



## **Integration of Ethics in marine research and management**

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The concept of Ethics extends beyond the established set of particular values and principles, being rather a reasoned reflection for acting well and adopting behaviors that will make the world lastingly habitable for all.

All sciences should be conducted in an ethical way. While ethical guidelines are, for example, well established in medical research, other scientific fields lack precise concepts, especially in the marine science. Marine research is conducted ethically when scientists study and monitor the ocean in a sustainable manner, generating a maximum benefit to science, society and environment, and leaving a minimal negative footprint on the marine realm itself. In ethical marine research, issues and challenges should be identified, addressed and used to call for protection of the marine ecosystems and advocate management responses, environmental policies and societal awareness.

Within a scientific community, the researchers already acknowledge some ethical issues. Yet, research projects are increasing in their complexity, becoming more multi-disciplinary, multi-sector, and multi-cultural. It is thus expected that new ethical issues in marine research will arise. As a part of their role in team building process, project managers should include ethics into management practices to ensure that scientists are aware of the ethical conduct and the impacts of their research activities.

This paper discusses the importance of Ethics in marine research and suggests values and principles which can guide ethical activities in different aspects of marine research. Based on the examples of ethical issues and challenges encountered in ocean observations, we discuss potential strategies and methodologies that can reduce the negative impact of scientific activities on the marine environment. We evaluate how these solutions can be further implemented as guidelines in marine policies and legislations, thereby adding value to sustained ocean observing systems and projects like H2020 AtlantOS.