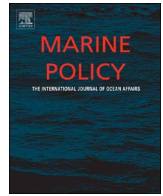




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Sustainable management of deep sea mineral activities: a case study of the development of national regulatory frameworks for the Republic of the Marshall Islands[☆]

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ABSTRACT

The Republic of the Marshall Islands (RMI) is a Freely Associated State of the United States of America (USA) of which more than sixty percent of the country's GDP is provided through the Compact of Free Association Agreement. The Compact grant assistance was provided with the aim to assist in the development of the RMI's economy, and establishes the Compact Trust Fund (CTF) for long-term budgetary self-reliance for the RMI Government. Base on the CTF's performance to date, it is anticipated that there would be a financial gap that may be difficult to fill given the limited economic base of the RMI. It is in this context that the RMI Government sees the sustainable development of the deep sea minerals (DSM) industry as the opportunity to bring substantial income and benefits to strengthening national efforts to achieve greater socio-economic self-reliance. However, this will only be possible if proper regulatory frameworks are in place to manage health, social and environmental risk; protect and preserve the marine environment as well as other legitimate users. This determination should allow the RMI to maximize the potentiality of the 'Blue economy' while meeting the targets assigned through the recently adopted Sustainable Development Goals.

1. Introduction

The Republic of the Marshall Islands (RMI) is located in the Central Pacific, approximately mid-way between Hawaii and Australia. The country, which spread on a land area covering approximately 181.5 km² distributed on thirty-three low lying coral atolls [1] and five islands, shares maritime boundaries with the Federated States of Micronesia (FSM), Kiribati and Nauru. With an exclusive economic zone (EEZ) of about 2,190,000 km², the RMI has a great potential for the development of its 'Blue Economy'. These atolls and islands form two groups: the Ratak Chain (meaning 'sunrise') to the East, and the Ralik Chain (meaning 'sunset'), to the West. According to several studies carried out, the western part of the RMI's EEZ has significant deep sea mineral (DSM) potentials [2]. It is therefore perceived that the DSM industry could bring substantial income and benefits to the RMI by strengthening national efforts to achieve greater socio-economic self-reliance. However, this will only be possible if proper regulatory frameworks are in place to manage health, social and environmental risk; protect and preserve the marine environment as well as other legitimate users, as commanded by the recently adopted Sustainable

Development Goals (SDGs) [3].

This paper aims at providing an overview of the efforts deployed by the Government of the RMI to develop strong and effective national regulatory frameworks to ensure sustainable management of DSM activities that may be carried out under the effective control of the country.

2. The RMI's political and socio-economic context

2.1. Political context

The political history of the RMI is shaped by different colonial influences which include Spain, Germany, Japan and the United States of America (USA). In 1979, the RMI became a sovereign, independent country, ending over 125 years of foreign control. Few years later, in 1986, the RMI entered the Compact of Free Association with the USA. Under the terms of this agreement and in accordance with the Military Use and Operating Rights Agreement, the USA is granted the exclusive military access to the RMI in return for a guarantee of defense against third parties. It also provides for the leasing of most parts of the lagoon

[☆] The opinions contained in this article are expressed by the authors in their personal capacities and do not reflect the views of the Government of the RMI.

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and several islands on Kwajalein Atoll. Amended in 2004, the Compact of Free Association will remain valid until 2023.

The Government of the RMI is a mixed parliamentary and presidential system; it has a unicameral parliament, ‘the Nitijela’. The Parliament comprises thirty-three members elected by universal suffrage from twenty-four electoral districts. Under the 1979 Constitution, the Council of Iroij (House of Chiefs) plays an advisory role to the Parliament on matters of custom, traditional rights and land tenure [4]. The Council of Iroij comprises twelve tribal chiefs representing different electoral atolls. The President is the Head of the State, and the Head of Executive Government. The President, elected by the Parliament, nominates cabinet members who are then appointed by the Speaker of the Parliament. The Cabinet has ten Ministers with different portfolios to head the Government departments. The Ministry responsible for DSM matters in the RMI is the Ministry of Resources and Development (R & D).

The 1979 Constitution of the RMI also provides for the establishment of a local governance system. A total of twenty-four local governments have been established. The system of the local governments extends to the sea and the seabed of the internal waters of the atoll, or island and to the surrounding sea and seabed up to a distance of five miles from the baselines from which the territorial sea of that atoll or island is measured [5]. Local governments are entitled to make ordinances including ordinances relating to taxes and fees [6]. Provided however, that such ordinances are not inconsistent with any act, any legislative instrument (regulation), or any executive instrument.

