]

In this scenario, the early implementation of the Hong Kong Convention regime by the EU, with the combined European merchant fleet comprising almost 20% of the world merchant

22 On economic implications of entry-into-force conditions of the Hong Kong Convention, see U.D. Engels *European Ship Recycling Regulation. Entry-into-force Implications of the Hong Kong Convention* (Springer, Heidelberg: 2013) 48–51.

23 Ibid., 59.

24 Ibid., 81–88. See also note 27.

fleet tonnage, may turn out to be crucial, providing a substantial incentive for ship recycling states to improve their recycling standards and to ratify the Hong Kong Convention.

The EU Regulation on Ship Recycling

Different policy options for a EU legal regime on ship recycling have been discussed, the main questions being whether or not to exclude ships falling under the scope of the Hong Kong Convention from the scope of the EU Shipments of Waste Regulation and, if so, whether ships should be covered instead by domestic legislation of member states or whether they should be addressed by an *ad-hoc* EU regulation, covering the whole life-cycle of ships.

The idea to implement the key elements of the Hong Kong Convention into the EU Shipments of Waste Regulation would have lead, according to the European Commission, to maintaining the existing huge level of circumvention of the legislation benefiting primarily substandard facilities, at least in the short and medium period.[25]

From a different perspective, the European Commission has underlined the risk that the process of ratification and implementation of the Hong Kong Convention by EU member states took place at a different pace and with a non-harmonized regulation, resulting in unfair competition between the member states acting as flag states. The EU cannot become party to the Hong Kong Convention since it is reserved for members of the IMO; however, incorporating its requirements into EU legisla-

[25] European Commission Doc. SWD(2012)47, note 10 at para.4. In such scenario, the prohibition to dismantle EU flagged ships outside the OECD would have been maintained, even in facilities authorized under the Hong Kong Convention, since the EU Shipments of Waste Regulation would have continued to constitute the core of the control mechanism covering end-of-life ships.

tion is expected to promote uniform decision-making and hasten the ratification process amongst the member states.[26]

In addition to the international character of shipping and the global dimension of the environmental problems generated by ship recycling, these considerations constitute the background of the decision to adopt a new EU regulation, implementing the requirements of the Hong Kong Convention, and adapting and completing them where necessary.

The provisions of the EU Ship Recycling Regulation address, on the one hand, requirements for ships, concerning the construction, operation and preparation for recycling, and, on the other hand, requirements for ship recycling facilities and activities, concerning their equipment, management and authorization. In substance, it applies the provisions of the Hong Kong Convention to EU-flagged ships, and to a lesser extent to ships calling at EU ports, and to ship dismantling facilities aiming to recycle EU-flagged ships.[27]

Requirements for Ships

Flag state obligations represent the first pillar of the European regime. The EU Ship Recycling Regulation deals with the issue of the control of hazardous materials on board ships, in accordance with the 'cradle to grave' approach. In fact, the establishment of a framework for restricting and monitoring the use of certain

[26] Ibid., para. 4.2.

[27] On the content of the Hong Kong Convention, see S. Bhattacharjee "From Basel to Hong Kong: International Environmental Regulation of Ship-Recycling Takes One Step Forward and Two Steps Back" (2009) 1 *Trade, Law and Development* 193-230; T.G. Puthucherril *From recycling to sustainable ship recycling. Evolution of a legal regime*, (Martinus Nijhoff Publishers, Leiden: 2010); V. Rossi "The dismantling of end-of-life ships. The Hong Kong Convention on safe and environmentally sound recycling of ships" (2010) XX *The Italian Yearbook of International Law* 275-298.

materials is necessary to ensure that end-of-life ships will no longer be a source of contamination and occupational disease.

Similar to the Hong Kong Convention, the new rules provide that the installation or use of the hazardous materials listed in Annex I of the Regulation shall be prohibited or restricted, as specified in the annex, both on EU-flagged ships and on ships flying the flag of a third country whilst in port or anchorage of a member state.[28] It is worth noting that these materials are already banned or controlled under other international instruments, both at the global and European levels.[29] The list of hazardous materials to be restricted under the ship recycling regime has been debated during the preparatory phase for the negotiation of the Hong Kong Convention. The idea to include only hazardous materials, the installation and use of which were already regulated, in order to enhance the existing control regime, was preferred above the option to provide for new restrictions in this context and move proactively with the substitution principle to promote green ship building.[30] In implementing the Hong Kong Conven-

28 Art. 4 and art. 12 (2) of the Regulation.

29 The substances included in Annex I are: asbestos, ozone-depleting substances, PCBs, PFOS and antifouling compounds and systems, which are already regulated by international conventions like MARPOL 73/78; the International Convention for the Safety of Life at Sea (SOLAS) of 1 November 1974 (1184 UNTS 277); the Stockholm Convention on Persistent Organic Pollutants of 22 May 2001 (2256 UNTS 119); the Montreal Protocol on Substances that Deplete the Ozone Layer of 16 September 1987 (1522 UNTS 3); and the International Convention on the Control of Harmful Anti-fouling Systems on Ships of 5 October 2001 (IMO Doc. AFS/CONF/26).

30 IMO Marine Environment Protection Committee (MEPC), *Recycling of Ships: Proposal for prohibited and restricted materials to be listed in Appendix I of the draft International Convention for the Safe and Environmentally Sound Recycling of Ships*, Doc. MEPC 55/3/8 of 15 August 2006. The idea to include new substances was sustained by some NGOs. See NGO Platform on Shipbreaking, *Critique of the draft IMO International Convention for the Safe and Environmentally Sound Recycling of Ships*, 15 March 2006, available at <ban.org/library/IMO_Draft_Convention_CritiqueFINAL.pdf> at para. B.1.

tion, the Regulation has introduced more restrictive requirements with reference to a few substances but it has remained substantially adherent to this rationale; indeed, the restrictions included in Annex I conform to the existing EU legislation. This is true as regards the deadline for the phasing-out of some ozone-depleting substances, envisaged for 2020 under the Hong Kong Convention[31] but already in force under EU law,[32] as well as with respect to the inclusion of perfluorooctane sulfonic acid (PFOS) in the list of prohibited materials, which is consistent with the EU Persistent Organic Pollutants Regulation.[33]

Nevertheless, there are many other hazardous materials on board ships that are not prohibited and that need to be controlled during the recycling operations. For this purpose, the Regulation provides that EU-flagged ships, as well as ships calling at EU ports, will be required to have on board an inventory of hazardous materials, which shall identify the location and the approximate quantity of the materials listed in Annex II. All ships, new and existing ones, will be required to have on board a ship-specific inventory that shall be updated throughout the ship operational life and verified by the relevant administration of the flag state.[34]

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[31] In accordance with the amended Annex VI of MARPOL 73/78, new installations containing hydro-chlorofluorocarbons shall be prohibited from 1 January 2020.

[32] Regulation (EC) no. 1005/2009 of the European Parliament and of the Council on substances that deplete the ozone layer [2009] OJ L 286/1, which has reviewed and simplified previous Regulation (EC) 2037/2000.

[33] New installations which contain PFOS and its derivatives shall be prohibited in accordance with Regulation (EC) no. 850/2004 of the European Parliament and of the Council on persistent organic pollutants [2004] L 158/7. However, the prohibition of new installation containing PFOS is applicable only to EU flagged ships.

[34] Art. 5 and art. 12(1) of the Regulation. Guidance is expected to be produced by the European Commission on implementation of the inventory and is expected to be more detailed and stringent than the Guidelines on the Inventory of Hazardous Materials adopted by the IMO in implementing the

The enforcement of these provisions is largely entrusted to flag states. EU-flagged ships will be subject to several surveys (initial, renewal, additional and final), carried out by the competent administration of the flag state, and will be required to have on board the prescribed certification (inventory certificate or ready-for-recycling certificate, whichever relevant).[35] In addition, the Regulation provides for inspections of ships by port states to be conducted by EU member states having regard to Directive 2009/16/EC;[36] accordingly, it adds the inventory certificate to the list of documents that are to be checked as a minimum pursuant to this Directive, in case of an inspection.[37] As per the Hong Kong Convention, such inspections are limited to verifying that there is on board the required certificate which, if valid, shall be considered sufficient for the inspection to be approved. If a ship flying the flag of a third country fails to submit to the relevant authorities the inventory of hazardous materials and a copy of the statement of compliance issued by the flag state, it may be warned, detained, dismissed or excluded from the ports under the jurisdiction of a member state.[38]

The control mechanism outlined in the Regulation reflects the increased attention that port state jurisdiction has gained, in recent years, as a complementary enforcement mechanism, aimed at correcting non-compliance by flag states, not only serving the interests of individual enforcing states but also furthering those

Hong Kong Convention. For existing ships the inventory shall be developed "as far as practicable".

35 Arts. 8 and 9 of the Regulation.

36 Directive 2009/16/EC of the European Parliament and of the Council on port State control [2009] L 131/57.

37 Art. 11 and art. 28 of the Regulation.

38 Art. 12 of the Regulation.

of the international community.[39] Moreover, the port state control regime established in the EU, through the Directive 2009/16/EC, is far more stringent and detailed than the provisions on port state inspections contained in several IMO instruments or in the Memoranda of Understanding adopted at the regional level. Hence, it may represent an effective enforcement mechanism for the rapid and widespread implementation of the inventory of hazardous materials provided for by the Hong Kong Convention as an essential condition for safe and sound ship recycling.

In this context, however, it is important to acknowledge the issues arising from regulatory measures applying to ships flying the flag of third countries. These provisions raise the question whether a regional measure may, by implementing an international agreement that is not yet in force, impose specific obligations on third states which are to be enforced by EU member states' ports.[40] From a legal perspective, the rules adopted by the EU are consistent with the broad powers to prescribe and enforce measures against visiting vessels that port states have under general international law. According to the LOS Convention,[41] reflecting in this regard customary law, the port state has the right to establish particular requirements for the prevention, reduction and control of pollution of the marine environment as a condition

[39] See E. J. Molenaar "Port State Jurisdiction: Toward Comprehensive, Mandatory and Global Coverage" (2007) 38 *Ocean Development & International Law* 225–257; Y. Tanaka "Protection of Community Interests in International Law: the case of the Law of the Sea" (2011) 15 *Max Planck UNYB* 350–364; J. E. Vorbach "The Vital Role of Non-Flag State Actors in the Pursuit of Safer Shipping" (2001) 32 *Ocean Development and International Law* 27–42.

[40] Engels, note 22 at 109–110. The author does not raise this question with specific regard to the EU Ship Recycling Regulation (proposed/adopted at a later time), but rather assesses and evaluates a number of measures suggested at the EU level with a view to ship recycling regulation and this issue emerges as a relevant one.

[41] United Nations Convention on the Law of the Sea of 10 December 1982 (1833 UNTS 396, available at <www.un.org/Depts/los>).

for the entry of foreign vessels into its ports (article 211(3)) and the right to prevent any breach of the conditions to which the access is subject (article 25(2)). The "preventive enforcement power" acknowledged by the latter article, "is not only a competence to prescribe conditions for entry, but arguably also an enforcement power in case conditions have been breached".[42] In both these LOS Convention provisions, there is no reference to generally accepted international rules and standards; in the absence of any express limitation, it is commonly agreed that port-access requirements may concern all kinds of safety, anti-pollution and seaworthiness conditions and standards, even design, construction manning and equipment standards.[43] Furthermore, the way in which the EU exercises its prescriptive jurisdiction is consistent with general principles of international law, such as proportionality, the prohibition of abuse of rights and non-discrimination.[44] There is, indeed, a direct connection between the access requirements and the EU's interest "to enhance ship safety, protection of human health and of the marine environment throughout a ship's operating life".[45] Moreover, the provision is not discriminatory, as it applies to all vessels entering EU ports, regardless of their flag. Finally, it is worth mentioning that the LOS Convention includes several references to complementary regional strategies, encouraging regional approaches in certain contexts, provided that regional arrange-

[42] Molenaar, note 39 at 230.

[43] Ibid., 231; V. Frank *The European Community and Marine Environmental Protection in the International Law of the Sea: Implementing Global Obligations at the Regional Level* (PhD Thesis, Utrecht: 2006) 164, available at <dspace.library.uu.nl/handle/1874/13122>; L.S. Johnson *Costal State Regulation of International Shipping* (Oceana Publications, Dobbs Ferry 2004) 40.

[44] See H. Ringbom *The EU Maritime Safety Policy and International Law* (Martinus Nijhoff Publishers, Leiden: 2008) 223 -230; V. Frank, note 43 at 165; B. Marten *Port State Jurisdiction and the Regulation of International Merchant Shipping* (Springer International Publishing, Switzerland: 2014) 11-12.

[45] Regulation on ship recycling, art. 1; Hong Kong Convention, art. 1(1).

ments are consistent with the object and the purpose of the Convention, and with the jurisdictional framework it sets out.

Requirements for Ship Recycling Facilities and Operations

The second major element of control outlined in the Regulation is the authorization of ship-recycling facilities and operations. According to the new rules, ships flying the flag of an EU member state shall be recycled only in approved facilities, included in the 'European List', to be established by the European Commission.[46] To be included in the list, the recycling facilities will have to comply with the design, construction and operation requirements set out in the Regulation but may be situated anywhere in the world. For facilities located in EU member states, the assessment will be conducted by national authorities. Conversely, facilities located in third countries shall submit an application to be assessed by the European Commission; to this end, their compliance with the prescribed requirements shall be certified following a site inspection by an independent verifier.[47]

The EU Ship Recycling Regulation, thus, allows the export of end-of-life ships for recycling to non-industrialized countries, provided that certain conditions are satisfied and, concurrently, excludes ships covered by the new legislation from the scope of

[46] Art. 6(2) and art. 16 of the Regulation. The European List will be published not later than 31 December 2016.

[47] Art. 15 of the Regulation provides that the certification shall be submitted to the European Commission when applying for inclusion in the List and every five years there-after, upon renewal of the inclusion; a mid-term review to confirm compliance with the requirements of the Regulation is also provided for. Moreover, by applying for inclusion, the recycling companies accept the possibility of the ship recycling facility concerned being subject to site inspections by the European Commission.

the EU Shipments of Waste Regulation.[48] As a matter of fact, by doing so, the EU introduces a derogation from the Basel Convention regime, implemented by the latter Regulation in the EU legal order. In fact, as previously explained, the classification of end-of-life ships as hazardous waste, and their consequent inclusion into the scope of the Basel Convention as well as of the EU Shipments of Waste Regulation, has its legal basis in an ad hoc decision of the Conference of the Parties (COP) to the Basel Convention.[49] As a party to this Convention, the EU is bound by its provisions as well as by decisions adopted by its bodies. Further, the EU is bound by those provisions, like the Ban Amendment, that have not yet entered into force; indeed, having ratified this amendment, the EU is under obligation not to defeat its object and purpose, in accordance with general international law.[50]

The derogation introduced by the Regulation is questionable under EU law and under international law. According to article 216 of the TFEU, "agreements concluded by the Union are binding upon the institutions of the Union and on its Member States".[51] As stated by the EU Court of Justice on several occasions, international agreements are part of the European legal order and they prevail over secondary EU legislation.[52] It follows that the Regu-

48 Art. 27 of the Regulation. However, art. 2 excludes from the scope of the Regulation on ship recycling small ships (less than 500 GT), warships, naval auxiliary or other state-owned or operated vessels which are used only on non-commercial service or ships engaged only in domestic voyages. The Regulation on shipments of waste, thus, will continue to apply to these categories of ships.

49 See note 15.

50 Codified by Art. 18 of the Vienna Convention on the Law of Treaties, Vienna of 23 May 1969 (1155 UNTS 331, available at <www.un.org/law/ilc>).

51 Consolidated Version of the Treaty on the Functioning of the European Union [2008] OJ C115/13.

52 This also applies to the so-called mixed agreements, like the Basel Convention, for the part of the agreement that falls within the EU competence. See, *inter alia*, EU Court of Justice, case C431/05 *Merck Genericos*, ECR

lation may derogate from the provisions of the Basel Convention only if it is expressly provided for by the treaty itself.[53]

In this context, article 11 of the Basel Convention becomes relevant in that it contemplates the possibility for parties to enter into "bilateral, regional or multilateral agreements or arrangements regarding transboundary movement of hazardous waste", provided that such agreements "stipulate provisions which are *not less environmentally sound* than those provided for by [this] Convention, in particular taking into account the interests of developing countries" (emphasis added).

However, difficulties in relying on this provision arise from different perspectives. Firstly, the question emerges whether the Regulation may be understood as an agreement or arrangement within the meaning of article 11. According to an opinion that seems here to be shared, in the context of the Basel Convention, the EU legislation on waste issues may not be considered a multilateral agreement between EU member states.[54] Since the EU itself is a party to the Convention, the Regulation must rather be considered as internal legislation of a contracting party.

Yet, it is possible to argue that the Hong Kong Convention is an agreement under article 11 and that the Regulation aims at implementing its regime. This path is legally difficult too. Aside

2005 I–7001; case C–344/04 *IATA and ELFAA*, ECR 2006 I–403, para. 35; case C–239/04 *Commission v. France*, ECR 2004, I–9325, para. 25; case C–13/00 *Commission v. Ireland*, ECR 2002 I–2943. On the legal status of decisions adopted by bodies created by international agreements in EU legal order, see EU Court of Justice, 21 January 1993, case C–188/91, *Deutsche Shell*, I–363. See also Centre for International Environmental Law, *Legality of the EU Commission Proposal on Ship Recycling*, 12 December 2012 at 10; L. Kraemer *The Commission Proposal for a Regulation on ship recycling, the Basel Convention and the protection of the environment*, 4 September 2012 at 5; both available at <www.shipbreakingplatform.org>.

53 It is worth noting that art. 26(1) of the Basel Convention states that "[n]o reservation or exception may be made to this Convention".

54 See Kraemer, note 52 at 7– 8.

from the fact that the Hong Kong Convention is not yet in force and, as already mentioned, it is not open to the EU itself, the main question is whether the Hong Kong Convention fulfils the condition set out in Article 11 of the Basel Convention with regard to the level of environmental protection required.

The issue of the 'equivalence of the level of control and enforcement' established under the two treaties, has been discussed by the Conference of the Parties (COP) to the Basel Convention, following the adoption of the Hong Kong Convention.[55] On this matter, the COP recognized a divergence of views, particularly between the developed states (including the EU and its member states) and China, which believed that equivalence has been met, and developing countries in Africa and Latin America which did not believe this to be the case.[56] In particular, several representatives from non-industrialized countries highlighted a number of weaknesses in the Hong Kong Convention, including: its failure

[55] The COP to the Basel Convention, by its decision IX/30, requested the Open Ended Working Group (OEWG) to carry out a 'preliminary assessment' on whether the Hong Kong Convention establishes "an equivalent level of control and enforcement as that established under the (Basel) Convention, in their entirety" (COP to the Basel Convention, Decision IX/30 *Dismantling of ships*, Doc. UNEP/CHW.9/39 of 27 June 2008, 56). The OEWG has developed a set of criteria and Parties and relevant stakeholders have been invited, based on those criteria, to provide their preliminary assessment. Subsequently, during the following meeting (COP 10), there was a considerable discussion on this issue.

[56] See, COP to the Basel Convention, *Compilation of assessments provided by Parties and others of the level of control and enforcement established by the Basel Convention, in its entirety, and comparisons with the expected level of control and enforcement to be provided by the draft legally binding instrument on ship recycling in its entirety*, Doc. UNEP/CHW.8/INF722 of 3 November 2006; and, in particular, European Commission, *Communication from the European Commission to the Council. An assessment of the link between the IMO Hong Kong Convention for the safe and environmentally sound recycling of ships, the Basel Convention and the EU waste shipment Regulation*, Doc. COM(2010)88 final of 12 March 2010, available at <archive.basel.int/ships/>.

to provide equivalent levels of protection for human health and the environment; its lack of consideration for the specific needs of developing countries; its failure to regulate downstream waste management and its weaker enforcement provisions. Should the parties have concluded that equivalency has been met, they may have considered options to exclude ships covered by the Hong Kong Convention from the scope of the Basel Convention. Conversely, the COP, recalling its decision VII/26, acknowledged that the Basel Convention continues to apply as it relates to ships and, at the same time, it established a contact group to consider the matter further and encouraged the early ratification of the Hong Kong Convention.[57]

Nonetheless, in its opinion on the Regulation proposal, the Legal Service of the Council of the EU considered the fact that the COP encouraged ratification of the Hong Kong Convention "as a reasonable justification for taking the view that the "*preliminary assessment*" of the EU and its member states amounts to good faith interpretation of the Basel Convention".[58] Consequently, it concluded that the Hong Kong Convention, and the EU legislation giving effect thereto, "would be likely to satisfy the requirements of Article 11 of the Basel Convention, *in its current form*" (emphasis added).[59]

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[57] COP to the Basel Convention, Decision X/17 *Environmentally sound dismantling of ships*, Doc. UNEP/CHW.10/28 of 1 November 2011 at 53. See also note 15.

[58] Council of the EU, *Opinion of the legal service. Proposal for a Regultion of the European Parliament and of the Council on ship recycling*, 16995/12 of 28 November 2012 at para. 21.

[59] Ibid. The Legal Service reached this conclusion in relation to the Basel Convention as it is currently in force and as regards "states which are parties to the Hong Kong Convention, or which (pending the entry into force of the latter Convention) host recycling facilities authorised in accordance with the proposed regulation". Obviously, a differentiated approach would be required with reference to states which are not parties to the Hong Kong Convention. As to such states, in the absence of an agreement or arrange-

Despite this opinion, it is undeniable that the issue of equivalence of the level of control and enforcement established under the two treaties is, at least, not resolved. Rather, indeed, the Hong Kong Convention on ship recycling has been, and still is, the object of criticism. According to several observers from international organs, non-governmental organizations (NGOs) and scholars, it has fatal flaws, which question its ability to effectively protect human health and the environment against the major hazards posed by ship recycling activities.[60] The interplay and the possible coexistence of the two conventions still raise several questions[61] and this situation is playing its role in slowing

ment under article 11, the Basel Convention provisions would continue to apply (as an example, in circumstances where an EU-flagged ship is sent for recycling in a state which is not a party to the Hong Kong Convention). In this regard, the Legal Service pointed out that the EU Court of Justice could be likely to accept judicial review of art. 29 of the Regulation proposal (art. 27 of the approved Regulation) in the light of the Basel Convention, in so far as it excludes certain ships from the scope of the Regulation on shipments of waste regardless of the State of destination (paras. 23-24).

60 See Human Rights Council, *Report of the Special Rapporteur on the Adverse Effects of the Movement and Dumping of Toxic and Dangerous Products and Wastes on the Enjoyment of Human Rights, O. Ibeanu*, Doc. A/HRC/12/26 of 15 July 2009; Greenpeace International and FOEI, *Consideration of the Draft International Convention for the Safe and Environmentally Sound Recycling of Ships*, IMO Doc. SR/CONF/14 of 19 May 2009; NGO Platform on Shipbreaking, *Determining "Equivalent level of control" as established under the Basel Convention*, 31 January 2009, available at <www.shipbreakingplatform.org/>; COP to the Basel Convention, *Compilation of assessments*, note 56.

61 The importance to avoid "the duplication of regulatory instruments having the same objective" has been stressed several times by the Basel Convention Secretariat during the negotiations of the Hong Kong Convention. Actually, the two regimes are largely redundant and duplicating but also difficult to coordinate on some issues. Moreover, in the present scenario, the entry into force of the Hong Kong Convention would result in a confusing situation. According to art. 15 of the Hong Kong Convention, "nothing in [this] convention shall prejudice the rights and obligations of Parties under other relevant and applicable international agreements". As a consequence, be-

down the ratification process of the Hong Kong Convention. In view of that, and above all considering the lack of endorsement by the COP to the Basel Convention, it cannot be assumed that the Hong Kong Convention (and the EU legislation giving effect thereto) provides for an 'equivalent level of control and enforcement' according to article 11 of the Basel Convention.

As a consequence, from a legal perspective, it seems difficult to argue that the unilateral exemption of ships flagged to EU member states from the Basel Convention regime introduced by the new Regulation does not constitute a breach of EU's obligations under this agreement. That is all the more true with regard to the Ban Amendment. As a matter of fact, whatever regime based on the control of exports and recycling conditions is, in principle, less protective than an export prohibition. Therefore, pending the entry into force of the Ban Amendment, the derogation introduced by the Regulation is inconsistent with the EU's obligation to refrain from acts that could defeat its purpose and objective, in accordance with general international law.[62]

Clearly, this conclusion also raises questions on the legality of the Regulation under EU law, with particular reference to article 216 of the TFEU, and about its possible judicial review by the EU Court of Justice in the light of the Basel Convention. In this perspective, it is noteworthy that all EU member states are parties to

tween states parties to the Basel Convention which are also parties to the Hong Kong Convention, the Basel Convention provisions should be applied to the extent that they are compatible with the Hong Kong Convention (*lex posterior derogat priori*). Differently, between states which are only parties to the Basel Convention and other states (whether or not they are parties to the Hong Kong Convention), the Basel Convention provisions should have full application. For a deeper analysis of entry-into-force implications of the Hong Kong Convention, see Engels, note 22 at 123–147. See also note 59.

62 In this regard, even the opinion of the Legal Office of the Council of the EU underlines a "serious risk" of a breach of the EU's obligation not to defeat the object and purpose of the treaty. Council of the EU, note 58 at para. 30.

the Basel Convention (and have all ratified the Ban Amendment[63]), thus, they are legally bound by its provisions both as EU member states and individually.[64]

However, apart from a purely legal perspective, the EU Ship Recycling Regulation should be analyzed also from a different standpoint. Actually, in implementing the Hong Kong Convention, the EU has completed and strengthened some of its requirements.[65] To some extent, the Regulation has improved the legal regime outlined in the Hong Kong Convention, also with reference to a number of the critical issues highlighted by different actors, which emerged in the course of the equivalence assessment carried out within the COP to the Basel Convention.

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63 Except for Croatia which has not ratified the Ban Amendment. See the Basel Convention website <www.basel.int/Countries/StatusofRatifications/tabid/1341/Default.aspx> (last view, 25 February 2015).

64 In that regard, it is interesting to mention that, according to the European Commission impact assessment, the exclusion of end-of-life ships from the scope of the EU Shipments of Waste Regulation is also intended to rule out any risks of duplication (or even incompatibility) of requirements contained in the Hong Kong Convention and in the EU Ship Recycling Regulation, in order to foster ratification of the Hong Kong Convention by member states. How can the European Commission have ignored that the same problems would have arisen as regards obligations of the EU member states as parties to the Basel Convention? From a different perspective, it seems interesting the observation that the two treaties, the Hong Kong Convention and the Basel Convention (including the Ban Amendment) are not incompatible and both of them could be applied to end-of-life ships (see Kraemer, note 52 at 10-11). In this perspective, the ship recycling regime (Hong Kong Convention and EU Ship Recycling Regulation) would work as a complementary instrument in order to improve the application of the international regime on transboundary movements of waste (Basel Convention and EU Shipments of Waste Regulation) to a special category of waste, i.e. ships. In theory, EU member states should send their end-of-life ships for recycling only to facilities included in the EU List and located in OECD countries; in practice, overlaps and difficulties in coordinating the two regimes are undeniable.

65 Stricter requirements provided for by the Regulation are in accordance with art. 1(2) of the Hong Kong Convention.

From this perspective, the EU legislation may represent a step forward in the development of an international legal regime aimed specifically at ship recycling which is a more enforceable and *environmentally sound*[66] alternative to that outlined in the Basel Convention. In other words, even though it is questionable from a legal perspective, unilateral action by the EU may turn out to be decisive from a political perspective and may break the deadlock which the international community is in after the adoption of the Hong Kong Convention.

Indeed, additional requirements to be fulfilled by ship recycling facilities have been added in the Regulation in order to better protect human health and the environment and, in particular, to ensure that hazardous waste is treated in an environmentally sound manner. Moreover, the required standards are mandatory and not merely guidelines.[67] Unlike the Hong Kong Convention and the implementation guidelines adopted by the IMO, the standards for facilities contained in the Regulation definitely disqualify the 'beaching' method and provide for specific conditions on downstream waste management.[68] The waste management facilities which receive the waste shall be operated in accordance with standards that are "broadly equivalent to relevant international and Union standards".[69] Further, when applying for inclusion in the European List, facilities located in third countries accept the possibility of being subject to site in-

66 According to art. 11 of the Basel Convention.

67 It has been acknowledged that many important aspects of shipbreaking activities are not addressed by the Hong Kong Convention but only by the guidelines adopted by the IMO which parties are required to "take into account". See, COP to the Basel Convention, *Compilation of assessments*, note 56 at 3; Human Rights Council, *Report of the Special Rapporteur*, note 60 at para. 60. The IMO has adopted several the sets of guidelines available at <www.imo.org/OurWork/Environment/ShipRecycling/Pages/Default.aspx>.

68 Art. 13(1) of the Regulation.

69 Art. 15(5) of the Regulation.

spections by European Commission or agents acting on its behalf, prior to or after their inclusion in the European List, in order to verify compliance with the requirements of the Regulation.[70]

On the other hand, a few critical issues raised with reference to the Hong Kong Convention are still not resolved. These include the absence of any pre-cleaning obligations, at least of hazardous materials which are not necessary for the final voyage to the recycling yard. The Regulation only provides that ship owners of EU member states will have to ensure that end-of-life ships are duly prepared prior to any recycling, *inter alia*, minimizing the amount of cargo residues, remaining fuel oil, and ship-generated wastes remaining on board.[71]

Further, according to the Regulation, the ship recycling plan shall be explicitly or tacitly approved by the competent authority of the EU member state or of the third country where the recycling facility is located. Thus, as per the Hong Kong Convention, there is no need for express consent from the recycling state

[70] Art. 15(4) of the Regulation. The issue of control of on-the-ground conditions in ship recycling facilities is a critical one. Suffice it to say that a third party audit scheme of the ground conditions in ship recycling facilities, envisaged in a draft text of the Hong Kong Convention, has been deleted at the request of China, India and other delegations. See IMO Doc. MEPC 56/3 at para. 20, Doc. MECP 56/3/13 and Doc. MEPC 56/23 at para. 3.27, Doc. MEPC 57/3 at paras. 3.9-3.12.

[71] The European Parliament's proposal to include the minimization of residues and waste on board as a prerequisite for the issue of the ready-for-recycling certificate, did not receive support. European Parliament, *Amendments adopted by the European Parliament on the proposal for a regulation on ship recycling*, Doc. P7_TA-PROV(2013)0182 of 18 April 2013 at amendment 45. Nonetheless, this pre-cleaning condition is very important from a practical perspective and is in accordance with the Basel Convention objective of the minimization of the transboundary movements of hazardous waste. It is noteworthy that oil sludge represents 88% and oils 10% of the total quantity of hazardous waste from end-of-life ships. See European Commission, *Commission staff working document. Accompanying document to the Green paper on better ship dismantling*, Doc. SEC(2007)645 of 22 May 2007 at 11.

for each ship to be recycled nor is a direct notification between the flag state and the recycling state necessarily provided for.[72] According to several observers, the absence of these requirements does not allow the recycling state to effectively control the import of ships to be recycled and to take meaningful action (and, as a consequence, does not satisfy the Basel principle of the prior informed consent procedure).[73]

Concerning the enforcement measure to be adopted by EU member states, the Regulation only provides that member states shall lay down provisions on penalties that shall be "effective, proportionate and dissuasive".[74] It does not contain an express obligation to impose criminal penalties for infringements, not even for offences leading to illegal shipment of ships for recycling, as required under the Basel Convention and in accordance with the EU Directive on the protection of the environment through criminal law.[75] Nor is this lack of criminal penalties compensated for by other measures. In effect, the enforcement mechanism envisaged is rather weak, above all compared to that outlined in the initial proposal of the European Commission. Where a ship is sent for recycling in a facility not included in the European List, the Regulation proposal provided for a financial penalty, corresponding as a minimum to the price paid to the ship owner

72 This is only a possible option according to art. 7(4) of the Regulation.

73 See Human Rights Council, *Report of the Special Rapporteur*, note 60 at para. 62(b); Greenpeace International and FOEI, note 60 at para. 2; NGO Platform on Shipbreaking, note 60 at 7.

74 Art. 22 of the Regulation.

75 Directive 2008/99/EC of the European Parliament and of the Council on the protection of the environment through criminal law [2008] OJ L 328/28. According to art. 3, illegal waste shipments committed intentionally constitute a criminal offence. The Regulation postpones the issue, providing that the European Commission shall assess which infringements of the Regulation should be brought under the scope of such Directive.

for its ship. Moreover, it included penalties for ship owners which have sold a ship which is sent for recycling in a non-listed facility within less than six months after being sold.[76] Yet, all these provisions have been abandoned.

Finally, the Regulation postpones the issue of the creation of a financial mechanism to finance environmentally sound ship recycling and counterbalance the incentive for the last ship owner to go to low-standard facilities as well as the possibility of reflagging in order to escape the Regulation.[77] This is a key question for several reasons. The creation of a ship recycling fund based on contributions from ship owners would force the internalization of the costs associated with the use of dangerous materials on ships, in accordance with the 'polluter pays' principle, enshrined in article 191(2) of the TFEU. This principle has been referred to in several documents adopted by the EU institutions on ship recycling, including previous European Commission documents, maintaining that environmentally sound ship recycling is first and foremost the producers' responsibility.[78] Evidently, the inter-

[76] European Commission, *Proposal for a Regulation of the of the European Parliament and of the Council on ship recycling* Doc. COM(2012)118 final of, 23 March 2012 at art. 23.

[77] In this regard, the European Parliament Rapporteur on the regulation proposal suggested introducing a fee to be paid by all ships calling at EU ports, based on their tonnage. The fee would have gone to a fund intended to finance ship recycling facilities that comply with the EU requirements, giving them a premium for each ship recycling to make them competitive. EP Committee on the Environment Public Health and Food Safety, *Draft Report on the Proposal for a regulation of the European Parliament and of the Council on ship recycling*, Doc. 2012/0055(COD) of 20 November 2012. Whilst the EP Rapporteur received strong support for his proposal, the scheme was rejected in plenary by only seven votes. According to NGO Shipbreaking Platform, ship owners and European Sea Ports Organization strongly lobbied against it. The Regulation only provides that the European Commission shall develop a report on the feasibility of a financial instrument by 31 December 2016 (art. 29).

[78] European Commission, *Green Paper on better ship dismantling*, Doc. COM(2007) 269 final of 22 May 2007 at para. 3.6; European Commis-

nalization of environmental and social externalities would work as a disincentive for EU ship owners to sell or reflag ships prior to recycling. Moreover, the fund could support the development of ship recycling capacity in EU member states and could help the recycling facilities located in third countries to improve their standards, in accordance with the Basel Convention regime.[79]

In summary, the new Regulation certainly represents a step forward in the development of international regulation of ship recycling activities. It has addressed a number of critical issues left open by the Hong Kong Convention, given the impossibility to reach an agreement, including the ban of the beaching method and the control of downstream waste and on-the-ground conditions in recycling facilities. At the same time, however, there is still some way to go. In particular, the creation of legal and financial disincentives for selling and reflagging ships in order to escape the legislation is essential to ensure the practical effectiveness of the envisaged regime; whereas, to this day, the impact of the Regulation is unclear, since ways to circumvent it already exist.[80]

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sion, *Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the regions. An EU strategy for better ship dismantling*, Doc. COM(2008) 767 final of 19 November 2008 at paras. 5.3 and 5.6. See P. Sands *Principles of International Environmental Law I: Frameworks, Standards, and Implementation* (Manchester University Press, Manchester: 1995) 216; I. Brownlie *Principles of Public International Law* 7th (Oxford University Press, New York: 2008) 279.

79 The concern for inequality of resources and capability between developed and developing countries is at the heart of the Basel Convention and the interests of developing countries are expressly recalled by its art. 11.

80 In this perspective, it is important to highlight that the level of implementation of the Regulation will exert a major influence over the success or failure of the Hong Kong Convention. As a matter of fact, if the new Regulation works, it may assist EU member states in ratifying and may foster the ratification process at the global level; otherwise, if it turns out to be ineffective, this will raise doubts about the Hong Kong Convention as well, and may even have the opposite effect to that intended and hamper the entry into force of the treaty.

Final Remarks

In recent years, the EU has been very proactive in the field of maritime safety and protection of the marine environment through the adoption of regional measures directed at strengthening the application of IMO rules in European seas and anticipating their implementation. Sometimes, this approach has been charged with undermining the role of competent international organizations, but it has undeniably stimulated progress in international regulation.

On the issue of ship recycling, the EU has again decided to play a proactive role, aware that "the EU is widely seen as a leader on environmental issues and its example encourages third countries to follow".[81] It was not an easy task, given the existing scenario at the global level, characterized by the stand-off between the international regulation in force (but not enforceable) on the transboundary movements of waste and the new *ad hoc* international agreement, the entry into force of which is more and more uncertain, or at least delayed.

In effect, the Regulation raises several issues from a legal point of view. In the present situation, it seems highly questionable to sustain that the EU unilateral derogation to the Basel Convention provisions does not constitute a breach of its obligations under this agreement; as a consequence, the Regulation may be inconsistent with article 216 of the TFEU and open to judicial revision by the EU Court of Justice.

Yet, although it is questionable from a purely legal perspective, unilateral action by the EU may turn out to be decisive from a political perspective. The EU has the merit to have brought again the issue of ship recycling on the international policy agenda, after the adoption of the Hong Kong Convention, in 2009. Further,

[81] European Commission Doc. SEC(2008)2846, note 21 at 19.

it has decided to drive the change and has taken significant steps towards improving the international regulation of ship recycling activities, also with reference to a few very critical matters (like the ban of the beaching method). Unfortunately, on other issues the political will underlying the EU initiative on ship recycling has weakened compared to the initial intent. Even the European Economic and Social Committee observed that "the proposal for a regulation on ship recycling is a rather pale reflection of the previous green paper and the communication on the same subject".[82] Moreover, as described before, the adopted Regulation is even weaker, in particular with reference to the enforcement measures needed to make the new regime effective; the potentially decisive instruments have been identified but the political will to adopt them has been manifestly absent.

Nevertheless, there are several requirements of the new legislation that still have to be implemented in detail by the European Commission as well as some crucial elements that are still on the table, above all the introduction of a financial incentive. Hopefully, the EU will take the opportunity to strengthen this instrument that seems, at the moment, to be incomplete. By doing so, it could really play the leading role it has claimed and may stimulate the IMO to improve regulations in the field of ship recycling at the global level, as it has already done in the past on other critical issues.

[82] EESC, *Opinion of the European Economic and Social Committee on the 'Proposal for a Regulation of the European Parliament and of the Council on ship recycling'*, Doc. COM(2012) 118 final of 12 July 2012 at paras. 1.5 and 5.10.

DECISION-MAKING IN THE IMMINENCE OF DISASTER: 'PLACES OF REFUGE' AND THE PREVALENCE OF NATIONAL INTERESTS

Nuno Marques Antunes*

Introduction

Navigating the oceans has always presented humankind with rather specific challenges, including the assistance to people and ships at risk in general. Access to a safe haven by a ship in the event of a maritime accident has been from the outset a particular case high up in the scale of such challenges. Uniform practice throughout the world's oceans over many years led to custom. Ships in distress have historically been granted permission to enter sheltered coastal areas with a view to ensuring the safety of people on board as well as the salvage of ship and cargo.[1]

The last few decades brought about a reappraisal of the issue of access to sheltered areas by ships in distress. Environmental essentials, driven to the forefront of international affairs by a

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[1] From a theoretical standpoint an interesting debate could be had as to in whom any customary rights have been vested, which for reasons of brevity cannot be carried out in this paper.

dramatic change in the complexity of the oceanic context, have arguably turned the table on the aforesaid ancient custom. The proliferation of transportation of highly dangerous cargoes in supersized tankers gave rise to perils unanticipated by the international legal order. Accidents with tankers in recent years, causing hydrocarbon spills of dire proportions, have led to questioning the parameters of access to a 'place of refuge' by ships in distress. A reconsideration of all interests involved, in light of a growing awareness of the need to protect the marine environment as well as interests of states, became paramount.

This paper seeks to outline a particular aspect of the debate on places of refuge: the decision-making process within a coastal state facing an imminent disaster involving a tanker in distress. To paraphrase Shakespeare, to grant or not to grant access to a place of refuge to a tanker in distress is the question. Assuming there is no unqualified right of access, the issue to be addressed is on what basis the decision as to whether or not to grant access to shelter is to be made by a coastal state. The first section of this paper consists of a terse primer on 'places of refuge'. A brief description of the incident involving the tanker *Prestige* is the subject of the second section. Attention is drawn, in the third section, to the bewildering factual circumstances surrounding the *Prestige* incident. The legal regime enacted in Portugal (in a European setting) in the post-*Prestige* era is the subject of the fourth section. Delving into the process for deciding whether or not to grant access to a place of refuge, the final section attempts to offer a view on how national interests could become critical elements in such decision-making process.

For reasons of brevity, as well as for the significance of the outcome and ensuing consequences, focus is kept in this paper on decision-making in 'limit cases',[2] such as the *Prestige* incident.

[2] By 'limit cases' the author means hard cases in which the decision is all but obvious and stakes are high.

These cases could at this juncture be characterized by reference to the following elements. First, the protection of human life is assured.

No decision (by action or omission) would lead directly or indirectly to an increase of risk for the people involved, irrespective of the situation of ship and cargo. There is unquestionably a paramount legal principle of safety of life at sea.[3] Second, the maritime incident is of such gravity that errors and/or changes in the parameters on which the decision is predicated, however small, risk resulting in a catastrophic outcome of unfathomable proportions, so no clear 'right decision' exists. Ships may require assistance in different circumstances. This paper looks only into instances where the potential environmental impact is massive (likely a catastrophe) and the ship's survival is threatened. Finally, no comprehensive review of the legal regime on places of refuge generally speaking is to be undertaken herein. A wealth of bibliography on the subject is available. This analysis attempts to review in a focused manner the specific aspects of the decision-making process (including its underlying material parameters, insofar as reasonably possible) of coastal state authorities faced with an imminent disaster similar to the *Prestige* case[4].

[3] It is assumed that no aspects other than those relating to the maritime incident in question are relevant. A key assumption is that no decision may result in an unjustified, unnecessary and unreasonable increase of risk for human life. This is a centuries old tenet of maritime law.

[4] Even though there was an international aspect to the *Prestige* incident, and transboundary pollution issues between neighboring states could be raised, no analysis is conducted here on this point, either at the EU law level, or from a wider international law perspective. Nor is reference made to either regional aspects, including possible implications at the level of regional conventions, or matters relating to specific factors within the decision-making process (e.g. insurance matters, liability issues, economic implications, or types of threats to the environment).

'Place of Refuge': A Terse Primer

According to the International Maritime Organization (IMO) Guidelines, a place of refuge may be defined as "a place where a ship in need of assistance can take action to enable it to stabilize its condition and reduce the hazards to navigation, and to protect human life and the environment".[5] Along similar lines, the Comité Maritime International (CMI) has defined it as "a place where action can be taken in order to stabilize the condition of a ship in need of assistance, to minimize the hazards to navigation, or to protect human life, ships, cargoes or the environment".[6] In spite of the similarities, the CMI definition seems to have a wider scope, in that: (i) the action can be taken by entities other than the ship itself; and (ii) ships and cargoes are included as elements to be protected alongside human life and the environment.

The differences between these two definitions could at first glance appear to be negligible. One would argue that perhaps it is not so. Consider notably the latter difference, i.e. the inclusion of ships and cargoes as protected elements apparently at the same level as human life and the environment. One would steer away from this suggestion on a number of grounds, which for reasons of brevity cannot be elaborated on here. Suffice it to say that, from an international law standpoint, one sees the protection of ships and cargoes as benefiting from a less intense protection than that awarded to human life and the environment.

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[5] IMO, *Guidelines on Places of Refuge for Ships in Need of Assistance*, Doc. A.Res.949(23) of 5 December 2003 (IMO Guidelines), para. 1.19. An overview of the IMO work on this topic is available at < www.imo.org/OurWork/Safety/ Navigation/Pages/PlacesOfRefuge.aspx>.

[6] CMI, *Draft Instrument on Places of Refuge*, available at <www.comitemaritime.org/Places-of-Refuge/0,2733,13332,00.html> (CMI Instrument), art. 1(c). Prepared as an attempt to arrive at a legally binding conventional text on this issue, the CMI Instrument is yet to have a direct significant impact.

The practical reality is that, in the past, the best way to protect human life (and the environment) was to protect the ship itself (and thus the cargo). Only an indirect protection was thus in question. The point is that this distinction could nowadays become decisive in the decision-making process on the granting of access to a place of refuge, all depending upon the factual circumstances.

