

# THE SECURITIZATION OF IUU FISHING IN THE SOUTHERN OCEAN

## *A SECURITIZAÇÃO DA PESCA INN NO OCEANO AUSTRAL*

*Luciano Vaz Ferreira<sup>1</sup>*

Universidade Federal do Rio Grande

### **Abstract**

Fish stocks around the world are about to collapse, which has immensurable environmental, economic, and social consequences. Therefore, the possibility that IUU (illegal, unreported and unregulated) fishing proliferate is now followed closely by the international community. In this context, securitization processes of those issues start to arise. The Southern Ocean is particularly vulnerable to IUU fishing and may become the stage of new security dynamics. Thus, we propose the following research question: "How is regulation of fishing at the Southern Ocean securitized and what role does international cooperation play in that process?". This article's main objective is to answer that question. Furthermore, its specific objectives are to investigate securitization of fishing internationally, to study security dynamics in the Southern Ocean, and to discuss the role of international regimes and cooperation for this process. This research project is exploratory in nature. As a research method, we applied literature review using multidisciplinary materials and document analysis.

### **Keywords**

Security. Southern Ocean. International Cooperation. International Regimes. Fishing.

### **Resumo**

*Com os estoques pesqueiros ao redor do mundo à beira do colapso, com consequências ambientais, econômicas e sociais imensuráveis, as possibilidades de proliferação da pesca INN*

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<sup>1</sup>Doutor em Estudos Estratégicos Internacionais (UFRGS), com período de pesquisa na *American University* (Washington, D.C.). Professor dos Cursos de Relações Internacionais e Direito da Universidade Federal do Rio Grande (FURG). Professor do Mestrado em Direito e Justiça Social (FURG). Membro do Instituto Brasileiro de Direito do Mar (IBDMAR). Pesquisador do Laboratório de Pesquisas em Política e Direito do Mar – LABMAR.

*(ilegal, não declarada ou não regulamentada) passaram a ser acompanhadas com grande atenção pela comunidade internacional. Neste contexto, desencadearam-se processos de securitização do problema. O Oceano Austral é particularmente vulnerável à pesca INN, podendo ser palco de novas dinâmicas de segurança. Neste contexto, apresenta-se o seguinte problema de pesquisa: “de que maneira ocorrem as dinâmicas de securitização do controle da pesca no Oceano Austral e qual o papel da cooperação internacional neste processo?”. Além da resposta ao problema de pesquisa, que é o objetivo geral, o artigo possui como objetivos específicos investigar a securitização da pesca no cenário internacional, estudar as dinâmicas de segurança existentes no Oceano Austral, discutir os papéis da cooperação e dos regimes internacionais neste processo. A pesquisa é de natureza exploratória. Como técnica de pesquisa escolheu-se a revisão bibliográfica, servindo-se de material interdisciplinar e análise documental.*

**Palavras-chave**

*Segurança. Oceano Austral. Cooperação Internacional. Regimes Internacionais. Pesca.*

## 1 INTRODUCTION

The consumption of fish and seafood has increased in the last decade. They are part of the daily diet of a great portion of Earth's population, in different societies. Increasing demand, as well as technological advancements, expand the capture of those animals. Consequently, several species may be endangered, and maritime ecosystems may be destroyed or become unbalanced. Their habitats - oceans and seas - are large spaces where state sovereignty hardly reaches, making them the scenery of international disputes. Such vulnerability is prominent in the Southern Ocean, which surrounds Antarctica, as it is a remote location. Since it is not subject to any coastal state and its wealth is not yet fully measured, it entices states' greed.

Thus, we propose the following research question: "How is regulation of fishing at the Southern Ocean securitized and what role does international cooperation play in that process?". This article's main objective is to answer that question. Furthermore, its specific objectives are to investigate securitization of fishing internationally, to study security dynamics at the Southern Ocean, as well as to discuss the role of international regimes and

cooperation for this process. The research is exploratory in nature and serves as an introduction to the theme, which is still sparsely discussed. As a research method, we applied literature review using multidisciplinary materials (from the areas of International Relations and International Law) and document analysis of sources extracted from international organizations' and governments' websites.

This article is divided into two sections. The first one is more general and the second one, more specific. The first section discusses the securitization process of international fishing regulations under a security and strategic studies perspective. It further analyzes the role played by international cooperation and international regimes in maritime security. It will focus on the "United Nations Convention on the Law of the Sea" (UNCLOS) regime, emphasizing its provisions regarding fishing. The second section studies the Southern Ocean as a security space, presenting the main security dynamics in the region. That section will discuss how international cooperation occurs for fishing regulation in the Antarctic region. It will specially emphasize efforts taken under the framework of the "Convention on the Conservation of Antarctic Marine Living Resources".

## **2 FISHING AS A SECURITY ISSUE AND THE CREATION OF INTERNATIONAL REGIMES**

Fishing is a very important human activity and has economic and social impacts. Currently, international trade of fish and other seafood amounts to USD 153 billion in exports (FAO, 2017). It is worth noting that the consumption of seafood has increased in the last decades. While in the 1960s about 20 million metric tons were captured every year, estimates for 2017 are around

90 million metric tons (FAO, 2017). Yearly average *per capita* consumption in the 1960s was 9.9 kg, while by 2012 the average had almost doubled to 19.2 kg (FAO, 2014, p. 06). Two factors have caused this increase: First, the development of naval technology, allowing displacement of fishing fleets at long distances and easier large-scale capturing; Second, increasing market demand for seafood, a consequence of population growth and of seafood consumption becoming more popular. This led to an increase in seafood capture throughout the world to supply the demand (PAULY; ZELLER, 2016).

Such unprecedented growth in the fishing market may result in a collapse of the whole sector, leading to unpredictable consequences. In 1974, 90% of fishing resources were explored sustainably, i.e., in a manner as to allow for their natural renovation. In 2011, the rate was measured to be 68.6%, which means that 31.4% of all stock in the world are subject to overfishing. They are thus at risk of being extinct in the near future (FAO, 2016, p. 05-06).

One element that greatly contributes to this situation is illegal, unreported and unregulated fishing (IUU). Generally speaking, "illegal fishing" refers to all activities conducted against national and international regulations; "Unreported fishing" is fishing undertaken without the activity being properly registered (such as description and amount of fish, fishing locations, use of fishing tools); "Unregulated fishing", in turn, is fishing undertaken at places or under circumstances for which there are no national or international regulations, such as some situations at high seas (PALMA et al, 2010, p. 38). An estimated 20 to 50% of fish are captured illegally, under the wrong label, with no records or from stocks with no sustainable management program. Those illicit practices generate between USD 15 and 36 billion every year (FAO, 2016, p 05-06).

