

# MARINE BIODIVERSITY AND GENE PATENTS – BALANCING THE PRESERVATION OF MARINE GENETIC RESOURCES (MGR) AND THE EQUITABLE GENERATION OF BENEFITS FOR SOCIETY

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Marine Genetic Resources have been identified and included in patent applications increasingly in recent decades. The number of patent applications including genes from marine organisms is growing at 12% per year (Arrieta *et al.*, 2010). However, human appropriation of marine genetic resources is poorly regulated, particularly in international waters where no legal framework exists. The absence of a clear regulation about the property of MGRs results in an absence of mechanisms to ensure proper protection of these resources in international waters. Moreover, access to the World's MGRs is limited by technological capacity. 90% of patent claims associated to genes of marine organisms originate from only 10 countries (Arnaud-Haond *et al.*, 2011). Thus, there is an urgent need to provide a clear access and benefit-sharing framework for MGRs in international waters.

Conversely, within the EEZ of different countries, where the property of MGRs is well established, the fear of biopiracy often results in too many restrictions to bioprospecting and to basic research in general. This fear of biopiracy could be greatly alleviated implementing specific requirements to disclose the geographical origin and taxonomic affiliation of the source organisms in patent applications involving natural genetic resources.

## References

- Arnaud-Haond S., J.M. Arrieta and C.M. Duarte. 2011. Marine biodiversity and gene patents. *Science* 331(6024):1521 –1522.
- Arrieta J.M., S. Arnaud-Haond and C.M. Duarte. 2010. What lies underneath: conserving the oceans' genetic resources. *Proceedings of the National Academy of Sciences* 107(43):18318 –18324.