

Law below and beyond frontiers: marine genetic diversity, IP and information

Abstract of proposed paper for BILETA 2019 (Belfast)

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A new future lies in the [Blue Economy](#), with the potential of the oceans' raw materials - marine genetic resources - which scientific expertise can transform into invaluable products (such as pharmaceuticals) to benefit society, is only beginning to be realized (Royal Society 2017). 862 marine species have been identified, with 12998 genetic sequences associated with patents. BASF registered 47% of all marine sequences included in gene patents (Blasiak 2018)

Key questions include the owning and benefitting from the results of innovation, products and restrictions of the activity of others in the research and commercial fields, and the elision between the two. This raises questions of private power. There is a further issue that as 64% of the surface of the oceans is beyond the control of states, questions result as to which states benefits from product development and where responsibilities lie in the removal and sharing of MGR.

A new international legally-binding instrument is being negotiated regarding marine genetic resources in areas beyond national jurisdiction, under the United Nations Convention on Laws of the Sea, building on General Assembly resolutions from 2004. An important issue identified is whether marine genetic resources should be seen as free to all to take and own (the freedom of the high seas approach), as being part of the common heritage of humankind, and whether a different approach should apply (Thamisetty 2018).

Valuable strands of this debate include the power of intellectual property rights (IPRs); the extent to which IPRs can and should be available in respect of marine genetic resources and records of data; intersections between IP, information, human rights, the law of the sea and access and benefit sharing in respect of biodiversity, and the work of the Intergovernmental Oceanographic Commission; the extent to which negotiations at the UNCLOS should have regard to these points and the risks of fragmentation from ignoring these issues; need to avoid repeating problems suffered in relation to public health and biotechnological and synthetic biology innovation in respect of humans and plants, and the risk of too much focus on these questions meaning that the negotiations are unable to reach any outcome. There are also strong analogies with debates regarding regulation and internet control.

This paper draws on interdisciplinary work between Law and Science (see <https://www.abdn.ac.uk/ncs/departments/chemistry/bbnj/index.php>), developing a pragmatic solution (Broggiato et al 2018). The proposal has a focus on notification and exclusivity period and some sharing of data or samples. The challenge is to minimise obstacles to scientific research and commercialisation, including through regulatory obligations regarding access and benefit sharing, and to avoid overly enabling private control of MGR including through intellectual property rights (Correa 2017). The goal is to contribute to the solution to be adopted at the Intergovernmental Conferences, completing in 2020. Proposals were developed and shared with diplomats, policymakers, lawyers, scientists and activists before and at IGC1 in 2018 will be further developed on relation to IGC2, March/April 2019 (before the BILETA conference). This paper will build on this from two perspectives: it will explore these challenges with an emphasis of the conflicts which arise when fields and values may clash; and evaluate the steps which may or may not be available at international policy to address these and other points in an effective and constructive manner to minimise problems for the future.

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