Recently, IUU fishing has been classified as a possible "security issue" by some sectors. An issue is "securitized" when it is presented as an existential threat to an object (normally a state, government, territory, or society), requiring extraordinary measures

(BUZAN; WEAVER; WILDE, 1998, p. 23-24), which may include the use of force or military responses.

Traditionally, strategic and security studies' agenda included only protection of states or governments against foreign threats, under a state-centric perspective (FIGUEIREDO, 2010, p. 273). The end of the Cold War, however, redefined international relations, and a new approach proposes the idea of "Human Security". Security studies now include the survival and well-being of individuals, not focusing exclusively on states anymore (PARIS, 2001, p. 88). In that sense, a security threat may also be defined as something that can rapidly and drastically degrade the quality of life of a state's population (ULLMAN, 1983, p. 129). The study presented in 1994 by the United Nations Development Programme, known as Human Development Report 1994, is considered a landmark for this approach. It includes a specific chapter on the concept of "Human Security", discussing economic, environmental, and social security threats.

Contemporary studies on human security usually approach the matter under a constructivist perspective, to observe how securitization processes occur. In that sense, definition of a threat is a self-referencing and socially constructed practice. It is not based on the real existence or extension of the issue, but simply on its classification through a "speech act" (BUZAN; WEAVER; WILDE, 1998, p. 24) by an actor with political power and its acceptance by their audience (WEAVER, 1995, p. 56).

Speech acts are consolidated in official documents issued by governments laying out their national maritime security and strategy plans<sup>2</sup>. The first was the United States' National Strategy

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<sup>2</sup> The search for documents available online was made through Google's search engine using keywords "national maritime strategy" and "national maritime security". On July 26, 2018, we found national maritime strategy plans from the following countries published in English: United States, United Kingdom, France,

for Maritime Security, issued in 2005. It associates inadequate exploration of maritime resources to environmental damages and to threats to economic security. The Strategy asserts that competition for scarce fishing stocks may result in violent conflict and regional instability, requiring national navies to take aggressive stances. In that context, it states that the "United States and other nations have a substantial economic and security interest in preserving the health and productive capacity of the oceans". It concludes affirming that the United States will continue to project their presence, monitoring and patrolling maritime areas under American jurisdiction, as well as "high seas areas of national interest". Recently, the National Intelligence Council, a United States intelligence advisory agency, published a report exclusively on IUU (Global Implications of Illegal, Unreported and Unregulated (IUU) Fishing, published in 2016). It argues that IUU is a threat to food and economic security and benefits transnational organized crime.

This stance is not exclusive to the United States. The United Kingdom's document on maritime security strategy, issued in 2014, established the need for protection against threats originating from its maritime domains, including IUU fishing. In the document, the United Kingdom puts IUU fishing at the same level as other threats, such as organized crime and terrorism, which shows how severe the British government considers it to be. National maritime security strategies and programs from Spain, issued in 2013, India, issued in 2015, and France, issued in 2015, follow along the same lines. The European Union issued its plan in 2014. It classified environmental risks, including IUU fishing, as a threat to the maritime security of its member-states (Table 1).

Table 1 - References to fishing issues in each country's and in the European Union's maritime security and strategy documents

Country	Title of the Document	Year of Publication	References to the words fish, fishing, fishers or fisheries
United States	National Strategy for Maritime Security	2005	3
Spain	National Maritime Security Strategy	2013	14
United Kingdom	UK National Strategy for Maritime Security	2014	47
India	Ensuring Secure Seas: Indian Maritime Security Strategy	2015	64
France	National Strategy for the Security of Maritime Areas	2015	62
European Union	European Union Maritime Security Strategy	2014	14

Table created by the author based on plans available online in English (UNITED STATES, 2005; ESPAÑA, 2013; UNITED KINGDOM, 2014; INDIA, 2015; FRANCE, 2015; EUROPEAN UNION, 2014) on July 31, 2018.

Even though our sample includes only five countries and one international organization, given their prominent position globally we argue that their official statements may serve to "take the temperature" of how a significant part of the international security community has recently dealt with the issue. Those "securitizing" discourses certainly reverberate throughout the international arena.

National maritime security and strategy plans studied here adhere to a human security approach. They understand IUU fishing issues as a threat to environmental, economic, and food security - three intertwined dimensions. The 1987 Brundtland Report, issued by the United Nations, was a landmark in sustainable development, and classified environmental protection as a pre-requisite for the

survival of mankind. A consequence of consumerism and unrestrained growth, overexploitation of natural resources generates irreversible impacts on the environment. It leads to violent conflicts and threats to human existence and dignity (MYERS, 1986, p. 251; MATTHEW, 2010, p. 08).

Several techniques applied to IUU fishing threaten environmental security. They may endanger species and cause irreparable harm to biodiversity and to the health of ecosystems (AGNEW, 2009). The use of forbidden techniques is common: Cyanide, bottom trawling, and explosives (WWF, 2018). IUU fishing is responsible for accidentally capturing and killing marine life such as young specimens, turtles, dolphins, and seabirds. At high seas, large fixed nets which are recovered by vessels when filled are often used. Many nets are abandoned and end up capturing and killing animals indefinitely. A common practice to dodge quota limitations or authorized fishing areas is to transfer fish to other reefer vessels at high seas, masking the true origin of products.

Economic security refers to the need to secure individuals a basic income, be it through productive labor or through a social security system (UNDP, 1994). Estimates indicate that between 15 and 20% of the world population acquires their income from fishing (FAO, 2014). This means shortage of those resources may lead millions of people into extreme poverty.

Food security refers to individuals' access to sufficient food (UNDP, 1994). We note that for 3.1 billion people in the world, fish consumption represents about 20% of daily animal protein intake (FAO, 2016, p. 04). It is an important nutritional source, especially in underdeveloped and developing countries, where that number can reach over 50% (KAWARAZUKA; BÉNÉ, 2011). Drastic reduction in fishing stocks may lead to increased malnutrition at those countries.

Another argument used in the securitization process of IUU fishing refers to its ties with transnational organized crime. This has even been pointed out in a 2009 UN General Assembly document (A/RES/64/72). The sheer size of high seas, the difficulty law enforcement agencies have to reach those areas, and



light penalties applied to those crimes make this activity attractive for those organizations (HAENLEIN, 2017, p. 08). Vessels practicing IUU fishing are also possibly used to transport drugs and guns. They can be found at the main routes used by those organizations. Forced labor is also usual, as the treatment given to the crew of those vessels shows (SHAVER; YOZELL, 2018, p. 16).

Having defined IUU fishing as a possible security issue, the next debate concerns responses from the international system (or at least from great powers) to deal with it, as it happens at a unique location: the sea. Historically, the sea has always been seen as a dangerous and insecure zone (MACK, 2011, p. 74). It serves not only as a passageway that connects different countries (about 90% of world trade is done through maritime ways), but also as a stage for power projection, military disputes, as well as a source of specific threats (such as piracy) (STEINBERG, 2001). The maritime physical space is unique and challenging, given its immense size (70% of our planet is covered in water); inhospitality (human beings are adapted to life on land, not water); and lack of physical barriers that may be used as strategic vantage points (enemies may move in any direction without leaving traces) (SPELLER, 2014, p. 16-18).