Account should also be taken, at the least within the European context, of the definition of 'place of refuge' included in the European Union's (EU) VTS Directive.[7] A place of refuge is defined therein as "a port, the part of a port or another protective berth or anchorage or any other sheltered area identified by a Member State for accommodating ships in distress".[8] There are at least three aspects in which this definition differs from the previous two. First, there is no explicit reference to the legal interests to be protected with the granting of access to a place of refuge. Second, it refers to a place identified (or to be identified) by the coastal state, meaning apparently that each coastal state has the right to select the location. Third, instead of "ships in need of assistance", it uses the terminology "ships in distress".[9]

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[7] Directive 2002/59/EC of the European Parliament and of the Council of 27 June 2002 establishing a Community vessel traffic monitoring and information system [2002] OJ L280/10, as amended by Directives 2009/17/EC [2009] OJ L 131/101 and 2011/15/EU [2011] OJ L 49/33. Unless otherwise stated, references to the VTS Directive in this paper shall mean the Directive incorporating the 2009 and 2011 amendments.

[8] VTS Directive, art. 3(m).

[9] This terminological difference stems perhaps from the fact that the original 2002 VTS Directive provisions on places of refuge were drafted in the aftermath of some maritime incidents, notably the *Erika* (1999) and the *Castor* (2000), in which the ships were in distress and required *immediate assistance*. The 2004 IMO Guidelines, which influenced the 2009 amendment of the VTS Directive, used the broader expression "ships in need of assistance", i.e. including ships which require assistance but are not in a distress situation. This broader expression was reflected in the amended version of art. 20 of the VTS Directive but not in the definition of 'place of refuge', which remained unaltered. While 'places of refuge' are not restricted to

Subject to the comments below characterizing the scope of this analysis, a 'place of refuge'[10] can for purposes hereof be understood on the basis of the following elements (loosely derived from a 'merger' of the three definitions above): (i) it is a sheltered area;[11] (ii) for accommodating a ship involved in a maritime incident and which suffered damage; (iii) in order to provide assistance thereto; and (iv) to attempt to remove or minimize potential threats to human life and the environment.[12]

Various authors contend that an international customary rule on places of refuge exists.[13] Such rule would arguably encompass

ships in distress, the focus of this paper are *Prestige*-like cases (as outlined below), in which ships are in distress.

10 There is a profusion of literature covering the issue of 'places of refuge'. Among the most recent, in-depth works on 'places of refuge' (which include a wealth of bibliographic references) one may refer to the following: A. Morrison, *Places of Refuge for Ships in Distress* (Brill/Martinus Nijhoff, Leiden: 2012); E. van Hooydonk *Places of Refuge: International Law and the CMI Draft Convention* (Lloyd's, London: 2010); and A. Chircop and O. Linden (eds) *Places of Refuge for Ships: Emerging Environmental Concerns of a Maritime Custom* (Brill/Martinus Nijhoff, Leiden: 2006).

11 Historically, the term 'port of refuge' seems to have been used. The reference to 'place' rather than 'port' is apparently meant to widen the geographical scope of areas that can be used as shelter.

12 The protection of ships and cargoes, historically viewed as being also relevant, has become of much lesser significance in terms of a decision on whether to grant access to a place of refuge to a distressed ship. Some authors argue that the protection of ship and cargo is still part of the customary rule: cf. e.g. A. Chircop "The Customary Law of Refuge for Ships in Distress" in Chircop and Linden (eds), note 10 at 224. One would argue that a qualification is required. The protection of ship and cargo is subject to human and environmental concerns, i.e. it must not constrain human and environmental protection and assessments relating thereto.

13 A table captioned "Summary of International Law Regimes of Ships in Need of Assistance" following from an analysis on various sources is proposed by van Hooydonk (cf. note 10 at 459). Distinguishing between 'classical customary law' and 'contemporary customary law', van Hooydonk suggests that that the former incorporated an 'absolute' right whereas the latter only a presumed right. One would side with other authors who conclude that

a right of a ship in need of assistance to be granted access to a sheltered area. Whilst one would perhaps not necessarily disagree entirely with the core assertion, it should certainly be added that the details of such rule could be the subject of an extensive debate. As far as shipping (any maritime uses of the ocean, more generally) is concerned, the oceanic context within which the (so-called) customary rule on places of refuge emerged was dramatically distinct from that of today's ocean. To begin with, protection of human life was at the heart thereof. Nowadays people can be rescued from ships in distress in ways that do not involve providing coastal shelter to the ship. Other aspects need be considered, from distinct activities to higher density of traffic, or from different technology to the dangerousness of cargoes for the environment. Nothing resembles the days in which such (argued) customary rule began to emerge.[14] All changed in a few decades. To state that said differences have no bearing on the validity and scope of the (ancient) customary rule on places of refuge would in the author's opinion render invalid any argument that the rule applies today. State practice contemporary to this novel ocean setting is decisive for any appraisal of the contents of a customary rule.

Today's distinct oceanic context bears fundamentally on a two-fold factual change. First, human lives can nowadays be protected without access to a place of refuge having to be granted to a ship in distress. Second, in the case of accidents, the damage (potentially) caused by a ship (particularly to the environment) is far greater given the dangerousness of certain cargoes and

outside the situations of protection of human life there is no customary rule imposing on coastal states the obligation to grant refuge to a ship in distress: cf. e.g. Morrison, note 10 at 75–126.

[14] The argument that this customary rule on places of refuge dates back millennia does not seem to add value to the debate. In effect, the more different the context in which the custom was formed is, the less acceptable becomes the extrapolation that the rule applies in today's context.

the quantities in which they are carried. Environmental interests, which are at the forefront of today's concerns on ocean management, would perhaps on their own determine a reappraisal of the whole discussion, notably as to their weighing-up against the interests of protection of ships and cargoes. The catastrophic repercussions for the environment of recent tanker accidents became entirely unacceptable for the international community at large, rendering all aspects other than human life and the environment virtually irrelevant in terms of interests to protect.[15]

Shortly put, in the discussion on places of refuge, given that the 'humanitarian rationale' has lost some of its previous significance as a factor in the decision-making process (because of technological advancements and the means available to guarantee the safety of human lives), the 'environmental protection rationale' became paramount, ships and cargoes being a somewhat negligible factor if their protection is not reconcilable with human and environmental protection goals.

Even if a customary rule indeed exists – which would require demonstrating the *opinio juris sive necessitatis* with respect to a *usus* of coastal states in assisting ships in distress in today's oceanic context (in our opinion, hitherto an elusive goal) – one would argue that, however frequent such assistance has been, the contours of the relevant norm need be reconsidered in light of recent practice of various coastal states in refusing to grant refuge in certain circumstances. A relevant body of state practice concerning specific incidents, and refusing access to a place of refuge in certain circumstances where disaster seemed imminent, has emerged in recent years. This state practice may not be

[15] For an outline of interests to be considered in the debate on places of refuge, cf. Morrison, note 10 at 38–50.

simply discarded without further consideration. Either there is a customary rule and the relevant states were (likely) in breach thereof, or the customary rule does not exist (or its contents are such that depart from what has been claimed) and such states have simply acted within their rights. The so-called '*not in my backyard*' approach, which has apparently underlain said recent state practice, arguably incorporates not only an aspect of *usus* by a number of interested coastal states (denying access to a place of refuge to a ship in distress), but also demonstrates *opinio juris* (as such states have taken the view that no obligation to grant access in such circumstances exists).[16]

[16] One argument that has been used to claim that these recent instances of state practice do not indicate the disappearance of the customary right of access is that "no opponent of the right of access has ever convincingly demonstrated that this right no longer exists" (van Hooydonk, note 10 at 112). The soundness of this approach can be questioned. First, in terms of customary law, said state practice shows that the states involved consider themselves not to be under any obligation to grant access to a place of refuge in the prevailing circumstances. Second, demonstration must be provided by the party claiming to enjoy an international law right of access to a place of refuge in those circumstances. However deeply rooted in a centuries-old state practice such claimed customary rule may be, the point that need be addressed is whether there is today a *usus* that is supported by an *opinio juris*; and, if so, the scope of such rule. Custom evolves over time. Assessing custom at any given point in time is a cumbersome and complex undertaking. For the ebbs and flows of custom-making are grounded on the very practice of the subjects to which the norm applies. At the very least, such body of recent state practice is evidence that several interested states consider the customary rule as not imposing an obligation to grant refuge in some cases. The argued customary rule has been 'challenged' thereby. One would in fact argue that the contents of the customary right of access (assuming for the sake of argument that it continues to exist) have been entirely reshaped over recent decades, and that in specific instances (which are referred to herein as *Prestige*-like cases), provided that danger to human life is not in question, there is no obligation for a coastal state to grant refuge to a distressed ship. This is perhaps why van Hooydonk eventually seems to go on to acknowledge that a 'right of refusal' does exist (van Hooydonk, note 10 at 162 *et seq*).

The LOS Convention,[17] hailed as a 'Constitution for the Oceans',[18] incorporates no rules sufficiently workable and detailed to deal in any adequate manner with the issue of places of refuge. Nor are such rules on places of refuge codified or incorporated in various others potentially relevant international instruments. It all boils down to a simple point: no obligation to grant access to a place of refuge to a ship in distress has ever been codified or provided for in an international instrument.[19]

In the LOS Convention, only certain high-level provisions can be relied on to attempt to ascertain the regime on places of refuge. Coastal states enjoy sovereignty over internal waters and (albeit with certain limitations) the territorial sea,[20] that is, the maritime zones in which places of refuge are typically located. Access to ports and anchorages (the usual places of refuge, as denoted in the VTS Directive definition) is not explicitly regulated. Coastal states are in effect entitled to take preventive measures in regard to compliance with conditions imposed on access to internal waters or ports.[21] More particularly, entry into said internal waters and ports may be subject to specific requirements for the prevention, reduction and control of pollution of the marine

17 United Nations Convention on the Law of the Sea of 10 December 1982 (1833 UNTS 3)..

18 T.T.B. Koh 'A Constitution for the Oceans' (Third United Nations Conference on Law of the Sea, Montego Bay, 6–11 December 1982), available at <www.un.org/depts/los/convention_agreements/texts/koh_english.pdf>.

19 This view is supported by recent state practice. Cf. the Agreement on Port State Measures to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing, of 22 November 2009 (available at <www.fao.org/Legal>), art. 10.

20 LOS Convention, art. 2(1).

21 Ibid., art. 25(2), which provides that "[i]n the case of ships proceeding to internal waters or a call at a port facility outside internal waters, the coastal state also has the right to take the necessary steps to prevent any breach of the conditions to which admission of those ships to internal waters or such a call is subject".

environment (the environment being the key international legal interest to be protected).[22]

Contentions have been put forward by certain interested academics and stakeholders that Part XII of the LOS Convention, on "Protection and Preservation of the Marine Environment", offers a workable basis from which to derive an obligation for the coastal state to grant refuge to a ship in distress off its coasts.[23] The argument has been apparently built around the general obligation for states to protect and preserve the marine environment, culminating in the obligation to grant refuge to ships in distress as means to prevent environmental damage. Without entering into details, which are incompatible with the nature of this paper, one would nevertheless argue that said approach seems weak on two levels. First, for the argument to be entirely valid, a demonstration would have to be made that the granting of refuge would in all (or virtually all) instances be the best course of action to prevent or minimize environmental damage. No such general demonstration, notably in terms of causality link, has ever been provided. Nor could it be since, as will become apparent, the decision involves an 'incident-specific' assessment. Second, such an argument would clearly prioritize general prevention of environmental damage as an abstract notion ahead of concrete national interests of the coastal state in protecting their coastal environment. If only because the coastal state is the one which must live with the consequences of whatever decision it makes, and on whom the right (and duty) to protect the coastal environment is

22 Ibid., art. 211(3).

23 Ibid., art. 192 *et seq*. This general obligation has multiple facets reflected throughout Part XII (e.g. adoption of implementing measures; obligation to cooperate in various manners; duty not to transfer damage or hazards; monitoring and assessment). Part XII seems in fact to have established newer legal grounds for coastal states to exercise an increased jurisdiction over vessels within their jurisdictional waters, and has in no way imposed an obligation on coastal states to grant access to refuge for distressed ships.

vested under international law, one would undoubtedly challenge this underlying premise on both legal and policy grounds.

The Salvage Convention[24] offers perhaps the most significant and workable treaty law provision on places of refuge. Its article 11 establishes that, in regulating or deciding upon matters relating to salvage operations, such as admittance to ports of vessels in distress, states are to take into account the need for co-operation between salvors, other interested parties and public authorities, in order to ensure the efficient and successful performance of salvage operations, for the purpose of saving life or property in danger as well as preventing damage to the environment. Still, no obligation to grant access to a place of refuge to a ship in distress was provided for.

The conclusion has already been reached that remedies dealing with "the problem of places of refuge must seek an acceptable balance between the interests of coastal states and the shipping interests",[25] and more generally that the IMO Guidelines and the CMI Instrument are inadequate as solutions for the problem of places of refuge, a new approach being required.[26] What an "acceptable balance" could be in terms of general provisions incorporated in an international instrument remains to be seen. At this stage, all the international community seems to have been able to achieve is something entirely different and much less detailed. Further, national interests remain at the heart of decisions concerning the granting of a place of refuge to a distressed ship.

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24 International Convention on Salvage of 28 April 1989 (1953 UNTS 194).

25 Morrison, note 10 at 307. Morrison refers to the factors affecting any international response to the question of places of refuge, which include (i) improved industry performance, (ii) improved industry regulation, (iii) issues of liability, compensation and limitation, (iv) incentives for coastal states to use the IMO Guidelines, and (v) liability for cross-boundary environmental harm: ibid., at 308–350.

26 Ibid., at 353.

The *Prestige* Incident in a Nutshell

At around 15.15 on 13 November 2002, the single-hull tanker *Prestige*, which had run into an Atlantic gale force 10/11 storm, suffered a structural accident some 27 nautical miles westwards of Cape Finisterre,[27] off the Iberian Peninsula. Within a few minutes, the fully laden vessel (with 77,000 tonnes of heavy-grade oil) was listing 25 degrees to starboard and leaking its cargo. In the morning of 14 November, with the engine damaged, the distressed *Prestige* had drifted (under the severe weather conditions) closer to the Spanish coast of Galicia (lying approximately 5 M[28] therefrom), moving on a northeastwards course towards the Bay of Biscay. No risk of grounding appeared to exist, apparently.

Spanish tug boats unsuccessfully attempted to tow the vessel, its emergency towing system having been found inoperative. The company SMIT Salvage BV eventually took over the situation as salvage operator, managing to take the *Prestige* in tow. With the vessel leaking heavy-grade oil,[29] in the imminence of a catastrophic environmental disaster, the Spanish authorities ordered the ship away from the coast, refusing to grant the *Prestige* a 'place of refuge'. The ship was towed out into the open sea

27 The investigation into the *Prestige* incident seems not to have reached definitive conclusions as to what happened to the ship exactly as far as the structural damage is concerned. The crew apparently described it as having heard a loud noise and felt abnormal vibrations: cf. Galician High Court, 2013 Decision on Prestige case, ECLI Reference: ES:APC:2013:2641, available at <www.poderjudicial.es/search/indexAN.jsp>, at 31; *Report on Improving Safety at Sea in Response to the Prestige Accident* (European Parliament Doc. A5-0278/2003 of 15 July 2003), at 22.

28 The symbol 'M' represents the unit 'nautical mile', which corresponds to 1,852 metres.

29 By the afternoon of 14 November, with a fissure in one of its oil tanks, the *Prestige* had reportedly already spilled an estimated 3,000 tonnes of heavy-grade oil into the ocean.

by the team of SMIT Salvage BV, who apparently objected to the towing of the vessel (jointly with the Captain), arguing in favor of taking it into the harbor of La Coruña.

This decision of Spanish authorities to deny refuge to the *Prestige* has been subject to heavy scrutiny on multiple grounds by various stakeholders, including at the EU level. It was critical for the outcome, irrespective of how such outcome is assessed in hindsight. What could (or would) have happened had the decision been different (i.e. had an attempt been made to take the *Prestige* into a refuge area) can only be speculated; or at best be the subject of a somewhat limited educated guess. While a certain consensus appears to exist among some technical experts around the argument that refuge should have been granted to the *Prestige* in order to (attempt to) carry out repairs and avoid widespread pollution, the reality is that the decision taken by Spanish authorities appears to have been supported by many Spanish stakeholders and the vast majority of the people living in that coastal area (i.e. those who would be more directly affected by the decision).

The *Prestige* was ordered to start the engines and, with the assistance of tugs, was taken away from the Spanish coast, navigating in a northwesterly direction to the open Atlantic Ocean. On 15 November mid-afternoon, two tugs held the *Prestige* some 60 M from the Spanish coast. Spanish authorities issued new instructions for the vessel to be moved at least 120 M offshore. To avoid facing the rough seas, the tugs took the *Prestige* in a southwesterly direction on 16 November. This course attempted to avoid Portuguese jurisdictional waters since this country's authorities had already indicated that the vessel would not be allowed in. Additional structural damage, which caused an increased leakage of the cargo, led the vessel to be subsequently navigated southwards in search for calmer seas. On November 18, with the vessel rapidly approaching its Exclusive Economic Zone (EEZ) Portuguese authorities prohibited the salvage operator

from towing the *Prestige* into its jurisdictional waters. The south-westerly course was thus resumed.

At some time after 08.00 on 19 November, the *Prestige* broke in two amidships. The aft section sunk that day at around 12.00, the same happening to the bow section at around 16.15, approximately 130 M off the Iberian Peninsula. Estimates of the total spill of heavy-grade oil vary from 40,000 to 64,000 tonnes, the remainder being still inside the *Prestige* on the bottom of the Atlantic Ocean, at a depth of some 3,500 meters.

The coasts of Spain (Galicia), and to a much lesser degree of Portugal and France, were affected by this heavy-grade oil spill. Total damages reportedly have been estimated hitherto at over 4 billion Euros. The *Prestige* case is, by any account, one of the greatest disasters of this type humankind has ever witnessed,[30] even if the environmental impact is yet to be fully confirmed and the possible implications at the level of human health remain somewhat uncertain.

Two characterizing aspects are decisive for the review attempted in this paper, reason for which they should be briefly outlined at this early stage.

First, and perhaps the most critical point, reference ought to be made to the protection of the *Prestige* crew members. The vast majority of them (24 out of 27) were airlifted by helicopter on 14 November. Three of them remained onboard: the captain; the first mate; and the chief mechanic. Ultimately, the *Prestige* in-

[30] Numerous accounts of the *Prestige* incident have been written, as short summaries or longer accounts, not only as academic studies but also as policy oriented reports or even politically driven arguments. For a specific academic review, including references to multiple sources, cf. e.g., V. Frank "Consequences of the *Prestige* Sinking for European and International Law" (2005) 20 *The International Journal of Marine and Coastal Law* 1-64. Reference can also be made, in the EU context, to the *Report on Improving Safety at Sea in Response to the Prestige Accident*, note 27. Both documents provide somewhat detailed descriptions of the *Prestige* case.

cident involved no loss of human lives. Nor were the lives of all involved (i.e. the *Prestige*'s crew members, as well as those who assisted the ship) at any relevant risk (i.e. a level of risk not inherent in a professional life at sea) throughout the events. This boils down to stating that, in the *Prestige* incident, the decisions made on granting refuge seem not to have been influenced by the 'humanitarian rationale'.

Second, as was unfortunately confirmed as events unfolded and the consequences became apparent, the dangerousness of the *Prestige*'s cargo emerged as an equally critical point of assessment. More than a matter of a potential spill of 77,000 tonnes of hydrocarbons (already a catastrophe), the dilemma stemmed from the fact that heavy-grade oil[31] was involved.[32] The immediate environmental impact of a heavy-grade oil spill of such magnitude could (can) only be described as a tragedy. In addition, one must not disregard the (not entirely known) potential longer-term effects for the environment as well as, much more importantly, at the level of health risks for humans from (potential) exposure thereto.[33]

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31 Reg. 21 of 1978 Annex I – Regulations for the Prevention of Pollution by Oil (2010 revised version), of 1978 Protocol relating to the International Convention for the Prevention of Pollution from Ships of 2 November 1973 (MARPOL 73/7), defines 'heavy grade oil' as including: (i) crude oils having a density at 15°C higher than 900 kg/m^3; (ii) oils, other than crude oils, having either a density at 15°C higher than 900 kg/m^3 or a kinematic viscosity at 50°C higher than 180 mm^2/s; or (iii) bitumen, tar and their emulsions.

32 In 2003, following the *Prestige* accident, the IMO adopted resolutions implementing an accelerated phase-out for single-hull tankers (cf. MARPOL 73/78, Annex I, revised reg.13G), as well as a ban from 2005 on the carriage of heavy grade oil by single-hull tankers (cf. MARPOL 73/78, Annex I, reg.13H). It should be noted that the carriage in bulk as cargo or carriage and use as fuel of such heavy grade oils was subsequently generally prohibited in the Antarctic area (cf. MARPOL 73/78, Annex I, reg. 43).

33 One of the reasons why this paper focuses on *Prestige*-like cases is because the coastal areas involved are densely populated. If this factor would not be a part of the decision-making process, the outcome could be very different.

Decisions taken at the time of the *Prestige* incident might therefore have been clearly influenced by these two characterizing aspects. On the one hand, there was no relevant immediate risk for human life to be factored in. On the other hand, the impact of a massive heavy-grade oil spill at the level of human health and of the environment was a daunting threat for Spain, as well as the other coastal states involved (Portugal and France), if an accident occurred closer to the coast in a sheltered area.

Bewildering Circumstances

The details of the shipping setting within which the *Prestige* incident unfolded are somewhat bewildering. Difficulties concerned not only factual circumstances, but also legal parameters. Further, when such factual and legal aspects are examined, it is rather striking to conclude that (in spite of all the changes subsequently introduced) such circumstances could perhaps emerge in future incidents.

Let attention now be turned to the specific situation of the *Prestige* incident. The facts summarily outlined below are (to the best of our knowledge) accurate and reflect the bewildering setting of the last of the *Prestige*'s voyages with respect to the vessel and the cargo. The following aspects deserve consideration:

- The ship was a 26 years old single-hull tanker flying the Bahamian flag;

- It had been chartered by a Swiss-based trading business with ties to Russia;

The 'environmental protection rationale' would become virtually the deciding element.

- It carried a cargo of 77,000 tonnes of heavy-grade oil from Russia;
- The corporate vehicle through which the ship was owned was a Liberian company (which has apparently remained veiled throughout the events);
- The ship was apparently ultimately owned and managed by Greek interests;
- The *Prestige* was classed by an American society;
- Insurance had been taken out with a British entity;
- The latest class surveys had been conducted in China and the United Arab Emirates; and
- The crew comprised Greek, Filipino and Romanian nationals.

If an attempt were made to characterize these circumstances, the term 'transparency' would certainly not come to mind. The problem is that such a convoluted line of ownership, control and responsibility exists more often that it would perhaps seem desirable. Together with this lack of transparency exist a number of increased pitfalls (e.g. ineffective flag state control and substandard shipping; lack of control of dangerous cargoes), which acquire particular significance in tanker accidents. The implications, including as to enforceability, as well as determination of responsibility, are many-fold and cannot be reviewed (even if briefly) in this paper.

From the standpoint of the issue of places of refuge, all that needs to be emphasized is that it might become difficult for a decision-maker to rely on the information available (as to, for

example, the 'condition' and 'cargo details' of certain ships, and liability issues). If faced with a difficult decision on whether or not to grant refuge, decision-makers of the coastal state involved will almost inexorably tend to and probably should err on the side of caution in assessing the information provided. The reform of control mechanisms at various levels within the EU (including, particularly, of port state control), in the aftermath of the *Erika* and *Prestige* incidents, is a conspicuous token of how this lack of transparency has been at the forefront of recent concerns.

To turn a bad situation into a worse one, international law offered no adequate 'comfort' to those who were charged with making rather multi-faceted, problematic and burdensome decisions. First, there were no international or EU legal standards on which to rely materially in respect of granting access to a place of refuge. Second, no effective, pre-planned contingency plans or procedures seem to have been in place at the time. Third, the existing financial and compensation mechanisms seemed to be incompatible with the magnitude of the potential (environmental and other) repercussions. Therefore, legal conundrums existed at various levels.

There appears to be no doubt that Spanish authorities did consider the possibility of granting access to a place of refuge to the *Prestige*. Ultimately, the decision was made in the negative. Criticism has been fast in coming from multiple quarters, with many concluding that the environmental disaster could have been averted had the *Prestige* been brought to a place of refuge. But perhaps such criticism should be tempered with a measure of caution. An old saying comes to mind. *Beware of opinions from someone who does not have to live with the consequences of a decision*. It is especially so when such opinions are provided in hindsight.

In the *Prestige* case, the fact that local communities of Galicia (i.e. those whose lives and interests would be more directly affected by a decision) seem to have supported the decision of

Spanish authorities should not be taken lightly. For the democracy principle must be duly weighed-up in a decision-making process of this nature.

No theoretical demonstration can guarantee what the outcome of the incident would have been had Spanish authorities granted refuge to the *Prestige*. It is certainly the case as to the environmental and economic consequences. A more disconcerting feeling arises when attention is turned to human health aspects. Existing medical knowledge falls short of drawing definitive conclusions as to the long-term effects of certain substances in heavy-grade oils. The possibility of a carcinogenic impact from contact with such substances for humans seems not to be far-fetched. A question should therefore be asked when looking back at the *Prestige* incident. In the hypothetical scenario of access to a place of refuge not having averted the sinking of the *Prestige*, how should a decision-maker have factored the possibility of heavy-grade oils being spilled not in open sea but in an enclosed area, i.e. in higher density and closer proximity to human populations and the basis for their livelihood? For anyone who sailed close to shore and in enclosed waters, it is easy to think of a few reasons as to why under the meteo-oceanographic conditions prevailing at the time bringing the *Prestige* (a ship sailing with a structural fault) to refuge in an area such as the Finisterre could hypothetically result in an environmental catastrophe similar or worse to that which ultimately occurred. The additional downside of such a scenario would be that the risks of contact of humans with heavy-grade oil would probably increase.

Claims have been advanced that Spanish authorities have acted with negligence, allegedly as evidenced by a number of facts (e.g. unreasonable response times; unreliable decision-making; prioritization of political aspects over expert assessments). In spite of all evidence gathered, reviews conducted and reports prepared, such claims fail to provide sound proof on a crucial

point: that the granting of refuge would beyond any reasonable doubt have caused less damage than that caused by opting for sending the *Prestige* out to sea. Even if it would be hypothesized for the sake of argument that the environmental damage would have been less, there would always be the issue of heavy-grade oil spills closer to human populations. To factor risks concerning the environment above the risks concerning humans, where the two would be of a significant magnitude, would appear to be tantamount to turning international law upside down. However relevant environmental concerns may be as a matter of principle they do not trump human-related concerns (health and otherwise).

The 2013 decision of the *Tribunal Superior de Justicia de Galicia* (Galician High Court) on the *Prestige* case[34] can be seen as striking evidence of the complexity of a situation such as that of the *Prestige* incident as well as of the difficulties in dealing with a situation characterized by a lack of transparency. As the judgment noted, the evidence showed that the *Prestige*'s structure was not in a condition to withstand the demands of normal navigation let alone critical situations, and that the inspections were not effective. In spite of that, it was noted the *Prestige* was deemed seaworthy and cleared to sail. When referring to the emergency action that had been required, the Galician High Court stated that no one could have known for certain what the correct response to the accident should have been. With regards to the action taken by Spanish authorities, it concluded that the decision to order the vessel out to sea had in light of all facts known been seen as correct, if not the only possible decision.[35] This brief reference provides, on its own, food for thought as to what might happen if a similar accident would ever occur.

[34] Cf. note 27.

[35] Ibid., at 43–44, 51–52.

One of the points to be driven home, with regards to decision-making on whether or not to grant a place of refuge to a distressed ship, is that the complexity of a *Prestige*-like set of circumstances does not seem to lend itself to straightforward answers. No matter how hard the search for 'right answers', there always is room for disagreement and alternative approaches. In the current international legal setting, when deciding whether or not to grant refuge to a distressed ship in a *Prestige*-like case, any obligation would tentatively have to be conceived of as an *obligation of means* (i.e. as to the procedures to put in place for the purposes of and to the actual use thereof in decision-making), rather than an *obligation of result* (i.e. as to effectively grant refuge). Differently put, the demonstration that would have to be provided is that the decision that is eventually made can be put forward as an entirely valid option, all circumstances having been considered. The principal focus, as will be noted below, becomes the 'traceability' of the decision, not its content and outcome. To some extent, this seems to have been the core of the approach followed by the Galician High Court.

Whether or not the aforesaid *obligation of means* is already part of customary international law could be a matter for debate. Practice is yet scarce, although by accepting hard and soft international law instruments and by implementing national legislation to this effect states appear to be giving rise to an *usus*, arguably supported by *opinio juris*.

For Portugal, the situation was (fortunately) far less complex, not only because of the fact that it was not the coastal state directly involved (as the incident had not taken place in its jurisdictional waters), but also because the legal scenario for the decisions was somewhat different (for instance, an aspect of transboundary environmental harm had to be contemplated, in theoretical terms at least). When the possibility arose of the *Prestige* entering Portuguese jurisdictional waters, the authori-

ties refused to allow the ship to navigate southwards. Decisions in Portugal were being coordinated at ministerial level (with information from various sources), a Navy ship having been dispatched to the scene to follow-up the situation. Several scenarios were contemplated in the event the ship would indeed enter Portuguese waters. Ultimately, the *Prestige* remained outside Portugal's EEZ until it sank. With respect to Portugal, no other decision would seem appropriate when considering the national plane. In the absence of binding, effective international and regional legal mechanisms to deal with incidents such as these, national interests prevailed and determined the action taken.[36]

In terms of environmental damage, Portugal was much less affected than Spain. Two factors appear to have contributed to this outcome. First, the Portuguese authorities' decision not to allow the ship to enter its jurisdictional waters signified that the *Prestige* (as potential source of pollution) was kept as far as possible from Portuguese coastal areas. Second, the meteo-oceanographic (wind, in particular) conditions at the time were such that the pollution was driven away from Portuguese shores. At another time of the year, the situation could have developed in a different manner.

Portugal's Legal Regime in the Post-*Prestige* Era

The legal developments that took place (primarily) in the post-*Prestige* era (also the post-*Erika* era) highlighted the need for change that became all too apparent in the management of maritime disasters involving in particular tankers. There is little doubt that the developments notably within the IMO and the EU were aimed at 'responding' (at least partially) to the *Prestige* and *Erika* disasters and the decisions by coastal states not to grant refuge.

[36] When assessing the circumstances of the *Prestige* case, the Galician High Court made specific reference to the Portuguese decision not to allow it to sail into its jurisdictional waters: ibid., at 33, 44.

The example of Portugal could be relevant in this debate for a few reasons. First, Portugal was one of the coastal states that, in the aftermath of the *Prestige*, adopted a concerted action with Spain and France to implement measures against single-hull tankers in its EEZ.[37] Second, in maritime terms, Portugal has a massive exposure to environmental risks and threats from shipping, given its extensive coastal areas and archipelagic features. Third, even though Spain's decisions affected Portugal directly, the Portuguese position during the *Prestige* events was to a certain extent of sympathy for the Spanish handling of the situation. Finally, although Portugal was not directly involved in a decision on places of refuge, it took action that effectively sent the *Prestige* out to open sea and away from the direction that had been selected to minimize the impact on the ship.

Taking a step back, let an additional comment be made on the 'ancient custom' to grant refuge to ships in distress. There seems to be little doubt that a customary rule compelling coastal states to allow entry into their internal waters (e.g. harbors, roadsteads,

[37] While authors have referred to it as 'unilateral action', it is somewhat odd to think that such 'unilaterality' refers in fact to action by a group of states. Moreover, while the three states mentioned were the more active paladins of such measures, other states supported their positions. The example of Italy is noteworthy, as its positions during the 2003 Informal Consultative Process (4th Meeting, 4 June 2003), months after the sinking of the *Prestige*, were to a significant extent aligned with those of Portugal, Spain and France. While not so openly vocal, other EU Member states expressed their sympathy. The United Kingdom, Ireland and Belgium joined-in with Portugal, Spain and France to apply for the setting-up, within the IMO, of the Western European Particular Sensitive Sea Area. Certain associated protective measures, which included a ban on carriage of heavy-grade oil by single-hull tankers, were involved. While such measures were eventually not approved, this evidence shows that a wider group of interested states had similar concerns. Whether or not the actions by Portugal, Spain and France were inconsistent with international law is a different matter, one which will for the time being remain undecided. Arguments can be made either way, this being perhaps a borderline situation.

bays) to a ship requiring assistance existed once. Such right undoubtedly exists when human life needs to be protected ('humanitarian rationale'). Environmental protection emerged in the last decades as a 'game-changer' and is currently also a critical aspect to be considered here ('environmental protection rationale'). Protection to ships and cargoes, apparently also warranted in the past, lost its significance at least to a certain extent, having nowadays become a 'distant third' in the list of 'justifying reasons' in favor of granting a place of refuge.[38] Customary international law, one would therefore contend, does not incorporate any rule imposing on coastal states an untrammeled duty to grant shelter to distressed tankers.

When one delves into the legal developments that occurred in the aftermath of the *Erika*, *Castor* and *Prestige* incidents, the most poignant and striking conclusion is precisely that no unqualified obligation to grant refuge to a ship in distress was identified. Had it been concluded that a customary rule to that effect existed, it would certainly have been spelt out in documents such as the VTS Directive and the IMO Guidelines. A similar conclusion is reached when reviewing international instruments that could potentially include provisions on the subject. As noted above, the Salvage Convention was the instrument that came closest to spelling out a workable rule,[39] but has fallen short of providing for an obligation to grant refuge. Its contribution could perhaps be found at another level, that is, in identifying (i) human life, (ii) property, and (iii) the environment as the interests to be protected.

[38] The VTS Directive refers to measures (consistent with international law) designed "to ensure the safety of shipping and of persons and to protect the marine and coastal environment" (cf. art. 19.1). Similarly, when dealing with contingency plans, reference is only made to threats to human life and the environment (cf. art. 20a.1). Threats to ships and cargoes seem thus placed at an entirely different level.

[39] Salvage Convention, art. 11.

In light of all reviews of international law undertaken hitherto, the conclusion does appear to be that in spite of all attempts no customary or conventional rule imposing on coastal states a duty to grant distressed ships access to places of refuge areas has been identified.

As a EU member state, and a party to the IMO, the legal panorama on the issue of places of refuge in Portugal is to a very large extent determined by international and EU instruments. Two such instruments, already mentioned, constitute the starting point of and the framework for any review of the relevant Portuguese legal regime: (i) the IMO Guidelines; and (ii) the VTS Directive (as amended). While other instruments could be made reference to[40], attention will be briefly drawn to the more significant aspects of these two instruments in terms of the specific issue treated here: the decision-making procedure on whether or not to grant access to a place of refuge by a ship requiring assistance.

The IMO Guidelines offer a framework on the basis of which states can act in respect of places of refuge. The following points attempt to summarize what can be deemed as the critical aspects of the IMO Guidelines on this problem, as regards both theory and practice:

- At the very outset, it is made clear that the Guidelines are not to be followed where safety of human life is in question. Nor are they to be viewed as addressing the issue of operations for the rescue of persons at sea.[41] This approach seems to confirm that the decision-making on places of refuge is a matter to be conceived of as not prejudicing the 'humanitarian rationale', which has been central to the 'ancient

[40] Within the IMO context, consideration should be given to the Maritime Assistance Services (MAS) Resolution: cf. IMO Doc. A23/Res.950 of 26 February 2004.

[41] IMO Guidelines, paras. 1.1 and 1.13.

customary rule'. However indirectly, it is acknowledged that the problem is to be viewed from a different angle;

- The decision-making process is canvassed not as a purely theoretical or doctrinal debate but as a matter of finding the solution to a practical (event-specific) problem. Its purpose is to provide states, shipmasters, companies and salvors with a common framework that enables them to respond effectively to a possible imminent disaster;[42]

- While noting that when a ship is damaged, the best way of preventing damage or pollution from its progressive deterioration would be to lighten its cargo and bunkers and to repair the damage (an operation best carried out in a place of refuge), it recognizes unreservedly that the granting of a place of refuge could (a) involve political decisions and considerations which can only be addressed on a case-by-case basis, and (b) encounter local opposition;[43]

- Reference is made to the weighing-up process within which due consideration must be given on an objective basis and specifically in relation to the event in question to, on the one hand, the advantage for the affected ship and the environment resulting from bringing the ship into a place of refuge and, on the other hand, the risk to the environment resulting from that ship being near the coast;[44]

- The latter of the foregoing factors, sometimes discarded without reasonable justification from the debate on places

[42] Ibid., paras. 1.2 and 1.12.

[43] Ibid., paras. 1.3, 1.7 and 1.10.

[44] Ibid., paras. 1.7 and 3.5.

of refuge, is of fundamental relevance: bringing a damaged ship closer to shore inevitably and indisputably results in an increase of the risk for the environment and the human populations of the coastal areas in question. This reference shows clearly that the specific area chosen as place of refuge may be more severely threatened and affected should a disaster occur;

- When setting down the elements concerning action by a coastal state, no doubts are left as to the right of coastal states to require ships to act in a certain manner with a view to handling the threat of danger;[45]

- It recommends the establishment by coastal states of procedures aimed at handling and acting on requests for the granting of a place of refuge and, where appropriate, authorizing access to such place of refuge.[46] The right of a coastal state not to authorize access to a place of refuge, if and when it deems it as not appropriate, is indubitably recognized;

- Contingency plans are to be drawn up by coastal states with a view to dealing with disaster situations involving damaged ships off their coasts. Such plans are to be implemented if and when an incident takes place. An information-sharing mechanism should be set up within the coastal state, linking all governmental and maritime authorities, in order to improve decision-making if the situation arises;[47]

- Factors to be weighed-up in the analysis of an incident through an event-specific assessment are listed. The ana-

[45] Ibid., para. 3.1.

[46] Ibid., paras 3.2 and 3.4.

[47] Ibid., para. 3.6, and Appendix 2, para. 2(3).

lysis, to be conducted in view of the prevailing circumstances and on an objective basis, must incorporate a comparative risk-assessment review by reference to the two options available: (a) the ship remaining at sea; and (b) the ship being brought into a place of refuge. The extensive list of factors includes, *inter alia*: (i) condition of the ship; (ii) nature of the cargo, in particular if hazardous cargoes are involved; (iii) threat to public safety; (iv) human and crew factors; (v) insurance, liability and financial aspects; (vi) environmental constraints, including existence of sensitive areas; (vii) economic impact; (viii) meteo-oceanographic conditions; (ix) navigational and piloting aspects; (x) contingency plans; and (xi) foreseeable consequences;[48]

- The comparative risk-assessment review must cover the safeguarding of human life at sea, the safety of persons at the place of refuge, as well as its industrial and urban environment, the pollution risks, the risks of disruption of economic activities, notably as to ports operations, the implications of the refusal of access to the place of refuge, including as regards the possible transboundary impact (*sic utere tuo* principle), and the possibility to preserve the hull, machinery and cargo of the distressed ship;[49]

- Most importantly, it is expressly stated that there is no obligation for the coastal state to grant access to a place of refuge, it being nevertheless bound to weigh-up all factors and risks and to give shelter whenever reasonably possible.[50]

48 Ibid., para. 3.9, and Appendix 2, para. 2.

49 Ibid., paras. 3.10 and 3.11.

50 Ibid., para. 3.12.

Turning to the VTS Directive, the first point to be made is that it incorporates to a significant extent the IMO Guidelines, including explicit references thereto. The clearest example concerns the contingency plans to be drawn up by EU member states.[51] Focusing exclusively on the decision-making concerning the granting of access to a place of refuge, heed should be paid to the following aspects of the VTS Directive:

- The measures to be taken by member states in the event of incidents or accidents at sea are aimed at ensuring the safety of shipping and of persons and protecting the marine and coastal environment;[52]

- Amongst the non-exhaustive list of measures that national authorities are allowed to adopt are the possibility of directing the ship to follow a specific course and causing the ship to be piloted or towed;[53]

- EU member states must designate competent authorities which are to have the expertise and the power to take independent decisions concerning the accommodation of ships in need of assistance, by adopting any of the measures mentioned above;[54]

- Most notably, it is explicitly established that decisions are to be preceded by an assessment made by reference to applicable contingency plans. National authorities have to ensure

[51] VTS Directive, art. 20a.2.

[52] Ibid., art. 19.1.

[53] Ibid., Annex IV (to which art. 19.1 refers), paras. (a) and (d). If a ship is towed under a towage or salvage agreement, these measures may be addressed to the relevant assistance, salvage and towage companies.

[54] Ibid., arts. 20.1 and 20.2.

that distressed ships are admitted to a place of refuge only if they conclude that it is the best course of action for the purposes of protection of human life and the environment;[55];

- Contingency plans for accommodating ships in need of assistance are to be drawn up with a view to responding to potential threats to human life and the environment. Such plans to be based on the IMO Guidelines and have to incorporate the assessment procedures for acceptance or refusal of a ship in need of assistance in a place of refuge;[56]

- It is stipulated that the absence of an insurance certificate is not a sufficient reason for a refusal to grant refuge to a ship in distress.[57] When examined in light of the *Prestige* case, this aspect of the EU regime should perhaps invite cause for trepidation, since the 'bill' in the *Prestige* case was estimated by the Spanish government to be over 4 billion Euros;

- A specific obligation for masters and owners of ships carrying dangerous or polluting goods to cooperate with national authorities is imposed. This obligation is aimed at minimizing the consequences of incidents or accidents;[58] and

- It explicitly acknowledged that matters of recovery of, or compensation for, economic losses and damages relating to the accommodation of ships in distress need be looked into at the EU level.[59]

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[55] Ibid., art. 20b.

[56] Ibid., arts. 20a.1 and 20a.2.

[57] Ibid., arts. 20c and 20d.

[58] Ibid., art. 19.2 (which refers to art. 12).

[59] Ibid., arts. 20d and 26.3. The Commission has submitted to the European Parliament and the Council the *Report on Liability and Compensation for*

The applicable Portuguese regime established by Decree-Law 52/2012 of 7 March 2012, which amended Decree-Law 180/2004 of 27 July 2004, reflects a wide list of international instruments.[60] The VTS Directive was transposed by the Portuguese statutory regime. Moreover, the IMO Guidelines have clearly also been taken into consideration. In a very loose sense, it could be said that the Portuguese regime is both EU and IMO compliant. While this is the case, there is little doubt that in its details this regime can depart somewhat from equivalent regimes within the EU zone and those of other states at large.

Financial Damages Sustained by Places of Refuge when Accommodating a Ship in Need of Assistance, Report COM (2012) 715 of 30 November 2012 (EU Liability Report). If additional evidence was necessary, the Report confirms how the liability and compensation aspects involved in the debate of places of refuge in effect confirm that questions remain unanswered. While there is no room in this paper to enter the debate on liability and compensation for financial damages stemming from the granting of refuge to a ship in distress, one illustrative point of the risks for coastal states should be highlighted. The report refers to the possibility of reception of a ship in a place of refuge to be legally deemed a "preventive measure" for purposes of the IMO liability-related instruments: see, EU Liability Report, paras. 2.2.1 and 5.1(3). No such confirmation exists, perhaps also because it could depend on each specific set of circumstances (i.e. it is not certain that all decisions to grant refuge qualify). The primary instrument on international liability aspects is the International Convention on Civil Liability for Oil Pollution Damage of 29 November 1969 (973 UNTS 3, as amended), which has been complemented by the Convention creating the International Oil Pollution Fund and the 2003 Protocol on a Supplementary Fund (jointly, "IOPC Funds"). An overview of the *Prestige* case in respect of the IOPC Funds and compensation issues is available at <www.iopcfunds.org/incidents/incident-map/#126-2002-210-November>.

[60] Regulations detailing aspects of the regime set down in Decree-Law 180/2004 are expected to be enacted in the future. Unless otherwise stated, references to Decree-Law 180/2004 in this paper shall mean the Decree incorporating the 2012 amendments.

The Portuguese authority designated as competent for deciding whether or not to grant refuge to a ship in need of assistance is the member of Cabinet charged with sea and maritime affairs.[61] The clear implication of this choice of competent authority seems to be that Portugal considers that political factors could become significantly relevant in a decision-making process, and has accordingly opted for integrating the decision at the level of the Cabinet. Compliance with the requirement for independent technical expert input was achieved through an obligatory but non-binding opinion from the Technical Commission for Accommodating Ships in Distress.[62] The measures which the competent authority may take are the exact same as those listed in the VTS Directive.[63]

With respect to the required contingency plans, the amended Decree-Law 180/2004 follows again the regime set forth in the VTS Directive, and provides for consideration to be given to the IMO Guidelines.[64] The decision on whether or not to grant refuge, as stipulated in the VTS Directive, is to be affirmatively taken where it is deemed the most appropriate decision for protection of human life and the environment.[65] The issue of financial security and compensation is dealt with again in the same exact terms as in the VTS Directive.[66]

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61 Decree-Law 180/2004, art. 19.1.

