

# 3<sup>rd</sup> International Conference on **Biodiversity & Sustainable Energy Development**

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## Ensuring all components of marine ecosystems included in marine reserves

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In 2012, the Australian Government established 40 Commonwealth marine reserves totalling more than 2.3 million square kilometres to bring Australia's marine reserve estate to 3.1 million square kilometres. The bioregionalisation for these reserves was based largely on physical and oceanographic characteristics of the seabed and water masses. Biological data came mainly from fishery related surveys and studies of fish communities with some macroscopic epibenthic data. Such data may bias the identification of diverse biodiverse areas and certainly under-represents all the components of marine ecosystem functioning, namely the roles of benthic sessile and in faunal communities and small or microscopic soft bodied biota. This is critical given the increasing impact of climate change, increased urbanisation around Australia's coast and offshore gas and oil exploration all of which are likely to substantially impact on benthic systems. While much of this benthic fauna is still undescribed, we suggest that in fact substantial amount of unanalysed collection material and data is available and needs to be incorporated into fuller description of these bioregions and used when developing marine parks and spatial plans for managing marine biodiversity and natural resources. We suggest that the allocation of resources to analyse unworked materials and make data available is important for detecting change and should be considered before allocating resources for additional sampling.

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