Recent studies on maritime security (from the beginning of the 21<sup>st</sup> century) assume that those particularities of maritime environments require special strategies different from those produced by mainstream strategic studies (BUEGER; EDMUNDS, 2017, p. 1296-1297). While for threats on land unilateral force is often applied and International Law is disregarded, the idea for maritime threats is that they require responses based on international cooperation and on respect for international norms.

Concerning international cooperation, we note that maintenance of maritime security is deemed too complex and diffuse by several countries' foreign policies. Therefore, it cannot be

controlled by a single state, regardless of its power (BUEGER; EDMUNDS, 2017, p. 1297). Starting in 2005, the United States Navy argued that the United States were incapable of handling maritime security issues alone. They would need cooperation strategies with other states that shared their interests. This idea was seen as controversial at the time.

The United States National Strategy for Maritime Security defines as one of its strategic actions to "enhance international cooperation" to prevent and respond to maritime threats. Among the suggested initiatives are the exchange of information between intelligence and law enforcement agencies about criminal activities; the creation of an international database of vessel registrations (including data on crew and cargo); to offer economic aid so other countries may invest in maritime security. In the following years, the understanding of maritime security based on international cooperation was replicated by several countries' and international organizations' strategic plans, including: United Kingdom (2014), France (2014), Australia (2016), European Union (2014), NATO (2011), African Union (2014), and G7 (2015) (BUEGER; EDMUNDS, 2017, p. 1298). This understanding is in line with Geoffrey Till's (2014, p. 06-14) model of "post-modern navies". According to this model, national navies and coast guards are responsible for maintaining the order at sea by adopting a collaborative stance towards their counterparts, developing joint activities to face criminal activities (TILL, 2016, p. 181).

The second characteristic of maritime security worth noting is the relevant role played by International Law. The reason lies on the development of specific legal norms laying out detailed rules for actor behavior and responsibility in international waters. Those norms and rules create international regimes<sup>3</sup> unparalleled in any

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<sup>3</sup> According to Stephen D. Krasner (1982, p. 186), international regimes are "implicit or explicit principles, norms, rules, and decision-making procedures around which actors' expectations converge in a given area of international relations".

other security issue<sup>4</sup>. In this context, International Law applicable to maritime security stabilizes expectations and solves possible conflicts between naval powers. It does that by encouraging international cooperation to face common threats (KRASKA; PEDROZO, 2013, p. 10). Law and maritime security become inseparable themes. This can be identified in research by authors focused exclusively on International Relations<sup>5</sup> or on multidisciplinary approaches<sup>6</sup>.

One of the most important instruments is the 1982 United Nations Convention on the Law of the Sea (UNCLOS) (which came into force in 1994). Widely accepted<sup>7</sup>, it deals with different topics, such as maritime resources conservation and exploitation and navigation rights. Those rules have direct impact on maritime security dynamics<sup>8</sup>.

UNCLOS has several relevant norms on international fishing and on limits to overseeing illicit activities. Traditionally, International Law considered fishing to be a free and unrestricted activity, as it was believed that fishing resources were inexhaustible (FULTON, 1911, p. 03). However, some initiatives started to be

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<sup>4</sup> On Law of War, see Vaz Ferreira (2014).

<sup>5</sup> Authors who research contemporary naval power under an international relations perspective and who are references in this area, such as Geoffrey Till (2014) and Ian Speller (2014), dedicate some of their research to discussing the role of International Law, especially the UNCLOS regime.

<sup>6</sup> This is the case of research by James Kraska (2011) and Natalie Klein (2011), both of whom have backgrounds in Law and research maritime security.

<sup>7</sup> UNCLOS is currently ratified by 168 countries and one international organization (the European Union). Even though the United States have not ratified the Convention, they accept its application as customary law.

<sup>8</sup> Another treaty on maritime security issues, specifically terrorism, is the 1988 "Convention for the Suppression of Unlawful Acts against the Safety of Maritime Navigation". It has been complemented by an additional protocol on the Convention's application to fixed platforms and one other protocol on the use of vessels to transport weapons of mass destruction.

implemented during the first half of the 20<sup>th</sup> century. The "International Convention for the Regulation of Whaling", signed in 1946, established its own international organization that functions to this day.

UNCLOS innovated by dividing among states that have shorelines ("Coastal States") the right to exclusively explore natural resources within their exclusive economic zone (EEZ) - a 200-nautical-mile area counting from the coast. The idea is that by defining "property rights" (or "sovereign rights", according to the Convention's text) for Coastal States regarding their fishing stocks, putting them under state jurisdiction (national and foreign vessels), their exploration would be more sustainable, and states would be more careful overseeing illegal activities (UNCLOS Arts. 61 to 68) (ROTHWELL; STEPHENS, 2016).

The high seas are areas outside the limits established for states' EEZ. There, exploration remains free for all countries, generally speaking. However, the UNCLOS determines a general duty to preserve high seas stocks, given the migratory nature of maritime animals and possible negative impacts of overfishing on ecosystems (UNCLOS Arts. 116 to 120). As it is an international space, at high seas the state where the vessel is registered ("flag state") must oversee its activities (Art. 96), observing boarding and inspection prerogatives ("right of visit") (Art. 110). Regarding fishing, foreign vessel boarding at high seas is only allowed in three exceptional cases: a) Continuous pursuit of a vessel that has committed an illicit act at a national EEZ ("right of hot pursuit") (Art. 111); b) Vessels with no nationality registration (Art. 110); c) Vessels from countries members of a regional fishing organization (ratified through a specific treaty) that previously allows mutual oversight<sup>9</sup>.

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<sup>9</sup> That is the case, for example, of the "International Commission for the Conservation of Atlantic Tunas" (ICCAT); The "Commission for the Conservation of Southern Bluefin Tuna" (CCSBT); The "Asia-Pacific Fishery Commission" (APFIC); The "Central Asian and Caucasus Regional Fisheries and Aquaculture Commission" (CACFish); The "Southwest Indian Ocean Fisheries Commission" (SWIOFC); The "International Whaling Commission" (IWC), and other.

The creation of international regimes has not ended IUU fishing. It continues to contribute to the increase in tension between countries and to encourage securitization moves. A landmark case is the South China Sea, which became an area of intense disputes to determine local states' jurisdiction zones. Those states depend on maritime economy (BECKMAN, 2013), thus several countries in the region have curbed activities by Chinese fishing vessels, which are sometimes accompanied by the Chinese Coast Guard. In Latin America, it is worth noting the pursuit and sinking of a Chinese fishing vessel by the Argentinean Coast Guard in 2016, a measure that had not been taken in 15 years (CNN, 2016).