62 Ibid., art. 19.2. This commission is composed of members from a wide range of sectors (e.g. maritime and port authorities, vessel traffic authority, navy, environmental authority, and meteo office). Other members from interested sectors and stakeholders may be called upon to join the commission.

63 Decree-Law 180/2004, art. 19.5 refers to Annex IV, which virtually transcribes the relevant annex of the VTS Directive.

64 Decree-Law 180/2004, art. 19A.

65 Ibid., art. 19B (reference is made to stabilizing the condition of the ship).

66 Ibid., art. 19C.

Decision-Making: Prevalence of National Interests?

The scope of situations involving a decision-making process relating to places of refuge is likely to be virtually unlimited. For purposes of this paper, the author focused entirely on what was referred to as a *Prestige*-like case. In short, it is a maritime accident of the severest nature, near densely populated coastal areas,[67] involving a tanker carrying a highly polluting and dangerous hydrocarbon cargo,[68] in which from the outset the survival of the vessel comes into question, in which the responsibility for ship and cargo is not entirely clear, all signs auguring an imminent environmental and human catastrophe of unimaginable dimension and cost. This point is not without critical implications.

As reflected in the more recent international instruments, decision-making in respect of whether or not to grant a distressed ship access to a sheltered area is an 'incident-specific process'. On its own, this aspect would render invalid any simplifications and attempts at hard and fast rules on decisions concerning such granting of access to refuge. International law, indeed, contains no rule dealing with the outcome of the process. That is, there is no legal obligation to grant refuge (not even a 'qualified obliga-

67 In the hypothetical scenario of a similar accident occurring in unpopulated (or even very sparsely populated) areas, the decision-making process relating to access to a place of refuge would probably factor circumstances in a different manner. Human health and other human-related concerns being absent, the decision would likely revolve around the dichotomy 'coastal environmental protection' *versus* 'oceanic environmental protection'. In such hypothetical case, protection of ship and cargo could perhaps be a more relevant factor than it would otherwise be the case.

68 Parallels could be attempted between heavy-grade oils and other dangerous cargoes. For purposes of this paper, the option was made for restricting the analysis to a Prestige-like case. Reliance on the argument proposed here for purposes of a case involving a dangerous cargo of a different type would require the validation of the necessary legal analogies between both sets of circumstances.

tion', one would argue).[69] Conversely put, there is no *obligation of result*. What international law does appear to incorporate is an *obligation of means*, whereby states are mandated to carry out a decision-making process predicated on the specific circumstances of the incident. The outcome is entirely dependent on how such circumstances are weighed-up – through such decision-making process and in light of the critical interests to be protected. Only the said process may be subject to legal review, not the decision itself (or the outcome thereof) in isolation. Admittance of a ship to a place of refuge, according to the VTS Directive, is mandatory only if national authorities conclude that such decision is "the best course of action for the purposes of the protection of human life or the environment".[70] What the "best course of action" consists of is for each EU coastal member state to assess in each specific incident.[71]

Wedded as the decision-making process eventually is to the upshot thereof, the critical aspect has apparently become the *traceability* of the ultimate decision – that is, the possibility of ascertaining the stages of the process in reaching the decision of allowing (or disallowing) access to refuge. It should be immediately emphasized, however, that the relevant instruments have stopped short of a rigid process.[72] On the contrary, much room

69 Correspondingly, there is no right for the ship to require a coastal state to grant it access to a place of refuge.

70 VTS Directive, art. 20b. Portugal has added another aspect: the stabilization of the ship's condition: cf. Decree-Law 180/2004, art. 19B, n.º 2.

71 An attempt is made by van Hooydonk to present the basis pursuant to which, under customary law, states may exercise a right of refusal of entry (van Hooydonk, note 10 at 170 et seq.). While not agreeing with the approach adopted, there are points of contact notably as to the elements of each decision (not necessarily the way in which such elements are weighed-up).

72 While in and of itself the decision-making process established in the IMO Guidelines is not binding on IMO parties, the fact that such process is incorporated by states into their national legislation (as happened with Portugal) has undoubted law-making implications. By giving their imprimatur

for discretion continues to lie with coastal states because, for instance: (a) no comprehensive list of factors to be weighed-up was drawn up; (b) how each factor is to be concretized (or valued) remains a matter of judgment; and (c) the relative weight of each such factor in the decision-making process is not set in stone. Therefore, a wide margin of discretion for the coastal state persists. If a legal review on the process were attempted, unless the decision-making process had been conducted in a manifestly unreasonable manner, such legal review could stumble on very challenging aspects concerning the exercise of legal discretion by states. Said *traceability* appears to be thus critically linked to a notion of *reasonableness* in light of concrete circumstances.

A significant part of the discussion surrounding the *Prestige* disaster appears to have been centered on the decision itself. In light of subsequent developments by international instruments, a reappraisal might be well warranted. What should be enquired nowadays is perhaps whether the process leading to a decision – first, weighed-up all aspects that were relevant in the concrete circumstances and, second, factored each aspect in a not manifestly unreasonable manner. Zooming in on the process should be about reasonableness of the weighing-up process. No single correct weighing-up of the incident circumstances exists. How transparent the decision-making process is, from the standpoint of linking a set of circumstances to a specific decision, has in our view become the 'key to the vault'.

Sound technical assessments are a requirement for such decision-making processes, as they have or should have always been. The concrete circumstances of the affected vessel (i.e. seaworthiness, position, repairs required, survivability assessment), together with the availability of a sheltered area adequate to carry

to the decision-making process as described in the IMO Guidelines, states are arguably validating it for national and international law purposes.

out the necessary repairs in time to avert disaster, are indubitably amongst the critical features of the decision-making process. At the technical level, implementation should be perhaps viewed through the lenses of contingency plans. A decision-making process supported by a carefully designed contingency plan (e.g. pre-planned procedures, responses and precautionary actions together with robust means for pollution combat) is perhaps the most effective technical contribution. The decision-making process can never be made tantamount to a technical assessment. However, a clear technical input (in the form of a contingency plan) can become one of the pivotal elements thereof, by decluttering the process of unnecessary technical discussions at a critical time. Today, such contingency plans seem to have become a legal requirement, at the very least for EU member states.

Side-by-side with such technical assessments the coastal state's political 'value judgments' need be considered. They may not be simply brushed aside.[73] To do so would consist of a breach of international law as it now stands, as well as of the principle of democracy in several of its facets. The view taken by local stakeholders and the local population on the granting of refuge in a nearby area, for example, must particularly be given due weight. Access to a place of refuge located in a coastal area without human settlements, and limited or no economic activities, is an entirely different proposition. In the context of these political

[73] While being 'value judgments' that are by nature political, these aspects become legal factors for purposes of the decision-making process. Differently put, international law allows coastal states to undertake assessments that have a political element and to weigh-up such element within the legal decision-making process. The basis for these 'value judgments' is not the IMO Guidelines, which simply reflect international law. States are under international law entitled to weigh-up political factors to any extent not prohibited thereby. Insofar as no right of access to a place of refuge exists, in deciding whether to grant access to a distressed ship, states are fully in their right to undertake assessments as to the political implications of any decisions and scenarios.

'value judgments', two considerations arguably acquire outstanding significance in a *Prestige*-like incident.

First, there is the question of the full range of short and long-term impacts on human life primarily, but also the environment. Its relevance is too obvious to require explanation under international law. The long-term aspect is of paramount difficulty and should be separately considered. When in doubt as to which such long-term (irreversible) implications might be, a protective approach[74] taken by the coastal state appears to be fully justified (certainly when potentially serious implications for human life are involved). When such long-term impact comes together with a potentially significant financial burden, such a protective approach is all the more justified from a legal standpoint (which leads to the second consideration below). To be clear, one would argue there is no international law or EU obligation for a coastal state to avoid risks of widespread pollution as a result of refusing to grant shelter to a distressed ship when that goal would be attainable only by risking concentrated pollution with potential long term damage for humans and the coastal environment.

Second, there is the issue of financial liability for all damages caused by a disaster occurring after refuge is granted to a dis-

74 Granting a place of refuge in a *Prestige*-like case entails the consideration of the scenario of massive volumes and high concentrations of heavy-grade oil being spilled over a confined coastal area. Because such coastal area is directly linked to human populations and their livelihoods ('human environment'), a manifest risk of serious damage for humans exists. Even if the consequences for humans are unknown from a purely scientific standpoint, making a decision that avoids such a spill by protecting the human environment seems clearly warranted. In a decision between 'two unknown evils' – the consequences of a massive spill of heavy-grade oil in a confined coastal area in close proximity with human populations or the consequences of a similar spill in an open oceanic area with no direct links with humans and where the heavy-grade oil would be in smaller concentrations – the choice to be made (assuming that the probability of each scenario materializing is not manifestly different) seems rather clear: protection is to be granted to the human environment instead of the environment in abstract terms.

tressed ship. As clearly demonstrated by the *Prestige* incident, a several billion Euro 'bill' might be left unpaid. Whether a coastal state is willing to bear such a financial burden (or even contemplate the possibility of having to face it), without clear guarantees of full compensation for all damages directly and indirectly resulting from the accident after refuge is granted, is a matter to be decided in discretionary terms. From a different angle, the issue of 'who' is affected by the disaster arises. If refuge was granted, and the disaster occurred, the damages would most likely be concentrated in internal waters, ports and/or the territorial sea of the coastal state. If, on the contrary, the disaster took place tens of miles offshore, it would likely not have the same intensity for the shores of such state. Of course, pollution of the high seas could become a problem to be addressed. However, pollution of the high seas does not seem to result per se in liability for a state.[75] It is even more so because a coastal state is not under a legal obligation to grant refuge. The debate on this point cannot be undertaken here. One would simply advance what seems to be critical. Even at the EU level, it is doubtful that a state may be 'forced' to face the risk of significant pollution damages (most notably if human populations are to be severely affected) without having the reciprocal right and guarantee to obtain full redress for any actual (direct and indirect) damages eventually suffered.[76]

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[75] The *res communis omnium* nature of the high seas often led to difficulties in similar situations. Unsurprisingly, the economics theory of the 'tragedy of the commons' has been named when referring to the situation of this maritime zone (cf. "The tragedy of the high seas" *The Economist*, 22 February 2014, available at <www.economist.com/news/leaders/21596942-new-management-needed-planets-most-important-common-resource-tragedy-high>). Strictly legally, a situation of pollution affecting the Area would likely have to be addressed from a different angle. From a practical perspective, however, it would be difficult to render a coastal State liable for pollution in the Area in a case of refusal to grant refuge.

[76] Cf. note 59, with very brief notes on this point.

A different issue concerns a possible risk of pollution of maritime zones subject to the jurisdiction of another state. This would be a much more complex point to deal with, reasons for which it was excluded at the outset from the scope of this paper. All that will be suggested here is that a mere risk of pollution of maritime zones subject to the jurisdiction of another state is per se not sufficient to constrain decisively the decision-making process of the state involved in the request for access to a place of refuge.

When comparing today's legal setting with that in place at the time of the *Prestige* incident, one almost feels as if little has changed for a coastal state faced with a similar threat of imminent disaster. The situation would still be an exceptional one as far as circumstances are concerned, and to be assessed and decided upon on its own merits. No certainty would exist as to the consequences of whichever decision would be made: allowing or not allowing access to a place of refuge. For the outcome of a potentially 'disastrous' situation can only be controlled to a certain (variable) extent. Given that certainty does not exist, a coastal state would always have to 'make a call' on the basis of its best assessment of all specific circumstances of the incident. Political considerations would continue to be present, and would be for the coastal state alone to deal with on its discretion. Most significantly, under international law there is still no obligation to grant shelter to the distressed ship.

Improvements have certainly occurred. The requirement that coastal states implement adequate decision-making procedures, contingency plans and organizational responding structures indubitably is a step towards better decision-making in *Prestige*-like incidents. Determining what the 'best course of action' is has been made somewhat clearer and easier by the legal instruments drawn up since the *Prestige* case (including national legislation, as in the case of Portugal).

Sieving through the interspersed gaps of international and EU law, the ultimate critical point to be touched upon concerns the

priority to be set on the interests to be protected by the coastal state's decision. Should international or European interests (in principle embodied by the need to avoid 'widespread pollution' by granting refuge to a distressed ship) prevail over those of the potentially affected coastal state (which is to grant access to a place of refuge)? In the present legal setting, one would argue that the answer should perhaps be given in the negative. All other things being equal, in light of the legal discretion enjoyed by coastal states in this respect, national interests will likely have a *prima facie* prevalence. Only the potentially affected coastal state may, in assessing the situation, waive the right to place prevalence on its national interests when deciding whether or not to grant refuge. Although possibly not what many would conclude, this seems to be the conclusion that best reflects the status quo of international and EU law.

BLACK SEA FISHERIES: THE LONG SEARCH FOR AN EFFECTIVE FORUM FOR INTERNATIONAL REGULATION

Ioannis Stribis*

A Vulnerable Ecosystem

The Black Sea is geographically one of the most isolated seas in the world. It is connected to the world's oceans via the Mediterranean Sea through the Bosphorus, the Sea of Marmara and the Dardanelles. In the northeast it is linked with an equally isolated body of salty water, the Sea of Azov through the Strait of Kerch.[1] The Black Sea has six coastal states (Bulgaria, Georgia, Romania, Russia, Turkey and Ukraine), and an extremely extended catchment area compared to its surface: it receives freshwater and sediment inputs (more than 350 km^3/per year)[2] from rivers draining almost half of Europe and significant parts of Eurasia

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[1] On the Sea of Azov, cf. the comprehensive V. Lagutov (ed) *Environmental Security in Watersheds: The Sea of Azov* (Springer, Dordrecht: 2012).

[2] N. Panin "General Oceanographic Properties: Geography, Geology and Geochemistry" in T. Oguz (ed) *State of the Environment of the Black Sea (2001 – 2006/7)* (Commission on the Protection of the Black Sea Against Pollution, Istanbul: 2008), 23–43 (further: BSC 2001–3006/7 Report).

(including the Danube, the Dnieper and the Don,[3] the second, third and four largest rivers of Europe respectively). The drainage area encompasses a surface of approximately 2 million km^2 (almost 1/3 of continental Europe, with a population of than 160 million people)[4] against a sea surface of about 420 000 km.^{2}

The Black Sea has a natural, predominantly anoxic environment: the water exchange with the Mediterranean is quite limited and this natural phenomenon creates stratification of waters with oxygen-rich surface waters (down to 150-200 meters) and a much bigger lower layer of anoxic waters. The combination of this natural phenomenon with the increase of land-based pollution means that over 85% of the volume of the Black Sea is practically devoid of marine life, except for some forms of bacteria.

The marine environment of the Black Sea[5] depends on both the coastal and non-coastal states of its basin and is exposed to significant pressure from land-based human activity. The changes of the Black Sea ecosystem during the last five decades clearly

[3] Through the adjacent shallow Sea of Azov, connected only with the Black Sea through the Strait of Kerch.

[4] General Fisheries Commission for the Mediterranean (GFCM) Secretariat, Background Document on the Black Sea Fisheries, Preliminary version (First Meeting of the GFCM Working Group, January 2012); S. Heileman, W. Parr and G. Volovik, "Black Sea" in K. Sherman and G. Hempel (eds) *The UNEP Large Marine Ecosystem Report: a perspective on changing conditions in LMEs of the world's Regional Seas* (UNEP Regional Seas, Report and Studies No. 182, Nairobi: 2008), 202-213.

[5] On the state of the environment of the Black Sea, cf. G. Lericolais "La Mer Noire, un espace environnemental en danger" in B. Chatré and S. Délory (dir) *Conflits et sécurité dans l'espace mer Noire: L'Union européenne, les riverains et les autres* (Editions Panthéon Assas, Paris: 2009), 79-86; I. Stribis *Pooling Forces in Protecting the Black Sea Marine Environment: Actors and Actions* (ICBSS, Athens: 2009), 2-6; BSC 2001-3006/7 Report, (note 2) at 448; L.D. Mee "Protecting the Black Sea Environment: A Challenge for Cooperation and Sustainable Development in Europe" in T.D. Adams, M. Emerson, L.D. Mee and M. Vahl *Europe's Black Sea Dimension* (Centre for European Policy Studies, Brussels: 2002), 89-143.

indicate the vulnerability of this large enclosed sea to anthropogenic effects. Land-based pollution is by far the largest source of environmental degradation in the drainage basins of the rivers and consequently in the sea body and its coasts. It accounts for almost 80% of the pollution, while pollution from vessels and other sea-based activities are the remaining polluting factors for the Black Sea.[6]

From the late 1960s to the early 1990s, the growing development of agriculture and industry, urbanization, overfishing, as well as the rapid expansion of navigation in the Black Sea were the causes of such widespread environmental degradation that many qualified the situation in the Black Sea as "an environmental catastrophe".[7]

The so-called "green revolution" in agriculture resulted in the inflow of large quantities of nutrients from the major rivers. This brought about the phenomenon of eutrophication, which is the increased intensity of phytoplankton hindering light penetration in the sea. Deprived from light, the photosynthetic benthic (bottom) species of algae died, and with them perished the source of oxygen for a wide variety of species, which disappeared from the Black Sea. The eutrophication phenomenon was mostly observed in the north-western part of the Black Sea.

Another factor impacting on the quality of the marine environment of the Black Sea (and the depletion of its fish stocks) has been the introduction of exotic or alien invasive species. The main source of these invaders is the discharged ballast water of vessels navigating into the Black Sea, while a third of the newcomers

[6] See the detailed statistics in BSC, *State of the Environment of the Black Sea. Pressures and Trends 1996-2000* available at <www.blacksea-commission.org/_publ-SOE2002-eng.asp>, chapter 2 (further: BSC 1996-2000 Report).

[7] L.D. Mee "The Black Sea in crisis: The need for concerted international action" (1992) 21(4) *Ambio* 278-286.

have been imported for aquaculture purposes.[8] These opportunistic species prey on local plants and animals and/or compete for food with the indigenous species, with serious negative impacts on the marine biodiversity of the Black Sea.

General Situation of Black Sea Fisheries

Despite being the largest natural anoxic water basin in the world, the Black Sea is still comparatively rich in living resources. Also, its shelf and river deltas are important spawning grounds for sturgeon and other fish species, and the coastal wetlands are migration and breeding grounds for numerous rare and endangered European birds.

Owing to natural factors, the diversity of species of Black Sea fauna is approximately three times lower when compared with that of the Mediterranean. More than 160 fish species inhabit the Black Sea. Anchovy, sprat, horse mackerel, whiting, spiny dogfish, turbot, sturgeons (the giant sturgeon and the Russian sturgeon), mullets (the golden mullet, the red mullet, the leaping grey mullet and Pacific mullet), Atlantic bonito, bluefish, shad and rays are among the species of fish that can be found in the Black Sea.[9] From this specific diversity, twenty six species of fish have traditionally been commercially harvested, including commercially valuable sturgeon, mackerel (bonito), turbot as well as anchovy and sprat.[10]

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8 Examples of alien species in the Black Sea are the Bay barnacle *Balanus improvisus*, Comb jelly *Mnemiopsis leidyi* from the Atlantic Ocean, Soft-shelled clam *Mya arenaria*, White-fingered mud crab *Rhithropanopeus harrisi tridentata* and the fish *Haarder Mugil soiuy*: See, BSC, Strategic Action Plan for the Rehabilitation and Protection of the Black Sea (Istanbul: 1996); BSC 1996–2000 Report (note 6) at chapter 4.6.

9 BSC 2001–3006/7 Report, (note 2) at chapter 9.

10 Report of Rapporteur D. Saganelidze to the Parliamentary Assembly of the Black Sea Economic Cooperation (PABSEC) "*State and prospects of fisheries in the BSEC member-states*" (adopted by the Twenty Ninth General Assem-

These species produced about 98% of the catch in the whole period from 1996 to 2008.[11] Anchovy and sprat accounted for more than 90% of total annual catch in 2008. The rest of the catch included commercially less important fishes, such as the Mediterranean horse mackerel (15.300 tons), whiting (11.100 tons), Atlantic bonito (5.000–20.000 tons) and a few molluscs (e.g. rapa whelk).[12]

The fishing effort in the Black Sea sharply increased in the 1970s and 1980s with the introduction of large-scale purse seine and mid-water trawl fisheries of small pelagic fish.[13] The larger and most valuable species (including sturgeons, river herring, turbot, sprat) rapidly became over-fished.[14] Fishing in the Black Sea region is a basic source of food for a majority of the local population and a significant source of revenue for the economy. Up to 150,000 people were estimated to depend directly on Black Sea fisheries while this industry supported approximately two million fishers and dependents. It is thus evident that the depletion of the fish stocks creates biological, social, economic and food-linked risks and problems which cannot be overestimated.[15]

Land-based pollution and eutrophication, and pressure from overexploitation and illegal fishing resulted in an overall decline of biological resources and the diversity of species of the Black

bly of the PABSEC, Varna, 13 June 2007) Doc. GA29/EC28/REP-1/07, 2-3 (further: Report of Rapporteur Saganelidze to the PABSEC).

11 BSC 2001-3006/7 Report, (note 2) at chapter 9.

12 General Fisheries Commission for the Mediterranean (GFCM) Secretariat, *Background Document on the Black Sea Fisheries, Preliminary version* (First Meeting of the GFCM Working Group, Constanta, 16-18 January 2012), 14.

13 C. Stamatopoulos *Trends in catches and landings. Mediterranean and Black Sea fisheries: 1972-1992* (FAO Fisheries Circular no. 855.4 (Supplement), Rome: 1995).

14 See European Commission Maritime Affairs and Fisheries, *Facts and Figures on the Common Fisheries Policy, Basic Statistical Data*, 2010, p. 4.

15 Report of Rapporteur Saganelidze to the PABSEC (note 10) at 15.

Sea. Some commercially valuable species (e.g. mackerel, bonito and horse mackerel) had by 2002 practically disappeared in the waters of Ukraine, Georgia and Turkey. Anchovy has declined due largely to the invasion of the non-indigenous comb jelly.[16] Turbot stocks have been severely depleted due to the poor environmental quality of shelf waters that prevents recovery of these species, unsustainable fishing practices (fishing gears) and illegal fishing. For the anadromous species (mainly sturgeons), an additional challenge has been the increasing construction of dams and other structures which prevent these species from reaching natural spawning grounds in rivers like the Danube and Dnieper.

The decline of marine capture fisheries resulted in the late 1980s and early 1990s to the near collapse of the catches: catch values from the mid-1980s to early 1990s declined by about US$ 240 million. A slow recovery has been observed in the last fifteen years for anchovy and sprat, whereas the horse mackerel catch remained at very low catch values. Among demersal stocks, the catch of whiting, red mullet and picked dogfish continuously decreased from the early 1990s. The turbot catch shows large fluctuations which could also be related to the reliability of official catch data for this stock.[17]

Need for International Regulation

In the Black Sea, most of the important commercial fisheries are recognized as transboundary, i.e. occurring within the exclusive

[16] The peak years of the *Mnemiopsis leydei* outbreak were between 1989 and 1992; see T. Oguz, B. Fach and B. Salihoglu "Invasion dynamics of the alien ctenophore *Mnemiopsis leydei* and its impact on anchovy collapse in the Black Sea" (2008) 30(12) *Journal of Plankton Research* 1385–1397.

[17] BSC 2001–3006/7 Report, (note 2) at chapter 9.

economic zones (EEZs) of two or more coastal states.[18] Five of the Black Sea coastal states, with the exception of Turkey, are parties to the LOS Convention,[19] and all six of them have declared EEZs of up to 200 nautical miles (in most places this is not possible due to the shorter distance of the coasts). These six EEZs seem to cover the entire Black Sea surface, so that it is not risky to assume that no pocket of high seas would exist.[20] This situation obliges coastal states to seek either directly or through appropriate subregional or regional organizations to agree upon the measures necessary for the conservation and development of the fish stocks concerned (stocks occurring within the EEZs of two or more coastal states, highly migratory fish stocks or anadromous species).

The Black Sea is an enclosed or semi-enclosed sea within the meaning of articles 122 and 123 of the LOS Convention. This is recognized by the coastal states and a relevant recital has been included in the successive draft agreements for fisheries and conservation of marine living resources of the Black Sea. The coastal states consistently use the following formulation:

> PROCEEDING from the fact that in accordance with the requirements of the law of the sea States bordering a semi-enclosed sea should co-operate with each other in the exercise of their rights and performance of their duties and that in particular they

[18] United Nations Convention on the Law of the Sea of 10 December 1982 (1833 UNTS 396, available at <www.un.org/Depts/los>), arts. 63, 64, 66, 67.

[19] Ibid.

[20] There could be a small uncertainty in the western part of the Black Sea due to the lack of delimitation of EEZ between Bulgaria and its neighbors, Romania (and potentially Ukraine). In the unlikely case that a small pocket of high seas would remain after the above delimitation, it would be completely insignificant. Therefore, in the Black Sea there would be, most probably, no straddling fish stocks in the sense of art. 63(2) of the LOS Convention.

> should endeavor to co-ordinate the management of the living resources of the sea and their scientific research policies and to undertake appropriate joint programs of scientific research.

This preambular paragraph (3rd in 1997 and 2000-I, 4th in 2000-II and 7th in the Draft Legally Binding Document for fisheries and conservation of living resources of the Black Sea (DLBD)) is a selective reproduction of article 123 of the LOS Convention referring specifically to subparagraphs (a) and (c), while omitting the call to the coastal states "to invite, as appropriate, other interested States or international organizations to cooperate with them".[21] This is not an oversight, as the Black Sea coastal states consider that the issue of the management of fisheries of the Black Sea should be an exclusive issue of those coastal states and hence that inviting other actors would not be "appropriate" as acknowledged by article 123(d) of the LOS Convention.[22]

At the national level, coastal states have their own fisheries management institutions, rules and practices (e.g. limitations of fishing effort through licensing of fishing vessels and fishing gear, restriction of some fishing gears, closed seasons and closed

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[21] LOS Convention, art. 123(d). The text of art. 123, entitled 'Cooperation of States bordering enclosed or semi-enclosed seas' reads as follows:
"States bordering an enclosed or semi-enclosed sea should cooperate with each other in the exercise of their rights and in the performance of their duties under this Convention. To this end they shall endeavor, directly or through an appropriate regional organisation:
(a) to coordinate the management, conservation, exploration and exploitation of the living resources of the sea;
(b) to coordinate the implementation of their rights and duties with respect to the protection and preservation of the marine environment;
(c) to coordinate their scientific research policies and undertake where appropriate joint programmes of scientific research in the area;
(d) to invite, as appropriate, other interested States or international organisations to cooperate with them in furtherance of the provisions of this article".

[22] BSC Advisory Group on Fisheries and Other Marine Living Resources, *Summary Proceedings* (2nd Meeting, Istanbul, 5-7 December 2001), 2.

areas). Russia applies Total Allowable Catches (TACs) and vessel quotas.[23] TACs and national quotas have been applied in Bulgaria and Romania for turbot and sprat since 2008, after their accession to the EU in 2007.[24] However, there are gaps in the enforcement of the national fisheries management measures.[25]

These gaps of national legislations together with the characteristics of the Black Sea and its marine living resources (enclosed sea, existence of EEZ, transboundary living resources) render intergovernmental agreements for the management of fisheries resources in the region unavoidable.[26] In view in particular of the specific characteristics of the Black Sea and the state of its fisheries (see above), fisheries management in that sea requires strengthening and regional harmonization of the regulatory framework, especially with regard to the conservation and management of the shared marine living resources and the ecosystem approach to fisheries. The Black Sea coastal states have, however, thus far been unable to agree on an inclusive and comprehensive regional fisheries management instrument, and cross-border fishing activities remain largely unregulated.[27] Except for some bilateral agreements (e.g. between Georgia, Turkey and Ukraine about an-

[23] E. Duzgunes and N. Erdogan "Fisheries Management in the Black Sea Countries" (2008) 8 *Turkish Journal of Fisheries and Aquatic Sciences* 181–192.

[24] J.M. Sobrino Heredia and G. Oanta "The Black Sea in the process of reforming the European Union's Common Fisheries Policy" in *Law – Education and Creativity for a Knowledge-based Society, Proceedings of an International Conference* (Titu Maiorescu University, Bucharest: 2010), 17.

[25] I.C. Goulding, K.A. Stobberup and T. O'Higgins "Potential economic impacts of achieving good environmental status in the Black Sea" (2014) 19(3) *Ecology and Society*, 37.

[26] Cf. Duzgunes and Erdogan (note 23) at 189 and 191.

[27] G. Radu, E. Anton, M. Golumbeanu, V. Raykov, M. Yankova, M. Panayotova, V. Shlyahov and M. Zengin "State of the main Black Sea commercial fish species correlated with the ecological conditions and fishing effort" (2011) 12(2) *Journal of Environmental Protection and Ecology* 549–557.

chovy fishing in Georgian waters),[28] there is no overall agreement on regional management of Black Sea fish stocks.

1959 Convention Concerning Fishing in the Black Sea

The only international agreement on the regulation of Black Sea fisheries at a regional level was the Varna Convention.[29] This convention was a cold war instrument among like-minded Warsaw pact states and therefore Turkey did not participate, limiting thus its scope and impact. Be that as it may, the overall objective of this Convention was the cooperation and assistance between its three parties "in carrying on rational fishing in the Black Sea, in improving fishing technique, and in carrying out research in the field of ichthyology and hydrobiology for the purpose of maintaining and augmenting the stocks of fish in the Black Sea with a view to increasing the yield".[30] For attaining this objective, the Convention granted the right to fishing vessels of the parties to enter designated ports of refuge to shelter from bad weather or in case of damage,[31] including the right to dispose of their catch fresh at the ports of refuge if it could not be preserved on board the vessel; minimum sizes at which fish may be harvested; a five year moratorium for harvesting the species Russian sturgeon; exchange of information on fisheries (*inter alia* on statistical data of catches, migratory movements of "industrial fish", time and place at which fish stocks congregate, direction of movement, density of schools,

28 Duzgunes and Erdogan (note 23); GFCM Secretariat, *Background Document on the Black Sea, Preliminary Version* (First Meeting of the GFCM ad-hoc Working Group on the Black Sea, Constanta: January 2012), 61.

29 Convention Concerning Fishing in the Black Sea of 7 July 1959 (377 UNTS 203) between Bulgaria, Romania and the Soviet Union.

30 Varna Convention, art. 1.

31 These ports were Balchik, Varna, Nesebur, Burgas, Sozopol and Michurin in Bulgaria, Constanta and Sulina in Romania, and Odessa, Evpatoria, Yalta, Novorossysk, Sochi, Sukhum, Poti and Batum in USSR.

hydrometeorological conditions in which congregations and migrations of commercially valuable stocks occur); and scientific cooperation.

Following the pattern of the regional fisheries conventions, the Varna Convention established a Mixed Commission for its implementation.[32] This Mixed Commission, composed by one commissioner by each contracting party, had mainly coordination and management functions. As a coordination body the Mixed Commission was tasked mainly with coordinating the planning of scientific research projects to be conducted by the competent authorities of the parties; determining the nature and extent of the statistical and other data which each contracting party had to furnish to it for the purpose of the implementation of the convention; and exchanging information concerning its application.[33] In its management capacity, the Mixed Commission principally had an advisory function: it was entrusted with recommending to the contracting parties measures to regulate fishing, with a view to the conservation and augmentation of fish stocks in the Black Sea, and to develop industrial fishing techniques. Such recommendations, adopted by unanimity by the Mixed Commission, would be given effect if none of the contracting parties raised objections within four months from the submission of the recommendation to the three parties.[34] The Mixed Commission was also bestowed with decision-making capacity with regard to the species and size of the fish that could be taken by the parties.[35] These decisions, requiring the favorable vote of all commissioners, would take the form of amendments to article 5 of the Convention (relating to the species and minimum sizes of fish caught in the Black Sea).

32 Varna Convention, art. 8.

33 Ibid., art. 9(1)–(5).

34 Ibid., arts. 9(1) and 10.

35 Ibid., art. 9(2).

From the above schematic description of the contents of the Varna Convention, it is obvious that it is an obsolete document. It reflects the understanding of fisheries management of a bygone era, with massive shortcomings compared with the more recent regional fisheries agreements, specifically in terms of sustainable management. The parties have effectively ceased to implement the Convention at the eve of the dissolution of the Warsaw Pact and the dislocation of the USSR. New conditions, legal (new law of the sea, EEZ), factual (dramatic decline of fish stocks) and political (revival of inclusive regional cooperation without political divides) eventually brought the Varna Convention into oblivion.[36] That said, its parties disagree whether the 1959 Agreement needs to be formally terminated or if such a formal termination is superfluous.[37] The latter point of view seems more conform to the reality as this Agreement has become extinct due to the discontinuance of its application by the parties for a long period of time, itself a result of a fundamental change of circumstances.[38]

Renewed Efforts for a Regional Fisheries Management Agreement

The extinction of the Varna Convention made conspicuous the need of international regulation of regional fisheries in the Black

[36] See, however, the proposal by the Romanian Minister of Environment, BSEC Doc. BS/INFO.2000.283 of 14 August 2000 indicating that the negotiation of a multilateral fisheries convention for the Black Sea started in early 1990s was an attempt to update the Varna Convention. Yet such approach is clearly not supported by the facts nor by the then ongoing negotiation, which did not refer at all to that Convention.

[37] Cf. disagreement on incorporating in the DLBD (note 44) a provision to that effect in art. 22(2) in brackets: "[The Agreement on Fisheries in the Black Sea of 1959 shall be terminated after this LBD enters into force. The Depositary of this Agreement shall be duly informed by the Depositary of the present LBD in regards of the termination of the Agreement]".

[38] Vienna Convention on the Law of Treaties of 23 May 1969 (1155 UNTS 331, available at <www.un.org/law/ilc>), art. 62.

Sea. Therefore efforts for elaborating a new instrument for the management of the fisheries of the Black Sea started after the end of the cold war, prompted also by a new period of regional cooperation in the Black Sea region inaugurated in the early 1990s, as evidenced by the establishment of the Commission for the Protection of the Black Sea against Pollution (BSC) and the Black Sea Economic Cooperation (BSEC) in March and June 1992 respectively. The quick conclusion of the environmental protection normative framework, through the Bucharest Convention[39] and its initial four protocols[40] gave hope for a speedy conclusion of a fisheries management convention as well. This expectation, however, did not materialize.

In the more than twenty years since the negotiation has started (1993), four draft instruments have been produced:

- "Draft Convention for fisheries and conservation of living resources of the Black Sea", initialled in Ankara, on 25 June 1997 (1997 DC);[41]
- 2000 versions:
    - "First Option of the Draft Convention for fisheries and conservation of living resources of the Black Sea" (Option 2000-I);[42]

[39] Convention on the Protection of the Black Sea against Pollution of 21 April 1992 (available at <www.blacksea-commission.org>).

[40] The model adopted was that of the UNEP Regional Seas Programme. The first three protocols of the Bucharest Convention were signed at the adoption of the Convention in 1992. A fourth protocol was adopted in 2002.

[41] Final Report of the diplomatic conference for fisheries and conservation of living resources of the Black Sea held in Ankara on 23–25 June 1997, unpublished (further: 1997 Final Report); included in the Document File, BSEC Expert Group Meeting on "Draft Convention for Fisheries and Conservation of Living Resources of the Black Sea", Istanbul, 5–7 September 2000.

[42] Expert Group Meeting on "draft Convention for Fisheries and Conservation of Living Resources of the Black Sea", Istanbul, 5–7 September 2000, Report, Annex III.

- "Second Option of the Draft Convention for fisheries and conservation of living resources of the Black Sea" (Option 2000-II);[43]
- Current draft: "Draft Legally Binding Document for fisheries and conservation of living resources of the Black Sea" (DLBD).[44]

These negotiations have been taking place in different *fora*: in a multilateral diplomatic conference of the six Black Sea coastal states in the 1990s, in the BSEC for a short period between 2000 and 2002 and since 2002 in the BSC. The succeeding organizational venues for the negotiation have had a significant impact on the institutional set up for the implementation of the instrument to be concluded and to a lesser degree for its substantive provisions. It is therefore necessary to briefly present these *fora*, in order to better understand the turns and trials of this hitherto unsuccessful enterprise.

The BSEC is a regional economic organization, launched in 1992 by eleven states of the wider Black Sea area[45] as an informal and flexible *forum* of cooperation with the aims to achieve further development and diversification of their bilateral and multilateral cooperation, to foster their economic, technological and social progress, and to encourage market economy and free enterprise.[46] A few years later, the members acknowledged that in order to attain its goals, the BSEC should be bestowed with

[43] Ibid.

[44] Website of the BSC, available at <www.blacksea-commission.org/_draft-LBDfisheries.asp>.

[45] Albania, Armenia, Azerbaijan, Bulgaria, Georgia, Greece, Moldova, Romania, the Russian Federation, Turkey and Ukraine. Twelve years after the establishment of the BSEC, Serbia acceded to the BSEC, bringing its membership to twelve states.

[46] Summit Declaration on Black Sea Economic Cooperation, Istanbul, 25 June 1992, in BSEC, Handbook of Documents, vol. I, 1995, 3.

permanent institutions and decided thus to transform the BSEC into a full-fledged international organization. To this effect they concluded the BSEC Charter, in Yalta, on 5 June 1998.[47] The BSEC Charter entered into force on 1 May 1999.

The Organization of the BSEC – as emerged from its Charter – is an inter-governmental mechanism of cooperation, encompassing principal and subsidiary organs. The structure is headed by the Council of Ministers of Foreign Affairs of the BSEC Member States. The Council's sessions are prepared by the Committee of Senior Officials. The top structure of the Organization is completed by the Chairman-in-Office, which rotates every six months, and the Troika, composed of the Chairman-in-Office, its predecessor and its successor. The bulk of the groundwork of the BSEC is laid by the subsidiary organs, mainly Working Groups and Expert Groups. There are Working Groups for each area of cooperation provided for in the BSEC Charter, while Expert Groups are constituted on an *ad hoc* basis whenever the need arises for studying specific issues. The secretarial services for the BSEC are carried out by the Permanent International Secretariat (PERMIS). In addition to the inter-governmental structure, BSEC has four additional *fora* of cooperation, a parliamentary, a business, a financial and an academic one, that are qualified by the Charter as BSEC related bodies. These bodies are the Parliamentary Assembly of the Black Sea Economic Cooperation (PABSEC), the BSEC Business Council, the Black Sea Trade and Development Bank and the International Centre for Black Sea Studies (ICBSS).

The priority areas of cooperation among the BSEC member states include: trade and economic development, banking and finance, communications, energy, transport, agriculture and

[47] Charter of the Organization of the Black Sea Economic Cooperation of 5 June 1998 (available at <www.bsec-organization.org>), (BSEC Charter)

agro-industry, health care and pharmaceutics, environmental protection, tourism, science and technology, exchange of statistical data and economic information, collaboration between customs and other border authorities, human contacts, combating crime, as well as other related areas, following the determination of the Council of Ministers of Foreign Affairs.[48]

The BSC has been established by the Bucharest Convention. It is entrusted with the cooperation of its members in the framework of the Bucharest Convention and its Protocols.[49] The BSC served as the forum for the negotiation and adoption in 1996 of the Strategic Action Plan for the Rehabilitation and Protection of the Black, which was amended in 2002.

Both the scope and participation of the BSC are narrower than those of the BSEC, as the former is limited to issues relating to the protection and preservation of the Black Sea environment and is comprised of only the six Black Sea coastal states.

The main aim of a Black Sea fisheries convention has been, irrespective of the forum chosen in the various stages of the negotiations, to set up a normative framework for the sustainable exploitation and management of the marine living resources[50] in

48 BSEC Charter, art. 4.

49 Protocol on Protection of the Black Sea Marine Environment Against Pollution from Land Based Sources ; Protocol on the Protection of the Black Sea Marine Environment Against Pollution by Dumping; Protocol on Cooperation in combating pollution of the Black Sea Marine Environment by Oil and Other Harmful Substances in Emergency Situations (concluded at the same time as the Bucharest Convention); Protocol on Black Sea Biodiversity and Landscape Conservation (2002); and Protocol on the Protection of the Marine Environment of the Black Sea from Land-Based Sources and Activities (2009, not yet in force).

50 Though the title of all four instruments refers to "Fisheries and Conservation of Living Resources of the Black Sea", art. 1 (Objectives) omits any reference to fisheries: "[t]he objectives of this Convention shall be to provide for proper conservation, rational use and management of the living resources in the Black Sea, to ensure that any use of the Black Sea living

the Black Sea. Throughout this lengthy process there have been both partly common and partly divergent approaches in achieving this common aim shared by all participants in the negotiation.

All coastal states concur that international regulation for the management of the Black Sea fisheries and other living resources though a regional convention is necessary (if not unavoidable). To that end, there exists a basic agreement to establish a regional fisheries institution as a forum for consultation and decision-making on conservation and management of marine biological resources; all successive drafts invariably refer to the competences of the regional organ to be established and the measures it would be entrusted to adopt.[51] This part of the draft documents has been exactly identical[52] since the very beginning of the negotiation.

The long negotiation has at the same time revealed some competing approaches that have been hampering the international regulation of the issue, despite the in-principle agreement. This tension between national approaches with regard to the international regulation of Black Sea fisheries has three main manifestations: a conceptual one, on the philosophy of the convention to be concluded, as an instrument regulating a predominantly economic activity or a convention with an overarching environmental aim; a variety of tactics regarding the institutional set up of the regional fisheries management body to be established, closely related with the financial impact thereof; and also disagreements

resources be on a sustainable basis that will maintain and enhance ...its biological diversity and productivity (1997 DC; Option 2000-I; Option 2000-II)/ ...these resources for present and future generations..." (DLBD).

[51] 1997 DC, art. 10; Option 2000-I, art. 10; Option 2000-II, art. 8; and DLBD, art. 16.

[52] The only additional point in the DLBD is the provision enabling the regional fisheries organ to determine "the terms and conditions of fishing of anadromous species as well as take measures on its conservation including spawning areas and taking into account primary interest of the Contracting Party in whose waters these stocks originate.": DLBD, art. 16(3)(o).

on some substantive provisions of the text relating to compliance and enforcement. Examining in some detail the above divergences will hopefully provide some explanations to the enduring lack of international regulation of the Black Sea fisheries.

Economic Or Environmental Approach?

The first objective of the parties articulated in article 1 of the successive drafts remained the same throughout the negotiating history:

> The objectives of this [document] shall be to provide for proper conservation, rational use and management of the living resources in the Black Sea, to ensure that any use of the Black Sea living resources be on a sustainable basis that will maintain and enhance these resources for present and future generations.

All four drafts refer also in their preamble to

> Chapter 17 of Agenda 21 adopted by the 1992 United Nations Conference on Environment and Development which provides the basis for the sustainable development of the marine and coastal environment and its resources and that this requires new approaches to fisheries and marine living resources management and development, including at a regional level, that are, inter alia, precautionary and anticipatory in ambit.

From the above we can see that the two concerns (economic and environmental) co-existed since the beginning of the negotiations, but the emphasis put on each of it evolved over the years. It is thus the focus on the means to achieve such an objective that shifts from version to version.

Almost Purely Economic Activity

It should be stated at the outset that there has been an initial agreement (going back to 1994) of the six Black Sea coastal states that the draft convention for fisheries and living resources of the Black Sea should address only the commercial aspects of fisheries, while the biodiversity and environmental issues were to be covered by a distinct document,[53] i.e. the (then draft) Black Sea Biodiversity and Landscape Conservation Protocol to the Bucharest Convention, which was eventually concluded in 2002 under the auspices of the BSC. It appeared thus reasonable and in line with international practice[54] for the Black Sea coastal states to assign the negotiation of the fisheries instrument they purported to conclude to a distinct diplomatic conference instead of the (already existing) BSC.

This first phase of the negotiation of the fisheries instrument closed in June 1997, when the 1997 DC was initialled in Ankara. For a number of years there had been no progress on the status of this draft, which had not been finalized and opened for signature and ratification. The main reason of the stalemate was financial, as the coastal states were reconsidering the commitment included in the 1997 DC to bear the costs of a regional fisheries management institution (the 1997 DC provided for the establishment of a fully-fledged new organization, the Black Sea Fisheries Commission having international legal personality, budget and organs, a Scientific and Technical Committee and a Secretariat.[55] There were concerns about the financing and sustainability of the organizational structure envisaged, and therefore the antic-

53 BSC Advisory Group on Fisheries and Other Marine Living Resources, *Summary Proceedings* (2nd Meeting, Istanbul, 5–7 December 2001), 2.

54 No regional seas agreement regulates fisheries (the Antarctic Treaty System is not a typical regional seas agreement).

