The Marine Botany group grew in several ways: size (postdocs, research assistants and post-graduate students), concurrent projects (Moreton Bay Study and bioindicator consultancies), space (new Hines Building laboratory), and facets (communication program). The Stradbroke Island research workshops became more frequent and several boats were added to the UQ fleet. A communications program was developed using conceptual models, science newsletters and books, and a training video. An expanded network of collaborators was developed, within Australia and internationally.

Moreton Bay study

The Marine Botany group conducted an intensive field based research program as part of Stage 2 of the Moreton Bay Study. Marine Botany projects included: impact assessment of the May 1996 flood; seagrass-light relationships; benthic flora nutrient dynamics, design and implementation of baseline monitoring; and plankton trophic dynamics. Some key findings include: rapid recovery of ecosystem processes following a flood event; elucidation of a toxic cyanobacteria (Lyngbya) bloom; sewage plume maps using $\delta^{15}$N to distinguish various sources; nitrogen limitation throughout the river estuaries and Moreton Bay. Mark O'Donohue did the bulk of his PhD research, Drs Judy O'Neil and Cindy Heil did their postdoctoral research, Jane Rogers, Graham Webb and Ben Longstaff did their Honours research, and Liz Duffy did her research experience as part of the Moreton Bay Study. Jens Hansen (Aarhus Univ.) did part of his PhD research and Sabine Roberts and Bernie Dudley did their Honours research on Moreton Bay seagrasses. Moreton Bay research was supported by a combined local council, state and federal government funding scheme.

Bioindicator application

Bioindicators developed in the initial studies were tested in a variety of locations throughout Australia. These applications included the Elevated Nutrients on Coral Reef Experiment conducted on One Tree reef, aquaculture ponds and pond effluent, estuaries and coastal waters. Bioindicator applications conducted in this diversity of locations allowed further refinement of the techniques and an understanding of the limits of each technique. Marine Botany also contributed to the testing of a novel technique for measuring in situ photosynthesis (Diving Pulse Amplitude Modulated fluorometer). Adrian Jones conducted his PhD research and Simon Costanzo, Scott Lowe, Phil Kay and Liz King conducted their Honours research. Bioindicator applications were funded through a series of consultancies with the Great Barrier Reef Marine Park Authority, Cooperative Research Centre for Aquaculture, Ports Corporation of Queensland and various local councils.

Outputs

Marine flora can be analysed to provide useful, ecologically meaningful information about the source, transport, fate and impact of nutrients in coastal marine environments.