### 3 INTERNATIONAL COOPERATION FOR THE REGULATION OF FISHING IN THE SOUTHERN OCEAN

The Southern (or Antarctic) Ocean encircles the Antarctic Continent. Its limits are defined by the "Antarctic Convergence", a place where cold water from the south pole meets warmer water from the southern portions of the Atlantic, Pacific, and Indian Oceans<sup>10</sup>, creating a unique marine ecosystem. The existence of a seventh continent had been conceived since the Antiquity. However, the economic exploration of the region's maritime resources started only during the 20<sup>th</sup> century, from a series of

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<sup>10</sup> There are technical divergences on the existence of the Southern Ocean. It could be simply the meeting of the Atlantic, Pacific and Indian Oceans. There is also a debate on its limits - it could be limited by parallel 60°, close to the Antarctic Continent. For this research, we elected to use the stance adopted by *Encyclopaedia Britannica* and by the *CIA World Factbook*, which identify the Southern Ocean's limits at the Antarctic Convergence.

European incursions seeking to capture whales - to extract combustible oil - and seals - for fur trade.

Exploration of the Antarctic krill (*euphausia superba*, a small crustacean) begun in the 20<sup>th</sup> century. As it is the base of the food chain, it is of extreme relevance for the region. It serves as primary food for several species, including whales, seals, penguins, birds, and fish. The Antarctic krill is rich in protein and has low fat. Besides being appreciated as a delicacy, it has been processed into food supplement for humans, feed for fish in captivity, and fishing bait (ANTARCTIC AND SOUTHERN OCEAN COALITION, 2018). As well as the krill, the Antarctic toothfish (*dissostichus mawsoni*), the Patagonian toothfish (*dissostichus eleginoides*), and the mackerel icefish (*champscephalus gunnari*) are also explored.

Growing awareness on the strategic role of Antarctica and of the Southern Ocean led several countries to claim territories in the Continent itself and its adjacent (Subantarctic) islands throughout the 20<sup>th</sup> century. As there is no native population in those islands, the main goal was to guarantee exclusive exploration of their natural resources. With their strong presence in the southern part of the Atlantic Ocean (controlling the Falklands, South Georgia, and South Sandwich), the British made their claim in 1908, seeking to guarantee the monopoly of whaling (DODDS; HEMMING, 2012, p. 1436). Currently, British claims include part of the Antarctic Peninsula (Graham Land), a portion of territory at Northwest of the Continent (Queen Elizabeth Land), as well as the islands of South Orkney and South Shetland. Later, the British Empire transferred part of its domains to its ex-colonies: to New Zealand, land situated at the South of the Continent (in 1932) (Ross Dependency); to Australia, several areas at Southeast and Northeast of the Continent<sup>11</sup> (in 1933), as well as the islands of Head and McDonald (in 1947).

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<sup>11</sup> Enderby Land, Kemp Land, Mac. Roberts Land, Princess Elizabeth Land, Kaiser Wilhelm II Land, Queen Mary Land, Wilkes Land, George V Land, Oates Land.

British initiative encouraged France to make their own claims in the Continent (Adélie Land, in 1924). The French could easily go to Antarctica, as they strategically occupied several islands at the South of the Indian Ocean (Kerguelen, St. Paul and Amsterdam, Crozet and Scattered Islands). Norway was also interested in whaling, and annexed Bouvet Island (1927), located at the South Atlantic, close to the Southern Ocean, to its territory; Peter I Island (1928), located at Southeast; and part of the Continent, to the North (Queen Maud Land, in 1939). During the 1940s, the two South American countries geographically closer to the Continent, Chile (1940) and Argentina (1942), made their claims. This created a conflict situation, as Argentinean and Chilean claims overlapped each other, as well as British claims.

During the Cold War, the United States increased their presence in the region, which included undertaking military exercises. Between 1946 and 1947, the US Armed Forces organized Operation Highjump. About 4,700 soldiers and 13 ships participated in it. Despite being marketed as a simple training exercise, it had clear geopolitical goals. It is worth noting that the United States made no territorial claims, as an official statement would certainly ensue Soviet reaction. This situation could then interfere in the fragile stability of the region maintained by those seven claimants. Furthermore, the US would have to employ political and economic power that was not available to them at the time, especially in a region where economic and strategic gains were yet not quite clear (ABDEL-MOTAAL, 2016, p. 58-62).

With an imminent dispute for Antarctica and its Ocean, a cooperative and multilateral response gained momentum. In 1957, a large international scientific research project was created, the "International Geophysical Year". Its goal was to study Earth's geophysical phenomena in detail, including those in Antarctica. Surprisingly, countries disputing the Antarctic Continent put their

claims temporarily aside (including rivals US and USSR) to cooperate in this project.

As a result of this initial approach and of the beginning of diplomatic talks, the "Antarctic Treaty" was signed in 1959 (and came into force in 1961). Its goal was to mitigate international disputes motivated by the issue<sup>12</sup>. The Treaty encompasses land and waters below parallel 60 S. It is based on three principles: encouraging international scientific cooperation, which materialized in the creation of several national research units sharing the Antarctic region; the region should be a peaceful zone, with no military activities; territorial claims and debates on sovereignty should be suspended while the Treaty was in force.

Even though the Antarctic Treaty does not directly deal with the use of maritime resources, later initiatives approached this issue by adopting a stance based on sustainable exploration. The first agreement was undertaken in 1964. It sought to preserve and promote rational use of Antarctic fauna and flora<sup>13</sup>. In 1972, the regulation of Antarctic seal hunting and the preservation of the species were object of a treaty (CAS)<sup>14</sup>. As this practice ended decades ago, this instrument was not widely applied. In 1980, the Convention on the Conservation of Antarctic Marine Living Resources (CCAMLR) was created and came into force in 1982. The CCAMLR is applicable to all living maritime resources in the region. Its fundamental principles are the safekeeping of the environment and the integrity of Antarctic ecosystems.

In 1981 and 1987, the states parties to the Antarctic Treaty negotiated the creation of an international treaty regulating mining in the region, including the use of the seabed. Even though a Convention was signed, the project was abandoned, especially due to pressure from the environmentalist movement. As a reaction,

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<sup>12</sup> Currently, 53 states are parties to the Treaty.

<sup>13</sup> "Agreed Measures for the Conservation of Antarctic Fauna and Flora". The Treaty was later derogated by other initiatives.

<sup>14</sup> "Convention for the Conservation of Antarctic Seals" (CAS), signed in 1972, came into force in 1978.



the Protocol on Environmental Protection to the Antarctic Treaty ("Madrid Protocol") was created in 1991 and came into force in 1998. Among other, the instrument determined the requirement of previous environmental impact assessments for all activities to be developed in the region. It also blocked any mining activity until 2048, when there will be a new debate on the document.