55 1997 DC, arts. 5, 9, 7, and 8.

ipated diplomatic conference for the adoption and signature of the Draft Convention for fisheries and conservation of living resources of the Black Sea was never convened.[56]

In early 2000, Turkey proposed to include in the agenda of the BSEC the finalization of the 1997 DC, which was until that time negotiated by the six Black Sea coastal states outside the BSEC framework.[57] The Turkish delegation explained their proposal to bring Black Sea fisheries under the auspices of the BSEC by the following reasons: the lack of any progress since the draft Convention had been initialled three years ago, fishing was an economic activity and as such fell within the BSEC mandate, and also the desire to avoid duplication of efforts and costs.[58] With regard to the latter point the Turkish delegation submitted that fisheries was an issue taken up by some BSEC structures and the existence of a parallel diplomatic forum devoted to this same issue was not effective nor efficient.

The Summit Declaration of the Black Sea Economic Cooperation (1992) calls the BSEC member states to "take appropriate steps, including by promoting joint projects, for the protection of the environment of the Black Sea, and the conservation, exploitation and development of its bio-productive potential".[59]

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[56] 1997 Final Report (note 41), item 6, p. 2: "As the Draft Convention was completed it was decided also that the Diplomatic Meeting will be held in Turkey at a date to be determined through diplomatic channels".

[57] "Working Paper submitted by Turkey on various areas of cooperation within BSEC" (2nd Meeting of the Council of Ministers of Foreign Affairs, Chisinau, 27 April 2000) Doc. BS/FM/R(2000)1, Attachment 6 to Annex VII.

[58] In fact in the first phase of the negotiation (1994–1997), Turkey had offered and the other coastal states have accepted to bear all the costs of the Secretariat of the Black Sea Fisheries Commission for the period of the first three years after the Convention had entered into force. By 2000, the Turkish position had changed, and was seeking proportional share of the costs and with a larger number of states than the six coastal ones.

[59] Summit Declaration on Black Sea Economic Cooperation, Istanbul, 25 June 1992, in BSEC, *Handbook of Documents*, vol. I, 1995, 3.

Moreover, the BSEC member states had established in the BSEC framework, a Working Group on Agriculture and Agro-Industry, whose mandate encompassed issues related to fisheries and aquaculture. There were at the time some questions raised regarding the competence of the BSEC to take up an issue concerning exclusively the sovereignty and sovereign rights of the coastal states to the conservation and management of the marine living resources in their EEZ;[60] however, the economic character of the activity has not been objected to.

Notwithstanding the unique character of a discussion in the BSEC framework on an issue that by definition could not concern the entire membership of the Organization, an Expert Group on the "Draft Convention for fisheries and conservation of living resources of the Black Sea" (BSEC EGF) was convened in September 2000.

This BSEC EGF worked on the basis of the 1997 DC, further developing its provisions and produced one document, in two options (versions), depending on the preferred institutional set-up of the treaty-body to be established (see *infra*). The issue of the general approach of the instrument, namely the regulation of a primarily economic activity with some environmental impact, was maintained in both 2000 options.

After the submission of the 2000 options to the BSEC member states for comments, a disagreement appeared concerning the legal competence of the BSEC and/or its practical appropriateness and usefulness to take up the finalization of a regional Black Sea fisheries management agreement. The question raised was of a constitutional nature for the BSEC as it concerned its core principle of *inclusiveness*: BSEC operates on the general principle (based on the BSEC Charter and confirmed by a fully consistent practice)

[60] LOS Convention, art. 56(1)(a). Cf. Communication by the Ministry of Foreign Affairs of the Hellenic Republic, BSEC Doc. BS/INFO.2000.309, 1 September 2000.

that all instruments negotiated and concluded in its framework should be open to each and every BSEC member state. Between 2000 and 2002, BSEC had 11 member states, including 5 non-Black Sea coastal states.[61] This possibility was directly or indirectly excluded by some Black Sea coastal states in the aftermath of the meeting of the BSEC EGF in September 2000,[62] and therefore the envisaged regional Black Sea fisheries convention had very little prospect to eventually become a BSEC agreement.

Full Integration of Environmental Approach

At that junction, Ukraine, which had already expressed its preference for a convention among the Black Sea coastal states,[63] proposed to convene, in its capacity of BSEC Chairman-in-Office, a coordination meeting between BSEC and BSC, in order to explore the prospect to bring the draft Black Sea fisheries convention to the BSC and handle it in the future within this forum. The Ukrainian Chairmanship of the BSEC undertook the necessary steps for convening such a meeting and the BSC Executive Director agreed to provide the relevant information to the BSC Commissioners, with a view to preparing the prospected coordination meeting.

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61 Even before the start of the work of the BSEC EGF, Greece, a BSEC member state which is not a Black Sea coastal state, had warned that the 1997 DC was a text "clearly provid[ing] the restrictive nature of the document insofar as the eventual participation [was] concerned" (limitation to coastal states) and that "if agreed in its present, restrictive, form, cannot be considered as a BSEC document": Communication by the Ministry of Foreign Affairs of the Hellenic Republic, ibid.

62 See Note of the Embassy of Ukraine to the Republic of Turkey to BSEC Permanent International Secretariat, N. 2068/013, 9 October 2000; Note of the Consulate General of the Russian Federation in Istanbul to BSEC Permanent International Secretariat, No. 65-H, 12 October 2000.

63 Note of the Embassy of Ukraine to the Republic of Turkey to BSEC Permanent International Secretariat, N. 2068/013, 9 October 2000.

In December 2001, the issue of a regional Black Sea fisheries convention was considered by the BSC Advisory Group on Fisheries and Other Marine Living Resources with a view to recommending to the BSC the way forward. In this regard two proposals were put forth. According to the first one, the BSEC–BSC coordination meeting should take as a basis for its work Option 2000–I (as elaborated by the BSEC EGF in September 2000) and concentrate its deliberations on the finalization of the organizational aspects of this draft, i.e. the establishment and functioning of the envisaged Black Sea Fisheries Commission, because this was the only outstanding issue of the negotiation. In this point of view, all the other provisions of Option 2000–I were not to be touched upon, and therefore, no fisheries experts should take part in the anticipated BSEC–BSC coordination meeting, which should be between the BSEC Working Group on Organizational Matters and the BSC Commissioners. The other point of view underlined that the 2000 Options omitted serious environmental concerns, and needed to be amended to address these. The BSC could therefore take over the finalization of the draft Option 2000–I, provided that fisheries experts would be consulted in order to develop that text taking into account the need for sustainable management of Black Sea fisheries.[64] The second point of view prevailed, and the Advisory Group on Fisheries and Other Marine Living Resources eventually recommended that the BSC takes over the negotiation of the draft Black Sea fisheries agreement in the framework of its Advisory Group on Fisheries and Other Marine Living Resources.[65]

The Joint Meeting of the BSEC Working Group on Organizational Matters and the BSC, held on 20 February 2002, confirmed this understanding and:

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[64] BSC Advisory Group on Fisheries and Other Marine Living Resources, *Summary Proceedings* (2nd Meeting, Istanbul, 5–7 December 2001), 3.

[65] Ibid., 4.

> agreed that the 'Draft Convention for Fisheries and Conservation of Living Resources of the Black Sea' be finalized among the Black Sea Coastal States within the framework of the BSC in co-operation with the relevant national authorities.[66]

Despite the fact that the transfer from the BSEC to the BSC of the negotiation of the draft Black Sea fisheries agreement was not motivated by a shift on the focus of the instrument to be adopted (the initiators of the transfer did not put in doubt the mainly economic character of the document, but their desire to limit the participation in the agreement to the Black Sea coastal states), the move eventually resulted in the acquiescence by the coastal states – which had for over a decade resisted the BSC as the forum for negotiation of a regional fisheries management convention – of a more environmentally-oriented approach of the convention to be adopted.

Such a shift was long overdue and should be hailed as a positive development: it aligned the quest for international regulation for Black Sea fisheries to the general evolution of the international fisheries law as evidenced in particular in the Fish Stocks Agreement[67] and subsequent international agreements on management of marine living resources.[68]

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[66] Joint Meeting of the BSEC WG on Organizational Matters and the Commission on the Protection of the Black Sea against Pollution, 20 February 2002, Report, BSEC Doc. BS/OM-BSC/WG/R(20002)1, p. 2, para. 8.

[67] Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks of 4 August 1995 (2167 UNTS 3, available at <www.un.org/Depts/los>).

[68] Cf., *inter alia*, E.J. Molenaar "Regional Fisheries Management Organizations: Issues of Participation, Allocation and Unregulated Fishing" *in* A.G. Oude Elferink and D.R Rothwell (eds) *Ocean Management in the 21st Century: Institutional Frameworks and Responses* (Martinus Nijhoff Publishers, Leiden: 2004),69-86; E.J. Molenaar "Ecosystem-based fisheries management, commercial fisheries, marine mammals and the 2001 Reykjavik Declaration" (2002) 17(4) *International Journal of Marine and Coastal Law* 561-

The further elaboration of the regional Black Sea fisheries convention was assigned internally to the BSC Advisory Group on Fisheries and other Marine Living Resources, transformed later and consequently renamed Advisory Group on Environmental Aspects of Management of Fisheries and Other Marine Living Resources. The mandate of this Advisory Group encompasses all issues related to the regional and international cooperation in the field of fishing and is entrusted, *inter alia*, with formulating the regional policies and proposing regional strategies and actions for the implementation of ecosystem-based fisheries management and the FAO Code for Responsible Fisheries[69] in the Black Sea, and for the improvement of management of the Black Sea fish stocks based on harmonized methodologies of assessments and agreed regional criteria.

Currently, the first of the main tasks of the Advisory Group is the finalization of the DLBD and the facilitation of its adoption by all the Black Sea coastal states. The outstanding issues of the DLBD concern mainly the institutional aspects of the management regime relating to the Black Sea Fisheries Commission,[70]

595; J. Beer-Gabel and V. Lestang *Les commissions de pêche et leur droit: la conservation et la gestion des ressources marines vivantes* (Emile Bruylant, Bruxelles: 2003); E.M. Vázquez Gómez *Las organizaciones internacionales de ordenación pesquera: la cooperación para la conservación y la gestión de los recursos vivos del alta mar* (Junta de Andalucía Consejería de Agricultura y Pesca, Sevilla: 2002); G. Munro, A. Van Houtte and R. Willmann *The Conservation and Management of Shared Fish Stocks: Legal and Economic Aspects* (FAO Fisheries Technical Paper 465, Rome: 2004); S.B. Kaye *International Management Fisheries* (Kluwer Law International, The Hague: 2001); W.R. Edeson, D. Freestone and E. Gudmundsdottir *Legislating for Sustainable Fisheries: A Guide to Implementing the 1993 FAO Compliance Agreement and the 1995 Fish Stocks Agreement* (The World Bank, Washington DC: 2001).

69 Code of Conduct for Responsible Fisheries of 31 October 1995 (adopted by the Twenty-eight Session of the FAO Conference, available at <www.fao.org/fishery/en>).

70 DLBD, art. 13.

the Scientific and Technical Committee,[71] and Financial Arrangements.[72] Some other bracketed provisions (application of the instrument to internal waters, enforcement measures, formal termination of the 1959 Agreement concerning fishing in the Black Sea) require also further work to be agreed upon.

The agreed objectives of the DLBD, in its current form, are to provide for proper conservation, rational use and management of the living resources in the Black Sea, to ensure that any use of the Black Sea living resources be on a sustainable basis that will maintain and enhance these resources for present and future generations as well as to set up mechanisms for the effective cooperation with the existing international instruments in the field of protection of the biological diversity. The notions of the precautionary approach, ecosystem-based approach, sustainable development and anticipatory actions were in general succinctly present in (or missing from) the 1997 DC and the 2000 Options. In the DLBD they are elevated to "Basic Approaches",[73] guiding the actions of the parties in the implementation of their obligations under the DLBD.[74] Their prominence in the text makes

[71] Ibid., art. 17.

[72] Ibid., unnumbered article.

[73] Ibid., art. 4.

[74] The full text of article 4 DLBD – Basic Approaches reads as follows:

> "1. In order to achieve the objective of the LBDF the following basic principles and approaches are pursued in this LBDF:
> • Precautionary approach – capture of the scientifically justified (on multi annual basis) part of living resources that ensure their restoration (naturally, or if necessary by artificial reproduction and introduction) and ensures the maintenance of individual populations and the stock as a whole (FAO)
> • Ecosystem-based approach – the comprehensive integrated management of human activities based on best available scientific knowledge about the ecosystem and its dynamics, in order to identify and take action on influences which are critical to the health of the marine ecosystem, thereby achieving sustainable use of ecosystem goods and services and maintenance of ecosystem integrity. Ecosystem consideration

them acceptable interpretative principles as well in the application of the more specific provisions of the DLBD.

The change of the focus can be traced already in small, yet not insignificant, changes in the Preamble, in which, e.g. the term "ecosystem" and the related approach appear *verbatim* for the first time[75] or where the language of specific recitals is strengthened to emphasize:

> ...the concern of the Coastal States in such issues as ensuring that sustainable development of fisheries is achieved through effective conservation and management and accepting that this involves recognition, *inter alia*, of the rights and interests of future generations in using marine living resources...

and are placed in a prominent position of the Preamble, while in the 1997 DC and both 2000 options, they were vaguely formulated and included at the very end of the Preamble.

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of fisheries management includes: impact and interaction of pollution and fish stocks, impact of eutrophication and human activities on fish stocks, climate change, impact of fishing on the ecosystem and needs to protect species and habitats.

• Sustainability of fishery resources – to ensure the maintenance of the quality, diversity and availability of fishery resources in sufficient quantities for present and future generations in the context of food security, poverty alleviation and sustainable development".

[75] DLBD:

"CONSCIOUS that living resources constitute the integral part of the Black Sea ecosystem and that the problems of protecting the marine environment of the Black Sea and its living resources are interrelated and need to be considered as a whole".

1997 DC and both Options 2000:

"CONSCIOUS that the Black Sea and its living resources constitute an ecological unit and that the problems of protecting the marine environment of the Black Sea and its living resources are interrelated and need to be considered as a whole".

The environmentally-oriented approach pervades the DLBD and is evidenced by numerous explicit provisions. Suffice here to refer to some examples illustrating the conceptual shift. The "General Undertakings" of the DLBD[76] are quite eloquent in this respect: they open with the statement that "[t]he right to fish carries with it the obligation to do so in a responsible manner so as to ensure effective conservation and management of the living marine resources". They go on providing for the cooperation of the parties in the restoration of depleted resources to sustainable level;[77] in determining allowable catches of living resources in waters under their jurisdiction and of shared stocks based on the best scientific evidence taking into account the precautionary approach where adequate data and analysis are incomplete or missing;[78] in assessing of the impact on fishery of other human activities;[79] in the protection and rehabilitation of critical habitats in marine and coastal ecosystems (such as wetlands, lagoons, nursery and spawning areas);[80] in the application of fisheries techniques and methods based on the best available practice that causes minimal damage to ecosystems and non-target species, and ensures biodiversity conservation;[81] etc.

In addition to such rather new provisions of the DLBD, the strengthened environmental approach is visible in many provisions of the text which pertain to issues regulated in all four texts. For example, while aquaculture was envisaged in the 1997 DA and

[76] DLBD, art. 6.

[77] Ibid., art. 6(2).

[78] Ibid., art. 6(3)-(4).

[79] Ibid., art. 6(5).

[80] Ibid., art. 6(6).

[81] Ibid., art. 6(7).

2000 options as a purely economic activity with potential impact on marine ecosystems,[82] article 11 of the DLBD provides that:

> 1. The Contracting Parties shall encourage the development of responsible aquaculture *to promote restoration of resources*, diversification of income and diet and *to reduce a fishing pressure on marine living resources and Black Sea ecosystem*.
> 2. In the development of aquaculture, the Contracting Parties shall take appropriate preventive and regulatory measures for *avoiding the potential negative local and transboundary impact of aquaculture on marine ecosystems and marine living resources due to escape of cultivated species, pollution, diseases, genetic disturbance of native populations, etc.*
> 3. The Contracting Parties shall encourage and promote cooperation and exchange of experience in innovative techniques and methods of aquaculture aiming at the *minimization of harmful impact of aquaculture on the Black Sea ecosystem and restoration of its living resources*. (emphasis added).

The environmental approach in the DLBD has nevertheless caused some new disagreements. The issue of the application of the instrument to be adopted in the internal waters of states parties is an open question in the current draft DLBD,[83] while in all previous versions there was agreement to exclude internal

[82] 1997 DC, art. 17; Option 2000–I, art. 18(2); and Option 2000–II, art. 16(2): "In the development of aquaculture, the Commission/Working Group on Fisheries and Conservation of Living Resources of the Black Sea shall take into consideration the potential impact of aquaculture upon marine ecosystems and marine living resources and shall take appropriate measures".

[83] DLDB, art. 1(2).

waters from the scope of the Convention. The ecosystem-based approach would lend support to the application of international regulation also to internal waters as the ecosystem-based approach is founded on the connection of all elements of the natural environment in an organic unit,[84] without artificial limitations or exclusions of a legal or political nature.

A similar controversy was raised with regard to the mandate of the Scientific and Technical Committee to be established. While the negotiators agree on the function of the Committee to make recommendations to the Black Sea Fisheries Commission "concerning the conservation, management and sustainable utilization of the living resources", the proposed addition to make recommendation concerning "the environmental factors influencing" these living resources remains in brackets.[85]

Institutional Aspects

We have already seen that one of the motivations for bringing the negotiation of the 1997 DC into the BSEC was the concern to avoid the financial burden entailed by the establishment of the Black Sea Fisheries Commission, envisaged in the 1997 DC as a treaty-based institution, with its Secretariat (located in Istanbul),[86] legal capacity, privileges and immunities, budget and a Scientific and Technical Committee as advisory body.[87] In 2000, it was suggested that a new course of action could be considered in order to conclude the convention, that is to adapt the 1997 DC

[84] J. Brunnee and S.J. Toope "Environmental Security and Freshwater Resources: Ecosystem Regime Building" (1997) 91(1) *American Journal of International Law* 26–59.

[85] DLBD, art. 17(6)(ii).

[86] Turkey would assume the costs of the Secretariat for three years after the entry into force of the Convention: 1997 DC ,art. 9(3).

[87] 1997 DC, arts. 5, 8, 9, and 7.

to the BSEC rules and regulations, by assigning the tasks envisaged for the Black Sea Fisheries Commission and its Scientific and Technical Committee to a specific BSEC subsidiary organ to be established and the secretariat services to the BSEC Permanent International Secretariat, sparing thus any additional financial burden for the states parties to the convention to be concluded.[88]

The institutional set-up of the international regulation of Black Sea fisheries was obviously closely related to the discussion, referred to above, on the competence of the BSEC to take up the finalization of a convention that by its nature would not be open to all BSEC member states. The BSEC EGF held on 5–7 September 2000 could not agree on this issue and hence elaborated two versions of the instrument to be adopted: the first presumed the continuation of the drafting process on the basis of the structure, participation, key provisions and financial provisions contained in the 1997 draft (Option 2000-I), while the second encompassed the substantive provisions of the 1997 text, with agreed amendments, and at the same time introduced changes into the organizational aspects of the draft Convention in order to render it compatible with the BSEC norms and practices (Option 2000-II). Option 2000-II contained an institutional set-up for the fisheries management mechanism to be established that was fully integrated in the BSEC structure: the Black Sea Fisheries Commission[89] would become a BSEC subsidiary organ, the BSEC WG on Fisheries and Conservation of Living Resources ,[90] while the Scientific and Technical Committee[91] would become a BSEC

[88] Expert Group Meeting on "draft Convention for Fisheries and Conservation of Living Resources of the Black Sea", Istanbul, 5–7 September 2000, Report, (the document was not given reference number), paragraph 7, *in BSEC Handbook of Documents*, vol. V, 444.

[89] 1997 DC, art. 5; and Option 2000-I, art. 5.

[90] Option 2000-II, art. 5.

[91] 1997 DC,, art. 7; and Option 2000-I, art. 7.

Ad Hoc Group of Experts, with the same advisory functions to the BSEC WG on Fisheries and Conservation of Living Resources.[92] The BSEC WG on Fisheries and Conservation of Living Resources would have the functions of a regional fisheries management body, but it would have to exercise them in full respect of the BSEC Charter and by-laws, while the BSEC Permanent International Secretariat would provide the secretarial support for the two aforementioned BSEC subsidiary organs.[93]

This second option raised complex issues with regard to the decision-making in the WG on Fisheries and Conservation of Living Resources. BSEC WGs do not have the power to adopt decisions, and in the BSEC the Council of Ministers of Foreign Affairs has a *quasi*-monopoly in decision-making.[94] In order to enable the BSEC WG on Fisheries and Conservation of Living Resources to adopt the measures required by the Convention (e.g. decisions on species regulation; protected species and habitats; means and modalities for the limitation of fishing effort; the allowable catches for species harvested, on the basis of the scientific advice; quotas for each regulated species to be allocated to the Black Sea coastal States; etc.),[95] the BSEC Permanent International Secretariat invited the member states to consider the possibility of delegating decision-making from the Council to the WG, as envisaged in Art. 1(3) BSEC Rules of Procedure.[96]

92 Option 2000-II, art. 6.

93 Option 2000-II, art. 7.

94 Cf. I. Stribis *Decision-making in the BSEC: A Creative Cartography of Governance* (ICBSS, Athens: 2006) 21-22.

95 See, Option 2000-II, art. 8(3).

96 BSEC Rules of Procedure, art. (1)(3) provides: "The decision-making within the BSEC is, apart from the Summit, bestowed upon the Council which may charge subsidiary organs to make a decision on a particular question and inform the Council on it".

Accordingly, at the meeting of the BSEC EGF, the Turkish delegation submitted a "Draft Resolution to be adopted by the Council of Ministers in Bucharest in October 2000" stipulating in its second paragraph that:

> The Council agreed to establish the Working Group on Fisheries and Conservation of Living Resources of the Black Sea provided for in the Article 5 of the afore-mentioned Convention and in accordance with the Article 1, paragraph 3 of the BSEC Rules of Procedure to bestow upon the said WG the authority of taking decisions related to the scope of the Convention and to inform the Council of Ministers on them.

However, this proposal was not included in the Report of the meeting of the BSEC EGF or in the draft Convention itself (Option 2000-II). Its compatibility with Art 1(3) BSEC Rules of Procedure appears doubtful in view of the requirement that the delegated authority should concern "a particular question". In the case at hand, the delegation of decision-making power did not concern a concrete, identifiable question but all matters relating to the implementation of the draft Convention; it is hardly possible to consider the wide range of issues in article 8 (3) of Option 2000-II that needed to be decided by the BSEC Working Group on Fisheries and Conservation of Living Resources of the Black Sea as "a particular question".[97] A subsequent elaboration of the proposal may have remedied this incompatibility. However, such elaboration never happened as the required consensus for the second option was not achieved and the majority of the Black Sea coastal states favored the first option, so that the

[97] On the interpretation of art. 1(3) of the BSEC Rules of Procedure, see Stribis (note 94) at 25-31.

finalization of the draft Convention was handed over, by joint decision of the two institutions, by the BSEC to the BSC.

The majority of outstanding issues of the DLBD as elaborated hitherto in the framework of the BSC refer, as already said, to the institutional structure of the regional fisheries management mechanism. The DLBD provides (as does the 1997 DC and Option 2000-I) for the establishment of the Black Sea Fisheries Commission as a stand-alone treaty-based body, with a Scientific and Technical Committee and a Secretariat.[98] Yet, the issues of its headquarters, budget, legal status, privileges and immunities are still under negotiation.[99] Financial considerations remain also one of the bones of contention, especially in the current context of scarcity of financial resources of the coastal states.[100] Furthermore, the DLBD does not regulate, at its present stage, the relationship of the Black Sea Fisheries Commission with the BSC, but leaves the future cooperation between the two institutions to an agreement to be concluded between them after the entry into force of the DLBD.

Enforcement Measures

It is not surprising that all four versions of the draft regional Black Sea fisheries management agreement contain provisions on compliance and enforcement.[101] The relevant provisions are almost identical and stipulate that the parties deem necessary to implement all generally accepted international measures of control and enforcement regarding fishing activities and conservation of the living resources in the Black Sea. Furthermore,

98 DLBD, arts. 13, 17 and 18.

99 Ibid., art. 13.

100 Ibid., art. 12 on financial arrangements.

101 1997 DC, art. 12; Option 2000-I, art. 12; Option 2000-II, art. 10; and DLBD, art. 20.

the parties shall, on the one hand, cooperate through the regional fisheries management body to be set up, in establishing an appropriate system of implementation, compliance, surveillance and enforcement of the provisions of the instrument to be concluded, and, on the other hand, shall take the necessary measures to implement the requirements of the instrument to be concluded, ensuring that the management of living resources, including the fishing activities, comply with the provisions of the said instrument in the waters under their jurisdiction.

The provisions on enforcement, in particular against nationals of a state other than the party in whose jurisdiction a violation of the regional Black Sea fisheries agreement occurs, came at the center of the negotiation of the draft regional Black Sea fisheries agreement following the violent incidents that took place in waters under Ukrainian jurisdiction (most probably in the territorial sea of Ukraine, close to its outer limit, though the facts remained disputed) in March 2000. At the time, Ukraine's coastguard fired on several Turkish trawlers on suspicion of fishing illegally in Ukrainian waters. The interception claimed the life of one Turkish fisherman, while another was wounded in the shelling. One of the Turkish boats in the area sank and a second one was seized by the Ukrainian authorities.[102] The arrested Turkish fishers were freed later in 2000.[103] Turkish fishermen accused Ukrainian authorities of using excessive force during the interception.[104]

The use of force, the casualties and the detention of fishermen fuelled an opposition between the countries concerned by the incident with regard to the enforcement measures that a coastal state would be authorized to take against nationals of another state party for violations of the provisions of the regional Black

[102] "Ukraine deports Turkish fishermen" *BBC News,* 25 March 2000.

[103] "Turkish fishermen freed in Ukraine" *BBC News,* 24 June 2000.

[104] "Demirel regrets fishing clash with Ukrainians" *BBC News*, 23 March 2000.

Sea fisheries agreement to be concluded. In this regard, the 1997 DC provided only that the penalties to be imposed to the offender(s) by the coastal state "shall not include imprisonment or corporal punishment".[105]

During the meeting of the BSEC EGF of September 2000, this issue occupied a good part of the deliberations. The participants amended the above provision of the 1997 DC, dropping the corporal punishment (most probably as anachronistic) and permitted the imprisonment of nationals of another party if the violations of the regional Black Sea fisheries agreement occurred in the territorial sea of the prosecuting coastal state.[106]

The experts, however, introduced a second item in paragraph 6 of the relevant article addressing the reaction of the coastal states parties to violations of the regional Black Sea fisheries agreement by nationals of another state party. Two proposals were submitted for wording of the envisaged provision: one explicitly prohibiting the abuse of force by the authorities of the coastal state (Turkish proposal) and another requiring the coastal state to act in accordance with its national legislation and with international law (Ukrainian proposal). This divergence could not be bridged during the September 2000 meeting and both 2000 options included the following draft provision with bracketed text:

> In case of violations of the provisions of the present Convention committed by nationals of a State other than the Party in whose jurisdiction the violation occurs, the Parties shall [avoid the

[105] 1997 DC, art. 12(6).

[106] The amended provision had the following wording: "Where the violations are committed by nationals of a State other than the Party in whose jurisdiction the violation occurs, such penalties shall not include imprisonment, except for violations that occur in the territorial sea". See, Option 2000-I, art. 12(6); 1) (6) Option 2000-II).

> abuse of force] [act] in accordance with relevant national laws and regulations as well as international law.[107]

This disagreement was settled during the elaboration of the draft regional Black Sea fisheries agreement in the BSC framework in favor of the Ukrainian proposal, which used more neutral language.[108]

But while this obstacle to the finalization of the DLBD was set aside, a new controversy arose, rather unexpectedly, with regard to a provision that had been invariably present in the successive drafts relating to enforcement measures adopted by a coastal state within the waters under its jurisdiction against fishing vessels flying the flag of another party. The relevant provision of the 1997 DC and both 2000 options stipulated:

> Parties shall enforce this Convention and measures adopted thereunder within the waters under its [sic] jurisdiction against any vessel flying the flag of another Party which is reasonably believed to be engaged in activities in violation of the provisions of the present Convention. If on further investigation, evidence of a violation is found, the Party concerned may institute proceedings against the vessel or may, at the request of the flag State concerned transfer any available evidence of the violation to the Party, which shall take any necessary action.[109]

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[107] Option 2000-I, art. 12(6), second item; and Option 2000-II, art. 10(6), second item.

[108] DLBD, art. 20(6): "Where the violations are committed by nationals of a State other than the Contracting Party in whose jurisdiction the violation occurs, such penalties shall not include imprisonment, except for violations that occur in the territorial sea".

[109] 1997 DC, art. 12(4); Option 2000-I, art. 12(4); and Option 2000-II, art. 10(4).

The negotiation in the framework of the BSC revealed that the issue of the enforcement measures that a party to the DLBD is authorized to take against a vessel flying the flag of another contracting party, which is reasonably believed to be engaged in activities in violation of the provisions of the present DLBD within the waters under the jurisdiction of the enforcing state party, remained divisive (the relevant provision of Art. 20 (4) DLBD was put into brackets) and required further elaboration with a view to achieving a compromise.

What Role for the European Union?

The issue of a potential role of the EU in the negotiation and conclusion of a regional Black Sea fisheries management agreement was raised already in 2000, with regard to the proposal to bring the negotiation of the agreement in the BSEC. Greece did not participate in the meeting of the BSEC EGF, invoking also the exclusive competence of the EU and consequently the legal impossibility of an EU member state to negotiate and conclude any international agreement relating to fisheries.[110] This argument would become more relevant after the accession of Bulgaria and Romania to the EU (1 January 2007). Since that date, the EU has become a Black Sea coastal actor and its Common Fisheries Policy (CFP) has been extended into the Black Sea, as the EU's instrument for the management of fisheries and aquaculture in the waters under the sovereignty or jurisdiction of the new EU member states Bulgaria and Romania. Certainly the EU has to cooperate with the remaining four coastal states that are not EU member states for the management of the Black Sea marine living resources.

[110] On the other objections to the negotiation of the regional Black Sea fisheries agreement in the BSEC framework (lack of legal competence of this Organization, violation of the BSEC principle of inclusiveness), see Communication by the Ministry of Foreign Affairs of the Hellenic Republic (note 60).

In view of the 2007 enlargement, the European Commission has elaborated a regional Black Sea policy entitled "Black Sea Synergy", thereby presenting the opportunities and challenges that require coordinated action by the EU at the regional level, advocating for increased EU involvement in further defining cooperation priorities and mechanisms at the regional level, and presenting the main cooperation areas of the EU with the Black Sea regional states.[111] Among the main cooperation sectors which reflect common priorities and where EU presence and support is already significant, the European Commission ranked fisheries. The relevant part of the communication observes:

> The Black Sea is an important fishing region and the majority of its stocks are trans-boundary. A number of these are in a bad state and *action at regional level is therefore needed to help them to recover*. The EU would seek to *promote sustainable development through fisheries management, research, data collection and stock assessment* in the Black Sea region. *New ways to ensure sustainable and responsible use of fisheries resources in the region should be explored*. The possibilities offered by the General Fisheries Commission for the Mediterranean, which includes the Black Sea in its mandate, *should be better used*.[112]

Following the publication of the Black Sea Synergy, the EU has taken the first step in the management of Black Sea fisheries within the CFP with the enactment, in December 2007, of the Regulation (EC) No 1579/2007, establishing fishing opportunities for

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[111] Commission of the European Communities, *Black Sea Synergy – A New Regional Cooperation Initiative, Communication from the Commission to the Council and the European Parliament*, COM(2007) 160 final, (Brussels, 11 April 2007) (further: Black Sea Synergy Communication).

[112] Ibid., 6–7, italics in the original text.

certain fish stocks in the Black Sea and the specific conditions under which these may be used, applicable for the year 2008.[113]

By this legislation, the EU set for the first time TACs for sprat and turbot in the maritime zones of Bulgaria and Romania. Subsequently, the EU Council has adopted on an annual basis regulations concerning fishing in the Black Sea, fixing the TAC and/or the allowable fishing effort for certain fish stocks for the following year. These management measures are adopted, for the time being, unilaterally by the EU and concern only two fish species (turbot and sprat) and apply only to the maritime zones of Bulgaria and Romania and their fishing vessels.[114] This situation is unsatisfactory as the objective of regional cooperation in the management of the Black Sea fishery resources has not been yet attained.

The two Black Sea coastal states that are EU members are also in the delicate position to take part in the negotiation of the DLBD, while the EU has exclusive competence with regard to the conservation and management of marine living resources; in strict legal logic and political consistency the EU (instead of its member states) should be a party in any future binding agreement on Black Sea fisheries, if such an agreement were to apply to Bulgaria and Romania. In 2009, these two EU member states jointly submitted to the BSC parties a proposal for the accession of the EU to the BSC. Such an accession would presuppose the accession of the EU to the Bucharest Convention and would also qualify the EU to becoming a party to the protocols of the Convention and to other agreements concluded in the framework of the BSC, including the DLBD, currently under elaboration.

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[113] Council Regulation (EC) No 1579/2007 of 20 December 2007 fixing the fishing opportunities and the conditions relating thereto for certain fish stocks and groups of fish stocks applicable in the Black Sea for 2008 [2007] OJ L 346/1.

[114] No vessels of other EU member states fish in Black Sea waters.

The accession of the then Community to the Bucharest Convention was stated by the European Commission, already in 2007, as a priority of the EU regional Black Sea policy[115] (the European Commission has observer status with the BSC since 2001 and is represented by DG Environment). Yet, the Bucharest Convention does not foresee the participation of other international actors than states and an amendment to the Convention to allow accession of regional economic integration organizations would be required. At their meeting in Sofia in April 2009, the Ministers of Environment of the BSC members initiated, at the political level, the process which eventually would permit accession of the EU to the Bucharest Convention.[116]

An ad hoc Expert Group entrusted with the implementation of point 8 of the 2009 Sofia Declaration was established that same year. After three meetings, however, the Group conceded that the six BSC members "could not reach a common position on this issue".[117] The souring of the relationship between the EU and most non-EU Black Sea coastal states (primarily Russia and Turkey, and to a lesser degree Ukraine) does not allow, for the time being, optimism for a successful conclusion of the process leading to the accession of the EU to the Bucharest Convention and its full participation in the BSC.

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115 Black Sea Synergy Communication (note 111) at 6.

116 Declaration of the Ministers of Environment of the Contracting Parties to the Convention on the Protection of the Black Sea against Pollution on Strengthening the Cooperation for the Rehabilitation of the Black Sea Environment, Sofia, 17 April 2009, point 8: "...initiate a joint process within the Black Sea Commission to elaborate further on the proposal for the amendment of the Convention submitted by Bulgaria and Romania on the accession of regional economic integration organizations with a view to develop a recommendation on such amendments as may be required".

117 Ad hoc Expert Group on the Implementation of Item 8 of the Sofia Declaration 2009, Istanbul, 24 January 2011, Report, p. 2. Further, N. Oral *Regional Co-operation and Protection of the Marine Environment under International Law: The Black Sea* (Nijhoff, Leiden: 2013), 105–106.

Taking into account the dim prospects for the finalization of a regional Black Sea fisheries management agreement and the unlikely participation of the EU in such an agreement, if and when concluded, it is worth examining the suggestion by which the European Commission was concluding the aforementioned part of the Black Sea Synergy devoted to the regional Black Sea cooperation in the field of fisheries: "[t]he possibilities offered by the General Fisheries Commission for the Mediterranean, which includes the Black Sea in its mandate, *should be better used*".[118]

This suggestion had been previously submitted as a "pragmatic"alternative to the promotion of a regional Black Sea fisheries management agreement.[119] In this point of view "it would be preferable for the EU to support implementation of the existing General Fisheries Commission for the Mediterranean"[120] as a vehicle for its cooperation with the Black Sea coastal states in the field of fisheries.

The General Fisheries Commission for the Mediterranean (GFCM) is a regional fisheries management organization (established in 1949 under the framework of the FAO), which covers also the Black Sea.[121] Its membership includes Bulgaria, Romania and Turkey.[122] However, the other three Black Sea coastal states do not currently participate in the GFCM.[123]

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[118] Black Sea Synergy Communication (note 111) at 7, italics in the original text.

[119] F. Tassinari *A Synergy for Black Sea Regional Cooperation: Guidelines for an EU Initiative* (CEPS Policy Brief No. 105, June 2006), 7.

[120] Ibid.

[121] The only other RFMO whose scope extends to the Black Sea is the International Commission for the Conservation of Atlantic Tunas (ICCAT), responsible for the conservation of tunas and tuna-like species in the Atlantic Ocean and adjacent seas. Bulgaria, Romania, Russia and Turkey are ICCAT members.

[122] The Black Sea is the largest Sub-Area of the GFCM (Sub-Area 29).

[123] Russia is an observer in the GFCM.

In 2007, at its 31st Session, the GFCM considered the issue of cooperation with Black Sea research institutions in support of fishery research and management for this sub-region. To this end it requested a major involvement of the GFCM Scientific Advisory Committee (SAC) and requested the GFCM Secretariat to draft a project proposal on strengthening such cooperation.[124] This paved the way to the elaboration of the Black Sea Cooperation Project (BlackSeaFish) the main aims of which are the creation of the necessary capacity building in the Black Sea coastal states and the cooperation between national and international entities, fishery scientists and stakeholders from the Black Sea coastal area within the framework of an Ecosystem Approach to Fisheries, including the effective participation of those scientists and stakeholders in GFCM Scientific Advisory Committee activities.

In February 2011, the SAC agreed on the need to further strengthen the collaboration with the Black Sea coastal states by establishing an ad hoc Working Group on the Black Sea (WGBS) open to all scientists of the region and to the partner Organizations. The GFCM approved the recommendation of its SAC later that year[125] and the first meeting of the WGBS was held in Constanta in early 2012 (16–18 January). Since then the GFCM WGBS is convening on an annual basis.[126] The activities of the WGBS focus on cooperation in the fields of stock assessment, data collection, and aquaculture training. Cooperation seems to expand, in a modest way yet, to some aspects of fisheries management in the Black Sea: in May 2013, GFCM adopted the first Black

[124] See the papers by S. Knudsen "GFCM Black Sea programme: Preliminary elements for a project framework" and J. Caddy "Recent experience and future options for fisheries assessment and management in the Black Sea: A GFCM perspective", both in GFCM Doc. GFCM/XXXII/2008/Dma.4.

[125] FAO General Fisheries Commission for the Mediterranean, *Report of the thirty-fifth session* (GFCM, Rome, 9–14 May 2011), 21.

[126] The 2nd meeting of the WGBS was held in Varna on 24–26 April 2013, and the 3rd meeting held in Trabzon on 26–28 February 2014.

Sea-specific recommendation "on the establishment of a set of minimum standards for bottom-set gillnet fisheries for turbot and conservation of cetaceans in the Black Sea".[127]

The record of the WGBS is mixed. While it contributes to creating a sense of objectives common to all Black Sea coastal states and the international institutions active in that region, especially the need to promote the development of common methodologies for collecting, processing and analyzing data for stock assessment of commercial species, the contribution to the aim of sustainable management of Black Sea living resources remains modest.[128] The limited participation – relating to the Black Sea – in the GFCM is a major obstacle to the possibility of the latter to become an effective regional fisheries management institution for the Black Sea.

Final Remarks

The acknowledged need for an effective regional regulation for the management of Black Sea fisheries appears as the frame story in the seemingly never ending story of the ongoing negotiation of a regional Black Sea fisheries instrument. In this narrative nests several stories within the story, each of which has its own subsequent layers. In such conditions, attempting a conclusion would be risky: all involved stakeholders hesitate to take a concrete decision to overcome the last outstanding hurdles to the finalization of the regional instrument, under consideration for twenty years

127 Recommendation GFCM/37/2013/2 in FAO General Fisheries Commission for the Mediterranean, *Report of the thirty-seventh session* (GFCM, Split, 13–17 May 2013), Appendix H, 65. At the session, the GFCM adopted the "Roadmap on fighting IUU fishing in the Black Sea": ibid., Appendix J, 74.

128 Cf. Goulding, Stobberup and O'Higgins (note 25) at 38: "Attempts to improve cooperation on scientific research and advice (for example, the GFMC Working Group on Black Sea Fisheries, which met for the first time in 2012) have been undermined by the weak institutional framework, which is subject to inconsistent funding and political interference".

already. While the coastal states work, painstakingly, to narrow their disagreements over the substantive provisions of the instrument to be adopted, the issue of the forum for cooperation in fisheries management remains controversial. This is not a mere procedural question, because the choice of such a forum is perceived by the regional actors as prejudging the general approach of the instrument, with obvious interpretative consequences in the balancing act between environmental and economic imperatives. To this concern should be added also the financial constraints relating to the choice of forum and the subsequent budgetary implications for the organization whose part the regional fisheries entity to be established would be. The enduring negotiations have made it clear, that the first choice of most, if not all, coastal states was (and to a large extent still is) to establish a stand-alone entity, the Black Sea fisheries commission. However, the cost of the establishment and functioning of such a body (together with persistent disagreements over its seat) have become insurmountable stumbling blocks for the successful conclusion of the negotiations.

In addition to this uncertain institutional framework of the negotiation, another challenge comes from the political developments in the Black Sea region, especially since 2008 (armed conflict in Georgia, current Ukrainian crisis). The deterioration of the political environment currently renders a direct implication of the EU in the negotiation of the regional fisheries management instrument hardly realistic, despite the fact that the EU is a coastal actor of the Black Sea since Bulgaria and Romania's accession to the EU. The lack of trust, which is indispensable for the successful conclusion of the negotiation trust among the Black Sea coastal states (and the EU) and the ensuing hardening of national positions preventing necessary compromises hardly bode well for decisive moves in the enduring quest for an international legal regulation of the Black Sea fisheries.

PART TWO

COMPLIANCE: FROM MONITORING TO (INTERNATIONAL) DISPUTE SETTLEMENT

EMSA'S ROLE IN MAKING THE MARITIME REGULATORY SYSTEM WORK: SUPPORTING COMPLIANCE THROUGH MONITORING AND ENFORCEMENT

Markku Mylly*

Introduction

The gross added value of the maritime sector to the European Union (EU) is estimated at €500 billion, providing jobs for approximately five million people. Over 90% of EU external trade, and 37% of the intra-EU trade goes by sea. Effective, safe, and secure management of the maritime domain for transport and trade is therefore of critical importance.

Over recent decades, the emergence of safety and environmental regulations at the international level, the growing body of European legal *acquis*, and the transposition of such legislation at national level, has resulted in a strong regulatory framework. However, to ensure that these are implemented effectively at an operational level, it is also necessary to put systems in place for monitoring compliance with such regulations in the maritime sector, and for taking steps when vessel owners, operators, and crew are found to be non-compliant. European authorities

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therefore need detailed, reliable and timely knowledge about what happens at sea. Monitoring large numbers of vessels over extensive sea areas and calling at several ports, is a challenge; but adequate surveillance followed by effective enforcement is one of the few options open to authorities in order to ensure that actors in the maritime sector comply with safety and environmental regulations. The European Maritime Safety Agency (EMSA) has a role in supporting European authorities in these tasks.

This paper provides a brief overview of EMSA, and the context in which the Agency works. It then goes on to present two of the information systems operated in-house, CleanSeaNet and THETIS, which contribute to monitoring and enforcement efforts. CleanSeaNet, the satellite-based monitoring service for oil spill and vessel detection, forms a fundamental part of the law enforcement chain addressing illegal discharges of oil (and other substances) at sea. THETIS reinforces and supports the regular inspection of vessels to ensure compliance with safety and environmental regulations. Finally, the paper concludes by briefly noting that although these information services are essential for increasing awareness of what goes on in the maritime domain, they are only one aspect of efforts to improve compliance.

About Emsa

EMSA is one of the EU's decentralized agencies, and was established in 2002 by Regulation (EC) No 1406/2002.[1] Based in Lisbon, the Agency provides technical assistance and support to the European Commission and Member States in the development and implementation of EU legislation on maritime safety, mar-

[1] Regulation (EC) No 1406/2002 of the European Parliament and of the Council of 27 June 2002 establishing a European Maritime Safety Agency [2002] L 208/1, as amended by Regulations 1644/2003; 724/2004; 2038/2006; and 100/2013 (consolidated version available at <www.emsa.europa.eu>).

itime security, prevention of, and response to, pollution caused by ships as well as response to marine pollution caused by oil and gas installations. It has also been given operational tasks in the field of pollution response, and vessel monitoring and tracking.

