



Current legal regime for environmental impact assessment in areas beyond national jurisdiction and its future approaches



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ABSTRACT

In 2004, the United Nations launched an Ad Hoc Open-ended Informal Working Group to study issues relating to the conservation and sustainable use of marine biological diversity in areas beyond national jurisdiction. Since then, the topic of governing marine areas beyond national jurisdiction (ABNJ) has been widely discussed by politicians, policy makers and scholars. As one of management tools to protect marine biodiversity in ABNJ, environmental impact assessment (EIA) has been widely recognized and accepted by the international community, however, the biggest challenge is how to effectively implement the EIA regime in ABNJ. This paper explores the impacts of anthropogenic activities in ABNJ on marine ecosystems, reviews the existing legal regime for EIA in ABNJ and discusses possible measures to strengthen the implementation of EIA in ABNJ.

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1. Introduction

When it comes to the 21st Century, the extent of exploitation and utilization of the ocean has reached an unprecedented level (Stojanovic and Farmer, 2013). Due to the increase in anthropogenic activities, marine ecosystems are subject to increasing human pressure

(Parravicini et al., 2012; Halpern et al., 2015). Studies indicate that all of the world's marine areas are subject to human influence, areas without human influence no longer exist and that 41% are strongly affected by human activities (Halpern et al., 2008). In addition, the loss of marine biodiversity is accelerating due to overfishing, destructive fishing, pollution, climate change caused by human activities, etc.¹ One publication of the International Union for Conservation of Nature and Natural

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¹ United Nations General Assembly. Report of the Secretary-General, Oceans and the Law of the Sea, A/60/63/Add.1 of 15 July 2005.

Table 1
Specific international EIA instruments.

Instruments	Comments	Attribute	LB	Applicability	TG	BF
Espoo Convention	List activities are likely to have significant effects, summarize the minimum content of EIA.	Legal	Y	Various activities	Y	N
UNEP Goals and Principles of Environmental Impact Assessment	Provide a general guidance on the conduct of EIA and the minimum elements of EIA.	Policy	N	Various activities	Y	Y

LB: legally binding; TG: technical guideline; BF: biodiversity factor; Y: yes; N: no.

Resources in 2004 documented that 95–98% of the loss of the coral cover of seamounts was a result of deep-sea bottom trawl fishing. The high sea trawl fishing had already led to the depletion of targeted deep-sea fish stocks. Approximately 80% of the high sea catch of bottom species was taken by bottom trawl fishing vessels (Gianni, 2004). The Census of Marine Life indicates that a number of marine biological resources have been depleted. Due to overfishing, stocks of species such as tunas, sharks and sea turtles have declined sharply in the past decade, some even reduced by 90–95% (Ausubel et al., 2010; Lin, 2011).

In order to protect marine biodiversity in areas beyond national jurisdiction (ABNJ), an Ad Hoc Open-ended Informal Working Group to study issues relating to the conservation and sustainable use of marine biological diversity in areas beyond national jurisdiction was established under the United Nations in 2004.² To date eight meetings have been held since the first Working Group meeting in 2006, and the international community has made great progress on the conservation and sustainable use of marine biological diversity in ABNJ after nearly ten year negotiation and consultation. At the United Nations Conference on Sustainable Development in June 2012, States agreed to take a decision on development of a new instrument under UNCLOS to address the conservation and sustainable use of marine biological diversity in ABNJ.³ In June 2015, States decided to develop a new legally binding instrument under UNCLOS on the conservation and sustainable use of marine biological diversity in ABNJ, based on discussions at the United Nations Working Group in January 2015.^{4 5}

As a management tool to solve issues relating to the conservation and sustainable use of marine biodiversity in ABNJ, environmental impact assessment (EIA) has been recognized and accepted by the international community.⁶ However, the international community is facing a big challenge on how to effectively implement EIA in ABNJ and achieve its goals of protecting marine biodiversity in ABNJ. Though some existing international instruments require States to conduct EIA in ABNJ, such obligations are far from being implemented. Given that, a clear recognition on issues in respect to EIA in ABNJ will be beneficial for its future development.