The Antarctic Treaty, the CAS, the CCAMLR, and the Madrid Protocol are part of the "Antarctic Treaty System", a specific international regime. We note that the protection of environmental security is the main element of the Antarctic regime. All international debates on current and future activities in the region within the regime take this aspect into account (ROTHWELL; SCOTT; HEMMING, 2012, p. 13-14). There are also other relevant regimes regarding fishing (in Southern Ocean and beyond): The UNCLOS, which governs navigation and approach of vessels; and the International Convention for the Regulation of Whaling, which forbade that activity in the Southern Ocean starting in 1994 through its international organization, except for scientific research. Maritime security dynamics, international cooperation, and oversight of IUU fishing in the Southern Ocean abide by this legal framework.

Given the shortage of fishing stocks in several parts of the world, it is only natural that this activity would be transferred to other seas where they are still plentiful. In this context, a remote location away from national jurisdictions' oversight, such as the Southern Ocean is vulnerable to exploitation of its maritime resources, and consequently, to IUU fishing. Even though it has not yet reached alarming levels, during the last decades the exploration of krill almost doubled<sup>15</sup>. China's and Indian Ocean coastal states' food security needs (FOSTER, 2012, p. 166) will also expand

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<sup>15</sup> During the 1990s, the average was 100 thousand metric tons per year, while recently it has reached over 200 thousand metric tons (CCAMLR, 2017).

towards the Southern Ocean in the near future. It is worth noting that other fishing produce from the region currently reach high market prices. Small loads of those products are worth millions of dollars, increasing their trade. The Australian government has announced that it considers IUU fishing in the Antarctic region to be a "highly sophisticated form of transnational organised crime". Even though there are no specific data on illicit activities (as they are not subject to inspection), its occurrence and increase are plausible. As a consequence, securitization processes of fishing regulation have also transferred to the region.

The CCAMLR has been the main instrument used to coordinate international cooperation against IUU fishing in the region and to promote the preservation of maritime ecosystems. The treaty created an international organization, more precisely a "regional fishing organization" (FABRA; CASCÓN, 2008, p. 573), headquartered in Hobart, Australia. Besides the seven original claimants, the European Union, the US, China, India, South Africa, Russia, Japan, Belgium, Brazil, Germany, South Korea, Namibia, Poland, Spain, Italy, Sweden, Ukraine, and Uruguay are also parties to the Convention.

The CCAMLR reaches a wider area than the Antarctic Treaty does, as it encompasses the whole Southern Ocean. This means it includes not only waters below parallel 60 S, but also those encircling Subantarctic islands with national sovereignty (British, Norwegian, French, Australian, New Zealander, and South African). Those countries' EEZ are included because living natural resources certainly ignore political boundaries established by international relations and require integral monitoring and protection. In such context, the CCAMLR regime innovatively adopts an "ecosystem approach": the decrease of maritime resources cannot be regarded individually, but from an analysis of its impact on ecosystems and on food chains (FABRA; GASCÓN, 2008, p. 567).

Annual fishing quotas and protected areas are defined by CCAMLR decisions. CCAMLR actions are based on a "precautionary approach" that determines integral protection of

environmental resources from possible severe harm, even if there is scientific uncertainty on the issue (SANDS, 2003, p. 267-268). The goal is to balance conservation and rational use of maritime resources to establish long-term sustainable fishing and minimize impacts on local ecosystems. The organization monitors and records vessels authorized for fishing in the region by member states. Whenever those vessels access or leave the region, they must report to the organization, which then publicly discloses all information on their registration, fishing history, and equipment used.

Regarding IUU fishing, states parties to the CCAMLR are required to report any suspicious activity by vessels bearing their flag or the flag of any other country (including those that are not party to the Convention). As a result, the organization publishes a "blacklist" with information of sighted vessels, including their name, flag country, possible owner, and characteristics. Those vessels' flag countries are then notified to take appropriate measures to investigate and punish those acts (CCAMLR, 2018).

Despite offering a strong framework and well-established international cooperation practices, the CCAMLR system has some gaps that may pose a challenge to its operation. Except for Subantarctic islands under national sovereignty that project maritime jurisdictions over their EEZ, the Ocean encircling Antarctica is legally considered to be part of the high seas, according to the UNCLOS. This means natural resources available in the region are free for exploration by any country, regardless of it being a party to the Antarctic Treaty and to the CCAMLR or not.

Regarding oversight of IUU fishing by CCAMLR, we cannot forget that the organization does not have its own naval force, so it depends entirely on action by its members. Therefore, the CCAMLR designates vessels from member states' navies and coast guards to carry out those oversight activities. Given the

treaty's mandate, those inspections can only be done on fishing vessels registered to countries that have ratified the CCAMLR.

Against military training for typical naval warfare operations by traditional navies, the use of the "coast guard" model, through which naval forces are adequately trained to approach and capture vessels and suspects undertaking improper fishing activities, seems to be ideal for the security context of the Southern Ocean (BATEMAN, 2012, p. 130-131). It is also a way of mitigating possible conflicts with the Antarctic Treaty, as the role of law enforcement would not be military on itself. As a naturally international space, the Southern Ocean is an adequate place to test Till's concept of "post-modern navy" based on collaborative actions. It is undeniable, however, that increased presence of military forces, surveillance mechanisms and law enforcement infrastructure in the region as a reaction to IUU fishing may represent a source of tension and conflict in the future.

The problem lies on vessels from countries that are not party to the CCAMLR. According to UNCLOS' regime, vessels answer only to their flag countries. In that specific case, CCAMLR inspectors cannot approach vessels unless they voluntarily comply. If they refuse, inspectors can only notify the flag country to take measures. It is usual that those vessels use "flags of convenience": registration in countries with low state capacity that overlook IUU fishing.

Another topic to be discussed concerns the economic viability of maintaining patrolling and inspection activities by CCAMLR members. There are two fundamental requirements for this task: to have vessels capable of withstanding extreme climates such as the Antarctic cold; and the capacity to project the necessary power to undertake operations in the region, which may translate into the need to have a home or support port close the Antarctic territory. A country with no economic or operational conditions to project its navy or coast guard to Antarctic Ocean or its adjoining areas cannot help in those initiatives. Therefore, there is a natural tendency of delegating IUU fishing patrolling and inspection tasks under CCAMLR mandate to the seven Antarctic territory

claimants. They have traditionally worked on IUU fishing repression in the region (HAWARD, 2012, p. 232). This happens precisely because those countries are the only ones to maintain maritime forces close to the region, seeking to safeguard their territorial claims and to protect its Subantarctic islands' EEZ. Consequently, we highlight maritime projection capabilities of the United Kingdom, France, Australia, and New Zealand in the region, as shown in Table 2. Given increased military (or paramilitary) presence from those countries in the Southern Ocean, we must consider whether there is a genuine environmental securitization process occurring in the region or if what happens is only militarization of entirely economic interests motivated by existing maritime resources.