2.2. Socio-economic context

The RMI is classified by the United Nations (UN) as a Small Island Developing State (SIDS). The current population of the RMI is 52,900 (2014) [7] with a GDP per capita of USD \$3539 [8]. The country's economy relies heavily on the RMI Government and US military expenditures and employment, although some growth in commercial and small-scale fisheries, mariculture/agriculture, handicrafts and tourism is noted for few years. The RMI is a Freely Associated State of the USA through which financial support is provided. This support counts for approximately \$70 million dollars (USD) which contributes to more than 60% of the country's GDP reaching \$190.9 million USD in 2013 [9]. In 2013, the economic growth rate was recorded 3.0% [10], and increased by 0.5% in 2014. The country mainly imports fuel, machinery and equipment. Major import partners are Republic of Korea, Singapore, China and Japan.

Fisheries have traditionally been a key source of employment and growth, with increasingly diversified operations in harvesting, processing, transshipment and exports. Fish is the largest export commodity, Thailand, China, the USA and Japan being the main export destinations. In 2012, fishing activities contributed 1.2% points to GDP growth and accounted for about 10% of total employment as well as value added [11]. Fishing license fees have increased considerably in recent years, representing nearly 12% of fiscal revenues [12]. Fishing activities are mostly conducted by private companies, although the RMI Government has a 49% stake in a joint venture with a local private firm [13]. Whilst the fishing sector is projected to continue growing in the medium term, a number of factors challenge its expansion [14].

The RMI's Compact of Free Association agreement with the USA forms the basis of a unique strategic political and economic partnership through which grants have been received targeting health, education and infrastructure sectors. The establishment of the Compact Trust Fund (CTF) for the People of the RMI was a significant feature of the Amended Compact signed with the USA. The Compact grants expire in 2023 and Government is expected to use earnings from the CTF “to contribute to the long-term budgetary self-reliance of the RMI (...) [and] to provide the Government of the RMI with an ongoing source of revenue” [15]. However, based on its performance to date, it is expected that the CTF will not contribute to economic advancement

and long-term budgetary self-reliance nor will it meet funding objectives for the respective sectors as set out in the other parts of the Trust Fund Agreement unless additional funding is injected to make the CTF viable [16].

Therefore, Government has taken different measures to encourage private sector development particularly by seeking direct foreign investment. In line with this and in making sure that the economy grows and revenue is generated to improve the lives of the Marshallese People, Government has engaged several initiatives to make sure that private sector development supports its strategic development goals such as employment generation, human resources development, generation of foreign exchange, and import substitution. It is in this context that Government is willing to engage with the DSM industry taking into consideration the associated challenges and importance of adopting a precautionary approach in all phases of the activities.

3. Marshall Islands DSM context

3.1. DSM Potentials in the RMI

Scientific research and surveys carried out, through the KORDI-USGS and Japan-SOPAC partnerships, within the RMI's waters in 1989, 1996, 1998 and in 2002 have shown that large deposits of cobalt rich crusts (CRC) [17] with particular thickness and metal content (e.g. cobalt, nickel, platinum, copper, manganese) are present [18]. Although these survey results confirmed that the RMI's EEZ has one of the best potentials for CRC resource among the Pacific Islands' EEZs surveyed, additional exploration is needed to better understand the content and commercial viability of mining of these deposits as well as the environment associated to them.

Promising findings carried out in the international seabed area (the Area) also confirmed occurrence of minerals containing metals with higher grade per tonnage than those derived currently from land-based ore, including strategic minerals (‘rare earth elements’) currently required for high-tech applications and development of ‘green technology’. Although the resource base of these mineral deposits is yet to be quantified and the mining technology developed, Government decided that a policy framework be put in place to ensure effective control and proper management of DSM activities and maximize benefits for the Marshallese People. This could create favorable conditions to attract large commercial interest to invest in the development of DSM activities in the RMI. Government also considers that opportunities for the RMI to partner with DSM operators to conduct exploration activities in the Area should be further explored.

3.2. Potential socio-economic impacts of DSM

The recent cost benefit analysis of deep sea mining (DSM mining) in the Pacific commissioned by the Pacific Community (SPC) [19] establishes that the potential revenue to the RMI Government was not economically feasible from the perspective of the private miner. This is mainly due to a combination of two factors: the present price of cobalt and the cost of operating the mining equipment. As highlighted in the cost-benefit analysis, great strides in efficiency and cost reduction need to be made in order to increase profitability of a mining operation. Therefore, recognizing the potential future macro and micro socio-economic contributions of the DSM industry to the national growth in the future of the country, Government decided to pursue with the development of regulatory frameworks to protect against direct environmental damage to ensure the Marshallese people receive positive net benefits from DSM activities.

Besides licenses, fees and royalties collected from DSM activities, the Government is willing to explore and maximize other benefits the DSM industry may bring to the RMI. In line with this, DSM companies would be required to provide technical skilled job opportunities to Marshallese citizens at all phases of the operations undertaken.

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