These tasks are carried out by various means, including the information systems EMSA has established for maritime monitoring and in support of port state control (PSC) activities. EMSA hosts and operates: CleanSeaNet, the European satellite-based oil spill and vessel detection service; SafeSeaNet, the European vessel traffic monitoring and information system; the EU Long Range Identification and Tracking Cooperative Data Centre (EU LRIT CDC); and THETIS, in support of the PSC inspection regime. These systems streamline and speed up the exchange of information between maritime authorities on ship-source pollution, on vessel movements, and on the condition of ships that call in European ports.

Information made available through these systems, even if not always explicitly designed for enforcement purposes, can be extremely valuable to authorities engaged in ensuring compliance with the relevant international and EU regulations. Combining information from more than one system reinforces the added value to be obtained, and can provide users with a more complete overview of activities at sea.[2]

(Non-)Compliance With Maritime Safety and Environmental Regulations

Non-compliance with regulations may be due to lack of awareness of the instruments in force, negligence (such as poor maintenance of equipment), or deliberate violation (sometimes even actively promoted by the company). Whatever the cause, it usu-

[2] It should be noted that not all authorities are able to gain access to all systems; this should be ascertained on a case-by-case basis.

ally takes the form of identifiable actions/inactions on both the part of ship operators, and of the ship master and crew. Deliberate noncompliance is usually due to a conjunction of two factors: 1) there are economic advantages for ship operators; 2) there is a low risk of being caught and penalized. Motivations for the individual crew members are slightly different; these are less likely to include cost savings, but may be based on, for example, following perceived instructions from management (often implied rather than explicit) and/or fear of losing their job.

Those responsible for violating regulations, whether at the level of vessel operator or crew, will only risk acting illegally if the likelihood of being caught and severity of subsequent consequences are perceived as being low. At company level, the main factors which are likely to be taken into account are the possibility of being caught and sanctioned, the type and level of penalty, and the resulting negative publicity. The reputation of the company is also an important factor. At an individual level, many of these factors are also relevant for crew members who carry out illegal actions. Given the variety of legal systems in place in Europe, the defendant may be a natural person or may be a juridical person (company), or both. Penalties (criminal or administrative) may include monetary fines, imprisonment, or other sanctions such as banning crew members from working in a particular state's waters. Prison sentences and financial penalties are frequently not set high enough to dissuade non-compliance.

When at sea, the risk of being caught violating safety or environmental legislation is often lower further from the coast than in-shore. Not only is there less clarity on the high seas with regard to jurisdiction and the type of legislation in place, there is also less surveillance and no inspections. Coastal vessel tracking monitoring systems such as SafeSeaNet are still predominantly based on location information contained in Automatic Identification System (AIS) messages, which are limited to signal range

of coastal stations.[3] In Europe, monitoring of ship-source pollution by synthetic aperture radar (SAR) satellite also has much denser coverage in coastal areas compared to further offshore.

PSC inspectors have limited time to carry out inspections which cover a wide range of aspects. Verifications related to safety and environmental legislation are often limited to a formal examination of the ship's records; a more in-depth inspection is usually prompted by indications of an anomaly of some kind.

It is apparent therefore that surveillance, inspection, and subsequent enforcement efforts, along with other measures, are important to ensure the objective of widespread compliance with safety and environmental regulations. Given that enforcement responsibilities are shared between coastal, port and flag states, ensuring compliance with regulations is also only possible through international cooperation. Various factors related to jurisdiction may have to be taken into consideration: a vessel may be travelling between the ports of two different states, and flying the flag of yet another state. In addition, the parties responsible for the ship (operators and owners) may be registered somewhere else entirely, and the crew may well comprise individuals of various nationalities. Ensuring exchange of information in a rapid and harmonized manner is therefore also important.

[3] AIS is a maritime broadcast system, based on the transmission of very high frequency (VHF) radio signals from ships, which are received by coastal stations within signal range. This limits the geographical area over which ships can be tracked. The limitation of AIS in tracking ships only in coastal areas is gradually changing, as an increasing number of satellites are now being fitted with AIS receivers, which can track ship movements globally.

Environmental Protection: Illegal Ship-source Discharges in the Marine Environment

Legal Framework

At the international level there are two fundamental instruments that deal with certain aspects of ship-source pollution, including illegal ship-source discharges: the LOS Convention[4] and MARPOL 73/78.[5]

MARPOL 73/78 deals with the prevention of pollution from ships and the protection of the marine environment from discharges of harmful substances. It establishes criteria for discharges at sea and also an obligation for the ship master to report any pollution incident which is defined as "a discharge above the permitted level". It also imposes a duty to cooperate between states parties to the Convention in the sanctioning of such violations.

The LOS Convention was adopted in 1982 and entered into force in 1994. It regulates a variety of issues related to shipping, including those related to counteracting ship-source pollution. The LOS Convention defines the respective roles of the flag, port and coastal states.

At EU level, the relevant provisions of MARPOL 73/78 are implemented by Directive 2005/35/EC on ship-source pollution and on the introduction of penalties, including criminal penalties, for pollution offences.[6] Directive 2005/35/EC was adopted on 7 September 2005. Its main objective is to incorporate into

[4] United Nations Convention on the Law of the Sea of 10 December 1982 (1833 UNTS 396, available at <www.un.org/Depts/los>).

[5] International Convention for the Prevention of Pollution from Ships of 2 November 1973 (1340 UNTS 61, as amended).

[6] Directive 2005/35/EC of the European Parliament and of the Council on ship-source pollution and on the introduction of penalties for infringements [2005] OJ L 255/11 (as amended, consolidated version available at <eur-lex.europa.eu>).

European law the standards introduced by MARPOL 73/78 related to the prohibition of polluting discharges into the sea and to specify the sanctions to be imposed. Subsequently, it was amended by Directive 2009/123/EC[7] which extended liability for discharges onto "legal persons"[8] (thus making a wider variety of subjects potentially liable for the pollution) and obliged Member States to treat illegal discharges not only as infringements but also in some circumstances as criminal acts.

In relation to its geographical scope, the Directive applies to pollution wherever it occurs: ports, internal waters, territorial sea, straits used for international navigation, exclusive economic zone, other special zones and high seas.

In relation to its substantive rules, the Directive applies to "discharges of polluting substances from any ship, irrespective of its flag, with the exception of discharges coming from warships, naval auxiliary or other ships owned or operated by a State and used, for the time being, only on government non-commercial service".[9] The Directive has therefore quite a wide scope – any discharge of polluting substances into the sea, committed with intent, recklessly or by serious negligence, from nearly any ship, is covered.

Some other EU Directives may be of supportive value for the enforcement of the prohibition of illegal discharges, amongst others: Directive 2000/59/EC on port reception facilities for ship-generated waste and cargo residues,[10] Directive 2010/65/

[7] Directive 2009/123/EC of the European Parliament and of the Council amending Directive 2005/35/EC on ship-source pollution and on the introduction of penalties for infringements [2009] OJ L 280/52.

[8] Ibid., art. 1(3).

[9] Directive 2005/35/EC, art. 3(2).

[10] Directive 2000/59/EC of the European Parliament and of the Council on port reception facilities for ship-generated waste and cargo residues [2000] OJ L 322/81.

EU on reporting formalities for ships arriving in and/or departing from ports of the Member States,[11] Directive 2002/59/EC establishing a Community vessel traffic monitoring and information system,[12] and Directive 2009/16/EC on Port State Control.[13]

CleanSeaNet

EMSA developed and operates CleanSeaNet, a satellite-based oil spill monitoring and vessel detection service, which analyses synthetic aperture radar (SAR) images from Earth observation satellites to detect possible oil spills on the sea surface. The service was developed on the basis of Directive 2005/35/EC, as amended, which states that EMSA shall "work with the Member States in developing technical solutions and providing technical assistance ...in actions such as tracing discharges by satellite monitoring and surveillance".[14]

EMSA's role in addressing issues related to illegal discharges was reinforced in 2013, with the revision of the Agency's founding regulation by Regulation EU No. 100/2013.[15] The mandate of the Agency in this area was confirmed by article 4(f), which states that one of the Agency's core tasks is to:

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[11] Directive 2010/65/EU of the European Parliament and of the Council on reporting formalities for ships arriving in and/or departing from ports of the Member States and repealing Directive 2002/6/EC [2010] OJ 283/1.

[12] Directive 2002/59/EC of the European Parliament and Council establishing a Community vessel traffic monitoring and information system and repealing Council Directive 93/75/EEC [2002] OJ L 208/10 (as amended, consolidated version available at <www.emsa.europa.eu>).

[13] Directive 2009/16/EC of the European Parliament and of the Council on port State control [2009] OJ L 131/57.

[14] Directive 2005/35/EC, art. 10(2)(a).

[15] Regulation (EU) No 100/2013 of the European Parliament and Council amending Regulation (EC) No 1406/2002 establishing a European Maritime Safety Agency [2013] OJ L 39/30.

> "facilitate cooperation between the Member States and the Commission... in improving the identification and pursuit of ships making unlawful discharges in accordance with Directive 2005/35/EC on ship–source pollution and on the introduction of penalties for infringements".

The CleanSeaNet Service

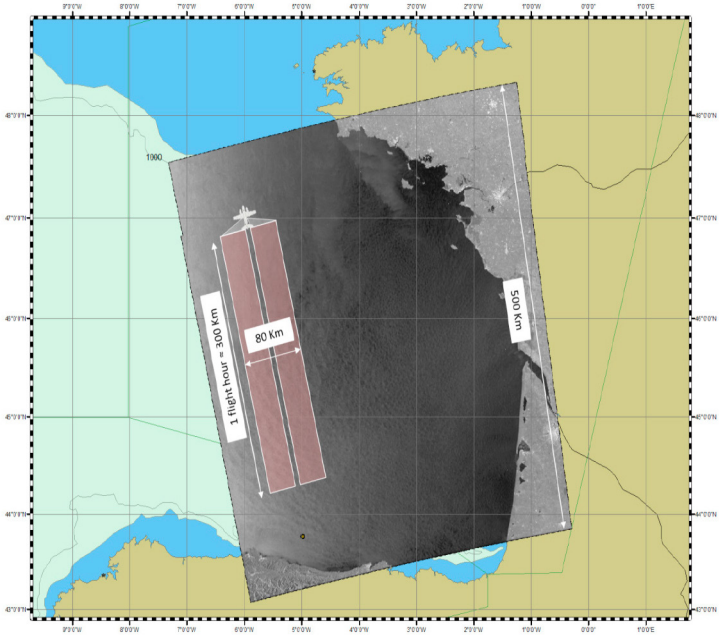
The CleanSeaNet service covers all European sea areas, and is available to 27 coastal states, including all EU coastal states, as well as Turkey, Iceland, Norway and Montenegro. There are almost 500 authorized national users of the system.

For a number of coastal states, CleanSeaNet is the only remote sensing tool available to detect and monitor oil spills at sea. The service is based on the near real–time analysis of images in order to detect possible oil spills on the sea surface. When a possible spill is detected within the alert area of a participating coastal state, an alert is immediately sent to the relevant authorities. Vessel traffic information based on location reports, such as AIS data extracted from SafeSeaNet, is used in CleanSeaNet to identify, whenever possible, the source of the spill (i.e. the vessel discharging the pollutants).

CleanSeaNet can provide a clear indication of the location and the dimensions of a possible pollution but cannot determine the type of pollution. Consequently, satellite detections have to be verified. As spills weather out quickly, it is recommended that CleanSeaNet be used in combination with aerial surveillance. Satellite image acquisition planning and flight schedules should be coordinated in order to optimize both the use of satellite surveillance and aerial surveillance. It should be noted that the CleanSeaNet conditions of use require that coastal states using the service take the satellite monitoring schedule into account for the planning of national or regional response, monitoring and

surveillance resources (e.g. aircrafts, vessels). This is a cost-effective solution in order to avoid flying over areas where no spills have been detected by satellite, and to be able to ensure appropriate follow-up to CleanSeaNet detections whenever necessary. When coastal states cannot verify on site, the possibility to request an inspection of a suspected vessel in the next port of call should be considered.

Figure 1: Area covered by satellite versus area covered by aircraft during one flight hour



In order to increase the likelihood of catching polluters, surveillance assets should be used in such a way that main traffic areas are monitored at regular intervals. However, the planning should not be predictable. Due to orbit constraints, SAR satellite times of passage are known in advance and cannot be modified. In order to avoid being detected, ships that intend to discharge illegally might discharge deliberately between satellite passes.

This can be mitigated by using several satellites and by planning other surveillance assets in the interval. Areas outside main traffic areas should also be randomly monitored.

A possible pollution incident detected on a SAR satellite image may be considered a sufficient suspicion that a ship has committed an illegal discharge. A growing number of coastal states use CleanSeaNet detections to trigger inspections in port when vessel traffic monitoring systems allow the clear identification of the source. A number of polluters have been fined on the basis of evidence collected during such inspections. It is not always possible, judicially or technically, to prosecute the offender for the pollution observed on a satellite image, even though this was the initial prompt for the inspection.

CleanSeaNet satellite images are acquired in segments of up to 1,400 km and swaths of up to 500 km. Consequently, most satellite images cover the waters of more than one coastal state. The best use of the service leads to increased cooperation between neighboring countries in a number of areas. This includes planning satellite and aerial surveillance activities, exchanging information on pollution incidents and with respect to implementing follow-up actions. The CleanSeaNet system has been designed to facilitate this cooperation in particular for planning satellite image acquisitions. In the Baltic Sea, for example, HELCOM IWGAS[16] is responsible for defining the total operational needs for satellite images for the each of the three Baltic Sea satellite monitoring sub-regions.

According to the service conditions of use, users must enter feedback into CleanSeaNet to report the results of on-site verification activities. This feedback is immediately available to neighboring countries. It is recommended that information

[16] The Baltic Marine Environment Protection Commission – Helsinki Commission (HELCOM) Informal Working Group on Aerial Surveillance.

on follow-up actions such as inspections in port of suspected polluters, or any other enforcement actions are also reported. CleanSeaNet statistics based on feedback provided by the users, should be used to evaluate trends and to identify areas where surveillance effort should be concentrated.

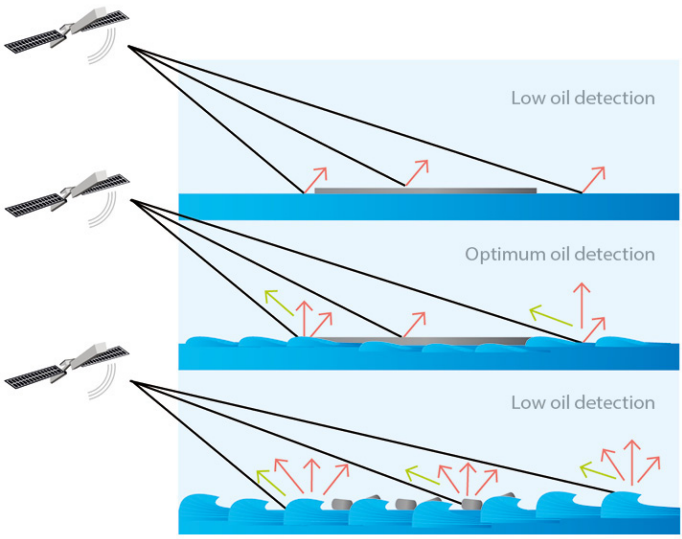
Users have access to the CleanSeaNet service via a web portal hosted at EMSA. Related products (images, oil and vessel detection information, etc.) are immediately made available through the portal.

How SAR Satellite Detection Works

CleanSeaNet is capable of monitoring wide areas at regular intervals. Long range detection is mainly based on radar sensors that measure the roughness of the sea surface. Radars generate electromagnetic pulses that 'illuminate' the ocean surface. Radar pulses are reflected by capillary waves that the wind creates at the surface of the sea (sea clutter). Radar systems will therefore detect any phenomena that suppress capillary waves. Some substances, for example oil, smooth the sea surface and reduce the level of the signal returned to the emitter. The signal is processed into an image where a clean sea will appear as a grey background; oil spills will appear as dark areas and vessels and platforms as bright spots. Oil, but also other substances and natural phenomena such as certain current patterns, ice and surface slicks associated with biological activity, will also appear as dark patterns on the radar image.

SAR radars are to a large extent able to detect very thin oil films floating on the sea surface day and night and through the cloud cover. There are limitations to this process as sea roughness is driven by the local wind speed and direction. Wind speeds below 2–3 m/s mask the dampening effect whereas speeds above 15 m/s also reduce detection capability.

Figure 2: Impact on wind radar systems



Trained operators are able to distinguish between natural phenomena and discharges from vessels. In particular, when an image shows the bright echo of a vessel at the end of a linear dark feature and when the shape of this feature matches the track of the vessel, there is little doubt that this vessel has been discharging. The discharged product could be oil but could also be another substance that would produce the same dampening effect. To confirm the nature of the substance detected and that the discharge exceeds the legal limits of MARPOL 73/78, requires the collection of additional information on site and/or in port.

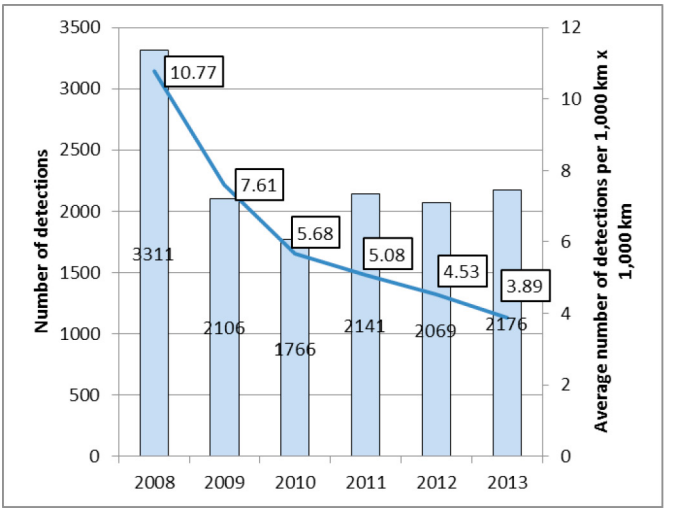
Detections

EMSA provides over 2,100 analyzed satellite images per year are to CleanSeaNet users. Spills identified on the images are separated into two classes: Class A, the detected spill is most probably oil (mineral/vegetable/fish oil) or a chemical product; and Class B –

the detected spill is less probably oil (mineral/vegetable/fish oil) or a chemical product. On the 2,547 images delivered in 2013, a total of 2,176 possible oil spills were detected (1,096 Class A spills and 1,080 Class B spills).

The level of chronic oil pollution in waters under the jurisdiction of EU Member States is difficult to measure. Evidence from beached bird and tar ball surveys indicate that levels of oil pollution have dropped considerably over recent decades, although levels remain above what is legally permitted. Evidence from aerial and satellite surveillance indicates that over the past five years illegal discharges from vessels have been reducing in volume across Europe. CleanSeaNet statistics show, for example, an overall reduction in the number of possible spills detected, from 10.77 possible spills identified per million km^2 monitored with satellite images in 2008, to 7.61 in 2009, 5.68 in 2010, 5.08 in 2011, 4.53 in 2012 and just 3.89 in 2013. However, this trend is unevenly distributed, and the reduction is more evident in some sea basins than in others.

Figure 3: Possible spills detected on CleanSeaNet images

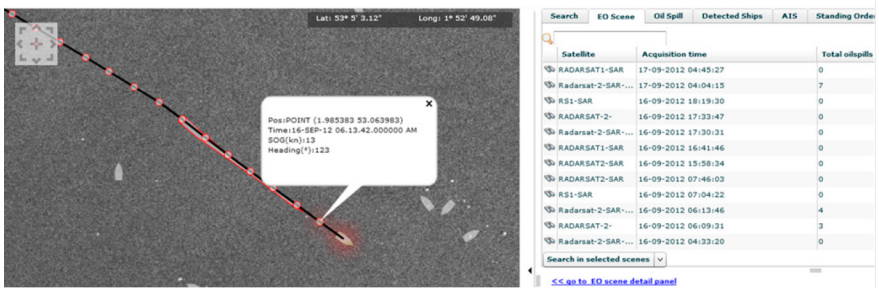


The drop is probably attributable to a range of different factors, for example changes in the types of fuels used, better port reception facilities, etc. However, it is likely that some of the drop is due to the deterrent effect resulting from intensive aerial and satellite surveillance activity.

CleanSeaNet in Operation

The CleanSeaNet service detects spills and vessels possibly linked to spills, and supports the identification of polluters by combining the CleanSeaNet images with vessel traffic information available through SafeSeaNet and EMSA's technical platform for combining data, the Integrated Maritime Data Environment (IMDatE).

Figure 4: AIS track overlaid on SAR satellite image of spill



In case of a discharge detected by CleanSeaNet, proving a MARPOL 73/78 violation requires additional evidence, which can be collected on site and/or in port. Two recent examples illustrate the contribution of the CleanSeaNet service to the detection and pursuit of ships discharging illegally.

Example 1: Pollution in UK Waters

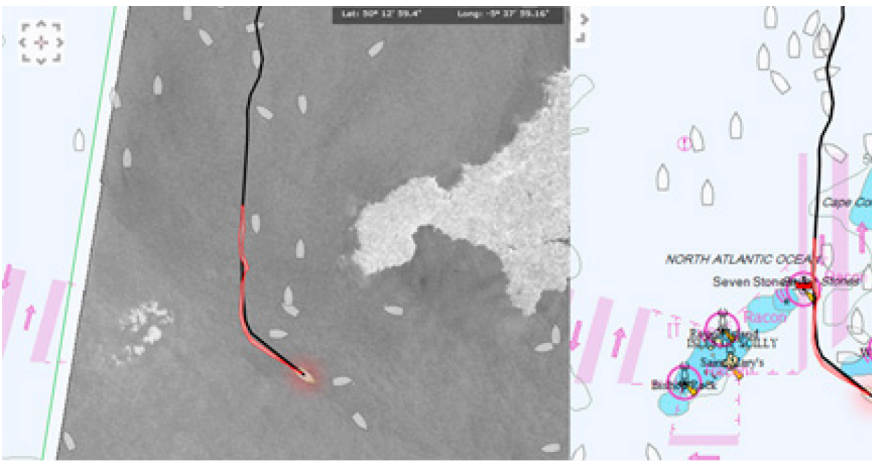
Satellite images should always be combined with supporting information when prosecuting a maritime pollution case, but the

images themselves may be admitted as primary evidence. On 25 February 2012, EMSA detected a possible pollution on a satellite image of the waters off the coast of Cornwall, UK. By combining the satellite image with AIS vessel track information from SafeSeaNet, the vessel was identified as the Singaporean flagged tanker *Maersk Kiera*.

The vessel was contacted by the UK's Maritime and Coastguard Agency, and initially denied that it was trailing a slick. It then admitted to cleaning the tank and discharging waste (palm oil and tank cleaning solution) but stated that this was outside the UK's 12 nautical mile territorial sea (i.e. certain discharges are permitted, provided conditions are met). Evidence from the satellite image showed that the slick was inside the territorial sea, and that the discharge was thereby illegal.

Following the court case, on 4 October 2013 the owner of the vessel was found guilty and fined. According to the investigating officer of the Maritime and Coastguard Agency's enforcement unit, it would not have been possible to achieve the prosecution without the satellite evidence.

Figure 5: *Maersk Kiera* trailing a spill



Example 2: Pollution in Croatian Waters

On 22 March 2013, a possible pollution was detected by CleanSeaNet in Croatia's territorial sea. Based on information available in SafeSeaNet, the possible source was identified (MMSI number[17]), and a vessel track generated. This information was added to THETIS, which made an inspection in the next port of call, in Slovenia (identified in THETIS based on SafeSeaNet information), mandatory. The inspection found evidence that an illegal discharge of oily waste had taken place (oil residues in the Oil Water Separator, and oil spots on starboard side hull), and imposed a fine on the vessel.

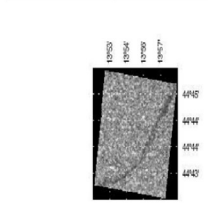
Figure 6: CleanSeaNet Alert Report, 22 March 2013, showing spill detected in Croatian waters

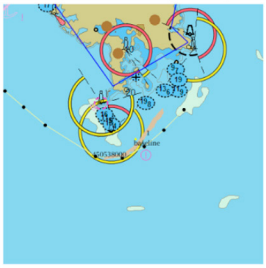
CleanSeaNet Alert Report — CROATIA — Acquisition: 2013-03-22 05:16:37 UTC

Scene ID: 124923 — RADARSAT-2 - SAR_R - SCWB — List of Spills — GIS Viewer

Details of possible Spill n°1 - OS_124923_1

Centre Position		SAR Wind at Center		Area	Length	Width	Class	Alert Level	Number of slicks	Oilspill Warning Issued
Latitude	Longitude	Direction (From)	Speed (m/s)	(km²)	(km)	(km)	(A/B)			
44° 43' 43" N	013° 56' 14" E	64.00	3.91	3.44	7.61	0.45	A	Yellow	1	NO





Meteorological and Ocean Data		
Sea State	Wave Height	0.2
Met.Wind	Direction (from)	64
	Speed (m/s)	4.2
Current	Direction (from)	N/A
	Speed (m/s)	N/A

Note: Grey fields are parameters set as "invisible" in the Print Parameters matrix or not available

Comments from Service Provider

Possible source information

N.	Detected	Dist.(Km)	Identified	Type	IMO	Name	MMSI	C/S	Latitude	Longitude	Time (UTC)	Track
1	Unknown	60.5	Yes	N/A	N/A	unknown	450538000	unknown	45° 08' 27" N	013° 25' 30" E	03:23:32Z	N/A

[17] A Marine Mobile Service Identity (MMSI) number is a nine digit number used to uniquely identify a ship. The number is transmitted by ships in their automatic reports (AIS reports, for example).

Maritime Safety and Environmental Protection: the Role of Port State Control Inspections

Port State Control

Inspection by PSC authorities of a foreign ship, which is voluntarily in a port, has the purpose of ensuring that the condition of the ship and its equipment comply with the requirements of international regulations, and that the ship is manned and operated in compliance with these rules. If the ship is considered deficient in any way, the PSC authorities will take administrative action, which may include detention of the ship until the deficiency(ies) is (are) rectified.

Given that ships will often visit ports of more than one state when operating in a given region, there are considerable advantages in organizing inspection on a regional basis. Among others, this reduces the burden on individual states of conducting inspections and minimizes delays to ships by ensuring that they are not repeatedly inspected in short time frames, yet provides that all merchant ships are inspected on a regular basis. It also helps to prevent regional 'port shopping', whereby a vessel may choose to call more often at a port where inspections are less likely, either because the vessel is sub-standard or because, even for compliant vessels, the inspections take time.

EMSA has been given the technical responsibility for monitoring PSC at EU level. This involves assessing the functioning of the port state inspection systems set up by individual EU members, undertaking a comprehensive analysis of statistics relating to vessels calling at EU ports, as well as analysis of data on individual ship inspections. Risk assessment studies combined with statistical research provide results which are used to develop objectives and procedures for the continuous improvement of the EU's performance on PSC.

In addition, the Agency carries out a number of supporting tasks in this area in order to ensure the overall effectiveness of the EU's PSC system; this includes developing and implementing, in cooperation with Member States and the Commission, the information system (THETIS) which is pivotal for the inspection regime for PSC.

Legal Framework

All major international Conventions (e.g. SOLAS,[18] MARPOL 73/78, STCW,[19] MLC[20]) contain provisions which confirm that contracting Governments have the right to carry out PSC (e.g. SOLAS Chapter I Regulation 19(a) stipulates "[e]very ship when in a port of another Contracting Government is subject to control by officers duly authorized by such Government ...").

The establishment of a system of harmonized inspection procedures throughout a region is done through a regional PSC agreement often known as a Memorandum of Understanding (MoU). These regional agreements are non-legally binding, but are political commitments between the Maritime Authorities of the participating states. There are currently nine MoUs which, along with the United States Coast Guard PSC Program, cover almost all seas and oceans around the world. The term MoU refers not only to the agreement itself that has been ratified by the participating maritime authorities, but frequently also refers to the institutional framework of the MoU. Each MoU has an executive body, known as a PSC Committee, which comprises represen-

18 International Convention for the Safety of Life at Sea of 1 November 1974 (1184 UNTS 277, with protocols and regularly amended).

19 International Convention on Standards of Training, Certification and Watchkeeping for Seafarers of 1 December 1978 (1361 UNTS 190, as amended).

20 Maritime Labour Convention of 23 February 2006 (45 ILM 792, available at <www.ilo.org>).

tatives of the participating maritime authorities and meets on a regular basis. Observers to these meetings may include other MoUs, the International Maritime Organization (IMO), and other organizations as relevant, e.g. the International Labour Organization (ILO) and the European Commission. In between meetings, the activities of the MoUs are managed by the secretariats.

The MoU in place in Europe is the Paris Memorandum of Understanding on Port State Control[21] (PMoU), described in more detail below. The application of the PMoU in Europe is underpinned by European legislation in the form of Directive 2009/16/EC on port state control. The Directive establishes the provision of a port state control system of inspections to enforce compliance of ships with the international standards for safety, pollution prevention and on-board living and working conditions for which the responsibility lies primarily with the flag state. It applies to any ship and its crew calling at a port or anchorage of a Member State.[22]

The Paris Memorandum of Understanding on Port State Control

The PMoU took effect on 1 July 1982. There are currently (2014) 27 maritime authorities[23] participating in the PMoU: all coastal Member States of the EU, Canada, Iceland, Norway, and the Russian Federation.

According to the PMoU, each Authority will maintain an effective system of PSC with a view to ensuring that, without discrimination as to flag, foreign merchant ships calling at a port of

21 Memorandum of Understanding on Port State Control, Paris of 26 January 1982 (as regularly amended, available at <www.parismou.org>).

22 With certain exceptions, as defined in the Directive.

23 The most recent version of the PMoU (including 37th amendment, in effect from 1 July 2014) uses the terms "Authority", "Maritime Authority" as well as "Member State". In the following section on port state control, these terms are used and considered equivalent.

its state, or anchored off such a port, comply with the standards laid down in the relevant instruments.

When an inspection is carried out and deficiencies are detected which are clearly hazardous to safety, health or the marine environment, the Maritime Authority will ensure that the hazard is removed before the ship is allowed to proceed to sea and for this purpose will take appropriate action, which may include detention. However, when exercising control under the Memorandum, the Authorities will make all possible efforts to avoid unduly detaining or delaying a ship.

The New Inspection Regime (NIR) of the PMoU, introduced in the EU through Directive 2009/16/EC as amended, entered into force on 1 January 2011.[24] The NIR introduced a number of new elements to overcome the main problems connected with the former PSC regime and, in particular, the freedom in selecting ships for inspection by the Authorities. The NIR contains improved mechanisms for targeting substandard ships which are now selected for expanded inspection every six months, while quality ships are rewarded with longer inspection intervals of up to 36 months. To facilitate the selection of ships for inspection and to report and store inspection results, the NIR is supported by a new information system called The Hybrid European Targeting and Inspection System (THETIS).

The target mechanism of the NIR is based on the Ship Risk Profile (SRP), which determines the periodicity of inspection. An alleged violation of regulations in force by a vessel may reduce the interval between inspections if introduced in THETIS by an Authority as an 'overriding factor' that triggers an additional in-

[24] The NIR was embedded into European legislation through the Directive 2009/16/EC as amended by Directive 2013/38, which applies to all Member States of the EU, plus Norway and Iceland as part of the European Free Trade Agreement. Russia, and Canada apply the NIR with minor differences compared with the content of the abovementioned EU Directive.

spection. During this inspection, the Authorities will endeavor to secure evidence relating to suspected violations. Obviously, when during a 'regular' PSC inspection an alleged violation is uncovered, or if a request is received from another Authority, the Authority will proceed in the same way.

The PSC inspection report and supporting documentation in the case of an alleged violation may be part of a judicial file. As the main purpose of the PMoU is to prevent the operation of sub-standard ships, the inspection report is not always adequate to deliver valid or sufficient evidence for criminal prosecution purposes; consequently, sanctions do not necessarily follow.

In addition, PSC inspections may include a Concentrated Inspection Campaign (CIC) in relation to a specific topic of a relevant instrument. A CIC is periodically held, normally once a year, for a period of three months. The primary purpose of a CIC is to improve the safety of life at sea, prevent pollution of the marine environment and improve maritime labor conditions. A CIC will propel the achievement of the declared mission of the PMoU, which is the elimination of substandard shipping through a harmonized system of PSC. By this means, a CIC will assist in raising the awareness of ship owners, operators and crew on the specific requirements addressed during the particular CIC. This will build up the safety attitude and thereby create a safer marine and labor environment.

The Hybrid European Targeting and Inspection System (THETIS)

EMSA is engaged in facilitating the correct and smooth functioning of the PMoU's NIR. To that effect, the Agency has developed an advanced information system called THETIS, which contains all the functionalities stemming from the requirements of the Directive 2009/16/EC and the PMoU. The system is hosted, maintained and operated by the Agency.

THETIS stores and processes ship call information for use in the context of PSC; calculates the Ship Risk Profile and Priority for each ship in the database on a daily basis; organizes from a single source the workflow from call to inspection, report and follow up action; provides information about inspections to the public; and publishes information on behalf of the European Commission.

The mechanism by which the NIR targets ships for inspection is based on the SRP. THETIS calculates and attributes to each ship in the database a risk profile which is updated daily. It ranks ships into Low Risk Ships, Standard Risk Ships and High Risk Ships. An SRP is based on criteria such as its type, age, flag, recognized organization, inspection history and, notably, managing company (the International Safety Management manager). Consequently, the SRP determines the periodicity of inspection. In addition to the periodic inspections, additional inspections may be carried out in case of 'overriding' or 'unexpected factors' depending on the severity of the occurrence.

THETIS also calculates the inspection share of the inspection commitment of each PMoU member state. THETIS monitors missed inspections, and also enables inspections to be rescheduled, and the reasons for missed inspections to be recorded.

Another important feature of THETIS is the processing of ship call information. The system receives ship arrival and departure information from SafeSeaNet. Connections have been established with Canadian and Russian equivalents of SafeSeaNet which allow THETIS to work as the central system of the PMoU rather than just the EU. THETIS uses this ship call information to automatically indicate the ships due for inspection. All EU Member States are required through Directive 2009/16/EC and Directive 2002/59/EC on vessel traffic monitoring to have in place the necessary arrangements to facilitate the reporting of the estimated time of arrival or departure and the actual time of

arrival or departure. This guarantees a high level of situational awareness for authorized users.

With regard to the use of THETIS for enforcement purposes, Authorities should be aware that if an 'overriding factor' is entered into THETIS, inspecting the vessel becomes mandatory regardless of the date of the last inspection. This 'overriding factor' can only be entered into THETIS by PSC authorities. Entering information into THETIS about a safety or environmental concern will trigger an inspection in the next port of call within the PMoU region. As the system has primarily been designed for administrative processes related to PSC, THETIS is not designed to request or exchange evidence for law enforcement purposes. Nevertheless, through administrative means, it supports more widespread compliance with a wide range of relevant instruments.

THETIS in Operation

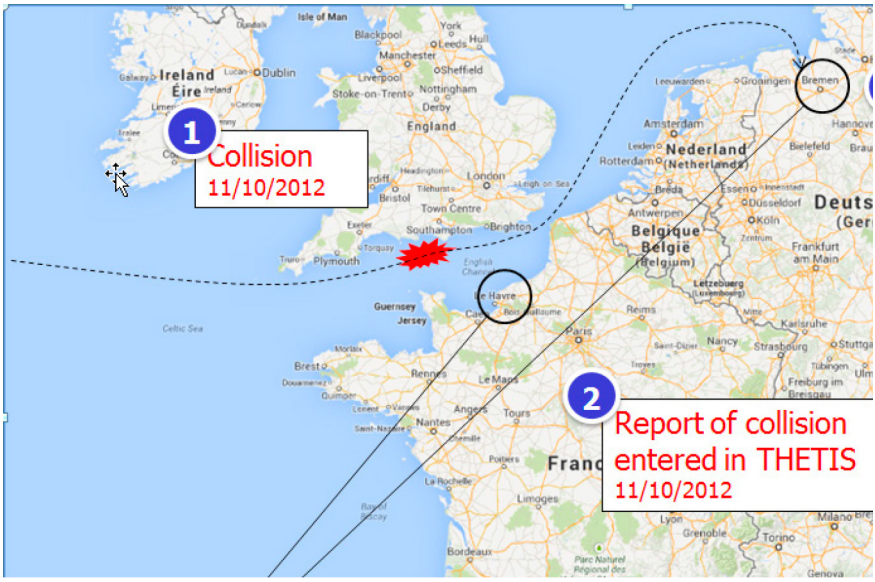
PSC in the EU and the wider area of the PMoU has been supported by a central information system since 2002. On 1 January 2011, THETIS superseded the first system, aiming to further enhance the internal communication between PMoU member states, as well as improve targeting and management of inspections.

Since 2002, notifications by coastal states of observed incidents and accidents involving a ship at sea have been entered in the information system for follow up by the port state. The improvements achieved with THETIS ensure that annually 2,400 messages are exchanged between PMoU member states, and a large number of these messages actually result in an inspection to verify whether the ship was, is and remains in compliance with relevant international conventions. The messages recorded mainly concern groundings, collisions, MARPOL 73/78 violations observed during aerial surveillance and complaints received from crew members regarding working and living con-

ditions. Any violation (in particular of MARPOL 73/78) detected during the ensuing inspection is also shared with the authorities in charge of criminal prosecution, subject to the national legislation of the port state, the coastal state reporting the case and the flag state of the ship.

The following scenario provides a clear example of how THETIS can be pivotal for the successful follow-up of violations.

Figure 7: THETIS in operation



On 11 October 2012, a large containership approaching from the North Atlantic was reported to have collided with a fishing vessel.[25] The containership remained at sea, making inspection on board unlikely. It eventually continued its voyage, by night, to a port which was different from the port that the vessel had previously scheduled as being the intended destination.

[25] As the case is currently under investigation, the exact details are not disclosed.

The port state authorities in the UK were informed of the incident through their Maritime Rescue Coordination Centres (MRCC) operators and on the same day recorded a notification of the incident in the THETIS system as an 'Overriding Priority' message. From that moment onwards, the priority of the ship to be selected for inspection was set to highest priority, a status which applied for any of the associated port states where the ship would eventually call.

On 15 October 2012, the ship entered the port of Bremen where the port state already had staff on standby, using the pre-arrival and arrival details of the ship, which were available through THETIS (based on information contained in SafeSeaNet). During the inspection of the ship, breaches of the applicable regulations were detected and the ship was detained to ensure the rectification of the deficiencies found. The inspection report was entered in the information system, which recalculated the SRP of the ship based on the elements contained in the report. Following the rectification of the deficiencies found, the ship was re-inspected and subsequently released from detention. Having its SRP adjusted, the ship was marked for a next inspection in the PMoU area at a shorter interval than it had been before the incident.

The port state made its findings available to the flag state, the coastal state and the local authorities in charge of criminal prosecution in the form of a technical report, in accordance with the applicable regulations governing such cases. Associated comments were recorded in THETIS to retain evidence of the relevant actions taken, and eventually to make these available for consultation by subsequent port states as well as for the creation of statistics of the PMoU as a whole.

Related EMSA Activities

It should be noted that EMSA has a much more extensive role than has been described in this paper in supporting compliance with maritime safety and environmental protection regulations. In addition to the operational systems managed by the Agency, EMSA undertakes numerous visits and inspections to verify the implementation of the EU's maritime safety, environmental protection, and security legislation. These cover a wide range of activities, from inspections on behalf of the Commission for tasks deriving from legislation (e.g. inspection of the work of classification societies) to inspecting EU Member States to ensure proper implementation of EU legislation (e.g. on accident investigation, port reception facilities, etc.). The visits serve to detect gaps in the overall safety system, promote a harmonized approach across the EU, and improve the efficiency and effectiveness of the measures in place.

EMSA also provides support in terms of training on a wide range of issues to representatives of the Member State authorities, as well as to European Neighbourhood Policy countries. Training is given on maritime legislation, including MARPOL 73/78, SOLAS, etc., and regular training sessions are organized specifically for PSC Officers. Occasional ad-hoc training is also given in relevant areas, such as aerial surveillance.

Moreover, EMSA provides logistical support to a number of forums, for example, to foster cooperation in the areas of pollution prevention and response. One of these forums is the Consultative Technical Group for Marine Pollution Preparedness and Response (CTG MPPR) whose main objective is to provide a platform for EU Member States to improve preparedness for and response to accidental and deliberate pollution from ships. The forum enables participants to exchange information, views and opinions, share best practices, and define current and future

priority actions. The representatives also form working groups which are active throughout the year to address areas of common concern, such as dispersant testing across Europe or lessons learnt from incident response.

EMSA also regularly participates in and contributes to meetings of the IMO as part of the European Commission delegation. With respect to Regional Agreements,[26] EMSA provides technical support to the European Commission during relevant meetings by submitting papers and participating in discussions.

Conclusions

The paper focuses in particular on two of the information systems operated at EMSA: CleanSeaNet and THETIS. These provide two clear examples of how improved monitoring and surveillance, and a regular system of inspections, can make a difference in the day-to-day implementation of the law. First, authorities can obtain the information they need to plan regulatory activities. Second, the likelihood that violations will be detected is substantially increased. Third, the rapid exchange of information through the systems supports a tighter link between detections and follow-up, promoting more efficient use of limited resources. Finally, the standardized exchange of information between different states (along with related activities such as user group trainings) enhances the harmonization of practices across Europe, thereby addressing to some extent the difficulties encountered in law enforcement in an international context such as the maritime sector.

[26] 'Regional Agreements' refer to the agreements signed by countries around a particular sea area to plan for pollution preparedness and to coordinate response in case of a large-scale marine pollution incident. The EU has an official role in some, but not all, of these.

While this paper has focused on presenting these two information systems, it should be emphasized that ensuring compliance with maritime regulations requires more than monitoring and enforcement. Equally important is changing norms and expectations in the sector, and encouraging cooperation between ship owners and operators and maritime authorities. Building communities of knowledge, promoting learning, and exchanging best practices has an important role to play. Compliance in Europe is improving, and this is due to concerted efforts on the part of all actors involved, public and private, and to the range of different measures being taken, not only through legislation and implementation, but also on a voluntary basis. The role of EMSA in supporting these measures is diverse; the Agency has adapted its areas of activity along with the changing needs of the Commission and EU Member States, and no doubt will continue to do so in future. EMSA is at the heart of EU efforts to "promote a safe, clean and economically viable maritime sector".[27]

[27] This is the Agency's vision statement. For more on EMSA and activities undertaken, please visit <www.emsa.europa.eu>.

ANTI-PIRACY AND THE USE OF FORCE: THE COHABITATION OF THE UNITED NATIONS CONVENTION ON THE LAW OF THE SEA AND THE EUROPEAN CONVENTION ON HUMAN RIGHTS

Magne Frostad*

Introduction

Representatives of coastal states use force in many different settings; from breaking up a fight on board a foreign registered vessel in one of its harbors, via enforcing its law on fishery management in its exclusive economic zone, to dislodging environmental campaigners having hung banners on an oil platform situated on its continental shelf. Beyond a myriad of other settings, we also have piracy; still a threat off the coast of Somalia, but currently more successful elsewhere, e.g. off West Africa.

On the high seas, enforcement jurisdiction rests in principle with the flag state under article 92 of the LOS Convention,[1] whereas article 94 enumerates the duties of the flag state. However, exceptions exist to the primacy of flag state jurisdiction on the high seas, e.g. piracy, where enforcement jurisdiction is granted to any state as long as it acts beyond the territorial sea of other states.[2]

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[1] United Nations Convention on the Law of the Sea of 10 December 1982 (1833 UNTS 3).

[2] See LOS Convention arts. 105 and 110.

This paper will address the limitations on the right to use armed force in peacetime operations. The relevant legal sources are typically found within the law of the sea itself; the LOS Convention and customary international law elaborating on the LOS Convention, both identified and interpreted in arbitration awards, soft law instruments, etc. But it is hardly controversial to argue that other fields of law apply, too. Correspondingly, this paper will look at the limitations on the use of potentially lethal force found in the law of the sea and the 1950 European Convention on Human Rights[3] (ECHR) – especially as regards case law of relevance to the right to life in article 2 of the ECHR.

The Regulation of the LOS Convention, Its Predecessors and Derivers

The aim of this chapter is to assess the authorization in the law of the sea to use force and especially consider how much force a naval vessel may apply during a visitation or seizure of a pirate vessel.

In the pre-LOS Convention judgments of the *S.S. I'm alone* case from 1935, and the *Red Crusader* case from 1962, only a vague sketch was given of the legal use of force. In the first case, the arbitrators approved of the:

> use [of] necessary and reasonable force for the purpose of effecting the objects of boarding, searching, seizing and bringing into port the suspected vessel; and if sinking should occur incidentally, as a result of the exercise of necessary and reasonable force for such purpose, the pursuing vessel might be entirely blameless. But the Commissioners think that, in the circumstances stated in paragraph eight of the Answer, the admittedly

[3] Convention for the Protection of Human Rights and Fundamental Freedoms of 4 November 1950 (ETS 5, as amended; consolidated version available at < http://conventions.coe.int>).