2. Identification of anthropogenic activities in areas beyond national jurisdiction and their environmental impacts

With the development of technology and economy, types of exploiting and utilizing the ocean have changed greatly (Stojanovic and Farmer, 2013). It is necessary to identify types of anthropogenic activities in ABNJ and their environmental impacts prior to discussing the legal issues relating to EIA in ABNJ. This section identifies the impacts of anthropogenic activities in ABNJ on the ocean, and discusses the necessity to conduct EIA for activities in ABNJ.

2.1. Impacts of anthropogenic activities in ABNJ on the ocean

According to chronological order, marine activities can be divided into three categories: traditional activities, new and emerging activities and future activities. Traditional activities include marine fisheries, shipping, laying of submarine cables and pipelines, marine scientific research, dumping of waste and military activities. New and emerging activities include deep seabed mining, ocean fertilization, carbon sequestration, marine bioprospecting and deep-sea tourism (Merrie et al., 2014). Different types of marine activities can cause adverse impacts to different degrees, some even are irreversible.

Marine fisheries in the world developed extremely rapidly over the past sixty years. The total marine catches increased from 16.7 million tons in 1950 to 79.3 million tons in 2012. To date fishing areas are mainly located in the North Pacific, the Western and Eastern Pacific, the South Pacific, the North Atlantic, the eastern part of the Western Central Atlantic, the Eastern and Western Indian Ocean, the Mediterranean, the Black Sea and the polar region (Food and Agriculture Organization., 2012). Marine fisheries cause adverse impacts on marine ecosystems in both direct and indirect ways. Direct effects include physical damage, sediment re-suspension and removal of marine species. The main impacts of indirect effects on marine species include: reducing the number of targeted species due to overfishing, affecting stocks of other species in biological communities, causing changes in community structure; the dumping of by-catch during fishing operation altering the nutrients of marine ecosystems; ghost fishing resulting in death of a large number of marine mammals (Jones, 1992; Dayton et al., 1995; Jennings and Kaiser, 1998; Kaiser et al., 2001). The impacts of shipping are divided into operational impacts and accidental impacts. Operational impacts include the noise generated during the operation of ships destroying the hearing systems of marine mammals, collisions with marine mammals and alien species invading through ballast water discharge (Ware, 2009; Xu and Fang, 2013). Comparing to operational impacts, accidental impacts such as toxic chemicals leaking and oil spill are fatal to marine ecosystems, even can lead to collapse of the ecosystem. The laying of submarine cables and pipelines can disturb seabed sediments, cause sediment re-suspension and re-deposition so as to destroy the structure of benthic habitats and affect the survival of benthic organisms (Vize et al., 2008). However, the potential impacts of the laying of submarine cables and pipelines are only limited to the operational areas. The impacts of marine scientific research are that of physical, chemical, noise and accidental impacts (Gjerde et al., 2008). Overall, the impacts of marine scientific research on marine ecosystems are relatively small and the scope of impacts is limited. However, high frequent sampling experiments in the same area may cause damage to the ecosystem. For dumping, hazardous waste is prohibited to dump into the ocean under the Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter (the London Convention). However, if the London Convention and its 1996 Protocol are not fully implemented, such disposal could cause adverse effects on the ocean.⁷ Military activities can also cause impacts on marine ecosystems to different degrees. Military sonar disturbs the physiological behavior of dolphins, whales and other marine mammals. In addition, the great sound

² United Nations General Assembly. Oceans and the Law of the Sea, Resolution 59/24 of 17 November 2004.

³ United Nations General Assembly. Resolution 66/288 of 27 July 2012.

⁴ Letter A/69/780 dated 13 February 2015 from the Co-Chairs of the Ad Hoc Open-ended Informal Working Group to the President of the General Assembly.

⁵ United Nations General Assembly. Resolution 69/292 of 6 July 2015.

⁶ The conclusion was drawn according to all documents of the meetings of the Ad Hoc Open-ended Informal Working Group.

⁷ United Nations General Assembly. Report of the Secretary-General, Oceans and the Law of the Sea, A/60/63/Add.1 of 15 July 2005.

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