

Managing Deep-sea Ecosystems at Ocean Basin Scale

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Research and policy development at basin scale has been driven by the realisation that climatic change and anthropogenic impacts are rapidly altering marine ecosystems at the same time as governments seek to promote increased economic output from the marine environment. This broad context sets the considerable challenge and opportunity for marine science, industry, management and policy to shape the frameworks through which this sustainable economic 'Blue Growth' can be achieved. This special session will explore recent findings and themes emerging as both the marine scientific and management communities embrace assessments of marine ecosystem connectivity, biogeography and function at ocean basin scale. This special session will invite contributions that bring together key advances and approaches relevant to ocean basin-scale research and management. Studies built upon new discoveries from poorly-understood deep ocean ecosystems are now highlighting the opportunities for the scientific community to create a new evidence base for long-term management. The improved understanding of ecosystem connectivity enhances our ability to define biogeographic patterns at full ocean basin scales. New generation of predictive models are better tuned to reflect the present-day occurrence of key species and make inferences about their future distributions as ocean conditions and human uses change. Such understanding is now making it possible for socio-economic assessments of ecosystem value to be conducted at larger scales. This special session will also seek contributions that explore the industrial and policy landscape at ocean basin scale. The special session chairs Murray Roberts, Colin Devey, and Telmo Morato are affiliated with the European ATLAS and iAtlantic consortia on ocean basin-scale research and management.