> intentional sinking of the suspected vessel was not justified by anything in the Convention.[4]

The use of force must therefore be "necessary and reasonable" for the purpose of ensuring the relevant acts which the entity is authorized under customary international law or treaty law to carry out. In the *Red Crusader* case, decided almost 30 years later, a Danish fisheries inspection vessel was found to have "exceeded legitimate use of armed force" when it fired a round of solid gun shot as a warning without first having cautioned that this would take place unless the relevant trawler stopped.[5] Moreover, the Commission of Enquiry held that the later firing of aimed solid gun shots (not explosive shells) also left much to be desired, as "other means should have been attempted" to persuade the trawler to stop than the very use of aimed shots, which "creat[ed] danger to human life on board the "Red Crusader" without proved necessity".[6]

Nothing explicit on this issue is nevertheless found in the LOS Convention, but as use of force is necessary in order to carry out visitation under article 110 and seizure under article 105, it is considered to follow implicitly from these provisions.[7] The International Tribunal for the Law of the Sea (ITLOS) thus held in the *Saiga No. 2* case that:

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[4] *S.S. "I'm Alone" (Canada, United States)*, in United Nations, Reports of International Arbitral Awards, Vol. III (New York: 2006) 1609–1618 at 1615.

[5] *Investigation of certain incidents affecting the British trawler Red Crusader*, in United Nations, Reports of International Arbitral Awards, Vol. XXIX (New York: 2012) 521–539 at 536–538.

[6] Ibid., 536–538.

[7] T. Treves "Piracy, law of the sea, and use of force: Developments off the coast of Somalia" (2009) 20 *European Journal of International Law* 399–414 at 413; and K. Manusama "Prosecuting Pirates in the Netherlands: the Case of the MS Samanyolu" (2010) 49 *Military Law and the Law of War Review* 141–163 at 145.

> [a]lthough the Convention does not contain express provisions on the use of force in the arrest of ships, international law, which is applicable by virtue of article 293 of the Convention, requires that the use of force must be avoided as far as possible and, where force is unavoidable, it must not go beyond what is reasonable and necessary in the circumstances. Considerations of humanity must apply in the law of the sea, as they do in other areas of international law.[8]

Admittedly, the reference to "unavoidable" should be seen as highlighting an aspect of the necessity principle.

The tribunal also approved the normal use of gradually escalating measures; from auditory or visual signals to stop, via actions intended to motivate a ship to stop like shots across the bow, to – as a last resort and after appropriate warnings – the use of force, i.e. armed force directed against the vessel.[9] Here, the ITLOS also found that the "basic principle" concerning the use of force for the purpose of effecting an arrest had been "reaffirmed" in article 22(1)(f) of the 1995 Fish Stocks Agreement,[10] under which:

> [t]he inspecting State shall ensure that its duly authorized inspectors [...] avoid the use of force except when and to the degree necessary to ensure the safety of the inspectors and where the inspectors are obstructed in the execution of their duties. The degree of force used shall not exceed that reasonably required in the circumstances.

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8 *The M/V Saiga (No. 2)* Case (Saint Vincent and the Grenadines v. Guinea), ITLOS, Judgment, 1 July 1999, para. 155 (available at <www.itlos.org>).

9 Ibid., para. 156.

10 Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 Relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks of 4 August 1995 (2167 UNTS 3).

Applying this to the case at hand, the ITLOS held that "there is no excuse for the fact that the officers fired at the ship itself with live ammunition from a fast-moving patrol boat without issuing any of the signals and warnings required by international law and practice."[11] Moreover, "[t]he Guinean officers also used excessive force on board the *Saiga*. Having boarded the ship without resistance, and although there is no evidence of the use or threat of force from the crew, they fired indiscriminately while on the deck and used gunfire to stop the engine of the ship".[12]

This understanding of the use of force was repeated by the Arbitral Award from 2007 which decided the maritime border dispute between Guyana and Suriname. Here, the tribunal "accept[ed] the argument that in international law force may be used in law enforcement activities provided that such force is unavoidable, reasonable and necessary".[13]

Reference should also be made to the ITLOS's *Arctic Sunrise* case, which admittedly did not rule on the use of force.[14] According to a description of what took place provided by Greenpeace International,[15] a number of relevant activities can nevertheless be

[11] *Saiga No. 2* case, note 8 para. 157.

[12] Ibid., para. 158.

[13] Award of the Arbitral Tribunal constituted pursuant to Article 287, and in accordance with Annex VII, of the United Nations Convention on the Law of the Sea in the matter of the arbitration between Guyana and Suriname of 17 September 2007, para. 445 (available at <www.pca-cpa.org>).

[14] *The Arctic Sunrise* (the Kingdom of the Netherlands v. the Russian Federation), ITLOS, Order for the prescription of provisional measures, 22 November 2013 (available at <www.itlos.org>). The merits of the case are currently before an arbitration tribunal established under Annex VII of the LOS Convention.

[15] Greenpeace International, Statement of facts concerning the boarding and detention of the MY Arctic Sunrise and the judicial proceedings against all 30 persons onboard, 19 June 2013, Annex 2 to The Arctic Sunrise (the Kingdom of the Netherlands v. the Russian Federation) Request for the prescription of provisional measures under Article 290, paragraph 5, of the Unit-

identified. Shots were allegedly fired by AK47 assault rifles with bullet impacts close to inflatable ribs, artillery cannons allegedly fired warnings shots, a threat to fire at the ship was allegedly issued unless it allowed a boarding, and during the helicopter boarding the crew of the vessel were allegedly held at gunpoint.[16] It might be useful to compare this with the rather low-keyed Norwegian reaction to illegal demonstrations by Greenpeace in May 2014,[17] but that will have to be left for another occasion.

The ITLOS revisited the regulation on the use of force in the *M/V Virginia G* case, where it held that "[d]uring boarding, the use of force did not go beyond what was reasonable and necessary in the circumstances".[18] The necessity and reasonableness test thus constitutes the test applied by the ITLOS.

Of relevance is also the 1988 Convention on the Suppression of Unlawful Acts of Violence against the Safety of Maritime Navigation, as revised by a protocol from 2005,[19] whose article 8bis(9) states that:

> [w]hen carrying out the authorized actions under this article, the use of force shall be avoided except when necessary to ensure the safety of its officials and persons on board, or where the officials are obstructed in the execution of the authorized actions. Any

ed Nations Convention on the Law of the Sea of 21 October 2013 (available at <www.itlos.org>).

16 Ibid., paras. 17, 22, 25 and 33.

17 "Norsk politi avsluttet Greenpeace-aksjon" *Aftenposten*, 29 May 2014 (available at <www.aftenposten.no/nyheter/iriks/Norsk-politi-avsluttet-Greenpeace-aksjon-7585161.html#.U8zlL02KBaS>).

18 *The M/V "Virginia G"* Case (Panama/Guinea-Bissau), ITLOS, Judgment of 14 April 2014, para. 361 (available at <www.itlos.org>).

19 Convention for the Suppression of Unlawful Acts Against the Safety of Maritime Navigation of 10 March 1988 (1678 UNTS 221), and the 2005 Protocol to the 1988 Convention for the Suppression of Unlawful Acts Against the Safety of Maritime Navigation of 14 October 2005 (IMO Doc. LEG/CONF.15/21).

> use of force pursuant to this article shall not exceed the minimum degree of force which is necessary and reasonable in the circumstances.

As this provision is considered to reflect the current regulation on the use of force,[20] it will have relevance also for the LOS Convention.[21]

By way of comparison, one could also mention the reference to the use of force in the 2012 soft law document of the International Maritime Organization (IMO) titled "Revised interim guidance to ship owners, ship operators and shipmasters on the use of privately contracted armed security personnel on board ships in the high risk area":

> PMSC [private maritime security companies] should require their personnel to take all reasonable steps to avoid the use of force. If force is used, it should be in a manner consistent with applicable law. In no case should the use of force exceed what is strictly necessary and reasonable in the circumstances. Care

[20] Consideration of: A draft protocol to the Convention for the suppression of unlawful acts against the safety of maritime navigation, 1988 and a draft protocol to the protocol for the suppression of unlawful acts against the safety of fixed Platforms located on the continental shelf, 1988: Comments on counter-terrorism, non-proliferation and boarding provisions Submitted by the United States IMO Doc. LEG/CONF.15/15 of 22 September 2005. The document is mentioned in H. Tuerk "Combating terrorism at sea – the suppression of unlawful acts against the safety of maritime navigation" (2007-2008) 15 *University of Miami International Law and Comparative Law Review* 337-367 at 362. Guilfoyle gives a similar interpretation of customary international law, see D. Guilfoyle *Shipping Interdiction and the Law of the Sea* (Cambridge University Press, Cambridge: 2009) 271.

[21] A good example of the gradually escalating use of force is found in the "Guidance on the Selection of Private Security Companies (PSC)" of 29 March 2011 of the Norwegian Shipowners' Mutual War Risk Insurance Association 10-12 (Example of pro forma rules for the use of force), paras. 3 and 4 (available at <lignesdedefense.blogs.ouest-france.fr/files/Norweigian-PSCGuidanceApril11.pdf>).

> should be taken to minimize damage and injury and preserve human life.
>
> PMSC should require that their personnel not use firearms against persons except in self-defence or defence of others.[22]

In the words of the UN Secretary-General, this IMO guidance:

> provided a basis for the development, by the International Organization for Standardization (ISO), of the ISO/Publicly Avail-

[22] *Revised interim guidance to shipowners, ship operators and shipmasters on the use of privately contracted armed security personnel on board ships in the High Risk Area*, IMO Doc. MSC.1/Circ.1405/Rev.2 of 25 May 2012, Annex, 7, paras. 5.14 and 5.15. In a somewhat modified wording, the essence of this guidance is continued in *the Interim guidance to private maritime security companies providing privately contracted armed security personnel on board ships in the High Risk Area*, IMO Doc. MSC.1/Circ.1443 of 25 May 2012, Annex, 9, para. 5.15. This has been address by the *Indian Guidelines on Deployment of Armed Security Guards on Merchant Ships* from 2011 in para. 6.9: "PMSC should require their personnel to take all responsible steps to avoid the use of force. If force is used, it should be in a manner consistent with applicable law. In no case should the use of force exceed what is strictly necessary, and in all cases should be proportionate to the severity of threat and actual situation at hand at the material point of time. PMSC should require that their personnel not use firearms against persons except in self defence or defence of others against the imminent threat of death or serious injury, or to prevent the preparation of a particularly serious crime involving grave threat to life." (available at <psm.du.edu/media/documents/national_regulations/countries/asia_pacific/india/india_guidelines_on_security_shipping.pdf>). The issue has also been addressed by the United Kingdom, Department for Transport, *Interim Guidance to UK Flagged Shipping on the Use of Armed Guards to Defend Against the Threat of Piracy in Exceptional Circumstances*, version 1.2, May 2013, 35, paras. 8.3 and 8.5: "The security team's function is to prevent illegal boarding of the vessel in order to protect the lives of those onboard, using the minimum force necessary to do so. These rules should provide for a graduated response, each stage of which is considered to be a reasonable, proportionate and necessary response to the threat; and which at no point will needlessly escalate a situation. Any measures to display capability to use force (e.g. making firearms visible, verbal warnings, warning shots etc) should be implemented in such a way so as not to be taken as acts of aggression".

> able Specification (PAS) 28007 on guidelines for private maritime security companies providing privately contracted armed security personnel on board ships, published in December 2012. A crucial component of ISO/PAS 28007 is the guidance on rules for the use of force.[23]

These are referred to by Kraska in the following way:

> Generally, private security on board ships should take "reasonable steps to avoid and deter the use of lethal force". PCASP [private contracted armed security personnel] should implement a "graduated approach," taking steps that are reasonable and proportionate, and that include non-lethal options, such as warning shots. Lethal forces [sic] should be used only in self-defense and be necessary and proportionate to the perceived threat. In particular, the "decisions [made by the Master concerning the use of force] will be binding, without derogating from the inherent right of self-defense". Furthermore, if the Master "judges that there is a risk to the safety of the ship, crew and or environment, he has the authority to order the security personnel to cease firing". If the Master is not available, the senior officer in command on the ship assumes the Master's authority.[24]

Also from the private sector, reference should be made of the Baltic and International Maritime Council (BIMCO), which issued its Guardcon (contract for the employment of security

[23] UNSG, *Report of the Secretary-General on the situation with respect to piracy and armed robbery at sea off the coast of Somalia*, UN Doc. No. S/2013/623 of 21 October 2013, para. 42.

[24] J. Kraska "International Regulation of Private Maritime Security Companies" (2013) *U.S. Naval War College Information Paper Series* No. 13-4 at 5 (brackets by Kraska and the original footnotes have been omitted).

guards on vessel) in 2012. Here, the fundamental understanding on the use of force reflects the 'graduated and proportionate force' principle; that non-violent means should be applied first, respect for human dignity and human rights should prevail, and that any use of force must be limited to what it necessary and proportionate.[25] Examples of non-violent measures are making the armed guards visible to the pirates, and the use of flares, lasers or long range acoustic signaling devices.[26]

Lastly, the UN Security Council (UNSC) resolutions on the issue of piracy off the coast of Somalia routinely refer to "all necessary means"[27] and "all necessary measures",[28] but now in a more indirect manner through a reference in the relevant resolutions to resolutions 1846 and 1851 from 2008.[29] However, as these references to all necessary means/measures are linked to references to, respectively, "in a manner consistent with action permitted on the high seas with respect to piracy under relevant international law" and "applicable international humanitarian and human rights law" (and the pirates are currently not a party to any armed conflict), these resolutions do not authorize the use of force beyond that which was already legal.

According to Guilfoyle, there hardly exists in international law generally agreed upon rules for the use of weapons during visitation, and he therefore instead refers to the national law of the state undertaking a boarding.[30] In a later publication, he and Murdoch refer to most of the former mentioned international

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25 *Piracy and armed robbery against ships – "Guardcon": A standard contract for the employment of security guards on ships*, IMO Doc. MSC/90/INF.5 of 13 March 2012, Annex II, para. 7.

26 Ibid.

27 UNSC res. 1816 (2008) para. 7 (b).

28 UNSC res. 1851 (2008) para. 6.

29 See e.g. UNSC res. 2125 (2013) para. 12.

30 Guilfoyle, note 20 at 291.

sources as "[...] standards [that] are far from a detailed code and might be thought to have more to say about the outer limits at which the use of force becomes impermissible, rather than providing clear guidance as to when force is permitted".[31]

It is nevertheless submitted that legal use of armed force covers the following: first, that it is limited to situations where the vessel against which force is used seeks to avoid visitation or seizure which the relevant state is entitled to carry out under international law. Second, that those who use force do not apply more force than (strictly) necessary. This would include an obligation to avoid the use of force as far as possible. A more uncertain issue is whether there is also a third aspect, i.e. that even where force may be necessary, it might nevertheless fail to be reasonable. The use of variations of the words "necessary" and "reasonable" might give such an impression, perhaps also the occasional reference to considerations of humanity, but it would rather seem as if the terms have been used as loose synonyms. In fact, it is hard to find cases where necessary acts have been censured.

Now, this would not be unique to the law of the sea; the conditions of proportionality under self-defense following article 51 of the UN Charter[32] seem in practice to have largely been absorbed by the necessity principle,[33] and a similar issue arises with limitations on human rights under the ECHR – e.g. article 8 – where it is difficult to identify a clear limit between the necessity

[31] A. Murdoch and D. Guilfoyle "Capture and disruption operations: the use of force in counter-piracy off Somalia" in D. Guilfoyle (ed) *Modern Piracy: Legal Challenges and Responses* (Edward Elgar Publishing, Cheltenham: 2013) 147–171 at 152.

[32] Charter of the United Nations and Statute of the International Court of Justice of 26 June 1945 (1 UNTS XVI).

[33] C. Gray *International Law and the Use of Force* 3rd (Oxford University Press, Oxford: 2008) 150.

and proportionality considerations in relation to "necessary in a democratic society".[34]

Here, it will be natural to glide upwards on the 'escalation ladder' in parallel to an intensification of the situation. To the extent possible, non-lethal measures and warning shots should thus be used before aimed shots are applied.[35] Moreover – time allowing – it is natural to start with aimed shots at non-vital parts of the vessel in which the pirates are found, before more vital parts of the vessels are aimed at.[36] This will seldom allow for more than making the pirate vessel unseaworthy.[37] Lastly, when aiming at individuals, the shots should – if possible – seek to injure rather than kill.

In order to avoid an attack on a merchant vessel, it might therefore be necessary to use lethal force when the vessel comes within the range of the pirates' weapons, provided the pirates show a will to use them, and no alternative to the use of weapons are at hand. The important issue is not whether the vessel may be injured by the pirates' use of force, but rather which threat to life and health of the crew and passengers on board exists as a consequence of the pirates' use of weapons.[38]

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34 Y. Arai "Chapter 5. The System of Restriction" in P. van Dijk et al (eds) *Theory and Practice of the European Convention on Human Rights* 4th (Intersentia, Antwerpen: 2006) 333–350 at 341.

35 For a similar view, see H. Tuerk "The resurgence of piracy: A phenomenon of modern times" (2009) 17 *University of Miami International Law and Comparative Law Review* 1–41 at 35, and C.R. Symmons "Embarking Vessel Protection Detachments and Private Armed Guards on Board Commercial Vessels: International Legal Consequences and Problems under the Law of the Sea" (2012) 51/1 *Military Law and the Law of War Review* 21–37 at 44–49 with further references.

36 Murdock and Guilfoyle, note 31 at 166.

37 R. Geiß and A. Petrig *Piracy and Armed Robbery at Sea: The Legal Framework for Counter-Piracy Operations in Somalia and the Gulf of Aden* (Oxford University Press, Oxford: 2011) 69. For a similar view, see Guilfoyle, note 20 at 293.

38 For the view that the use of sniper weapons at targets located far away from the operator would not constitute self-defense, see K. Neri "The Use of Force

The Right to Life Under the European Convention on Human Rights

General Aspects

International human rights law allows for a rather narrow use of potentially lethal force, and to a large extent these limitations have been factored into the instruments mentioned above. Illustrative are various non-legally binding instruments from the UN, which would seem to limit law enforcers' use of fire arms to situations where this is required in order to avoid that the perpetrator constitutes a lethal threat.[39]

One preliminary issue is whether acts undertaken abroad generate responsibility for a state under the relevant instrument. As is well known, for the purpose of the ECHR this issue is regulated by article 1, which states that "[t]he High Contracting Parties shall secure to everyone within their jurisdiction the rights and

by Military Vessel Protection Detachments" (2012) 51/1 *Military Law and Law of War Review* 74–92 at 86. Compare here with the scenarios indicated by Guardcon: (1) Firing directly at the MV or persons on board in circumstances where the attackers have failed to heed warning shots or other deterrent measures (assuming there was sufficient time for such measures). (2) Preparing to fire or firing at the vessel whilst clearly demonstrating an intention to close with vessel in an attempt to board, by positioning very close or alongside and preparing climbing ladders for that purpose. (3) Aiming, launching, rocket propelled grenade or equivalent: IMO, note 25 para. 7 (i).

39 Code of Conduct for Law Enforcement Officials, UN General Assembly Resolution No. 34/169 of 17 December 1979, Art. 3, commentary text para. (c), where admittedly the text is made somewhat vague through the use of the phrase "[i]n general". See also Basic Principles on the Use of Force and Firearms by Law Enforcement Officials, adopted by the 8th United Nations Congress on the Prevention of Crime and the Treatment of Offenders held on Cuba from 27 August 1990 to 7 September 1990, paras. 9 and 16. Of less help is on the other hand the presumably nevertheless most relevant soft law instrument from the Council of Europe; Council of Europe – Committee of Ministers, The European Code of Police Ethics, Recommendation Rec(2001)10, paras. 29 and 37 with corresponding commentaries.

freedoms defined in Section I of this Convention".[40] To make a long story short, a state is found to hold jurisdiction abroad when it holds authority and control over an individual, or effective (overall) control over a territory.[41]

Admittedly, some read parts of the *Al-Skeini* judgment to require more than mere authority and control over an individual before jurisdiction arises.[42] However, it is submitted that the reference to the "exercise of some of the public powers normally to be exercised by a sovereign government", i.e. in particular "authority and responsibility for the maintenance of security in South East Iraq",[43] should rather be seen as context specific reasoning required to establish jurisdiction. Such would be required since the facts of the case did not fit easily within the two exceptions to the non-application of the ECHR abroad, as these had been previously elaborated. This would especially seem to be the case as there is little indication of any change in this direction in the reasoning of the European Court of Human Rights (the Court) on the authority and control concept in paragraphs 133-137 of the judgment.

The case law regarding vessels may here be illustrative. Jurisdiction is thus found to exist where a naval vessel takes control over another vessel on the high seas, and obligates this foreign ship to

40 Provisions are found in the protocols to the ECHR which extend the reach of Article 1 to the provisions of those protocols, *e.g.* Protocol 1, art. 5.

41 *Al-Skeini and Others v. the United Kingdom*, Application No. 55721/07, Grand Chamber Judgment of 7 July 2011, paras. 133-140. The newest case from the Court on this issue is *Hassan v. the United Kingdom*, Application No. 29750/09, Grand Chamber Judgment of 16 September 2014, paras. 74-80. For more on this, see e.g. Directorate-General for External Policies (Policy Department) *Human rights implications of the usage of drones and unmanned robots in warfare* (European Union, Brussels: 2013) 16-18.

42 Neri, note 38 at 88-89.

43 *Al-Skeini and Others*, note 41 para. 149.

dock at a port belonging to that state party.[44] Likewise, when persons are taken on board a naval vessel belonging to a state party during a rescue operation on the high seas,[45] and when a vessel is hindered from entering the territorial sea of a state party by the naval vessels of that state.[46] Similarly, there will be jurisdiction where a state party consents to the control of its flagged vessels by another state party, and a vessel from this other state party navigates in the territorial sea of the first state in such a way that damage is inflicted on a vessel with resulting loss of life.[47]

As regards privately owned vessels, these will not lead to the establishment of jurisdiction under the ECHR for acts committed abroad as easily as do public vessels. This is due to them not fitting easily within the two exceptions from the non-extraterritorial application of the ECHR, as construed by the Court in the *Al-Skeini* case. However, flag state jurisdiction is one of the well-recognized bases for a state's exercise of jurisdiction abroad, although naturally "defined and limited by the sovereign territorial rights of the other relevant states".[48] To the extent that the relevant vessel is on the high seas, other states would only exceptionally be entitled to exercise enforcement jurisdiction with respect to that vessel. Moreover, as the flag state holds jurisdic-

44 *Rigopoulos v. Spain*, Application No. 37388/97, Chamber Decision of 12 January 1999, and *Medvedyev and Others v.* France, Application No. 3394/03, Grand Chamber Judgment of 29 March 2010.

45 *Hirsi Jamaa and Others v. Italy*, Application No. 27765/09, Grand Chamber Judgment of 23 February 2012.

46 *Women on Waves and Others v. Portugal*, Application No. 31276/05, Judgment of 3 February 2009 (only available in French). See in relation to this Geiß and Petrig, note 37 at 110-111.

47 *Xhavare and Others v. Italy and Albania*, Application No. 39473/98, Chamber Decision of 11 January 2001 (only available in French). See in relation to this Geiß and Petrig, note 37 at 114.

48 See e.g. *Banković with Others v. Belgium with Others*, Application No. 52207/99, Grand Chamber Decision of 12 December 2001, para. 59.

tion under general international law over such vessels, it would also be entitled – and even obliged under, *inter alia*, Article 94 of the LOS Convention – to pass necessary legislation to direct the activities of its vessels. With such legislative jurisdiction comes also – to the extent that it is not limited by the sovereign territorial rights of the other relevant states – enforcement jurisdiction. The flag state could thus be seen as having acted in a way which produces effects outside its own territory.[49] This is probably the rationale for the reference to extraterritorial jurisdiction in relation to acts "onboard craft and vessels registered in, or flying the flag of, that State" throughout much of the case law of the Court.[50] However, as the relevant crews can only exceptionally be

[49] *Drozd and Janousek v. France and Spain*, Application No. 12747/87, Plenary Court Judgment of 26 June 1992, para. 91. It is submitted that when such effects take place somewhere more closely connected with the state party than foreign territory, the latter typically having been the case in the relevant case law, this argues for the establishment of jurisdiction. Moreover, vessels are not regulated by the special regime under art. 56, which requires a specific notification before jurisdiction is established.

[50] See e.g. *Banković*, note 48 para. 73; *Al-Saadoon and Mufdhi v. the United Kingdom*, Application No. 61498/08, Chamber Decision of 30 June 2009, para.85; *Medvedyev and Others*, note 44 para. 65; and *Hirsi Jamaa and Others*; note 45 para. 75. Admittedly, the quote is often preceded by a reference to "the activities of its diplomatic or consular agents abroad", but as the cases dealing with vessels and aircraft do not seem to have involved direct acts of diplomats or consuls, the reference to crafts and vessels is – it is submitted – not limited to instances were such representatives of states act. It should nevertheless be noted that the Court now categorizes its earlier case law regarding jurisdiction in relation to acts taking place on vessels flagged by a state party as "authority and control"; *Al-Skeini and Others v. the United Kingdom*, Application No. 55721/07, Grand Chamber Judgment of 7 July 2011, para. 136. As a consequence thereof, the state is not obliged to provide the individual with all the rights and freedoms of the ECHR, but rather only those "that are relevant to the situation of that individual" (para. 137). However, the Court here dealt with acts of state officials and that should be differentiated from the setting where the flagged vessel is privately owned and the relevant act is not undertaken directly by a state official. In this case, the application of the ECHR could only indirectly be said

construed as state officials and thereby directly establish jurisdiction under the ECHR ("negative obligations"), any responsibility for the flag state would seem to be limited to positive obligations under the ECHR. To a certain extent, it is thus submitted that such vessels could be seen as either the quasi-territory of the flag state, or through some other legal construction be able to bring about the jurisdiction of the flag state.[51]

To the extent that a naval vessel does no more than approach the foreign vessel and contact it on the radio, this is probably not enough to establish jurisdiction.[52] This is probably also the case where a naval vessel only carries out visitation under article 110 of the LOS Convention.[53] The threshold has nevertheless been crossed if a boarding party apprehends the crew, wholly or par-

to follow from the "authority and control" alternative (this would in fact require the relevant individuals on board the vessel to somehow represent the flag state), and would have to follow from that of "effective control over an area" if jurisdiction is to exist. Due to the jurisdiction of the flag state over its vessels under the law of the sea, and especially its enforcement jurisdiction whenever the vessel is outside of the territorial sea of other states, it would seem proper to consider these privately owned vessels as quasi-territory for the purpose of the second exception to the non-extraterritorial application of the ECHR.

51 For perhaps the same view, see S.P. Bodini "Fighting maritime piracy under the European Convention on Human Rights" (2011) 22 *European Journal of International Law* 829–848 at 846–847, and D. Guilfoyle, "Shooting fishermen mistaken for pirates: jurisdiction, immunity and State responsibility", 2 March 2012 (available at <www.ejil.org>). Their application of the ECHR to the acts of private armed guards on board private vessels would seemingly presuppose that the vessels themselves were within the jurisdiction of the state, or that the guards somehow were seen as representatives of the state.

52 D. Guilfoyle "Human Rights Issues and Non-Flag State Boarding of Suspect Ships in International Waters" in C.R. Symmons (ed) *Selected Contemporary Issues in the Law of the Sea* (Martinus Nijhoff Publishers, Leiden: 2011) 83–104 at 89.

53 Ibid.

tially, even if the crew stays on board their own vessel.[54] Likewise when the vessel is made difficult to navigate on its own.[55]

On land, the Court has found that jurisdiction is established where officials fire across the border into another state and kill an individual on the latter's territory.[56] At least, this would seem to be the case where the foreign state is a party to the ECHR, or where a state party holds effective (overall) control over the foreign territory.[57] In the *Bankovic* decision, the Court held that

54 Guilfoyle, note 20 at 271; Manusama, note 7 at 156; and Guilfoyle, note 52 at 89.

55 Guilfoyle, note 52 at 89.

56 *Andreou v. Turkey*, Application No. 45653/99, Chamber Decision of 3 June 2008, 11. This understanding was upheld when the Court decided the substantive issues of the case (see *Andreou v. Turkey*, Application No. 45653/99, Chamber Judgment of 27 October 2009, para. 25). *Pad* resembles this scenario somewhat (*Pad and Others v. Turkey*, Application No. 60167/00, Chamber Decision of 28 June 2007). Here, Turkish helicopters used missiles and/or hand weapons against a group of suspected terrorists. Both parties agreed that the group was within the jurisdiction of Turkey, but they disagreed as to whether the group at that point in time was within Turkish or Iranian territory. Turkey held that its officers had not acted extraterritorially. The Court did not find the need to state its view on this issue, as "the Government had already admitted that the fire discharged from the helicopters had caused the killing of the applicants' relatives, who had been suspected of being terrorists" (see *Pad*, para. 54). Thus, *Pad* is hardly a strong argument for establishing jurisdiction in relation to episodes of shooting across an international border. For a different view, see M. Milanovic "Al-Skeini and Al-Jedda in Strasbourg" (2012) *European Journal of International Law* 121–139, at 124.

57 This since the victims are often beyond the "authority and control" of the relevant state. See M. Frostad "The Responsibility of Sending States for Human Rights Violations during Peace Support Operations and the Issue of Detention" (2011) 50 *Military Law and Law of War Review* 129–88 at 149. For a different view, see C. Droege "The Interplay between International Humanitarian Law and International Human Rights Law in Situations of Armed Conflict" (2007) 40 *Israel Law Review* 310–55 at 334–335. No reference is made to *Pad* in *Al-Skeini* and the only reference to *Andreou* is found in the description of the applicant's argument on p. 54; *Al-Skeini and Others*, note 41.

the mere firing of a missile against a target on the ground in a foreign territory did not bring the target within the jurisdiction of the state party.[58] If we compare the *Banković* and the *Andreou* cases, it would seem that proximity to target, choice of weapon (missile vs. hand weapons), and the target as such (building vs. individual) may be of importance to establishing jurisdiction.[59] Applied to anti-piracy operations, it would seem that the use of fighter jets, helicopters and armed drones do not necessarily bring the target within the jurisdiction of the state party. The same would probably be the case where naval vessels use missiles or cannons, whereas it might be easier to argue for jurisdiction where hand weapons etc. are used against a target in the water or onboard another vessel. On the other hand, in such cross-border shootings, or shootings undertaken beyond the territorial sea of a state party, the Court could decide instead to focus on whether the territory on which the injury/damage occurs belongs to a state party, and a vessel would here possibly constitute the quasi-territory of its flag state.[60]

As regards the question of *ratione personae*,[61] the Court does

[58] *Banković with Others*, note 48 para. 75.

[59] Frostad, note 57 at 149.

[60] As regards the question of whether injury/damage which occurs in this way on board a vessel is legally speaking occurring on the territory of a state party, the Court is likely to focus on the jurisdiction held by the flag state over its vessels and especially its enforcement jurisdiction whenever the vessel is outside of the territorial sea of other states.

[61] See e.g. T. Stein "Kosovo and the International Community. The Attribution of Possible Internationally Wrongful Acts: Responsibility of NATO or of its Member States?" in C. Tomuschat (ed) *Kosovo and the International Community: A Legal Assessment* (Kluwer Law International, The Hague: 2002) 181–192; K.M. Larsen "Attribution of Conduct in Peace Operations: The 'Ultimate Authority and Control' Test" (2008) 19 *European Journal of International Law* 509–531; D. van der Toorn "Attribution of Conduct by State Armed Forces Participating in UN-authorised Operations: The Impact

not seem very inclined to share the responsibility between multiple states or other entities.[62] It is rather a question of one state being held responsible, or none. The degree of control which must be held by the other entity before the sending state is relieved of responsibility, is referred to by the Court as the rather vague "ultimate authority and control",[63] although the Court has recently to a larger extent than before, referred to and applied the effective control test of the International Law Commission.[64]

To the extent that a state wishes to avoid responsibility under the ECHR, it might seek to temporarily transfer its vessels to a UN led force like the maritime part of the peace support operation in Lebanon (UNIFIL). Currently, there is no such force off Somalia, so the question is rather if participation in any of the at least three multinational naval anti-piracy operations will suffice. The answer will probably depend on whether the operation resembles KFOR ("Kosovo Force" as figured in the *Behrami and*

of Behrami and Al-Jedda" (2008) 15 *Australian International Law Journal* 9–27; C.A. Bell "Reassessing Multiple Attribution: The International Law Commission and the Behrami and Saramati Decision" (2009–2010) 42 *New York University Journal of International Law and Politics* 501–548; Guilfoyle, note 52 at 89–92; Geiß and Petrig, note 37 at 116–130; and Frostad, note 57 at 129–188. This is not only a question of who is responsible for a breach of human rights, but may lead to there not having been a violation of the Convention at all if e.g. an intergovernmental organization would have to be considered as responsible. Since the relevant organization is probably not party to the relevant agreements, have few if any human rights obligation in its own constitutive instrument, and there may not be relevant international customary law binding such a subject of international law.

62 *Behrami, Behrami and Saramati v. France, Germany and Norway,* Application Nos. 71412/01 and 78166/01, Grand Chamber Decision of 2 May 2007; and *Al-Jedda v. the United Kingdom*, Application No. 27021/08, Grand Chamber Judgment of 7 July 2011.

63 *Behrami, Behrami and Saramati*, note 62 paras. 133–4.

64 *Al-Jedda*, note 62 para. 84.

Saramati decision)[65] or MNF ("Multinational Force" in Iraq as figured in the *Al-Skeini* judgment). In the first case, the UN was held to be the sole entity holding responsibility, whereas the UK was held responsible in relation to the latter case.[66]

An important question is the degree of control which has been exercised by the sending state in relation to the specific case at hand. Friman and Lindborg argue for the force being seen as a single unit in relation to transfers between the different parts of the force, whereas transfer outside of the force – e.g. to a state close to the area of operations – should be treated by the ordinary rules, e.g. in accordance with the European Arrest Warrant.[67]

The German trial judgment in the *MV Courier* case is illustrative in this regard.[68] The German government argued that the relevant deprivation of freedom and later transfer should be seen as the responsibility of the EU, since they were carried out by German officials participating in the EU operation EUNAVFOR.[69] The court did not establish who actually undertook the apprehension of the suspects, but held that Germany had decisive influence on the question of transferring those apprehended to Kenya.[70] Explicit orders were given to that effect by Germany.[71]

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65 This is also expected to be the outcome of a future case in relation to acts of ISAF soldiers in Afghanistan, see *Serdar Mohammed v. Ministry of Defence,* High Court of Justice Queen's Bench Division Judgment of 2 May 2014, [2014] *EWHC* 1369 (QB), para. 178.

66 For an assessment of this issue for the time predating the establishment of MNF in Iraq, see *Hassan*, note 41 paras. 74–80.

67 H. Friman and J. Lindborg "Initiating criminal proceedings with military forces: Some legal aspects of policing Somali pirates by navies" in D. Guilefoyle (ed) *Modern Piracy: Legal Challenges and Responses* (Edward Elgar, Cheltenham: 2013) 172–201 at 192.

68 *Ali Mohammed Aw-Dahir v. Germany,* Verwaltungsgericht Köln, Case No. 25 K 4280/09 of 11 November 2011.

69 Ibid., paras. 24–25.

70 Ibid., paras. 35, 41 and 54–62

71 Ibid., para. 60.

Thus, Germany incurred responsibility for the risk faced by the transferees of treatment in violation of Article 3 of the ECHR due to substandard Kenyan prisons.[72]

Likewise, the Dutch Supreme Court held in the *Nuhanović* case that the Netherlands had jurisdiction over Dutch troops in the proximity of Srebrenica during the fall of the enclave to Bosnian-Serb troops in July 1995. The court stressed that the UN force was granted permission to operate in Srebrenica by an agreement entered into by the UN and the authorities in Bosnia-Herzegovina, while the Bosnia-Serb forces seemed to respect the control held by the Dutch forces over their own camp area.[73] Since the Netherlands was considered to have effective control over the acts of its troops in relation to the issue covered by that specific case,[74] the court held that the Netherlands exercised sufficient jurisdiction.[75]

Thus, the real question is whether the use of force was authorized by the organization or the home state, or potentially by both.

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[72] Ibid., paras. 74–79. This finding was upheld by the appeal court in its decision of 18. September 2014 (available as a press briefing at <www.ovg.nrw.de/behoerde/presse/pressemitteilungen/27_140918/index.php> (the full text of the decision was not available at the time of finishing this manuscript)).

[73] *The State of the Netherlands v. Hasan Nuhanovic,* Supreme Court of the Netherlands, Application No. 12/03324, Judgment of 1 September 2013, paras. 3.17.3.

[74] Ibid., para. 3.12.2–3. See e.g. the press release of Amnesty International UK regarding this case (available at <www.amnesty.org.uk/news_details.asp?NewsID=20956>).

[75] Ibid., para. 3.17.1–3. See also the corresponding reasoning in *Stichting Mothers of Srebrenica et al v. the State of the Netherlands and the United Nations,* Hague District Court, Case No. /C/09/295247/HA ZA 07-2973, Judgment of 16 July 2014, paras. 4.87, 4.144, 4.158–4.161, 4.322 and 4.338.

When Responding to an Attack by Pirates

To the extent that jurisdiction is found to exist, the central question now is whether article 2 of the EHCR allows for potentially lethal use of force in the fight against pirates, as well as if sufficient measures have been undertaken in order to avoid hostage situations which risk being a violation of the right to life.[76] More specifically, may potentially lethal force be used in order to avoid a piracy attempt from succeeding? As pirates on several occasions have been killed during firefights with naval vessels, this is a question of practical relevance.[77]

De Vidts refers to the right to self-defense as a fundamental human right, but in relation to piracy he stresses that "[t]he right to self-defence is limited to situations where the immediate threat of violence cannot be prevented by those authorized to do so in practice because no law-enforcement officer would be present at that moment".[78] Depending on national law, naval personnel may or may not be authorized to undertake law enforcement. Be that as it may, if force is applied by naval personnel, the question of a potential violation of the so-called negative obligation of the right to life will arise. Any such use of force by the crew of a private vessel or by civilian armed guards on board may on the other hand establish responsibility for the flag state under its positive obligations in relation to the right to life.

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[76] Bodini, note 51 at 837–839.

[77] Guilfoyle, note 20 at 71.

[78] B. De Vidts in C. Altafin (ed), *The threat of contemporary piracy and the role of the international community* (Documenti Istituto Affari Internazionali, No. 2014/01) 11.

In article 2(2) of the ECHR, three exceptions to the right to life are found, beyond the now seemingly defunct reference to capital punishment in paragraph 1. The chapeau of the paragraph states that "[d]eprivation of life shall not be regarded as inflicted in contravention of this Article when it results from the use of force which is no more than absolutely necessary", followed by the exceptions to the right to life.[79] The Court has established that it will suffice if the use of force is potentially lethal. That death was or would have been an unintended outcome is not enough to make the act fall outside of article 2.[80]

Pursuant to article 2(2)(a), life may, where absolutely necessary, be taken "in defence of any person from unlawful violence". The very wording shows that this alternative may not be used to protect anything besides a person, i.e. not in defense of equipment or real estate. But is this exception limited to a threat to life, or will a threat of serious bodily injury suffice? The Court seems to allow for even the latter. Admittedly, the *Giuliani and Gaggio* case concerned a presumed threat to the life of a policeman,[81] but the Court held that the policeman who shot the demonstrator "acted in honest belief that his own life *and physical integrity*, and those of his colleagues, were in danger [...]".[82]

In relation to piracy, the International Tankers Parcel Association pointed out in a document submitted to the IMO that "[p]irates now fire indiscriminately upon vessels, which largely

[79] Melzer refers here to the principles of strict necessity, proportionality and precaution which may be open to restrictive or extensive interpretation; Directorate-General for External Policies, note 41 at 30–34 (N Melzer is the sole author).

[80] See e.g. *Andronicou and Constantinou v. Cyprus*, Application No. 86/1996/705/897, Chamber Judgment of 9 October 1997, para. 171

[81] *Giuliani and Gaggio v. Italy*, Applicaiton No. 23458/02, Grand Chamber Judgment of 24 March 2011, para. 191.

[82] Ibid., para. 189 (italics by author).

negates the argument about avoiding a firefight".[83] Obviously, the use of weapons also constitutes a risk to the health of crew etc., but would the prospect of being held hostage in itself suffice as a valid reason to use potentially lethal force to counter it? The Court does not seem to have dealt with this issue under article 2(2)(a), and to the extent that individuals are merely taken prisoners and not mistreated, no right to use potentially lethal force arguably exists. As the pirates are primarily motivated by profit, they will seek to keep the hostages alive, since the hostages will not generate much revenue if they are dead. And few hostages have so far been killed by pirates.[84]

However, in its 2011 submission, the International Tankers Parcel Association held that "where in the past there was a level of confidence that, providing the vessel owners were prepared to enter into negotiations with the pirates, the crew would not be harmed, we are now hearing more and more reports of torture and even murder of crew members".[85] This fear is echoed by the UN Secretary-General's report of 21 October 2013 on piracy and armed robbery at sea off the coast of Somalia, where he highlights that "[h]ostages held by Somali pirates endure dire conditions in captivity; sometimes, pirates torture and threaten hostages in an effort to extract the maximum ransom" and – referring to a working paper by two NGOs – "all hostages held captive by Somali pirates at the time of writing had been held for over one year and were considered to be at high risk owing to physical abuse

83 *Piracy and armed robbery against ships: Employment of private armed security provider*, IMO Doc. MSC/89/18/11 of 22 March 2011, para 5. Also, U.S. law would seem to limit lethal force to threat of great bodily harm or death: Kraska, note 24 at 5.

84 Somali pirates are nevertheless reported to have killed 35 hostages in 2011, one of them as a negotiating tactic. See A. Taylor, Piracy today: An update, October 2012 at 2-3 (available at <www.comitemaritime.org/Acts-of-Piracy-and-Maritime-Violence/0,2734,13432,00.html>).

85 IMO, note 83 para 5.

and health problems resulting from limited access to food, water and medical support for over a year. Upon release, the vast majority of crew members report having undergone some form of physical violence and psychological abuse, while others have experienced direct threats of execution or other extreme stressors."[86] For its sake, the UNSC referred in Resolution 2125 (2013) to "the inhuman conditions hostages face in captivity".[87]

Acts of torture will typically lead to short- or long-term serious somatic and/or psychological health problems. To the extent that the treatment of hostages *generally* leads to such health damages – and there is nothing in the specific situation which would seem to indicate that the relevant treatment in this case would differ in a significantly positive manner from the general treatment – it is submitted that potentially lethal use of force may be used to avoid capture.

The second alternative under article 2(2) of the ECHR relates to lawful arrests and prevention of escapes of a person lawfully detained (subparagraph (b)). According to the Court, potentially lethal force may only be used under this alternative in order to protect life and health.[88] In other words, a certain degree of threat to health must exist before potentially lethal force may be applied.

The reference to life and health is often followed by the phrase "*and* is not suspected of having committed a violent offence".[89] The connector "and" could seem to require that both the above-

[86] UNSG, note 23 paras. 9–10.

[87] UNSC Res. 2125 (2013) of 18 November 2013, 4, para. 3.

[88] *Nachova and Others v. Bulgaria*, Application Nos. 43577/98 and 43579/98, Grand Chamber Judgment of 6 July 2005, para. 95. The European Commission on Human Rights expressed a similar point of view in *Kelly v. the United Kingdom*, Application No. 17579/90, Commission Decision of 13 January 1993, 8: "The situation facing the soldiers, however, had developed with little or no warning and involved conduct by the driver putting them and others at considerable risk of injury".

[89] *Nachova and Others*, note 88 para. 95 (italics by author).

mentioned risks and a relevant suspicion must exist before such use of force would be legal, but such an understanding would be exceedingly strange. Why should it matter if the perpetrator has undertaken violent acts before, if there is no reason to believe that he or she will repeat them? The real issue would rather be whether there are reasonable grounds for fearing a future threat to life or health.[90] The presumably correct way to interpret subparagraph (b) is thus that it requires a threat to life or at the very least a threat of serious health-injuries, and that earlier undertaken acts of violence provide the background for the consideration of likely future acts.

As regards subparagraph (c), rebellion does not seem to have generated much case law of relevance to the issue of threat to health.

