The Mares Conference on Marine Ecosystem Health and Conservation 2016: key themes

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Marine environments are generally considered as highly valuable and their health and conservation status are seen as key priorities. However, marine wildlife and habitats are facing multiple threats ranging from eutrophication to overfishing and ocean acidification, all of which directly or indirectly affect the biodiversity of marine ecosystems. The Mares Conference 2016 aims to address the main issues of marine ecosystems health and conservation. To do this, six thematic subjects will be explored throughout the conference scientific sessions and exhibitions;

1) Future oceans: Temperature increase, ocean acidification and expanding hypoxic zones in the ocean have the most prominent impacts on marine ecosystems health on the global scale. Recent results show that the reaction of marine ecosystems towards climate change, including ocean warming, acidification and expanding hypoxic zones, is often not linear but may occur in abrupt reorganisations of marine communities.

2) Understanding biodiversity effects on the functioning of marine ecosystems: During the last decades, it has become increasingly clear that the biodiversity of an ecosystem and its functional features are intricately linked. The objective of this theme is to further our understanding of how interactions between species, can be influenced by anthropogenic activities (pollution, fisheries).

3) Biological invasions: Species introduced outside their natural range are deemed non indigenous species. Invasive alien species can have adverse effects on biological diversity, ecosystem functioning, socio-economic values and/or human health in invaded regions.

4) Natural resources: overexploitation, fisheries and aquaculture: Since the late 19th century, the world fisheries catch has increased steadily, however, analysis of global trends of the most important marine stocks in the world shows that the majority are overexploited or depleted.

5) Ocean noise pollution: Anthropogenic sources of noise in the marine environment have increased in line with expansion in shipping, oil and gas exploration, infrastructure development, offshore renewable energy generation, naval sonar and research activities. These sound sources vary in intensity and frequency and can result in chronic and acute impacts on marine organisms.

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6) Habitat loss, urban development, coastal infrastructures and marine spatial planning: The coastal zones are changing under pressure from a growing human population and the conversion of shoreline habitat to urban development. While the conservation challenges associated with the expansion of human infrastructures are well understood in terrestrial systems, urban ecology has not been of as much focus in marine science and management.