

Ocean Governance: A tertiary educational perspective in the Mauritian context

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Abstract

Ocean governance provides for the norms and tools needed to ensure the sustainable use and management of marine resources. In order to implement effective ocean governance and tools, there is a need to train all stakeholders involved in the management and sustainable use of ocean resources. This is where education, particularly tertiary education, has an important role to play. The objective of this paper is to examine the contribution of tertiary education in promoting good ocean governance. The paper assesses the role and current involvement of a tertiary education institution, the University of Mauritius, in enhancing ocean governance in Mauritius. The findings will demonstrate that, although ocean governance modules are incorporated in some undergraduate and postgraduate programmes offered at University level, a more interdisciplinary approach and further collaboration is needed to promote training in this field.

Keywords: education, tertiary institutions, ocean governance, ocean resources

Introduction

The contribution of the oceans to the development of humanity cannot be underestimated. According to Gee (2019), many societies and civilizations were built based on the oceans and the resources they provide. Today, there is unanimous agreement by states that the ocean and its resources have to be protected. Post-World War II, steps were taken by the United Nations to ensure that there was a global agreement which regulates how countries use and benefit from the ocean. In 1982, the United Nations Convention on the Law of the Sea was signed, and the Convention became effective in 1994. This Convention, also referred to as the Constitution of the Sea by Maltese Ambassador A Prado (UN General Assembly, 1967), provides for the three major features it regulates: first the Convention provides for the extent of national sovereignty over the seas and oceans; secondly it elaborates on the navigational rights of ships and aircrafts; and finally it ensures environmental protection.

This essay examines how the University of Mauritius, through its courses and research, contributes to

the sharing of knowledge about ocean governance. The objective of this paper is to share the educational tools that the university uses to transmit knowledge about ocean governance to various stakeholders, thereby playing an important role in the discourse around ocean governance in Mauritius.

As more and more countries voiced their views and interests to ensure further protection and sustainable use of the oceans and its resources, the United Nations and its various agencies developed further agreements and strategies to ensure the sustainable use of the oceans. In 1992, through the United Nations Conference on Environment and Development (Chapter 17 of Agenda 21) and the 2002 World Summit on Sustainable Development, countries were required to devise and implement ocean and coastal government and policy approaches. In 2015, the Sustainable Development Goals (SDG) were developed and attention was drawn to the oceans, with SDG 14: 'Life below water'. This SDG encourages countries to take the necessary actions to protect the ocean and seas by ensuring the sustainable use of marine resources.

Ocean governance can guide countries in this endeavor. Although there is no universally accepted definition of the term ocean governance, many commentators have put forward that ocean governance relates to a set of norms, rules and practices that regulate maritime activities with a view to protect the marine ecosystem and reap economic benefits from the use and exploitation of marine resources (Singh and Ort, 2020). According to Bailet (2002), ocean governance involves three elements: a legal foundation, an institutional framework and mechanism of implementation.

At national, regional and international levels, the international community as well as individual states have taken steps to implement Bailet's (2002) three elements of ocean governance. Several laws, conventions and international institutions have been created over the years to encourage the sustainable use and management of marine resources and activities at sea. Several ocean governance mechanisms have been created to ensure the effective management of marine resources. Examples of governance norms and tools include, *inter alia*, environmental impact assessments, the ecosystem-based approach, sustainable development, marine protected areas, and marine spatial planning.

One element within the ocean governance discourse which requires attention and analysis is education. Education plays a central role in the management and use of marine resources. The sharing of knowledge and experience, whether from a scientific, environmental and legal perspective, encourages maritime stakeholders to become aware of the importance of the sea and how and why it should be protected.

In Mauritius, research is being carried out on the ocean governance tools and norms that can be used to sustainably manage and exploit marine resources. One aspect of the Mauritian ocean governance discourse, which has not been extensively researched, is how the tertiary education sector can contribute to educating and training the various stakeholders in achieving sustainable ocean governance and creating awareness about the law of the sea.

The teaching of ocean governance at the University of Mauritius (UoM) and its role in knowledge sharing is elaborated here, illustrating how UoM can strengthen its role in being a service provider in knowledge building of ocean governance in Mauritius.

The 2017 United Nations Conference to support the implementation of the Sustainable Development Goal 14, promoted educating people on ocean governance matters. During the conference, the United Nations Education, Social and Cultural Organisation (UNESCO) presented the "Ocean Literacy for all: A global strategy to raise awareness for the Conservation, Restoration and Sustainable Use of our Ocean" as a voluntary commitment for States to create public awareness on ocean related issues among their population (UNESCO, undated). This initiative illustrates the international motivation and will to educate people on ocean matters.

In the ocean governance context, where skilled and knowledgeable individuals are important for the implementation of ocean governance norms and tools, providing for formal classes and pedagogical instruments to individuals is crucial.

Santoro *et al.* (2017) recognised the importance of developing an educational framework that would include ocean sciences into national and state standard curriculum in the United States so that students would learn the role that the ocean plays in economic growth, national maritime security, protecting ocean health and the improvement of quality of life.

As Santoro *et al.* (2017) points out, having a formal or even an informal educational framework which expands on ocean-related matters has various advantages. For example, students are able to understand the role of the marine environment in supporting and sustaining marine species. The students are better aware of the importance of marine biodiversity and actions to be taken to protect the marine ecosystem and its functionality.

