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TITLE: Identifying knowledge gaps in seagrass research and management: An Australian perspective

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ABSTRACT:

Seagrass species form important marine and estuarine habitats providing valuable ecosystem services and functions. Coastal zones that are increasingly impacted by anthropogenic development have experienced substantial declines in seagrass abundance around the world. Australia, which has some of the world's largest seagrass meadows and is home to over half of the known species, is not immune to these losses. In 1999 a review of seagrass ecosystems knowledge was conducted in Australia and strategic research priorities were developed to provide research direction for future studies and management. Subsequent rapid evolution of seagrass research and scientific methods has led to more than 70% of peer reviewed seagrass literature being produced since that time. A workshop was held as part of the Australian Marine Sciences Association conference in July 2015 in Geelong, Victoria, to update and redefine strategic priorities in seagrass research. Participants identified 40 research questions from 10 research fields (taxonomy and systematics, physiology, population biology, sediment biogeochemistry and microbiology, ecosystem function, faunal habitats, threats, rehabilitation and restoration, mapping and monitoring, management tools) as priorities for future research on Australian seagrasses. Progress in research will rely on advances in areas such as remote sensing, genomic tools, microsensors, computer modeling, and statistical analyses. A more interdisciplinary approach will be needed to facilitate greater understanding of the complex interactions among seagrasses and their environment.

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