How will this play out in practice? If pirates fire their weapons against a vessel, there will typically be a threat to life and health on board that vessel, and thus it will often be in accordance with the right to life to return fire – even *in extremis* with aimed shoots. But what if the pirates manage to get on board the vessel, perhaps sneaking on board during nighttime, without them seemingly being inclined to use their weapons unless the crew/guards resist? Obviously, one may seek to disarm the pirates, but may one shoot them? Besides the 'easy' situation where the standoff escalates into imminent actual use of weapons, and where a threat to life may thus be considered to exist, the answer

90 See in this regard L. Zwaak "Chapter 6: Right to life (Article 2)" in P. van Dijk et al (eds) *Theory and Practice of the European Convention on Human Rights* 4th (Intersentia, Antwerpen: 2006) 351–403 at 395; and E. Wicks *The Right to Life and Conflicting Interests* (Oxford University Press, Oxford: 2010) 64. Such an understanding of the rule may lead some to read "and" as if it rather said "or". If that was the case, one would presumably be authorized to use the said force where the individual had at an earlier point in time carried out a violent act, but where he no longer constitutes a threat to anyone's life or health. This would however violate the requirement that use of force must be absolutely necessary.

will routinely depend on which threat to health is likely to follow from being taken hostage and perhaps held for a prolonged time. Currently, it would seem as if the threat is sufficient to allow for the use of potentially lethal force to avoid such capture.

An example of how authorities have sought to regulate the use of potentially lethal force by private armed guards through soft law instruments is the interim guidance to UK flagged ships on the use of armed guards to defend against the threat of piracy in exceptional circumstances, as revised in 2013.[91] Here, it follows from Section 8.9 that reasonable force may be used under English and Welsh law to protect property and prevent criminal acts, but footnote 17 provides that "[u]nder Scots law, defence of property will not justify assault by firearms. It may justify infliction of minor violence". Moreover, Section 8.10 holds that:

> The law does not preclude the use of lethal force – including through the use of legally held firearms - when acting in self defence or protecting the lives of other people, but a person can only use force that is proportionate and reasonable in the circumstances as they genuinely believed them to be. Care should be taken to minimise injury and to respect and preserve human life.

In relation to the term "self defence" a reference is made to a footnote where it states that "[u]nder Scots law, use of lethal force will only be justified in defence of life (one's own or that of another) or by a victim resisting rape". This might be understood as a contradistinction to English and Welsh law, which seem to allow for the use of lethal force also in other situations.[92] Thus, Scots law *might* seem to better reflect the obligations of the ECHR. Another example of presumably ECHR-conform rules is the "Guidance

91 United Kingdom, note 22 para. 8.10.

92 Ibid., paras. 8.9–8.10, and at 37, footnotes 17–20.

on the Selection of Private Security Companies (PSC)" issued by the Norwegian Shipowners' Mutual War Risks Insurance Association (Den Norske Krigsforsikring for Skib) in 2011.[93]

When Going on the Offensive

A relevant question would be whether air strikes against pirates are in conformity with article 2 of the ECHR. One such attack was undertaken by two fighter jets in 2012 against a presumed pirate base in northern Somalia,[94] where allegedly at least two persons were injured.[95] It is a bit unclear where these fighter jets came from, but on 23 March 2012 the Council of the European Union authorized the naval vessels and air assets contributed by member states to the EU Naval Force ATALANTA to attack fuel depots, boats, trucks and other equipment on land which is used in support of piracy.[96] As a consequence of this authorization, helicopters of EU member states attacked five fast-going pirate vessels in May 2012.[97]

As already mentioned, the ECHR might not apply to such situations, since the use of air weapons – at least when ammuni-

93 The Norwegian Shipowners' Mutual War Risks Insurance Association, note 21 paras. 3 and 4.

94 "Luftangrep mot piratbase" *Aftenposten* 18 April 2012, 18.

95 "Puntland blames anti-piracy task forces on airstrike in Bari region", AMISOM daily media monitoring, 19 April 2012 (available at <somaliamediamonitoring.org/april-19-2012-morning-headlines>).

96 *Council extends EU counter-piracy operation Atalanta,* Council of the European Union Doc. 7216/12 of 23 March 2012 (available at <www.consilium.europa.eu/uedocs/cms_data/docs/pressdata/EN/foraff/129216.pdf>); "Somalia pirates: EU approves attacks on land bases" *BBC News* 23 March 2012 (available at <www.bbc.co.uk/news/world-africa-17487767>); and "Luftangrep mot piratbase" *Aftenposten* 18 April 2012, 18. It might seem as if Operation Atalanta will be prolonged to 2016: "Kapringer" *Aftenposten* 20 January 2014, 14-15 at 14.

97 "EU-styrke har angrepet piratmål" *Aftenposten* 16 May 2012, 13, and "Kapringer" *Aftenposten*, 20 January 2014, 14-15 at 14.

tion travel a certain distance – has been seen on some occasions as insufficient to establish jurisdiction under article 1 of the ECHR.[98] If the ECHR would nevertheless be applicable, however, the use of such weapon systems outside of an armed conflict and without derogating from the ECHR is not looked upon too kindly by the Court.[99] Numerous cases against Russia show this.[100] Of importance here are the considerations made in advance of the attack in relation to choosing the target, time of attack and selection of weapon system. A lot has nevertheless been done to adapt naval assets to their enforcement tasks off Somalia.[101]

Positive Obligations

The positive human rights obligations flowing from the right to life will admittedly seldom lead to a state being found at fault for not having done enough to avoid a hostage situation. This issue is more likely to play an active role in relation to how a hostage rescue operation is conducted, as the state must take into consideration the threat to the life of the hostages which the operation may generate.[102] Among the other positive obligations, one may men-

98 Compare here *Banković and others*, note 48 supra, *Andreou*, note 56 supra, as well as *Pad and Others*, note 56.

99 As regards the question of derogations in relation to territory not belonging to the derogating state, see Frostad, note 57 at 152–157.

100 See e.g. *Isayeva v. Russia*, Application No. 57950/00, Chamber Judgment of 24 February 2005, and *Abuyeva and Others v. Russia*, Application No. 27065/05, Chamber Judgment of 2 December 2010.

101 A. Murdoch "Recent Legal Issues and Problems Relating to Acts of Piracy off ,|ation(ae le prolonged to 2016;Somalia" in C.R. Symmons (ed) *Selected Contemporary Issues in the Law of the Sea* (Martinus Nijhoff Publishers, Leiden: 2011) 139–168 at 148.

102 Compare here with *Finogenov and Others v. Russia*, Application Nos. 18299/03 and 27311/03, Chamber Judgment of 20 December 2011, where,|ation(ae le prolonged to 2016; a hostage rescue operation was found to have been in violation of ECHR art. 2.

tion the obligation to ensure that private actors do not violate the right to life. This could obligate a state party to regulate the use of force by private armed guards sailing on vessels flying its flag.

Other classic positive obligations refer to the possible risk of capital punishment which pirates may face if they are handed over to the authorities of another state. This will strictly speaking depend on whether the sending state is bound by protocols 6 and 13, but also on whether the right to use capital punishment has been terminated through the interpretation of the Court in the *Al-Saadoon* case.[103] Even in case captured pirates are released rather than prosecuted, the positive obligations of the flag state must still be upheld, even though the real issue here would often be whether the pirates risk treatment in violation of the flag states' positive obligations under article 3.[104] The risk of treatment in violation of article 2 and/or article 3 may nevertheless be reduced through the use of political assurances, etc.[105] Of importance is here how likely it is that the insurances will be upheld.[106]

A related issue is the obligation to save pirates if they are injured or suffer distress following the activities of the crew or security personnel on board the vessel which the pirates sought to capture, or as a consequence of naval vessels in anti-piracy operations. As long as the requirements of jurisdiction *ratione loci* and *ratione personae* are satisfied, it would be in violation

[103] *Al-Saadoon and Mufdhi v. the United Kingdom*, Application No. 61498/08, Chamber Judgment of 2 March 2010, para. 120.

[104] M. Tondini "Some Legal and Non-Legal Reflections on the Use of Armed Protection Teams on Board Merchant Vessels: An Introduction to the Topic" (2012) 51/1 *Military Law and the Law of War Review* 7-19 at 13.

[105] *Othman (Abu Qatada) v. the United Kingdom*, Application No. 8139/09, Chamber Judgment of 17 February 2012, paras. 138-189.

[106] For a similar view, see H. Friman and J. Lindborg "Initiating criminal proceedings with military forces: Some legal aspects of policing Somali pirates by navies" in D. Guilefoyle (ed) *Modern Piracy: Legal Challenges and Responses* (Edward Elgar, Cheltenham: 2013) 172-201 at 195.

of the positive obligations of a state under article 2 if the crew and personnel do not adequately protect the life and health of the pirates. The Court will probably not consider it of much importance that the pirates find themselves in distress as a consequence of acts they have initiated themselves.

Another issue here is the obligation on the flag state to investigate situations where life has been lost as a consequence of the use of force, or where this might have been a consequence of the said acts.[107] The state must itself initiate the investigation,[108] and this requires that the appropriate authorities receive information on the use of force having taken place between the crew/personnel of a vessel and the presumed pirates. Consequently, this positive obligation would seem to require the establishment of a system of notification to the appropriate authorities whenever death occurs or is likely to have occurred in such settings. Disciplinary measures and civil liabilities may be sufficient consequences for the purpose of article 2 if the acts were not intentional,[109] but the state would be on more secure ground if it opens criminal investigations where e.g. a presumed pirate has been shot by private armed security operators on board the vessel.

In relation to improper use of force, the rules on immunity may nevertheless limit the ability of the state to undertake prosecutions[110] – e.g. where Russian soldiers provide convoy protection and as a consequence thereof are temporarily stationed on board a Norwegian flagged vessel from which they shoot and kill a person suspected of a piracy attempt against the Norwegian vessel.

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[107] For a similar view, see "Norge plikter å etterforske drapet" *Aftenposten* 16 December 2013, 10 (interview with K. M. Larsen).

[108] J. Meyer-Ladewig *EMRK Europäische Menschenrechtskonvention Handkommentar* 3rd (Nomos Verlagsgesellschaft, Baden-Baden: 2011) 54.

[109] Ibid., 56.

[110] For a similar view, see Guilfoyle, note 20 at 318–323.

Conclusions

To a large extent, the ECHR might be seen as adding a bit of detail to the picture drawn up by the LOS Convention, customary international law and related instruments. The key caveat is whether the relevant acts come within the jurisdiction of the relevant state party. Beyond cases of defense against hostile use of weapons, where the use of lethal force will often be allowed, it is worthwhile to mention that currently even the threat of being taken hostage might suffice in order to – where absolutely necessary – use potentially lethal force to avoid capture.

Of importance are nevertheless the positive obligations, like providing article 2-conform regulations for the use of force by private armed guards, and ensuring the reporting of all incidents where there is a risk that suspected pirates have been injured or killed as a consequence of the acts of e.g. private armed guards. There is probably reason to believe that we currently see a degree of underreporting in this respect.

NETWORKED VEHICLE SYSTEMS: A GLIMPSE AT FUTURE CAPABILITIES FOR SAFER SEAS

João Tasso de Figueiredo Borges de Sousa*

Introduction

Unmanned ocean and air vehicle systems are already delivering new capabilities for maritime safety and environmental protection. But this is just the beginning. New technological developments in computation, communications, control, sensing, and materials will dramatically impact the design of unmanned vehicle systems for maritime operations. This will give rise to new capabilities and new concepts of operation.

New capabilities are required to help us to understand and monitor how key issues such as climate change, ocean acidification, unsustainable fishing, pollution, waste, loss of habitats and biodiversity, shipping, security, and mining are affecting global ocean sustainability and stewardship.[1] This is not an easy task. First, the oceans cover 71% of the Earth and contain 96% of the Earth's living space thus making ocean observation a problem at the planetary scale. Second, the oceans are still largely inaccessi-

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[1] IOC/UNESCO, IMO, FAO and UNDP *A Blueprint for Ocean and Coastal Sustainability* (IOC/UNESCO, Paris: 2011) available at <www.unesco.org>.

ble, not only to humans but also to man-made devices. Third, the oceans are a communications challenged environment. Fourth, a ship can only be at one place at a time, and can only stay at sea for limited time. Fifth, the interior of the ocean changes faster than it can be measured with traditional sampling devices, such as ship borne sensors and drifters.[2]

The paper discusses trends for maritime safety and environmental protection, with special emphasis on networked vehicle systems. It is an overview of systems focused on unmanned ocean and air vehicle systems (UXS) complementing and summarizing information available from multiple sources including roadmaps, standards, regulations and available literature. This is done with reference to the developments undertaken by the *Laboratório de Sistemas e Tecnologias Subaquáticas* (LSTS)[3] from the Faculty of Engineering of the University of Porto (FEUP). First, some UXS background is reviewed with special emphasis on levels of automation, operator functions, interoperability, and certification. Second, trends in computation, communications, control, sensing, and materials are discussed to present the background against which new vehicle systems will be developed. Third, the impact of new technological trends in multi-vehicle system capabilities and in new concepts of operations is briefly discussed. Fourth, an overview of operations undertaken by multi-vehicle systems developed by the LSTS will be presented to illustrate some of the new capabilities delivered by networked vehicle systems.

[2] J. Bellingham and K. Rajan "Robotics in Remote and Hostile Environments" (2007) 318 *Science* 1098–1102.

[3] Underwater Systems and Technologies Laboratory, website available at <lsts.fe.up.pt>.

Unmanned Vehicle Systems Background

The diversity of unmanned vehicles is growing by the day. There are ground, underwater, surface, air, and space vehicles. However, there is no commonly accepted terminology for describing these vehicles. Moreover, the existing terminology is somewhat misleading. For example, "autonomous" and "automatic" are used as synonyms. But this is simply not correct. Most unmanned vehicles are automatic in the sense that they execute scripts and that there is no deliberation onboard. Clough makes the following distinction: "[a]utonomous means that a system has a choice to make free of outside influence [...] Automatic means that a system will do exactly as programmed, it has no choice".[4]

In what follows, we adopt the following terminology: Autonomous Underwater Vehicles (AUVs) are small, unmanned, and untethered submersibles; Autonomous Surface Vessels (ASVs) are small, unmanned, boats; and Unmanned Aircraft Systems (UASs) are pilotless aircrafts.

Figure 1: Light Autonomous Underwater Vehicle developed by LSTS

[4] B.T. Clough "Metrics, Schmetrics! How The Heck Do You Determine A UAV's Autonomy Anyway?" (Performance Metrics for Intelligent Systems (PerMIS) Conference, Maryland, 15 August 2002).

Figure 2: X8-based Unmanned Aircraft System developed by LSTS

Figure 3: Swordfish Autonomous Surface Vessel developed by LSTS

The operation of unmanned vehicles does not necessarily remove humans from the operation of the vehicle. In remotely operated (or piloted) vehicles, there is a human operator in charge of piloting the vehicle which may be located at some remote location. This is not compatible with the operation of vehicles in some remote environments, such as the ocean or in space, where communications are typically difficult.

Autonomous vehicles are a (partial) answer to the limitations of remotely operated vehicles and are capable of executing mission plans without the intervention of human operators (i.e., autonomously). There are several degrees of autonomy, some of which are not feasible with the current technology. For example, full autonomy is still not feasible today: vehicles lack the sensing and reasoning capabilities required for that purpose. This is partly why the concept of *mixed initiative* operation was introduced in the last decade whereby, human operators are part of the planning and control loops of the vehicle. For example, while the operator is capable of generating plans and uploading these plans to the vehicle for autonomous execution, it is also possible to override plan execution and re-task the vehicle to execute new plans.

Depending on the operational environment, key technical specifications for unmanned vehicles include endurance, size, payload, range, communication and navigation capabilities, and deployment mechanisms. Endurance is highly correlated with the limitations of energy storage technologies. Usually, energy use is at a premium in unmanned vehicles, especially when these are designed for operation in remote environments. The size of the vehicle typically constrains the payload and energy storage. The payload, which typically consists of sensors and actuators, is what makes the vehicle useful. Sensor development is one enabling technology for unmanned vehicles. Power and size are the major limitations of the payload. Range depends not only on endurance, but also on the operational environment.

Communication and navigation capabilities determine the level of human intervention, the practical endurance and the usefulness of the vehicle. The vehicle cannot go beyond the range imposed by limitations of the navigation equipment without becoming lost (e.g., Global Positioning System (GPS) is not available underwater). Communications are necessary for operating and retrieving information from the vehicle (the vehicle becomes

useless if we cannot communicate with it). Communications are based on electromagnetic waves or on sound waves. The problem with underwater communications is that electromagnetic waves are severely attenuated underwater. Acoustic communications, relying on the propagation of sounds waves in the water, are considerable slower than their electromagnetic counterparts. This makes underwater operations very challenging, especially when it comes to the coordination of multiple vehicles (e.g., state of the art acoustic modems deliver up to 10Kbits/second).

Launch and recovery mechanisms determine how easy, and expensive, it is to deploy the vehicle. Launch and recovery of unmanned ocean and air vehicles from a ship at sea is still quite challenging.

Figure 4: LSTS vision for the operation of networked vehicle systems

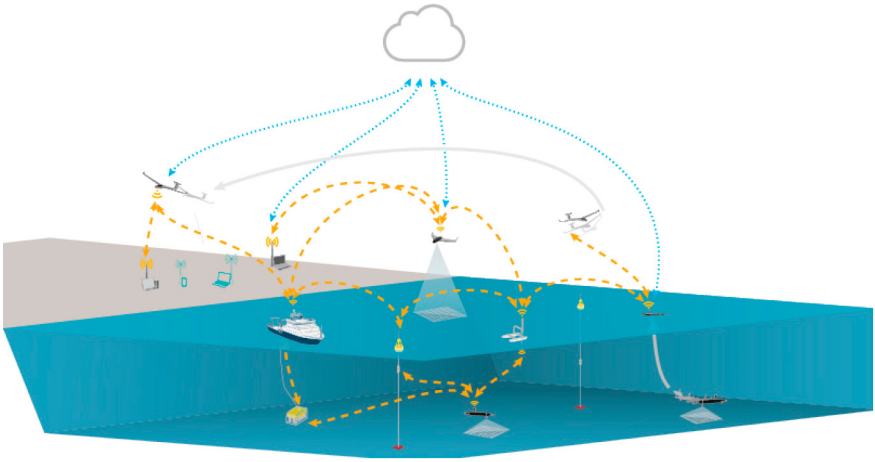


Figure 4 depicts the LSTS vision for the future operation of multi-vehicle systems. In this vision, unmanned vehicles and other systems communicate over inter-operated acoustic and radio communication networks to deliver system level services which could not be delivered by vehicles operating in isolation.

Networking is one of the enabling technologies for distributed cooperation and computation. However, we are still far from realizing the potential of networked vehicle systems.

There are several obstacles in the road to the practical, as opposed to experimental, deployment of networked vehicle systems. These are briefly discussed next.

Currently, there are no legal frameworks to encompass the operation of unmanned vehicles. In most countries the operation of unmanned air vehicles in controlled air space is severely restricted. Efforts are underway to address this problem in some European countries and in the USA. The Society for Underwater Technology published a recommended code of practice for ocean going vehicles and has published reports on this topic since the last decade.[5] But the code of practice is not binding and, under the current legal frameworks, issues such as the responsibility for collisions and the property of vehicles found at sea are addressed in the framework of piloted vehicles.[6] In practice these legal issues are precluding regular operations with ocean-going vehicles.

Interoperability, that is, the ability of making systems and organizations work together (inter-operate), is a major obstacle for the operation of networked vehicle systems. This is because the lack of interoperability standards is preventing researchers to operate, in a transparent manner, vehicles from different vendors in a network environment.

The lack of standards is not unique to inter-operability. To name just one example, currently there is no standardization in the area of underwater communications. There are several initiatives

[5] Available at <www.sut.org/publications>.

[6] Capt. A. Norris "Legal Issues Relating to Unmanned Maritime Systems Monograph" (2013) U.S. Naval War College.

addressing these issues.[7] A word of caution is needed here: the existence of standards does not imply standardization.

In general, commercial vehicles have not been developed as open systems. Closed systems tend to raise vehicle and maintenance costs, and may be conducive to forms of market practice that are not necessarily beneficial to the customer. This is especially critical in a field where technological obsolescence arises rapidly: vehicles and their components have to be upgraded periodically. Open systems may prove fundamental to the dissemination of networked vehicle systems.

The problems of planning and execution control for multiple vehicles interacting over interoperated, and possibly intermittent, communication networks have not yet been addressed in a systematic way and within an appropriate scientific framework. This requires an interdisciplinary effort at the intersection of control, computation, and communications. Significant efforts have been underway for over one decade now, but there is still a significant gap between these developments and application needs.

Life cycle cost has been another major challenge for the development, operation, and support of unmanned vehicle systems. There are several reasons for this. First, the unmanned field is relatively new, but it is evolving quite fast. Systems, capabilities, and associated cost have been changing significantly over time and there is no standard way to estimate and report costs. Second, the distribution of unmanned vehicle systems cost across acquisition, operation, and support categories differs significantly from that of manned vehicles making comparison between manned and unmanned vehicles complicated. Third, the diversity of unmanned vehicle systems, ranging in size from

[7] J. Potter, J. Alves, D. Green, G. Zappa, I. Nissen and K. McCoy "The JANUS Underwater Communications Standard" (Proceedings of the Underwater Communications and Networking Conference UComms 2014, Sestri Levante, September 2014).

few millimeters to tens of meters, precludes uniform cost metrics. Additionally, cost-per-hour quotes for unmanned vehicles use are often misleading in that they address only the recurring costs of actually operating the vehicle. However, non-recurring costs, which typically include engineering, fabrication, test and integration, payload integration, vehicle transport, support team travel, and acquisition costs, must also be considered. Fourth, the unprecedented pace of technological development of key components, such as sensors and communications devices, requires unprecedented models of development, with special emphasis on upgrades with short life spans. New acquisition and business models may be needed. Finally, unmanned vehicle systems technology enables new concepts of operation, notably those concerning the higher levels of automation. However, the economics of coordination and cooperation for heterogeneous systems of systems is still poorly understood.

Technological Trends

A generic unmanned vehicle system is typically composed of three main sub-systems:

- **Vehicle:** Frame, propulsion, communications, navigation/guidance, central computer, auxiliary equipment, vehicle application software, and vehicle system software.
- **Payload:** survivability, reconnaissance, remote sensor system delivery, payload application software, and payload system software.
- **Ground segment:** ground control systems, command and control subsystem, launch and recovery equipment, transport system components, ground segment application software, and ground segment system software.

A brief overview of technological trends, structured in terms of the three main sub-systems of a generic vehicle system, follows.

Vehicle

Developments in composite materials, nano-technologies and intelligent structures will decrease weight and increase vehicle performance. Operations from remote locations will be enabled by autonomous recharging and/or refueling. Specialized frame designs will allow energy harvesting from atmospheric/ocean phenomena. Design for survivability will make a major impact on overall reliability of vehicles and their systems. Developments in mechanical standardization will allow inter-operability of launch and recovery systems. Developments in high energy density power sources, namely in hydrogen and fuel cell technologies, are expected to increase mission time. Laser and microwave technologies are expected to allow recharging of batteries on-the-fly for small vehicles. Advances in communication standards will reduce development and operational costs. Trends in network-centric communication will facilitate integration in system(s) of systems frameworks. Advances in cognitive radio technologies and in heterogeneous communication devices will enable 'smart' communications with heterogeneous assets (e.g., manned and unmanned aircraft, offshore platforms, buoys, tagged animals, etc.) through inter-operated networks. Advanced relaying technologies, data compression and network coding techniques are expected to increase effective communication data rates over extended ranges thus alleviating dependence on satellite communication and enabling over-the-horizon communications. Aerostats and other aerial assets will allow sustained Beyond Line-Of-Sight[8] communications. In addi-

[8] Typically two radios need to be in direct Line-Of-Sight (i.e., with no obsta-

tion, multiple assets may be required to form communication networks to provide communications coverage in remote environments. Disruptive Tolerant Networking (DTN) protocols will enable the delivery of data and commands in communications challenged environments. Data mules will transport low priority messages between nodes which may not be in direct communications. Secure protocols and encryption will allow secure access control and control handover for networked operations. Identification standards will enable operations over wide geographic areas, including international waters, where assets from different countries and organizations may be present. New satellite services for global positioning will complement and improve existing services through better integration and coverage.

Developments in Microelectromechanical systems (MEMS) technologies will enable the development of tactical grade low cost inertial measurement units. Navigation aids mounted on naval assets will assist navigation in remote locations, in high latitudes, or in GPS denied environments. Miniaturization, multi-core computer architectures and dedicated computing units will enable demanding on-board computations, such as those related to data fusion, deliberative planning, and higher levels of autonomy. Interoperability standards and open architecture frameworks will reduce development costs and facilitate true interoperability with heterogeneous assets. Inter-operability will be extended to interactions with ship-based systems and with other maritime assets. Advances in collision avoidance technologies and concepts, together with advances in collision detection capabilities, will also facilitate certification and air worthiness of aerial vehicles. Advances in fault identification, intelligent sys-

cles in the way) for being able to communicate between them. A UAS provides a way of relaying data between two radios that are not in Line-Of-Sight of each other. This is possible when the UAS has Line-Of-Sight communications with the two radios.

tem health monitoring, contingency management, fault recovery, and in controls for degraded modes of operation will improve reliability and reduce associated costs. Advances in on-board automation, namely in deliberative planning, will enable higher levels of automation and advanced forms of mixed initiative interactions with remote operators operating from heterogeneous ground and maritime assets, including manned aircraft.

Payload

Design for survivability will improve reliability and reduce costs. Advances in miniaturization and sensor development will lead to new sensor capabilities for small vehicles. Developments in standalone ocean sensor and communication nodes will enable delivery of nodes to remote locations where ad-hoc networks may be formed. Retrieval of devices (e.g., sensors or containers with water samples) from the ocean will lead to unprecedented fast response to episodic events (e.g., underwater volcanic eruption). Developments in low power and high-performance computer systems will enable advanced on-board intelligent data handling and processing and advanced sensor fusion algorithms. This will reduce the need for high speed data links (for remote processing of sensor data) and also for operator intervention. Open architecture development paradigms will enable rapid testing and prototyping and will reduce development costs.

Ground Segment

Trends towards networking and system of systems will enable vehicles to interact with heterogeneous ground/ocean control systems ranging from more 'traditional' control stations to hand-held devices, to unattended buoys in the ocean or to other unmanned vessels. Advances in on board autonomy and in-

ter-operability will allow vehicles to become 'more operable' thus facilitating the task of human operators and reducing training cost. Moreover, these advances are expected to enable one operator to control multi-vehicle teams. Interoperability standards and open architecture frameworks will reduce development costs and facilitate interoperability with heterogeneous assets. Advances in command and control frameworks for system of systems frameworks will facilitate integration of vehicles into higher level maritime observing systems. This will enable new concepts of operation and new business models. Developments in human factors technologies will allow the optimization of mixed initiative interactions by providing better integration of human operators in system of systems frameworks. Standards for modular launch and recovery systems will facilitate operations from heterogeneous maritime assets and remote locations and will enable new concepts of operation taking advantage of geographically distributed launch and recovery locations. Standards and certification procedures will be developed to enable operations from maritime assets. Standardized components will facilitate transportation and minimize the cost of spare parts. Advances in archival of data – in a searchable manner, in the semantic web, and in intelligent data handling and processing techniques for high volumes of data – will enable unprecedented real-time data analysis capabilities. Cloud computing technologies will provide unprecedented computational power for intensive data handling and processing techniques. Advances in data fusion and visualization techniques will significantly improve situational awareness capabilities (e.g., overlay of video on top of satellite imagery from the same spot if not at the same time). Advances in inter-operability will enable interactions with external systems.

New Capabilities and Concepts of Operation

The problems of maritime safety and environmental protection span surface, air, subsea, seabed, and land masses, precluding human-based synoptic observations. However, state-of-the-art maritime safety and environmental protection missions are still made by manned operated vessels or aircraft. This means that there is still a significant observational gap.

A recent paradigm for ocean presence is the Autonomous Ocean Sampling Network (AOSN).[9] The AOSN is based on small, low cost vehicles supported by a sophisticated communication and control infrastructure. The diversity of vehicles, sensor packages, communication links, control software, and data processing/visualizations tools creates tremendous opportunities, but only if elements of the system are compatible with each other. This provides the motivation to develop an architecture and infrastructure which (a) provides science users with a straightforward yet flexible set of tools for interacting with deployed AOSN assets, (b) substantially eases the introduction of new capabilities to AOSN such as new vehicles or new software tools, (c) ensures compatibility of elements of the AOSN "tool kit", and (d) provides a re-configurable 'on-the-fly' capability to support real-time operations.

New capabilities for maritime safety and environmental protection will be achieved through an incremental and multi-dimensional approach.[10] First, there is a need to increase the number of systems (buoys, drifters, floats, etc.) in operation in the oceans, and to develop and deploy new fleets of robotic vehicles for maritime safety and environmental protection with unprec-

9 T. Curtin, J. G. Bellingham, J. Catipovic and D. Webb "Autonomous Ocean Sampling Networks" (1993) 6(3) *Oceanography* 86–94.

10 P. McGillivary, J. Borges de Sousa and R. Martins "Connecting the dots. Networking Maritime Fleets of Autonomous Systems for Science and Surveillance" (October 2012) 55(8) *Marine Technology Reporter* 33.

edented spatial and temporal resolution. Second, it is necessary to network existing systems and new robotic vehicle systems for coordinated adaptation to observational needs. This entails being able to command and control networks of manned and unmanned vessels which, in turn, may form *ad-hoc* communication networks allowing extended and cost-effective communications coverage. Third, there is a need to develop unmanned air/ocean/surface/ground vehicle systems (UXS) capable of long duration/range missions for cost-effective spatial and temporal coverage. This requires on-board autonomy. Fourth, there is a need for new organizational frameworks to manage and coordinate the system(s) of systems that will result from these networking trends and associated cost benefits.

Future maritime safety and environmental protection operations will take advantage of new capabilities within integrated systems of coordinated unmanned air, underwater, surface unmanned vehicles and sensors interacting over inter-operated underwater and radio communication networks with autonomous adaptive water and air sampling capabilities and support for system level planning. These systems should provide unprecedented situational awareness, should be easily deployed, and should provide communication services to support field operations.

Laboratório De Sistemas e Tecnologias Subaquáticas

Overview

The LSTS has been designing, building and operating unmanned underwater, surface and air vehicle systems for innovative applications with strong societal impact since 1997. Currently, the LSTS team has over 30 researchers with Engineering and Computer Science backgrounds. The LSTS has been involved in fostering and growing a world-wide research network in the area of net-

worked vehicle systems with yearly conferences and workshops, and, more recently, with large scale exercises at sea encompassing a significant number of worldwide reputed R&D institutions. In Portugal, the LSTS has a strategic cooperation with the Portuguese Navy and Air Force, the Portuguese Task Group for the Extension of the Continental Shelf, and the Porto Harbor Authority.

The LSTS fleet includes two remotely operated submarines, AUVs of the 2006 BES innovation award[11] winning Light Autonomous Underwater Vehicle (LAUV) class, one autonomous surface vehicle, and several UAS with wingspans starting at 1.9m. The fleet has been successfully fielded in innovative operations in Europe and in the United States of America.

The LSTS control architecture for networked vehicle systems has off-board and on-board components which are implemented with the LSTS *Neptus-IMC-Dune* software tool chain. This is a software framework for mixed-initiative control of unmanned ocean and air vehicles operating in communications challenged environments with support for DTN protocols.[12] The unique features of the tool chain build on experience with the coordinated operation of heterogeneous vehicles. *Neptus* is a distributed command, control, communications, and intelligence framework for operations with networked vehicles, systems, and human operators.[13] *IMC* is a communications protocol that defines a common control message set understood by all types of LSTS nodes (vehicles, consoles or sensors) in networked environ-

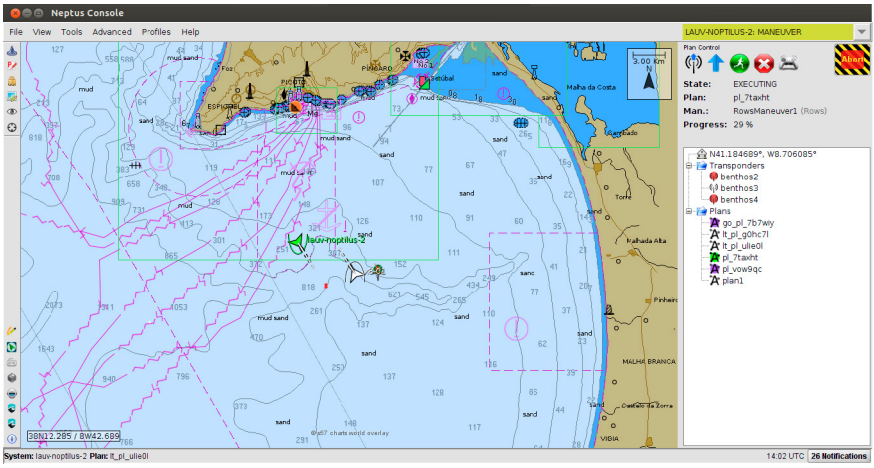
[11] Banco Nacional Espírito Santo Portuguese Innovation Award, 2006.

[12] D. Merani, A. Berni, J. Potter and R. Martins "An Underwater Convergence Layer for Disruption Tolerant Networking Internet Communications" (Baltic Conference on Future Internet Communications, Riga, 16–18 February 2011).

[13] J. Pinto, P.S. Dias, R. Gonçalves, E.R.B. Marques, G. Gonçalves, J. Borges de Sousa and F. Lobo Pereira "NEPTUS – a Framework to support the mission life cycle" (Proceedings of the 7th Conference on Maneuvering and Control of Marine Craft, Lisboa, 20–22 September 2006).

ments,[14] thus providing for standard coupling of heterogeneous components in terms of data interchange. *Dune* is the vehicle on-board software. *Dune* is used to write generic embedded software at the heart of the vehicle, e.g. code for control, navigation, or to access sensors and actuators. *Dune* has also been integrated with the deliberative onboard planning system TREX.[15]

Figure 5: LSTS *Neptus* command and control framework for heterogeneous vehicles



Operations

The LSTS has been organizing large scale experiments to test and evaluate new systems and technologies and to develop new concepts of operation.

14 R. Martins, P.S. Dias, E.R.B. Marques, J. Pinto, J. Borges de Sousa and F. Lobo Pereira "IMC: A Communication Protocol for Networked Vehicles and Sensors" (Proceedings of the IEEE Oceans, Mississippi, 26–29 October 2009).

15 K. Rajan, F. Py and J. Barreiro "Towards Deliberative Control in Marine Robotics" in M.L. Seto (ed) *Marine Robot Autonomy* (Springer Verlag, New York, 2013) 91–175.

The Rapid Environmental Picture (REP) annual exercise jointly organized since 2010 by the Portuguese Navy and Porto University, through the LSTS, provides a glimpse of future maritime safety and environmental protection operations.[16] In this exercise, with a duration of up to 3 weeks, multiple underwater, surface and air vehicles, and acoustic and wireless networks are deployed for operational evaluation and testing of systems and technologies contributed by national and international participants. This promotes inter-operability, strengthens a community of users, and provides the scope for long term pragmatic cooperation.

The REP-13 exercise[17] took place off the coast of Sesimbra, Portugal, but continued further south from the Portimão airfield. It involved participants from the Monterey Bay Aquarium Research Institute (MBARI) (US), Evologics (Germany), and the Norwegian University of Science and Technology (Norway). Several large and small propeller-driven ASVs, AUVs with different sensors and acoustic modems were deployed from *NRP*[18] *Bacamarte*, a ship from the Portuguese Navy. Several UAS were used in these experiments, some being deployed and recovered from civilian airports under monitoring of the Portuguese Air Force, and others launched and recovered aboard the *Bacamarte*. The exercise was targeted at applications in mine warfare, harbor protection, expeditionary hydrography, search and rescue, maritime law enforcement, and rapid environmental assessment.

16 R. Martins, J. Borges de Sousa and C. Carvalho Afonso "The REP-AUV10 Experiment Shallow water surveys with a fleet of heterogeneous autonomous vehicles" (2011) 52(11) *Sea Technology* 27-31.

17 Website available at <rep13.lsts.pt>.

18 Navio da República Portuguesa (ship of the Portuguese Republic).

In October 2013, researchers from the LSTS participated in one of the experiments of the Controlled, Agile, and Novel Observing Network Initiative (CANON)[19] undertaken by the MBARI. This experiment, which took place in Monterey, California, demonstrated coordinated ocean sampling with one LAUV from the LSTS, and the Dorado AUV and the TEX Wave Glider from the MBARI. The AUVs surfaced periodically to communicate measurements to TEX Wave Glider which relayed them to shore for real-time monitoring and supervision by the scientists in charge of the experiment.

The maritime incident response experiment, Exercise Cathach,[20] which took place in 2013 in the Shannon Estuary, Ireland, included a demonstration of networked vehicle systems of the NETMAR project[21] led by the LSTS and funded by the Atlantic Area Transnational program. These systems provided unprecedented situational awareness and communications for incident response.

The fifth Rapid Environmental Picture Atlantic (REP14-Atlantic) exercise took place in July 2014 at the Lisbon Naval Base and off the coasts of Sesimbra and Sines in Portugal. The exercise was jointly organized by the Portuguese Navy, the NATO Centre for Maritime Research and Experimentation (CMRE), and the University of Porto.

The REP14-Atlantic exercise was targeted at the operational evaluation and testing of heterogeneous multi-vehicle systems for maritime operations. The participants in the REP14 Atlantic exercise included, in addition to the organizers, the Royal Institute of Technology (Sweden), the University of Rome (Italy) and the companies Evologics (Germany) and Oceanscan Marine Systems and Technologies (Portugal).

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19 Website available at <www.mbari.org/canon>.

20 Website available at <www.shannonresponse.com>.

21 Website available at <project-netmar.eu>.

The REP14–Atlantic exercise included several ASVs,[22] AUVs[23] and Unmanned Aerial Vehicles[24] equipped with different sensors and acoustic communication payloads in additional to buoys and moorings equipped with acoustic modem and environmental sensors. These systems were deployed from Portuguese Navy ships *NRP Pegaso*, *NRP Auriga*, submarine *NRP Arpão* and from the NATO Research Vessel *Alliance*. The vehicle systems from the Portuguese Navy and from Porto University were deployed with the help of the LSTS *Neptus–Dune–IMC* software tool chain.

REP14–Atlantic concerned 6 operational vignettes: harbor protection, mine–countermeasures, anti–submarine warfare, rapid environmental assessment, search and rescue, and law enforcement.

Harbor protection and mine–countermeasure experiments took place at the Lisbon Naval base, at the Tejo Estuary and at sea, south of Sesimbra. These experiments demonstrated the operational use of multiple LAUV autonomous underwater submarines equipped with state–of–the–art side–scan sonars, video cameras and multi–beam sonars in harbor and challenging estuarine environments under difficult tidal constraints.

The NATO Centre for Maritime Research and Experimentation (CRME), Porto University and the Portuguese Navy demonstrated, for the first time, the use of an unmanned air vehicle controlling a submerged autonomous underwater vehicle with the help of a communications gateway (bridging WiFi and underwater acoustic communications) mounted on a Wave Glider. The unmanned air vehicles controlled the autonomous underwater vehicle with

[22] 2 Wave Gliders from the NATO Centre for Maritime Research and Experimentation (CMRE).

[23] 2 OEX and 6 Folaga from CMRE, 2 Gavias and 2 LAUV Seacons from the Portuguese Navy, and 6 LAUV from the LSTS.

[24] 4 X8 based unmanned air vehicles from the LSTS.

waypoint commands while receiving sensor data coming from the submerged vehicle in real-time.

Conclusions

The future of maritime safety and environmental protection will be significantly different from what is done today. This is because the projected developments of capabilities will entail a paradigm shift, from traditional methods into the integration of UXS into system(s) of systems for a sustained presence in the oceans. New concepts of operation will revolve around interactions, teaming, persistence, services, network behavior, and dynamic reconfiguration. Networking is the future. But a lot remains to be done.

MARITIME SAFETY AND ENVIRONMENTAL PROTECTION IN EUROPE: A ROLE FOR INTERNATIONAL COURTS AND TRIBUNALS?

Philippe Gautier*

Introduction

The aim of this paper is to give an overview of the categories of disputes relating to the marine environment which may be submitted to international courts and tribunals under the LOS Convention.[1]

The LOS Convention is not the only multilateral agreement concluded in the field of the marine environment. Other treaties co-exist with the LOS Convention and some of them contain their own mechanisms for the settlement of disputes. Therefore this paper also considers the cases where disputes related to the law of the sea would arise on the basis of other international agreements.

In examining these questions, the specific situation of the European Union (EU) and its member states will be kept in mind. Likewise, account will be taken of the jurisprudence of the European Court of Justice (ECJ) in cases addressing issues of alleged incompatibility between European and international law in the field of the protection of the marine environment.

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[1] United Nations Convention on the Law of the Sea of 10 December 1982 (1833 UNTS 3).

Overview of Case Law

At the outset, it may be recalled that inter-state litigation in the field of the marine environment is not an academic issue. Cases do exist and a look at the international case-law for the past twenty years will substantiate this assertion:

1995:	ICJ	*Fisheries Jurisdiction (Spain v. Canada)* case [2]
1999:	ITLOS	*Southern Bluefin Tuna Cases* [3]
	Annex VII arbitration	*Southern Bluefin Tuna Case between Australia and Japan and between New Zealand and Japan* [4]
2000:	ITLOS	*Swordfish* case [5]
2001:	ITLOS	*The MOX Plant Case (Ireland v. United Kingdom)* [6]
	Annex VII arbitration	*Ireland v. United Kingdom ("MOX Plant Case")* [7]
	OSPAR arbitration	*Ireland v. United Kingdom ("OSPAR" Arbitration)* [8]
2003:	ITLOS	*Case concerning Land Reclamation* [9]
	Annex VII arbitration	*Land Reclamation* case [10]
2010:	Annex VII arbitration	*The Republic of Mauritius v. The United Kingdom of Great Britain and Northern Ireland* (pending) [11]
	ICJ	*Whaling* case [12]

[2] Fisheries Jurisdiction (Spain v. Canada), Jurisdiction of the Court, Judgment, ICJ Reports 1998, p.432.

[3] Southern Bluefin Tuna Cases (New Zealand v. Japan; Australia v. Japan), Provisional Measures,Order of 27 August 1999, ITLOS Reports 2000, p. 10.

[4] Southern Bluefin Tuna Case between Australia and Japan and between New Zealand and Japan, Award on Jurisdiction and Admissibility, decision of 4 August 2000, Reports of International Arbitral Awards, vol. XXIII (New York: 2006) 1–57.

[5] Case concerning the Conservation and Sustainable Exploitation of Swordfish Stocks in the South-Eastern Pacific Ocean (Chile/European Community) (Discontinued) ITLOS Case No. 7, Orders available at <http://www.itlos.org/index.php?id=99>.

[6] The MOX Plant Case (Ireland v. United Kingdom), Provisional Measures, Order of 3 December 2001, ITLOS Reports 2001, p. 95.

[7] Ireland v. United Kingdom ("MOX Plant Case"), Permanent Court of Arbitration, Order of 6 June 2008, available at <http://www.pca-cpa.org/showpage.asp?pag_id=1148>.

It could be argued that the cases referred to above cover a broader scope than what is meant when we refer to the protection of the marine environment. Indeed, the list does include fishery disputes, although fishery matters are not *per se* expressly referred to in Part XII of the LOS Convention (entitled "protection and preservation of the marine environment"), which is dealing with marine pollution. Nevertheless, there are at least two reasons for not limiting environmental cases to pollution cases *stricto sensu*. First, the protection of the environment is not exclusively dealt with in Part XII. Rules on the protection of the environment are contained in other parts of the LOS Convention, for example in Part XI on the Area (see e.g. articles 145 and 147), in Part V on the exclusive economic zone (see e.g. articles 56(1) and 60(3)), or in Part XV on the settlement of disputes (see article 290(1), which provides for the prescription of provisional measures in order to prevent serious harm to the marine environment). Second, it seems difficult to consider that general principles contained in Part XII, such as the obligation to protect and preserve the marine environment, as reflected in article 192 of the LOS Convention, are not equally applicable to the protection of marine life or of endangered fish stocks.

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8 Ireland v. United Kingdom ("OSPAR" Arbitration), Permanent Court of Arbitration, Final Award, 2 July 2003, available at <http://www.pca-cpa.org/showpage.asp?pag_id=1158>.

9 Case concerning Land Reclamation by Singapore in and around the Straits of Johor (Malaysia v. Singapore), Provisional Measures, Order of 8 October 2003, ITLOS Reports 2003, p. 10.