Table 2 - Maritime Force Projection Capabilities in the Southern Ocean

Country	Vessel	Manufacturing	Closest Port	Crew	Weaponry
United Kingdom	HMS Protector (A173)	2001	Falklands (South Atlantic)	88	6 machine guns helipad
France	Nivôse (F732)	1990	Réunion Island (South Indian)	100	3 machine guns 2 missiles helipad
France	Floréal (F730)	1990	Réunion Island	100	3 machine guns 2 missiles helipad
Australia	ABFC Ocean Shield	2010	Sidney (Australia)	78	2 machine guns helipad
New Zealand	HMNZS Otago (P148)	2005	Dunedin (New Zealand)	80	1 machine gun helipad
	HMNZS Wellington (P55)	2005	Wellington (New Zealand)	80	1 machine gun helipad

Table created by the author based on Bush (2014), France (2018), Australia (2018), and New Zealand (2018).

Those nations' force projection towards the Southern Ocean already bear fruits. In 2001, an Australian customs control vessel intercepted "South Tomi", under Togolese flag, suspected of IUU fishing in Australian EEZ (Heard Island) and in Antarctic territory. After 14 days of pursuit, the vessel was captured by the South African navy by request of the Australian navy. In 2003, "Viarsa I", under Uruguayan flag, was intercepted under similar circumstances. After a three-week pursuit, the vessel was approached by the Australian navy with help from South Africa and United Kingdom (ROTHWELL, 2012, p. 141-143). In 2015, the New Zealander navy identified two vessels registered under Equatorial Guinean flag as practicing IUU fishing in the Antarctic region and possibly in Australian EEZ. The navy chose to ask for authorization from the Equatorial Guinea government before approaching the vessel, and the request was granted.

Another source of security tension has been whaling activities by Japanese vessels in the Southern Ocean, despite it being prohibited. Traditionally a consumer of whale meat, Japan has been masking its exploratory activities as scientific (BEDELL, 2015, p. 03-05). Environmentalist organizations (such as Sea Shepard) have tried to stop those activities. Reports, however, indicate that Japanese vessels have fought back using military-grade weapons, blast grenades, and acoustic weapons. Japanese whaling motivated Australia to file a case at the International Court of Justice. The Court decided Japanese activities were not scientific, thus a breach of International Law.

New securitization dynamics in the Southern Ocean encourage new cooperation initiatives beyond CCAMLR. There are two paradigmatic bilateral examples. The first one is the Combined Naval Patrolling ("Patrulla Antártica Naval Combinada") between Argentina and Chile, created in 1998. It is a yearly operation organized during the Antarctic summer. The navies from the two countries participate and patrol areas close to both nations' Antarctic territories (DODDS, 2012, p. 110-112).

Another initiative comes from Australia and France. They signed bilateral agreements (in 2003 and 2007) on navy cooperation

to patrol their Subantarctic EEZ and on law enforcement against IUU fishing activities (ROTHWELL, 2012, p. 142-143). In this case, patrolling vessels receive a foreign officer on board, who is responsible for authorizing or unauthorizing possible measures involving the use of force that may breach their national Law or jurisdiction. This is not exactly innovative, as this model (called "shiprider agreement") has been used by the US in bilateral agreements on drug trafficking control via Caribbean Sea. United States vessels patrol the region with officers from Caribbean countries on board (GUILFOYLE, 2009, p. 89).

## 5 CONCLUSION

Fish stocks around the world are about to collapse, which has immensurable environmental, economic, and social consequences. Therefore, the possibility that IUU (illegal, unreported and unregulated) fishing proliferate is now followed closely by the international community. From this research, we could observe the development of a securitization process of this issue, as it started to be treated as a security threat.

We understand the definition of threat as a self-referring and socially constructed practice. It comes into being through a speech act and its acceptance by its target audience. Therefore, IUU fishing securitization was verified through research on national maritime security and strategy plans (from the United States, United Kingdom, Spain, France, India, and European Union). Those documents refer several times to harmful practices from such fishing activities. Considering those are official documents from globally relevant countries, capable of influencing other actors and their strategies, we understand the securitization hypothesis to be completely verified. This issue is classified as a

threat to environmental, economic, and food security, and is tied to transnational organized crime.

As it happens at sea, an immense and inhabitable space, IUU fishing as a security issue requires a unique confrontation strategy. Therefore, international cooperation and International Law play a very important role. Currently, we understand maritime security to be too complex and diffuse for unilateral control. Thus, national maritime forces are compelled to adopt a collaborative stance towards their counterparts.

Maritime security and Law are becoming inseparable, as International Law plays the role of stabilizing expectations and resolving conflicts between naval powers. It encourages international cooperation to face common threats. On that regard, UNCLOS is one of the most relevant instruments, since its norms influence maritime security and regulation of international fishing and are widely adopted by the international community. We highlight the establishment of a general duty to preserve maritime resources and to create exclusive economic zones.

As it is a territory with no native population and far from sovereign states' jurisdiction, the Southern Ocean is especially vulnerable to IUU fishing. There are indications of possible increase in fishing activities in that region. This may lead to the displacement of eventual security dynamics. Disputes for wealth are part of the history of exploration of the Antarctic Continent. Only the creation of an international regime (the Antarctic Treaty System) avoided escalation in conflicts. The regime was able to suspend territorial claims, promote scientific cooperation, limit military presence, and establish sustainable and rational use of natural resources. Therefore, maritime security dynamics in the Southern Ocean are subject to the legal framework from the Antarctic Treaty System (as well as to general UNCLOS rules).

The CCAMLR, established as a regional fishing organization, is responsible for coordinating international cooperation against IUU fishing and for promoting the preservation of maritime ecosystems. Measures adopted by CCAMLR - which include monitoring access to fishing zones,



verifying records and inspecting member-states vessels - are healthy measures to face the issue.

However, we cannot forget that there are limitations to CCAMLR's reach, as it does not apply to vessels registered under flags not subject to the regime. Oversight is completely dependent on national maritime forces, that act according to parameters imposed by CCAMLR and UNCLOS. "Coast-guard" models, whose strategy is the employment of non-lethal force, and "post-modern navy" models, that adopt a collaborative stance towards foreign naval institutions, seem ideal for current Southern Ocean context. Not all CCAMLR member states are capable of conducting patrolling activities. Thus, countries with the required resources for the job play this role - possibly, those with sovereignty over Subantarctic islands and economic and political interests in the region. The United Kingdom, France, Australia, and New Zealand stand out, as they have the necessary capacity to project their power for those operations. Despite the possibility of escalating securitization and consequent conflicts, dynamics of fishing exploration in the Southern Ocean are prime for international cooperation initiatives.

