MARINE BIOPROSPECTING: INTERNATIONAL LAW, INDONESIA AND SUSTAINABLE DEVELOPMENT

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A thesis submitted for the degree of Doctor of Philosophy of

The Australian National University

January 2013
I certify that the thesis entitled *Marine Bioprospecting: International Law, Indonesia and Sustainable Development* submitted for the degree of Doctor of Philosophy of the Australian National University is an original work, which is the result of my own independent intellectual effort. Where reference is made to the work of others, due acknowledgment is given. I also certify that any material in the thesis that has been accepted for a degree or diploma by any other university of institution is identified in the text.

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Dedication

To the loving memory of my father.

To my mother, who has taught me how to be persistent in the pursuit of knowledge.

To my wife and children, who have filled my days with love, joy and laughter.
Abstract

Bioprospecting is an element of the commercial exploitation of biodiversity which has sparked a number of legal issues, especially in terms of regulating access to and the sharing of benefits arising from the utilisation of genetic resources. Current studies in this field have largely focused on terrestrial genetic resources. Marine genetic resources need a special attention not only because of their significant economic potential but also because their sustainability is currently threatened by the degradation of the marine environment. By using Elinor Ostrom’s theory of collective action in governing the global environment, this thesis provides an analysis of what legal frameworks should be adopted to regulate marine bioprospecting activities.

This thesis is centred on the development of a legal framework for marine bioprospecting in Indonesia, a megadiverse country and the largest archipelagic State in the world. With such distinctive features, Indonesia holds a significant position in the field of marine bioprospecting. However, the current legal regime in Indonesia is still inadequate to address the legal issues related to marine bioprospecting activities. In addition, Indonesia has been facing numerous environmental challenges, particularly the degrading state of its coral reefs. Moreover, social and economic problems have been pervasive, especially widespread poverty throughout the Indonesian coastal communities.

In this context, this thesis argues that the legal framework for marine bioprospecting should not only regulate access to and the sharing of benefits arising from the utilisation of marine genetic resources, but more importantly, also needs to be built upon the need to achieve sustainable development and to implement the concept of
Blue Economy. Thus, this thesis rejects the model of the regulation of access to genetic resources that focuses strongly and solely on reaffirming the sovereign right over natural resources and combating biopiracy. In addition, this thesis also rejects the model of regulating access to genetic resources that puts too much emphasis on the commercial use of biodiversity and neglects environmental objectives.

In this light, this thesis recommends that the Indonesian Government should amend the current regulatory framework for the utilisation of genetic resources. In particular, the Indonesian Government needs to enact specific rules and regulations with respect to three important fields, namely access to genetic resources, marine scientific research and patent law.

This thesis further argues that the regulation of marine bioprospecting with a view to implementing the principles of sustainable development and the Blue Economy is also required at the international and regional levels. As to the international level, this thesis supports a proposed implementing agreement under the framework of the *United Nations Convention on the Law of the Sea (LOSC)* to address the current legal loopholes in the utilisation of marine genetic resources. This thesis also calls for a closer coordination especially between the State Parties to the *LOSC*, the *United Nations Convention on Biological Diversity (CBD)* and the *Agreement on Trade-related Aspects of Intellectual Property Rights (TRIPS)*. As to the regional level, this thesis argues that countries in the same region need to take more concerted efforts in ensuring the implementation of sustainable development through marine bioprospecting activities. In this regard, Indonesia should play a leadership role in various regional fora, especially the Coral Triangle Initiative and the Association of South East Asian Nations.
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