

CIESM Congress Session : Biodiversity / global warming impact

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Moderator's Synthesis

Where do you see the main focus of research on biodiversity and climate change in the Mediterranean Sea ? The audience was not definite about the answer, but clear that it was necessary to investigate all levels of organization from species level to system level. Science contributes with experiments, observation and models, but it is hardly seen where and if the results are used (for examples by decision makers) and where science can efficiently contribute to the improvement of the current situation that is mainly characterized by a biodiversity change (a loss of native species but an increase in invasive and thermophile species).

The lack of access to necessary infrastructure (for example: well-equipped research vessels) in a number of bordering Mediterranean countries was seen as a major problem for oceanographic monitoring. Research should be better linked to the problems that cause biodiversity change in addition to climate change, and communication with civil should be improved. Policy makers need to prioritize measures of climate change not only on global but also on regional and local level to prevent a further tropicalisation of the Mediterranean Sea .

More experimental work such as testing the tolerance of certain species to temperature and CO₂ change is needed. Investigation of competition between native and invasive species should be also increased. With even 'simple', low-cost but well-designed field experiments, countries with lower resources could also make valuable contributions to the current research. Mesocosm facilities are good experimental units for experiments on biodiversity/climate change, but they are available only in few places and should be made more accessible to more scientists .

The audience agreed that we need an integrated view on the biodiversity that provides information not only on the simple change in species numbers in a certain region, but also on functional changes. Models with high resolution on species level could tell us a lot on the consequences of biodiversity changes on functional changes. This could be also emphasized for experimental research.