Worldwide, universities are offering courses, trainings, and capacity building on ocean governance (e.g., University of Malta, Masters in Ocean Governance). Tertiary education institutions (TEIs) provide not only an environment for sharing knowledge and skills, but also the vocational and practical aspects of ocean governance to prepare students for the future workplace. Through this, tertiary education institutions play a central role in transmitting knowledge and technical skills pertaining to ocean governance.

Kullenberg (2010) emphasizes the importance of education in promoting the sustainable use and management of ocean resources in order to reap

socio-economic benefits such as employment, food security and poverty alleviation. Tertiary education institutions provide a platform where students and academics can undertake research and participate in national discussions on the importance of ocean governance and how the implementation of ocean governance norms and tools can contribute to the socio-economic development of a country.

The UoM is the first TEI to include law of the sea and ocean governance in one of its curricula in Mauritius. UoM delivers several programmes concerned with ocean governance at the Faculty of Science and Faculty of Agriculture. There are three programmes that have been offered through the Department of Biosciences and Ocean Studies that have law of the sea and ocean governance components. The first programme is a 3-year undergraduate BSc Marine Environmental Science programme where students follow a 90-hour module on law of the sea and ocean governance. The module deals with the historical background and evolution of the law of the sea, the concept of ocean governance and institutional framework of ocean governance and marine spatial planning. The cohort size in these programmes since first offered in 2019 range from 22 to 30 students.

There are two Masters programmes, namely MSc Marine Science and MSc Coastal and Ocean Management which have been offered or on offer. The first Coastal and Ocean Management cohort, with 13 students, graduated in 2017. In this MSc, law of the sea and ocean governance forms a core module of 12 credits. In this module topics include major coastal and marine environmental laws and policies, maritime zones, and technical and analytical frameworks and concepts of ocean governance, law of the sea and marine policy. In the MSc Marine Science, there is a 6-credit module called Marine Resources and Law of the Sea. The law of the sea component focuses on marine environmental law and shipping laws, the economics of the ocean, international conventions and agreements, rights and responsibilities of states in various zones of the ocean, fisheries and non-living resources vessel nationality and jurisdiction maritime security maritime boundary delimitation and baselines, marine environment and dispute settlement mechanisms.

Research in ocean science is conducted by a number of PhD candidates at the UoM both at the Faculty of Science and Agriculture. The studies conducted could include ocean governance components if they

are dealing with management of marine biological resources. Furthermore, academics are increasingly conducting research in the field of ocean governance in the Mauritian context.

The UoM is the only tertiary education institution in the country to offer tailor-made undergraduate and postgraduate programmes based on ocean related matters. Although the UoM is the leading institution in Mauritius to provide for undergraduate and postgraduate courses on ocean related matters, ocean governance is still a novel concept in the country and the university can further enhance its pedagogical contribution in this field. The UoM can further strengthen its contribution to ocean governance locally, regionally and internationally.

Education plays a fundamental role in the ocean governance arena. Tertiary education can provide the necessary knowledge and practical skills required for good ocean governance.

Recommendations

At university level, there is a need to move towards a more multi-disciplinary and interfaculty approach for research and teaching. For example, at the UoM, the Faculty of Sciences, through its Department of Biosciences and Ocean Studies, offers courses on ocean governance and management.

Ocean governance is inherently a multidisciplinary and transdisciplinary endeavor and this should be reflected in training programmes on the subject. Courses and programmes should be created where academics from different faculties can contribute based on their expertise. For instance, in Mauritius the government is implementing the Blue Economy concept and courses and programmes combining management, economics and law, for example, can be developed at university level in order to be in line with governmental initiatives and contribute to expertise on new topics.

By encouraging exchanges between the UoM and other universities in the region, students throughout the Western Indian Ocean could benefit from the course and contribute to regional ocean governance understanding. Furthermore, the University can partner with regional and international organizations to contribute to, and benefit from, trainings and workshops that the partners provide. Collaboration between academics of the UoM and academics from

other universities in the region will promote research, build capacity, and ensure the transfer of knowledge and technology among academics in the region. The UoM provides a model that can be adopted and expanded to other countries in the region to develop undergraduate, Masters and research programmes in ocean governance.

The UoM has the potential to contribute to ocean awareness and the understanding of ocean governance at all levels of society. By collaborating with the Mauritius Institute of Education, which is the authority that trains primary and secondary school teachers, academics can train these teachers on ocean-related matters and thus encourage the inclusion of ocean studies in school curricula. This will improve the understanding of ocean issues at all educational levels. In addition, the UoM could organize trainings and short courses targeting governmental agencies, NGOs and local coastal communities on ocean related matters, such as environmental protection, shipping and maritime activities and the potential of the sea to contribute to economic growth.

Conclusion

The importance of effective ocean governance is gaining recognition worldwide. There is a need to educate people about ocean governance and how its norms and tools are important in protecting and sustainably using marine resources. Various international organizations, such as the United Nations and its agencies, have recognized the important role of education and how it can be a tool to promote ocean governance. Worldwide, universities are developing curricula which take into consideration ocean governance elements such as the law of the sea, environmental impact assessments or marine spatial planning. By including these tools in curricula the knowledge and skills necessary for the implementation of a well-functioning ocean governance framework are created and nurtured. In Mauritius, the UOM, through its various undergraduate and postgraduate programmes, has included elements of ocean governance in its curriculum. However, in order to further enhance knowledge about ocean governance in the country, the university should encourage a multidisciplinary approach and collaborate with regional and international organizations. Training in ocean issues should start from

primary and secondary school because having a population educated on ocean matters in Mauritius and regionally will ensure that decisions and actions taken will promote good governance and sustainable marine resource use, thus contributing to the protection of the marine environment for future generations.

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