## REFERENCES

ABDEL-MOTAAL, Doaa. *Antarctica: The Battle for the Seventh Continent*.

AGNEW, David J. Estimating the Worldwide Extent of Illegal Fishing. *PLOSONE*. Atlanta, 2009.

ANTARTIC AND SOUTHERN OCEAN COALITION. *Krill Conservation*. Disponível em:

<<https://www.asoc.org/advocacy/krill-conservation>>. Acesso em: 15 fev. 2018.

AUSTRALIA. *Department of Home Affairs – Australian Border Force Cutter Ocean Shield*. Acesso em: <<https://www.homeaffairs.gov.au/australian-border-force-abf/protecting/maritime/cutter-abfc-ocean-shield#Southern%20Ocean%20operations>>. Disponível em: 31 jul. 2018.

BATEMAN, Sam. Strategic Competition and Emerging Security Risks: Will Antarctica Remain Demilitarised? In: ROTHWELL, Donald R.; SCOTT, Karen N.; HEMMING, Alan D. The Search for Antarctic Security. In: ROTHWELL, Donald R.; SCOTT, Karen N.; HEMMING, Alan D (Org.). *Antarctic Security in the Twenty-First Century: Legal and Policy Perspectives*. Londres: Routledge, 2012, p. 116-134.

BECKMAN, Robert. The UN Convention on the Law of the Sea and the Maritime Disputes in the South China Sea. *The American Journal of International Law*, v. 107, p. 142-163, 2003.

BEDELL, Julia. On Thin Ice: Will the International Court of Justice's Ruling in Australia v. Japan: New Zealand Intervening End Japan's Lethal Whaling in the Antarctic? *Columbia Journal of Environmental Law*, p. 1-13, 2015.

BUEGER, Christian; EDMUNDS, Timothy. Beyond Seablindness: A New Agenda for Maritime Security Studies. *International Affairs*, v. 93, n. 6, p. 1293-1311, 2017.

BUSH, Steve. *British Warship and Auxiliaries*. London: Maritime Books, 2014.

BUZAN, Barry; WAEVER, Ole; WILDE, Jaap de. *Security: A New Framework for Analysis*. London: Lynne Rienner, 1998.

CCAMLR. *Illegal, Unreported and Unregulated Fishing*. Disponível em: <<https://www.ccamlr.org/en/compliance/illegal-unreported-and-unregulated-iuu-fishing>>. Acesso em: 31 mar. 2018.

CCAMLR. *Krill Fishery Report 2017*. Disponível em: <<https://www.ccamlr.org/en/system/files/00%20KRI48%202017.pdf>>. Acesso em: 31 mar. 2018.

CNN. *Argentina Sinks Chinese Vessel*. Disponível em: <<https://edition.cnn.com/2016/03/15/americas/argentina-chinese-fishing-vessel/index.html>>. Acesso em: 31 jul. 2018.

DODDS, Klaus. The Antarctic Peninsula: Territory, Sovereignty Watch and The “Antarctic Problem”. In: ROTHWELL, Donald R.; SCOTT, Karen N.; HEMMING, Alan D. The Search for Antarctic Security. In: ROTHWELL, Donald R.; SCOTT, Karen N.; HEMMING, Alan D (Org.). *Antarctic Security in the Twenty-First Century*: Legal and Policy Perspectives. Londres: Routledge, 2012, p. 95-115.

DODDS, Klaus; HEMMING, Alan D. Britain and the British Antarctic Territory in the Wider Geopolitics of the Antarctic and the Southern Ocean. *International Affairs*, v. 89, n. 06, p. 1429-1444, 2013.

ESPAÑA. *National Maritime Security Strategy*. Disponível em: <[http://www.lamoncloa.gob.es/documents/20131333estrategiadeseguridadmartima\\_ingls.pdf](http://www.lamoncloa.gob.es/documents/20131333estrategiadeseguridadmartima_ingls.pdf)>. Acesso em: 31 jul. 2018.

EUROPEAN UNION. *European Union Maritime Security Strategy*. Disponível em:

<[https://ec.europa.eu/maritimeaffairs/policy/maritime-security\\_en](https://ec.europa.eu/maritimeaffairs/policy/maritime-security_en)>. Acesso em: 31 jul. 2018.

FABRA, Adriana; GASCÓN, Virginia. The Convention on the Conservation of Antarctic Marine Living Resources (CCAMLR) and the Ecosystem Approach. *The International Journal of Marine and Coastal Law*, v. 23, p. 567-598, 2008.

FERREIRA, Luciano Vaz. *Direito Internacional da Guerra*. Jundiaí: Paco Editorial, 2014.

FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS (FAO). *The State of World Fisheries and Aquaculture: Opportunities and Challenges*. Roma: FAO, 2014.

FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS (FAO). *The State of World Fisheries and Aquaculture: Contributing to Food Security and Nutrition for All*. Roma: FAO, 2016.

FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS (FAO). *World Fish Market at Glance*. 2017. Disponível em: <<http://www.fao.org/in-action/globefish/fishery-information/resource-detail/en/c/338597/>>. Acesso em 31 mai. 2018.

FOSTER, Carline E. Antarctic Resources and Human Security. In: ROTHWELL, Donald R.; SCOTT, Karen N.; HEMMING, Alan D (Org.). *Antarctic Security in the Twenty-First Century: Legal and Policy Perspectives*. Londres: Routledge, 2012, p. 154-171.

FIGUEIREDO, E. L.. Os Estudos Estratégicos, a Defesa Nacional e a Segurança Internacional. In: Lessa, Renato. (Org.). *Horizontes das Ciências Sociais no Brasil (Ciência Política)*. 1ed.São Paulo: Anpocs/Editora Barcarolla /Discurso Editorial/ICH, 2010, v. 1, p. 271-295.

FRANCE. *Marine Nationale – Flóreal*. Disponível em: <<https://www.defense.gouv.fr/marine/equipements/batiments-de-combat/fregates/de-surveillance/floreal-f-730>>. Acesso em: 31 jul. 2018.

FRANCE. *Marine Nationale – Nivôse*. Disponível em: <<https://www.defense.gouv.fr/marine/equipements/batiments-de-combat/fregates/de-surveillance/nivose-f-732>>. Acesso em: 31 jul. 2018.

FRANCE. Disponível em: <[https://www.gouvernement.fr/sites/default/files/contenu/piece-jointe/2016/01/strategie\\_nationale\\_de\\_surete\\_des\\_espaces\\_maritimes\\_en\\_national\\_strategy\\_for\\_the\\_security\\_of\\_maritime\\_areas.pdf](https://www.gouvernement.fr/sites/default/files/contenu/piece-jointe/2016/01/strategie_nationale_de_surete_des_espaces_maritimes_en_national_strategy_for_the_security_of_maritime_areas.pdf)>. Acesso em: 31 jul. 2018.