10 Land Reclamation by Singapore in and around the Straits of Johor (Malaysia v. Singapore), Permanent Court of Arbitration, Award on Agreed Terms, 1 September 2005, available at <http://www.pca-cpa.org/showpage.asp?pag_id=1154>.

11 Notice of Arbitration and Pleadings available at <http://www.pcacpa.org/showpage.asp?pag_id=1429>.

12 Whaling in the Antarctic (Australia v. Japan: New Zealand intervening), Judgment of 31 March 2014, available at <http://www.icj-cij.org/docket/files/148/18136.pdf>.

Disputes Under the LOS Convention

Whenever a state party to the LOS Convention – and this term also applies *mutatis mutandis* to the EU[13] – adopts laws and regulations in the field of the protection of the marine environment, it has to ensure compliance with the rules contained in the LOS Convention and, in particular, with international standards determined by the competent international organizations.[14] As an illustration, reference may be made to the decision of certain states in the aftermath of the sinking of the *Prestige* in 2002 to inspect single-hull tankers in their EEZs with the possibility of requesting the ships concerned to leave their EEZs.[15] The legality of such unilateral measure was questioned *inter alia* in light of article 211(5) of the LOS Convention which authorizes the coastal states to "adopt laws and regulations for the prevention, reduction and control of pollution from vessels" in their EEZs on the condition that such laws and regulations conform to and give effect "to generally accepted international rules and standards established through the competent international organization or general diplomatic conference".[16] At that time, the EU also adopted Regulation (EC) No. 417/2002 of 18 February 2002[17]

13 See LOS Convention art. 1(2)(2).

14 See e.g. LOS Convention arts. 197, 201, 207(4), 208(5), 210(3)-(4), and 211.

15 See H. Ringbom *The EU Maritime Safety Policy and International Law* (Martinus Nijhoff, Leiden, Boston: 2008) 476-477.

16 See also art. 211(6)(c) of the LOS Convention, which states that additional laws and regulations adopted by the coastal States "may relate to discharges or navigational practices but shall not require foreign vessels to observe design, construction, manning or equipment standards other than generally accepted international rules and standards".

17 Regulation (EC) No 417/2002 of the European Parliament and of the Council of 18 February 2002 on the accelerated phasing-in of double hull or equivalent design requirements for single hull oil tankers and repealing Council Regulation (EC) No 2978/94 [2002] OJ L64.

aiming at accelerating the time-table for the phasing-out of single-hull tankers which had been decided by the IMO in 2001. This regulation was intended to "establish particular requirements for the prevention, reduction and control of pollution of the marine environment as a condition for the entry of foreign vessels into their ports", as provided in article 211(3) of the LOS Convention and, pursuant to this provision, had then to be communicated to the IMO. In order to ensure consistency between the standards applicable at the IMO and European levels, the IMO accepted in 2003 to bring its standards into line with the European regulation through an amendment to MARPOL 73/78.[18]

To ensure the implementation of its provisions, the LOS Convention sets up a mechanism for the settlement of disputes in its Part XV. While no reservation is admitted under the LOS Convention, there are nevertheless categories of disputes which are – or may be – excluded from the compulsory dispute settlement mechanism, either automatically (article 297) or on the basis of declarations made by states parties (article 298). It may be noted, however, that these limitations and exceptions have little impact on environmental disputes, with the exception of certain fisheries issues relating to the EEZ. Indeed, under article 297(3) fishery disputes are excluded from the compulsory mechanism to the extent that they relate to the sovereign rights – or the exercise thereof[19] – of coastal states with respect to the living resources

[18] International Convention for the Prevention of Pollution from Ships of 2 November 1973 (1340 UNTS 61, as amended); See e.g., E. Galiano "In the Wake of the Prestige Disaster: Is an Earlier Phase-Out of Single-Hulled Oil Tankers the Answer?" (2003) 28 *Tulane Maritime Law Journal* 120-122; and E. J. Molenaar "Port State Jurisdiction: Toward Comprehensive, Mandatory and Global Coverage" (2007) 38 *Ocean Development & International Law* 231.

[19] However, for disputes involving law enforcement activities in the EEZ see art. 298(1)(b) of the LOS Convention.

in their exclusive economic zones. In principle, all other disputes under the LOS Convention involving environmental issues are subject to the compulsory procedures provided for in Part XV. This means that states parties to the LOS Convention are entitled to institute proceedings unilaterally and submit their disputes to arbitral proceedings – if no other forum has been chosen by the parties to the dispute –, or, if both parties so agree, to the International Tribunal for the Law of the Sea (ITLOS) or the International Court of Justice (ICJ).

As regards the protection of the marine environment, the LOS Convention regulates matters in respect of which the EU exercises exclusive and shared competence with its member states. While fishery policy belongs to the exclusive competence of the Union, issues relating to law enforcement activities remain with member states.[20] On matters concerning maritime transport, safety of shipping and the prevention of marine pollution, the EU has exclusive competence "only to the extent that such provisions of

20 See para. 1 of the declaration of the European Community upon formal confirmation of the LOS Convention (Document C.N.143.1998.TREATIES – 4/2 of 30 April 1998), which states:

> "Matters for which the Community has exclusive competence: – The Community points out that its Member States have transferred competence to it with regard to the conservation and management of sea fishing resources. Hence in this field it is for the Community to adopt the relevant rules and regulations (which are enforced by the Member States) and, within its competence, to enter into external undertakings with third States or competent international organizations. This competence applies to waters under national fisheries jurisdiction and to the high seas. Nevertheless, in respect of measures relating to the exercise of jurisdiction over vessels, flagging and registration of vessels and the enforcement of penal and administrative sanctions, competence rests with the Member States whilst respecting Community law. Community law also provides for administrative sanctions".

the Convention or legal instruments adopted in implementation thereof affect common rules established by the Community".[21]

It should be pointed out that, in most instances, it is unlikely that disputes under the LOS Convention between member states of the EU will be submitted to one of the fora provided for under Part XV of the LOS Convention. This is the result of the decision of the ECJ in the *MOX Plant* case.[22] More precisely, in this case, the Court decided that, whenever rules contained in the LOS Convention have been the subject of internal rules adopted by the EU,[23] the issue would become a matter belonging to the European

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[21] Ibid., para. 2 which states:

> "Matters for which the Community shares competence with its Member States:
> – With regard to fisheries, for a certain number of matters that are not directly related to the conservation and management of sea fishing resources, for example research and technological development and development cooperation, there is shared competence.
> – With regard to the provisions on maritime transport, safety of shipping and the prevention of marine pollution contained inter alia in Parts II, III, V, VII and XII of the Convention, the Community has exclusive competence only to the extent that such provisions of the Convention or legal instruments adopted in implementation thereof affect common rules established by the Community. When Community rules exist but are not affected, in particular in cases of Community provisions establishing only minimum standards, the Member States have competence, without prejudice to the competence of the Community to act in this field. Otherwise competence rests with the Members States".

[22] Case C–459/03, *Commission v. Ireland*, Judgment of 30 May 2006, ECR I– 4635.

[23] Ibid., paras. 111 and ff:

> "111. Thus, with regard to the head of complaint alleging failure to meet the obligation to carry out a proper assessment of the environmental impact of all of the activities associated with the MOX plant on the marine environment of the Irish Sea, based on Article 206 of the Convention, it must be stated that this matter is the subject of Directive 85/337 [of 7 June 1990 on the freedom of access to information on the environment (OJ 1990 L 158, p. 56)]
> (...)
> 114. The same observation also holds true for the complaint which Ire–

legal order and the ECJ would then be exclusively competent for disputes relating thereto.[24]

It should not be inferred from the decision of the Court that recourse to Part XV of the LOS Convention is excluded as regards all environmental disputes arising out of that Convention and involving member states of the EU. For example, Part XV could still be available with respect to disputes between member states of the EU exclusively relating to the legality of law enforcement measures. But, in light of the decision of the ECJ in the *MOX Plant* case, member states of the EU will certainly consider carefully any use of Part XV of the LOS Convention.

Disputes under the LOS Convention are not limited to cases between member states of the EU. Indeed, disputes may arise between, on the one hand, states parties to the LOS Convention which are not members of the EU and, on the other hand, one or several member state(s) of the EU, the EU, or the EU and one or several of its member state(s).The *Swordfish* case between Chile and the EU constitutes such an example. In this case, Chile contended that the EU, as a state party to the LOS Convention, had not taken the necessary measures vis-à-vis vessels flying the flag

land bases on Articles 192, 193, 194, 207, 211 and 213 of the Convention, in so far as that complaint relates to the obligation to take the measures necessary to prevent, reduce and control pollution in the Irish Sea.
(...)
117. Furthermore, with regard to the complaint derived from Articles 123 and 197 of the Convention concerning the lack of cooperation on the part of the United Kingdom and, in particular, its refusal to provide Ireland with certain information, such as the full version of the PA report, it must be held that the provision of information of this kind comes within the scope of Council Directive 90/313/EEC of 7 June 1990 on the freedom of access to information on the environment (OJ 1990 L 158, p. 56)".

[24] Ibid., para. 121: "the provisions of the Convention relied on by Ireland in the dispute relating to the MOX plant and submitted to the Arbitral Tribunal are rules which form part of the Community legal order".

of any of its member states to protect swordfish stocks on the high seas and had therefore breached its obligations *inter alia* under articles 116 to 119 of the LOS Convention.[25]

In this regard, it is important to keep in mind that states parties to the LOS Convention which are not member states of the EU are not necessarily aware of, and bound by, the distribution of competences between the Union and its member states. This is expressly confirmed by Annex IX to the LOS Convention which requires the intergovernmental organization party to that Convention to make a declaration "specifying the matters governed by this Convention in respect of which competence has been transferred to the organization by its member States which are Parties to this Convention".[26] Likewise, Annex IX to the LOS Convention requires

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[25] See Order of 20 December 2000, note 5,:

> "On behalf of Chile:
> (a) whether the European Community has complied with its obligations under the Convention, especially articles 116 to 119 thereof, to ensure conservation of swordfish, in the fishing activities undertaken by vessels flying the flag of any of its member States in the high seas adjacent to Chile's exclusive economic zone;
> (b) whether the European Community has complied with its obligations under the Convention, in particular article 64 thereof, to co-operate directly with Chile as a coastal State for the conservation of swordfish in the high seas adjacent to Chile's exclusive economic zone ...
> (...)
> (d) whether the obligations arising under articles 300 and 297, paragraph 1 (b), of the Convention, as also the general thrust of the Convention in that regard, have been fulfilled in this case by the European Community".

[26] See art. 5 of Annex IX to the LOS Convention:

> "1. The instrument of formal confirmation or of accession of an international organization shall contain a declaration specifying the matters governed by this Convention in respect of which competence has been transferred to the organization by its member States which are Parties to this Convention.
> (...)
> 5. Any State Party may request an international organization and its member States which are States Parties to provide Information as to

that changes relating to the exercise of competences should be promptly notified to the depositary of the Convention.[27]

Important consequences are attached to these declarations. As stated by Annex IX to the LOS Convention:

> States Parties which are member States of an international organization which is a Party to this Convention shall be presumed to have competence over all matters governed by this Convention in respect of which transfers of competence to the organization have not been specifically declared, notified or communicated by those States under this article.[28]

In other words, a presumption is attached to the contents of the declaration made by the EU, independently of the actual distribution of competences within the Union. These provisions may sound particularly relevant in light of the fact that the only declaration under Annex IX from the EU was made on 1 April 1998.

In addition, pursuant to article 6(2) of Annex IX:

> Any State Party may request an international organization or its member States which are States Parties for information as to who has responsibility in respect of any specific matter[29]. The or-

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which, as between the organization and its member States, has competence in respect of any specific question which has arisen. The organization and the member States concerned shall provide this information within a reasonable time".

27 See art. V(4) of Annex IX to the LOS Convention:
"The international organization and its member States which are States Parties shall promptly notify the depositary of this Convention of any changes to the distribution of competence, including new transfers of competence".

28 LOS Convention, Annex IV, art. 5(3).

29 See also art. 57(2) of the Rules of the Tribunal:
"In a dispute to which an international organization is a party, the Tribunal may, at the request of any other party or *proprio motu*, request

> ganization and the member States concerned shall provide this information. Failure to provide this information within a reasonable time or the provision of contradictory information shall result in joint and several liability.

As this may be seen, the LOS Convention, on the basis of the declaration made and information provided by the EU, establishes rules and presumptions which may have an impact on the liability of the EU and its member states.

The existence of a joint dispute, i.e., a dispute between a state party to the LOS Convention and the EU and one or several of its member states, has consequences as regards the choice of the forum competent to deal with such a dispute under article 287 of the Convention. Pursuant to article 7(3) of Annex IX:

> When an international organization and one or more of its member States are joint parties to a dispute, or parties in the same interest, the organization shall be deemed to have accepted the same procedures for the settlement of disputes as the member States....

Logically, this provision is only relevant in the case of declarations choosing the ITLOS or arbitral proceedings since international organizations have no access to the ICJ.[30]

> the international organization to provide, within a reasonable time, information as to which, as between the organization and its member States, has competence in respect of any specific question which has arisen. If the Tribunal considers it necessary, it may suspend the proceedings until it receives such information".

[30] See art. 7(3) of Annex IX to the LOS Convention, which reads in part:
> "when, however, a member State has chosen only the International Court of Justice under article 287, the organization and the member State concerned shall be deemed to have accepted arbitration in accordance with Annex VII, unless the parties to the dispute otherwise agree".

Pursuant to the LOS Convention, the Tribunal has jurisdiction to deal with a case when the parties to the dispute have agreed to submit the case to it, either through a special agreement, on the basis of a jurisdictional clause contained in an agreement binding upon the parties, or on the basis of declarations under article 287 of the Convention. So far, the EU has not made a declaration under article 287 of the LOS Convention. This means that, in cases involving the EU, arbitration under annex VII to the LOS Convention will be the mandatory means available to the parties to the dispute, except if they agree to submit the dispute to another forum. Such an agreement may take place even after the institution of arbitral proceedings under Annex VII, as is shown in the *Swordfish* case. In this case, Chile and the EU agreed to transfer arbitral proceedings initially instituted under annex VII to a chamber of the Tribunal composed of 5 members.[31]

It should be added that the ITLOS has compulsory competence, by virtue of the LOS Convention, in prompt release proceedings under article 292 of the Convention and in proceedings for the prescription of provisional measures, pending the constitution of an arbitral tribunal.[32] In those instances, proceedings can be instituted unilaterally by one of the parties to the dispute. These two categories of proceedings may be relevant in environmental cases, as will be explained below.

In prompt release proceedings, the Tribunal has so far dealt with cases relating to the release of vessels and crews detained for fishery offences. This corresponds to the provision contained in article 73(2) of the LOS Convention, according to which "[a]rrested vessels and their crews shall be promptly released upon the posting of reasonable bond or other security". Prompt release proceedings are also available to states parties when vessels

[31] *Swordfish* case, Order of 20 December 2000, note 5.

[32] LOS Convention, art. 290(5).

flying their flag are detained for alleged violation of a coastal state's legislation relating to pollution. Such possibility exists under article 226(1)(b) of the LOS Convention, in the context of an investigation conducted pursuant to articles 216 (dumping), 218 (competence of port states as regards discharges from vessels) or 220 (pollution from vessels). Pursuant to this provision, "[i]f the investigation indicates a violation of applicable laws and regulations or international rules and standards for the protection and preservation of the marine environment, release shall be made promptly subject to reasonable procedures such as bonding or other appropriate financial security".[33] Article 220(7) also refers to such a procedure in the case of detention of vessels for pollution offences whenever release upon the posting of a bond is a mechanism agreed through the IMO or in an international agreement.[34]

[33] See also art. 226(1)(c) of the LOS Convention:

> "Without prejudice to applicable international rules and standards relating to the seaworthiness of vessels, the release of a vessel may, whenever it would present an unreasonable threat of damage to the marine environment, be refused or made conditional upon proceeding to the nearest appropriate repair yard. Where release has been refused or made conditional, the flag State of the vessel must be promptly notified, and may seek release of the vessel in accordance with Part XV".

[34] Art. 220(7) of the LOS Convention:

> "…whenever appropriate procedures have been established, either through the competent international organization or as otherwise agreed, whereby compliance with requirements for bonding or other appropriate financial security has been assured, the coastal State if bound by such procedures shall allow the vessel to proceed".

For an example of such provisions, see art. VI(1)(b) of the International Convention on Civil Liability for Oil Pollution Damage of 29 November 1969, as amended on 27 November 1992 (consolidated text available at <www.iopcfunds.org>); and art. 13(2) of the Convention on Limitation of Liability for Maritime Claims of 19 November 1976 (1456 UNTS 221).

As already mentioned, the Tribunal has had no opportunity until now to deal with prompt release proceedings for pollution cases under article 292 of the LOS Convention. Nevertheless, three observations may be made with respect to such a scenario:

1. Prompt release cases may only be instituted by the flag state of a detained vessel against the detaining state and, in dealing with such cases, the Tribunal does not enter into the merits of the case. Pursuant to article 292 of the LOS Convention, its competence is limited to the question of the release of the vessel and crew and the level of the bond to be fixed. In these circumstances, it may be considered that recourse to prompt release proceedings in the case of vessels detained for pollution offences is an option which can be exercised in disputes between member states of the EU.

2. It may be asked whether prompt release proceedings in pollution cases could be used in order to obtain the release of the crew only, for example when the vessel has sunk. This was the situation of the captain of the vessel *Prestige* who was detained in Spain for several months. In this respect, it could be argued that article 292, entitled "Prompt release of vessels and crews", should be exclusively reserved for claims seeking the release of both vessels and their crews. But this textual argument does not seem particularly convincing. For example, in the French version of the provision, the expression "Prompte mainlevée de l'immobilisation du navire ou prompte libération de son equipage" (corresponding to "Prompt release of vessels or crews") is used. Another approach is to consider that the crew members detained for pollution offences should logically be covered by prompt release proceedings since:

> Part XII does not authorize the arrest of any person; at most it permits the detention of the crew along with the vessel, but with prompt release subject to 'reasonable procedures such as bonding or other appropriate financial security'.[35]

3. In handling prompt release proceedings, the Tribunal has to assess whether the conditions fixed by article 292 are met and, if so, to determine the amount of the reasonable bond which should be posted to obtain the release of the vessel. In no way should this be seen as the expression of any inclination towards the position of the flag state as regards the merits of the case. If the detaining state argues that the circumstances of the case – for example in the case of a vessel repeatedly involved in pollution offences – indicate a failure of the flag state to exercise an effective control on its vessel, such a claim would not be admissible within the limited scope of prompt release proceedings. A state willing to challenge the legality of the conduct of the flag state would then have to institute separate proceedings under the LOS Convention, invoking for example a breach, by the flag state, of its duties under articles 94(3) or 217 of the LOS Convention.

In the context of its compulsory jurisdiction to prescribe provisional measures pending the constitution of an arbitral tribunal (article 290(5) of the LOS Convention), the ITLOS has already dealt with several cases relating to the protection of the marine environment.[36] This is somewhat natural since, under article 290(1) of the LOS Convention, the Tribunal is expressly competent

[35] M.H. Nordquist et al. (eds), *United Nations Convention on the Law of the Sea 1982: A Commentary* (Martinus Nijhoff: vol. IV 1991) 342.

[36] *Southern Bluefin Tuna Cases*, note 3; *The MOX Plant Case (Ireland* v. *United Kingdom*, note 6); *Case concerning Land Reclamation*, note 9.

to prescribe provisional measures in order to prevent serious harm to the marine environment. Furthermore, recourse to urgent proceedings such as provisional measures proceedings may be particularly useful in the case of environmental incidents requiring a timely response.

An important contribution of the jurisprudence of the Tribunal in this regard concerns the preservation of the procedural rights of the parties. Certainly, substantial rights (e.g., the right not to be affected by pollution damage resulting from hazardous activities) need to be protected in the context of provisional measures proceedings. But the protection of procedural rights, such as the right to be notified of a planned activity, to be consulted on its potential impact on the environment, to be informed of the risks of potential harm and emergency response measures planned in case of accidents, is equally important. In its decisions, the Tribunal has adopted specific measures intended to ensure access to information or to assess the environmental risks of a planned activity. For example, in the *Land Reclamation* case,[37] the Tribunal requested the parties to cooperate and exchange information and also ordered them to establish a group of independent experts in order to determine the effects of land reclamation works conducted by Singapore and to propose, as appropriate, measures to deal with any adverse effects of such work.[38]

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[37] *Land Reclamation* case, note 10.

[38] See Ibid., operative provision 1(a) in the Order of 8 October 2003:

> "Malaysia and Singapore shall cooperate and shall, for this purpose, enter into consultations forthwith in order to: (a) establish promptly a group of independent experts with the mandate (i) to conduct a study, on terms of reference to be agreed by Malaysia and Singapore, to determine, within a period not exceeding one year from the date of this Order, the effects of Singapore's land reclamation and to propose, as appropriate, measures to deal with any adverse effects of such land reclamation; (ii) to prepare, as soon as possible, an interim report on the subject of infilling works in Area D at Pulau Tekong …".

Other Agreements

The LOS Convention is not the only international instrument which is relevant in the context of the protection of the marine environment. A number of multilateral agreements coexist with the Convention, such as conventions adopted under the auspices of the IMO,[39] relating to regional seas,[40]or concluded in the field of fishery matters[41] including regional fishery conventions.[42]

These agreements do not adopt a uniform approach as regards the settlement of disputes in their respective provisions.

See also the Order of 3 December 2001 in the *MOX Plant Case (Ireland v. United Kingdom)*, note 6:

> "The Tribunal ... Prescribes, pending a decision by the Annex VII arbitral tribunal, the following provisional measure under article 290, paragraph 5, of the Convention:
> Ireland and the United Kingdom shall cooperate and shall, for this purpose, enter into consultations forthwith in order to:
> (a) exchange further information with regard to possible consequences for the Irish Sea arising out of the commissioning of the MOX plant;
> (b) monitor risks or the effects of the operation of the MOX plant for the Irish Sea;
> (c) devise, as appropriate, measures to prevent pollution of the marine environment which might result from the operation of the MOX plant".

[39] E.g. MARPOL 73/78.

[40] E.g. Convention for the Protection of the Mediterranean Sea against Pollution (Barcelona Convention) of 16 February 1976, amended in 1995 and renamed Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean (1102 UNTS 27); and Convention for the Protection of the Marine Environment of the North-East Atlantic (OSPAR Convention) of 22 September 1992 (2354 UNTS 67).

[41] E.g. Agreement for the Implementation of the provisions of the 1982 Convention relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks of 4 August 1995 (2167 UNTS 3).

[42] E.g. Agreement for the Establishment of the General Fisheries Commission for the Mediterranean of 24 September 1949 (as amended; consolidated version available at <www.gfcm.org>); Convention on Future Multilateral Cooperation in the Northwest Atlantic Fisheries of 24 October 1978 (as amended; consolidated version available at <www.nafo.int>.

Some of them do not provide for any mechanism for the settlement of disputes.[43] Others contain a specific provision in this respect. If so, they incorporate the mechanism contained in Part XV of the LOS Convention whether or not parties to these agreements are also parties to the Convention,[44] or provide for a separate procedure. In the latter case, the agreements set up a judicial or arbitral[45] mechanism or simply refer to diplomatic means without providing for a compulsory procedure entailing binding decisions.[46]

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[43] See, e.g., International Convention for the Regulation of Whaling of 2 December 1946 (161 UNTS 72); International Convention for the Conservation of Atlantic Tunas of 14 May 1966 (673 UNTS63).

[44] See Protocol to the 1972 Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter of 7 November 1996 (1046 UNTS 120) ; Convention on the Protection of the Underwater Cultural Heritage of 2 November 2001 (41 ILM 37); and Nairobi International Convention on the Removal Wrecks of 23 May 2007 (46 ILM 697).

[45] See, e.g., art. 10 of MARPOL 73/78:

> "Any dispute between two or more Parties to the Convention concerning the interpretation or application of the present Convention shall, if settlement by negotiation between the Parties involved has not been possible, and if these Parties do not otherwise agree, be submitted upon request of any of them to arbitration as set out in Protocol II to the present Convention".

See also art. 32(1) of OSPAR Convention (note 40):

> "Any disputes between Contracting Parties relating to the interpretation or application of the Convention, which cannot be settled otherwise by the Contracting Parties concerned, for instance by means of inquiry or conciliation within the Commission, shall at the request of any of those Contracting Parties, be submitted to arbitration under the conditions laid down in this Article".

[46] See, e.g., art. 16(1)–(2) of the Convention for the Conservation of Southern Bluefin Tuna of 10 May 1993 (1819 UNTS 360) (CCSBT Convention):

> "1. If any dispute arises between two or more of the Parties concerning the interpretation or implementation of this Convention, those Parties shall consult among themselves with a view to having the dispute resolved by negotiation, inquiry, mediation, conciliation, arbitration, judicial settlement or other peaceful means of their own choice.

It may then be useful to briefly examine the relations between Part XV of the LOS Convention and the mechanisms set out by these agreements when a dispute occurs as regards the application or interpretation of their provisions. Several hypotheses may be considered in this respect.

When the agreement incorporates the mechanism contained in Part XV of the LOS Convention, no specific difficulty should arise, in principle. Nevertheless, it will be important to assess whether some variations have been introduced in the agreement, as compared with the provisions contained in the LOS Convention. For example, the agreement could provide that recourse to compulsory proceedings under Part XV would be subject to the rule that diplomatic means should have been exhausted first.[47] Likewise, a change of drafting may have the result that recourse to Part XV is not anymore compulsory, as in the case of the Compliance Agreement.[48]

In the case of an agreement which does not contain any provision for the settlement of disputes, the question will arise as to whether Part XV could still be available to the parties to a dispute.

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2. Any dispute of this character not so resolved shall, with the consent in each case of all parties to the dispute, be referred for settlement to the International Court of Justice or to arbitration; but failure to reach agreement on reference to the International Court of Justice or to arbitration shall not absolve parties to the dispute from the responsibility of continuing to seek to resolve it by any of the various peaceful means referred to in paragraph 1 above".

47 See e.g., art. 16 of the Nairobi International Convention on the Removal Wrecks, note 44.

48 Agreement to Promote Compliance with International Conservation and Management Measures by Fishing Vessels on the High Seas of 24 November 1993 (2221 UNTS91). While the Agreement refers to the mechanism contained in Part XV of the Convention, it does not contain a compulsory mechanism. Its article IX only provides for the possibility of submitting the dispute to the ICJ, the ITLOS or arbitration "with the consent of all Parties to the dispute".

Part XV would then be used if it could be demonstrated that the facts of the case not only resulted in a breach of the agreement but also of provisions of the LOS Convention. This may be so when the agreement implements or develops provisions of the LOS Convention. A dispute could then be instituted under Part XV of the LOS Convention and, in this instance, pursuant to article 293(1) of the LOS Convention,[49] the competent judicial or arbitral forum could apply the provisions of the additional agreement.

Another scenario concerns agreements containing a clause which does not provide for a compulsory mechanism entailing binding decisions. In the event of a dispute, the agreement could simply provide for diplomatic means (negotiation, conciliation, mediation, enquiry) and, subject to the consent of the parties to the dispute, a recourse to judicial or arbitral proceedings. As in the previous hypothesis, in this instance Part XV of the LOS Convention could be activated if the facts of the case – in addition to the claim based on an alleged breach of the agreement – would justify an allegation of non-compliance with provisions of the LOS Convention. There is, however, an issue which could arise in this context, concerning the possible application of article 281 of the Convention.[50] Reference to this issue is prompted by the reasoning developed by the arbitral tribunal constituted under Annex VII to the LOS Convention to deal with the *Southern*

[49] LOS Convention art. 293(1) provides: "[a] court or tribunal having jurisdiction under this section shall apply this Convention and other rules of international law not incompatible with this Convention".

[50] LOS Convention art. 281(1) entitled "Procedure where no settlement has been reached by the parties" provides:

> "If the States Parties which are parties to a dispute concerning the interpretation or application of this Convention have agreed to seek settlement of the dispute by a peaceful means of their own choice, the procedures provided for in this Part apply only where no settlement has been reached by recourse to such means and the agreement between the parties does not exclude any further procedure. …"

Bluefin Tuna Case between Australia and Japan and between New Zealand and Japan.[51] In this case, the parties to the dispute (New Zealand, Australia, Japan) were states parties to the LOS Convention as well as to the CCSBT Convention,[52] which contained a clause (article 16) for the settlement of disputes. Pursuant to this clause, parties to a dispute had to "consult among themselves with a view to having the dispute resolved by negotiation, inquiry, mediation, conciliation, arbitration, judicial settlement or other peaceful means of their own choice" and disputes not so resolved "shall, with the consent in each case of all parties to the dispute, be referred for settlement to the International Court of Justice or to arbitration".[53] As this may be seen, such a provision simply reflects basic principles of general international law. Noting the similarities between the substantive provisions (on the protection of fish stocks) contained in the CCSBT Convention and the LOS Convention, the arbitral tribunal decided that it would be artificial to consider that there were two disputes, one under the CCSBT Convention and one under the LOS Convention. In its view, the clause contained in the CCSBT Convention expressed the agreement of the parties to "seek settlement of the dispute by a peaceful means of their choice". Thus this clause had to be given preference over Part XV of the LOS Convention. However, the negotiations between the parties had not been successful and, in this situation, pursuant to article 281(1) of the LOS Convention, Part XV would again be applicable, except when "the agreement between the parties does not exclude any further procedure". The arbitral tribunal found that, by requiring the consent of the parties to the submission of dispute to compulsory procedures, "the intent of Article 16 is ...

[51] *Southern Bluefin Tuna Case between Australia and Japan and between New Zealand and Japan,* note 4.

[52] Convention for the Conservation of Southern Bluefin Tuna, note 46.

[53] For the text of art. 16, see note 46.

to exclude the application to a specific dispute of any procedure of dispute resolution that is not accepted by all parties to the dispute".[54] The reasoning of the arbitral tribunal, which is based on an implicit agreement, does not seem very convincing. It would have been more logical to require a clear manifestation of consent in order to deprive states parties of their rights to have recourse to Part XV. That said, in light of this award, states concluding additional agreements related to matters covered by provisions of the LOS Convention would be well-advised to examine carefully the insertion of a clause for the settlement of disputes. Indeed, the insertion of a provision which *prima facie* looks innocuous could have the unfortunate result of preventing states parties to the LOS Convention from using the mechanism contained in its Part XV.

A specific situation concerns agreements containing a compulsory mechanism, distinct from Part XV, for the settlement of disputes relating to the application or interpretation of their provisions. In such instances, parties have at their disposal a specific mechanism and they do not need to have recourse to Part XV of the LOS Convention in order to be granted access to justice. The existence of self-contained mechanisms, distinct from Part XV of the LOS Convention, specifically devoted to the settlement of disputes relating to particular agreements is certainly a positive development. At the same time, it seems important to avoid that the procedure set out by a particular agreement would function in isolation, without taking into account the other rules of international law binding upon the parties to the dispute.

To some extent, this issue did arise in the dispute between Ireland and the United Kingdom which was submitted to arbitral

[54] *Southern Bluefin Tuna Case between Australia and Japan and between New Zealand and Japan,* note 4 at para. 57.

proceedings under the OSPAR Convention.[55] In this case, Ireland alleged that the United Kingdom had not complied with its obligation under article 9 of the said Convention to make available "information in written, visual, aural or data-base form on the state of the maritime area, on activities or measures adversely affecting or likely to affect it and on activities or measures introduced in accordance with the Convention". Ireland had specifically requested information on 14 different items.[56] However, in its award, the arbitral tribunal decided that none of these 14 categories of information did relate to the state of the marine environment.

Incidentally, it may be noted that Ireland, in the course of parallel arbitral proceedings instituted under Annex VII of the LOS Convention, submitted a request for the prescription of provisional measures (under article 290(5) of the LOS Convention) to the ITLOS and that, further to the Order adopted by the Tribunal in 2001, Ireland obtained information on two items[57] which – in the view of the OSPAR arbitral tribunal – did not relate to the state of the marine environment. Certainly, the two cases were dealing with different allegations: on the one hand, breach

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55 *Ireland v. United Kingdom ("OSPAR" Arbitration)*, note 8.

56 Ibid., para 161:

> "(A) Estimated annual production capacity of the MOX facility; (B) Time taken to reach this capacity; (C) Sales volumes; (D) Probability of achieving higher sales volumes; (E) Probability of being able to win contracts for recycling fuel in 'significant quantities'; (F) Estimated sales demand; (G) Percentage of plutonium already on site; (H) Maximum throughput figures; (I) Life span of the MOX facility; (J) Number of employees; (K) Price of MOX fuel; (L) Whether, and to what extent, there are firm contracts to purchase MOX from Sellafield; (M) Arrangements for transport of plutonium to, and MOX from, Sellafield; (N) Likely number of such transports".

57 Information on projected operational life of the MOX plant (see *ITLOS Pleadings, Minutes and Documents 2001, Vol. 9, MOX Plant (Ireland* v. *United Kingdom), Provisional Measures*, p. 887 (question No. 5) and p. 906) and on the transport of nuclear fuel from and to the MOX plant (see Ibid., pp. 928–929).

of article 9 of the OSPAR Convention; on the other hand, breach of duty to cooperate under the LOS Convention (article 197). It is nevertheless interesting to observe that, in the OSPAR proceedings, the award did not make any reference to the LOS Convention in its interpretation of the expression "state of the marine area" contained in article 9 of the OSPAR Convention. Article 32(6)(a) of the OSPAR Convention ("The arbitral tribunal shall decide according to the rules of international law and, in particular, those of the Convention") would have permitted to use other rules of international law but the arbitral tribunal decided that it should restrict the scope of applicable law to the OSPAR Convention, as *lex specialis*.[58]

A last scenario addresses the specific situation of law of the sea disputes before the ECJ. Pursuant to the European treaties,[59] the ECJ has exclusive jurisdiction to settle disputes between member states of the Union involving issues of European law. As indicated above, the exclusive jurisdiction of the ECJ may also apply to disputes under the LOS Convention between member states of the

[58] *Ireland v. United Kingdom ("OSPAR" Arbitration)*, note 8, paras. 84–85:
> "… The first duty of the tribunal is to apply the OSPAR Convention. An international tribunal … will also apply customary international law and general principles unless and to the extent that the Parties have created a *lex specialis*. Even then, it must defer to a relevant *ius cogens* with which the Parties' *lex specialis* may be inconsistent…
> (…)
> [T]he competence of a tribunal established under the OSPAR Convention was not intended to extend to obligations the Parties might have under other instruments…Interpreting Article 32(6)(a) otherwise would transform it into an unqualified and Comprehensive jurisdictional regime, in which there would be no limit *ratione materiae* to the jurisdiction of a tribunal established under the OSPAR Convention."

[59] See art. 344 of the Consolidated version of the Treaty on the Functioning of the European Union [ex. Article 292 of the Treaty Instituting the European Community] [2002] OJ C 326: "Member States undertake not to submit a dispute concerning the interpretation or application of the Treaties to any method of settlement other than those provided for therein".

Union to the extent that provisions of the LOS Convention have become part of the European legal system.

In this context, it may be recalled that the EU is bound by the LOS Convention and that, as stated by the ECJ: "[i]t is clear from Article 300(7) EC that the Community institutions are bound by agreements concluded by the Community and, consequently, that those agreements have primacy over secondary Community legislation".[60] The ECJ may then play an useful role in order to deal with issues of (in)compatibility between international law binding upon the Union – including the Convention – and secondary legislation (regulations, directives, decisions) adopted by the Union.

In practice, however, the situation is less promising, as is demonstrated by the *Intertanko* case.[61] This case was instituted before United Kingdom courts by associations of shipowners which contested the validity of a European directive imposing criminal penalties for ship-based pollution[62], on the grounds that its provisions were not compatible with different international legal instruments, including the LOS Convention. The matter was then submitted to the ECJ for a preliminary ruling on the validity of the directive.

In its Judgment of 3 June 2008, the ECJ found that it could not assess the validity of the directive *vis-à-vis* the LOS Convention. In this decision, the Court states that, in accordance with its jurisprudence:

> [the ECJ] can examine the validity of Community legislation in the light of an international treaty only where the nature and the

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60 Case C-308/06 *Intertanko e.a.,* Judgment of 3 June 2008 [2008] ECR I-0405, para. 42.

61 Ibid.

62 Directive 2005/35/EC of the European Parliament and of the Council on ship-source pollution and on the introduction of penalties for infringements [2005] OJ L 255, 11; as amended by corrigenda at [2006] OJ L 33, 87, and [2006] OJ L 105, 65).

> broad logic of the latter do not preclude this and, in addition, the treaty's provisions appear, as regards their content, to be unconditional and sufficiently precise…"[63]

On the basis of an examination of the Convention, the Court then comes to the conclusion "that UNCLOS does not establish rules intended to apply directly and immediately to individuals and to confer upon them rights or freedoms capable of being relied upon against States".[64] Therefore, "the nature and the broad logic of UNCLOS prevent the Court from being able to assess the validity of a Community measure in the light of that Convention".[65]

The reasoning of the Court, in support of its position that the LOS Convention does not contain any provision directly applicable, is open to doubt. Indeed, several provisions of the LOS Convention are drafted in the form of clear rights conferred on individuals, which could be invoked before municipal courts.[66]

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[63] *Intertanko e.a.*, note 60 at para. 45.

[64] Ibid., para. 64.

[65] Ibid., para 65.

[66] See, e.g., art. 97(1) of the LOS Convention entitled "Penal jurisdiction in matters of collision or any other incident of navigation":

> "In the event of a collision or any other incident of navigation concerning a ship on the high seas, involving the penal or disciplinary responsibility of the master or of any other person in the service of the ship, no penal or disciplinary proceedings may be instituted against such person except before the judicial or administrative authorities either of the flag State or of the State of which such person is a national".

See also, art. 73(3) of the LOS Convention:

> "Coastal State penalties for violations of fisheries laws and regulations in the exclusive economic zone may not include imprisonment, in the absence of agreements to the contrary by the States concerned, or any other form of corporal punishment";

Or art. 230(1) of the LOS Convention:

> "Monetary penalties only may be imposed with respect to violations of national laws and regulations or applicable international rules and standards for the prevention, reduction and control of pollution of the marine environment, committed by foreign vessels beyond the territorial sea".

But the purpose of the present paper is not to comment on the Court's Judgment. At this stage suffice it to say that the consequence of the Court's position is that the provisions of the LOS Convention cannot be invoked before the ECJ in the context of preliminary-ruling proceedings concerning the validity of an act adopted by the EU.

This situation may sometimes lead to curious effects. This may be seen in the *Air Transport Association of America and Others* case[67] concerning the alleged invalidity of a European directive[68] concerning aviation activities. Pursuant to proceedings instituted before United Kingdom courts by associations of air transporters, a request for a preliminary ruling on the validity of the directive was submitted to the ECJ. One of the breaches of international law invoked before the Court concerned the incompatibility of the directive with the rule that the high seas are not subject to the sovereignty of any state and the freedom of overflight over the high seas. Those two rules are clearly contained in articles 87 and 89 of the LOS Convention, respectively. However, the decision of the ECJ does not refer to these rules, although they are contained in a treaty binding upon the Union. The Court prefers to rely on principles of customary international law as codified in several treaties, including the 1958 Geneva Convention on the High Seas

On this question, see, e.g. P. Gautier "Applicabilité directe et droit de la mer " in R. Casado Raigon and G. Cataldi (dir.), *Mélanges offerts à Daniel Vignes, L'évolution et l'état actuel du droit de la mer* (Bruylant, Brussels: 2009) 373-393.

67 Case 366/10, *Air Transport Association of America and Others*, Judgment of 21 December 2011 [2011] ECR I-13755.

68 Directive 2008/101/EC of the European Parliament and of the Council of 19 November 2008 amending Directive 2003/87/EC so as to include aviation activities in the scheme for greenhouse gas emission allowance trading within the Community [2009] OJ L8/3.

and – last but not least – the LOS Convention.[69] On that basis, the ECJ is still able to exercise control over the international validity of European legislation but, in light of the relative imprecision of international customary law, that control is now more limited; it consists of verifying that there is no manifest violation of international law.[70]

It should be added that the effect of the ECJ's position is that the provisions of the LOS Convention cannot be used in the context of preliminary-ruling proceedings concerning the validity of an act adopted by the European institutions. However, it still leaves the possibility for the ECJ to rely on provisions of the LOS

[69] *Air Transport Association of America and Others* case, note 67 para. 104:
"These ... principles are regarded as embodying the current state of customary international maritime and air law and, moreover, they have been respectively codified in Article 1 of the Chicago Convention (see, on the recognition of such a principle, the judgment of the International Court of Justice of 27 June 1986 in *Military and Paramilitary Activities in and against Nicaragua (Nicaragua v. United States of America), I.C.J. Reports 1986*, p. 392, paragraph 212), in Article 2 of the Geneva Convention of 29 April 1958 on the High Seas (*United Nations Treaty Series*, Vol. 450, p. 11) (see also, on the recognition of this principle, the judgment of the Permanent Court of International Justice of 7 September 1927 in *the Case of the S.S 'Lotus'*, PCIJ 1927, Series A, No 10, p. 25) and in the third sentence of Article 87(1) of the United Nations Convention on the Law of the Sea, signed in Montego Bay on 10 December 1982, which entered into force on 16 November 1994 and was concluded and approved on behalf of the European Community by Council Decision 98/392/EC of 23 March 1998 (OJ 1998 L 179, p. 1)".

[70] Ibid., para 110:
"However, since a principle of customary international law does not have the same degree of precision as a provision of an international agreement, judicial review must necessarily be limited to the question whether, in adopting the act in question, the institutions of the European Union made manifest errors of assessment concerning the conditions for applying those principles (...)".

Convention for the interpretation of European law, in the context of preliminary-ruling proceedings on interpretation.[71]

Conclusion

The title of this contribution was drafted in the form of a question (Maritime Safety and Environmental Protection in Europe: a role for international courts and tribunals?). A positive response may be given to the question but, at the same time, it is prudent to acknowledge that such a role will depend on certain conditions.

The possibility of bringing disputes to an international court or tribunal depends on the mechanisms for the settlement of disputes available to the states and organizations concerned. The LOS Convention contains a mechanism that is largely compulsory and binding on the EU and its member states. While the majority of disputes among members states of the EU are likely to be submitted to the ECJ, disputes opposing the EU and/or its member states and third states may still be brought before the fora set

[71] See e.g., Case C-347/10 *A. Salemink v Raad van bestuur van het Uitvoeringsinstituut werknemersverzekeringen (Reference for a preliminary ruling from the Rechtbank Amsterdam)* [2012] ECLI:EU:C:2012:17:

> "33. It follows from Article 77 of the Convention on the Law of the Sea that the coastal State exercises over the continental shelf sovereign rights for the purpose of exploring it and exploiting its natural resources. ...
> 34. In accordance with Article 80 of the Convention on the Law of the Sea, in conjunction with Article 60 thereof, the coastal State has the exclusive right to construct the artificial islands, installations and structures on the continental shelf, to authorise them and to regulate their construction, operation and use. The coastal State has exclusive jurisdiction over such artificial islands, installations and structures.
> 35. Since a Member State has sovereignty over the continental shelf adjacent to it — albeit functional and limited sovereignty ... — work carried out on fixed or floating installations positioned on the continental shelf, in the context of the prospecting and/or exploitation of natural resources, is to be regarded as work carried out in the territory of that State for the purposes of applying EU law".

out by the LOS Convention. In this respect, the declarations under Annex IX of the Convention regarding the distribution of competences between the Union and its member states have important consequences. In the absence of a declaration made by the EU under article 287 of the LOS Convention, disputes involving the Union will be submitted to arbitral proceedings but the ITLOS remains available to the parties to a dispute on the basis of an *ad hoc* agreement. The Tribunal may also play a specific role in the context of prompt release proceedings in cases of vessels detained for pollution offences or provisional measures proceedings in cases between the EU and/or its member states and third states.

In addition to the LOS Convention, there exist a number of environmental agreements which may contain separate mechanisms for the settlement of disputes. The relations between such agreements and the LOS Convention, including its Part XV, will have to be determined on a case-by-case basis, in light of the provisions contained in these agreements regarding the settlement of disputes and applicable law.

It has been observed that, further to the decision of the ECJ in the *MOX Plant* case, member states of the EU have the obligation, under European law, to submit to the ECJ disputes among themselves relating to matters regulated by the LOS Convention which have been the subject of internal rules adopted by the Union. In practice, the ECJ is thus the sole judicial body which – within the European legal order – could address issues of compatibility between European legislation and the LOS Convention. In the *Intertanko* case, however, the Court decided that it could not play this role. This should not lead to the conclusion that issues of (in) compatibility between European legislation and the LOS Convention are deprived of any judge. Part XV of the LOS Convention remains available whenever such issue arises in a dispute between the EU and/or one or several of its member states and a non-EU member state that is a party to the Convention.

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