Reaping the benefits (and costs) of monitoring seagrass in Queensland Ports

Thursday, 9th July 15.00 - Lecture Theatre D2.211

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The Great Barrier Reef World Heritage Area includes one of the world's largest areas of seagrass (35, 000 km2) including 20% of the world's species. Mitigating natural and anthropogenic threats to this biodiverse region requires quantifying the resource for its' effective management. The Queensland Ports Seagrass Monitoring Program conducts long-term seagrass mapping and monitoring in the majority of Queensland's commercial ports. Monitoring focuses on seagrass habitat that is most "at risk" from the various threats that seagrasses face, providing port managers and regulators with key information to plan and implement port development and maintenance programs that will have minimal impact on seagrasses. The program has been successful in changing coastal development and ports and shipping industry practices, and has improved the ability of managers to protect marine habitats. As a by-product of the program a range of seagrass research projects have been established including developing tools to rapidly assess the health of seagrasses and to implement management triggers and thresholds; investigating seagrass resilience and recovery; quantifying productivity of tropical seagrass systems; and deciphering the role climate plays in shaping tropical seagrass communities. One of the limitations of the program is a sampling bias towards shallow coastal seagrasses within developed regions. This bias creates a problem if using monitoring data for building species and habitat maps. The data produced from the program results in a patchwork distribution of data sets that do not cover the entire ranges of seagrass habitats of the GBR and do not effectively represent relevant spatio-temporal changes making it difficult to produce broad-scale species and habitat maps to aid in management. The Queensland Ports Association is working alongside the Seagrass Ecology Group to try and fill these gaps in knowledge.