FULTON, Thomas Wemyss. *The Sovereignty of the Sea*. London: William Blackwood and Sons, 1911.

GUILFOYLE, Douglas. *Shipping Interdiction and the Law of the Sea*. Cambridge: Cambridge, 2009.

HAENLEIN, Cathy. *Below the Surface: How Illegal, Unreported and Unregulated Fishing Threatens our Security*. Londres: RUSI, 2011.

HAWARD, Marcus. Marine Resources Management, Security And Antarctic Treaty System: Na Ongoing Agenda?

In: ROTHWELL, Donald R.; SCOTT, Karen N.; HEMMING, Alan D (Org.). *Antarctic Security in the Twenty-First Century: Legal and Policy Perspectives*. Londres: Routledge, 2012, p. 216-237.

INDIA. *Ensuring Secure Seas: Indian Maritime Security Strategy*. Disponível em: <[https://www.indiannavy.nic.in/sites/default/files/Indian\\_Mariti](https://www.indiannavy.nic.in/sites/default/files/Indian_Mariti)

me\_Security\_Strategy\_Document\_25Jan16.pdf> . Acesso em: 31 jul. 2018.

KAWARAZUKA, Nozomi; BÉNÉ, Christophe. The potential role of small fish species in improving micronutrient deficiencies in developing countries: building evidence. *Public Health Nutrition*, v. 14, n. 11, p. 1927-1938, 2011.

KLEIN, Natalie. *Maritime Security and the Law of the Sea*. Oxford: Oxford University Press, 2011.

KRASKA, James; PEDROZO, Raul. *International Maritime Security Law*. Boston: Martinus Nijhoff Publishers, 2013.

KRASKA, James. *Maritime Power and the Law of the Sea: Expeditionary Operations in World Politics*. Oxford: Oxford University Press, 2011.

KRASNER, Stephen D. Structural Cases and Regime Consequences: Regimes as Intervening Variables. *International Organization*, Cambridge, v. 36, n. 2, p. 185-205, 1982.

MACK, John. *The Sea: A Cultural History*. Londres: Reaktion, 2011.

MATTHEW, Richard A. *Global Environmental Change and Human Security*. Boston: MIT, 2010.

MYERS, Norman. The Environmental Dimension to Security Issues. *Environmentalist*, v. 6, n. 4, p. 251-257.

NATIONAL INTELLIGENCE COUNCIL. *Global Implications of Illegal, Unreported and Unregulated (IUU) Fishing*. 2016. Disponível em: <<https://fas.org/irp/nic/fishing.pdf>> Acesso em: 31 mai. 2018.

NEW ZEALAND. *Royal New Zealand Navy – HMNZ Otago*. Disponível em: <<http://navy.mil.nz/mtf/otago/>>. Acesso em: 31 jul. 2018.

NEW ZEALAND. *Royal New Zealand Navy – HMNZ Wellington*. Disponível em: <<http://navy.mil.nz/mtf/well/>>. Acesso em: 31 jul. 2018.

PALMA, Mary Ann; TSAMENYI, Martin; EDESON, William. *Promoting Sustainable Fisheries: The International Legal and Policy Framework to Combat Illegal, Unreported and Unregulated Fishing*. Leiden: Martinus Nijhoff, 2010.

PARIS, Roland. Human Security: Paradigm Shift or Hot Air? *International Security*, v. 26, n. 1, p. 87-102, 2001.

PAULY, Daniel; ZELLER, Dirk. Catch reconstructions reveal that global marine fisheries catches are higher than reported and declining. *Nature Communications*, n. 7, fev. 2015.

ROTHWELL, Donald R.; SCOTT, Karen N.; HEMMING, Alan D. The Search for Antarctic Security. In: ROTHWELL, Donald R.; SCOTT, Karen N.; HEMMING, Alan D (Org.). *Antarctic Security in the Twenty-First Century: Legal and Policy Perspectives*. Londres: Routledge, 2012, p. 1-17.

ROTHWELL, Donald R. Law Enforcement in Antarctica. In: ROTHWELL, Donald R.; SCOTT, Karen N.; HEMMING, Alan D. The Search for Antarctic Security. In: ROTHWELL, Donald R.; SCOTT, Karen N.; HEMMING, Alan D (Org.). *Antarctic Security in the Twenty-First Century: Legal and Policy Perspectives*. Londres: Routledge, 2012, p. 136-153.

ROTHWELL, Donald R.; STEPHENS, Tim. *The International Law of the Sea*. Oxford: Bloomsbury, 2016.

SANDS, Philippe. *Principles of International Environmental Law*. 2 ed. Cambridge: Cambridge University Press, 2003.

SHAVER, Amanda; YOZELL, Sally. *Casting a Wider Net: The Security Implications of Illegal, Unreported and Unregulated Fishing*. Washington: Stimson Center, 2018.

SPELLER, Ian. *Understading Naval Warfare*. New York: Routledge, 2014.

STEINBERG, Philip E. *The Social Constructo f Ocean*. Cambridge: Cambridge University Press, 2001.

TILL, Geoffrey. *Seapower: A Guide for the Twenty-First Century*. New York: Routledge, 2014.

TILL, Geoffrey. The Changing Dynamics of Seapower and Concepts of Battle. In: BEKKEVOLD, Jo Inge; TILL, Geoffrey (Org.). *International Order at Sea: How it is Challenged, How it is Maintained*. Londres: Palgrave Macmillian, 2016, p. 177-198.

ULLMAN, Richard H. Redefining Security. *International Security*, v. 8, n. 1, p. 129-153, 1983.

UNITED NATIONS DEVELOPMENT PROGRAMEE (UNDP). *Human Development Report 1994*. Oxford: Oxford University Press, 1994.

UNITED KINGDOM. *UK National Strategy for Maritime Security*. Disponível em:

<[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/322813/20140623-](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/322813/20140623-)



40221\_national-maritime-strat-Cm\_8829\_accessible.pdf>. Acesso em: 31 jul. 2018.

UNITED STATES OF AMERICA. 1990. *Antarctic Treaty Handbook: Conservation of Antarctic Seals*. Disponível em: <<https://www.state.gov/documents/organization/15280.pdf>>. Acesso em: 31 mar. 2018.

UNITED STATES OF AMERICA. *The National Strategy for Maritime Security*. Disponível em: <<https://www.state.gov/documents/organization/255380.pdf>> . Acesso em 31 mai. 2018.

WEAVER, Ole. Securitization and Desecuritization. In: LIPSCHUTZ, Ronnie. *On Security*: Columbia University Press: New York, 1995, p. 46-86.

WWF. *Fishing problems: Destructive fishing practices*. Disponível em: <[http://wwf.panda.org/our\\_work/oceans/problems/destructive\\_fishing/](http://wwf.panda.org/our_work/oceans/problems/destructive_fishing/)> Acesso em: 31 mai. 2018.