

## ARC Centre of Excellence for Coral Reef Studies Media Release

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### **SCIENTISTS CALL FOR NO-TAKE CORAL SEA PARK**

More than 300 eminent scientists from Australia and from 21 other countries around the world today urged the Federal Government to create the world's largest no-take marine reserve in the Coral Sea.

"Marine reserves are an important tool for managing and restoring ecosystems. They protect brood stocks for sustainable fisheries and rebuild distorted foodwebs. We know how well they work because of the differences that we observe again and again between different marine zones under existing management schemes. Already, the recent rezoning of the Great Barrier Reef has resulted in a doubling of coral trout and other commercially important species" says the Director of the ARC Centre of Excellence for Coral Reef Studies, Professor Terry Hughes.

"The Australian Government's draft plan for a marine reserve in the Coral Sea is a significant step forward - but misses a unique opportunity for Australia to demonstrate global leadership in marine stewardship, by declaring the Coral Sea within Australia's EEZ as the world's largest no-take area" according to the statement, signed by more than 300 scientists..

"The Coral Sea adjoins the Great Barrier Reef, and because of its remoteness is one of the most intact oceanic ecosystems in the world. Together the two reserves would constitute the world's largest protected ocean ecosystem – at a time of growing concerns over the widespread loss of megafauna, corals and other marine life closer to shore," Says Professor Hugh Possingham. Director of the ARC Centre of Excellence for Environmental Decisions.

"We believe that an increased level of protection would be of immense benefit to Australia and to the world, at negligible cost. The Coral Sea is one of only a handful of places in the world where a very large oceanic no-take park could be created within a single national jurisdiction," the scientists said.

Their statement identifies six main reasons for extending the level of protection in the proposed marine reserve:

- Most of the shallow coral reefs, cays and sublittoral reefs of the western Queensland Plateau and the seamounts of the southern Coral Sea will not be fully protected in the Government's proposed reserve.
- The reefs of the Coral Sea need more protection: under the current plan only 2 new reefs out of 25 will receive a high level of protection. These reefs are important for recharging the corals of the GBR.

- Deep sea systems and seamounts need greater protection. The area contains Australia's largest deep trough system, which attracts large numbers of feeding and spawning fish, birds and whales.
- Ocean ecosystems need better protection from long-line fishing vessels, which threaten populations of yellowfin tuna, barracuda, sharks, turtles and seabirds.
- Catch-and-release fishing in the Coral Sea should be banned because of the high losses caused by predation and barotrauma, and its impact on shark populations
- It is much more cost-effective to manage a single, large no-take zone with simple boundaries than a variety of differently classified zones .

"A reserve of this scale and level of protection would provide unprecedented refugia for top ocean predators that are fast disappearing elsewhere in the world," Professor Terry Hughes said.

"Such a reserve will help to improve the resilience of the region's coral reefs to climate change, and provide a globally significant scientific reference site," adds Professor Bob Pressey of CoECSR and James Cook University.

"We believe that our recommendations will have minimal social and economic costs because there is very little current use of the Coral Sea region - but the recommendations will boost Australia's international reputation as a leader in marine protection and as an eco-tourism destination," he adds.

"Fully protecting the Coral Sea will provide a lasting legacy for future generations to enjoy and will reinforce the excellent levels of protection already achieved in the GBR," Professor Hughes said.

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CoECSR are proud sponsors of the 12th International Coral Reef Symposium, Cairns: 9-13 July 2012.

## **A Consensus Statement from the Australian and International Science Community on the proposed Coral Sea Commonwealth Marine Reserve**

The Australian Government's draft plan for a marine reserve in the Coral Sea is a significant step forward, but it contains a number of short-comings. The draft plan misses a unique opportunity for Australia to demonstrate global leadership in marine stewardship, by declaring the Coral Sea within Australia's EEZ as the world's largest no-take area, to protect its immense environmental and heritage values from the escalating threats of overfishing and climate change.

We believe that an increased level of protection would be of immense benefit to Australia and to the world, at negligible cost. The Coral Sea is one of only a handful of places in the world where a very large oceanic no-take park could be created within a single national jurisdiction. A single large no-take area encompassing Australia's Coral Sea jurisdiction would ensure that the scale of management appropriately matches the biological scale of important ecosystem processes such as dispersal and migration. A very large no-take park immediately adjacent to the GBRMP and its network of highly protected areas would be by far the world's largest protected ocean ecosystem. It would substantially enhance Australia's reputation as a world leader in the stewardship of marine biodiversity, and bolster the World Heritage values of the Great Barrier Reef, which is showing concerning signs of degradation (GBR Outlook Report 2009).

We identify six major issues in the draft plan that need to be addressed:

**1. Most of the shallow coral reefs, cays and sublittoral reefs of the western Queensland Plateau and the seamounts of the southern Coral Sea are not included in the proposed no-take zone.** Thus the representativeness of the no-take reserve is poor, with inadequate protection for key habitats in the west and south, contrary to the Australian Government's own principles for marine conservation. The draft plan also makes significant concessions to pelagic fishing activities that are inconsistent with achieving the conservation of species affected by these activities. The South Equatorial Current bifurcates in the Coral Sea into the Coral Sea Gyre in the north and the southwards flowing East Australian Current (Young *et al.* 2011), connecting the Coral Sea biota to both the GBR and southern reefs (Bode *et al.* 2006), as well as creating unique habitats and a genetic break in the north (van Oppen *et al.* 2008). The western Coral Sea, which is excluded from no-take zoning, has exceptionally high conservation value, because it includes the majority of the reefs and cays of the Queensland Plateau, breeding and calving grounds for humpback whales, nesting grounds for green turtles, foraging grounds for hawksbill turtles, populations of migratory pelagic species and breeding and foraging areas for seabird species, and the only known spawning aggregation site for black marlin (Ceccarelli 2011). Therefore, the proposed marine national park is not effective at representing the diversity of important habitats, environmental gradients, dispersal potential and highly sensitive species.

**2. The coral reefs of the Coral Sea need more protection.** Only 2 new reefs out of 25 named reefs in the Coral Sea are afforded a high level of protection. Monitoring by SEWPAC showed that of the two existing high-level reserves (Coringa-Herald and Lihou Marine Reserves), Coringa-Herald Marine Reserve has depauperate coral reef communities with low coral cover at present (Ceccarelli *et al.* 2008). To enhance connectivity in the region, and facilitate dispersal and recovery processes, additional reef habitat needs to be afforded no-take designation. Commercial and sport fishing targeting reef predators in the Coral Sea also has the potential to deleteriously affect the integrity of the small, relatively isolated and highly exposed reefs, which host smaller populations that are more reliant on large-scale dispersal of larvae than the highly interconnected Great Barrier Reef.

**3. Deep benthic systems and seamounts need more protection.** Neither the Queensland nor the Townsville Troughs are included in the proposed western no-take zone. Together they represent Australia's largest trough system, attracting large aggregations of feeding and spawning pelagic species. The Marion Plateau sub-region, including Marion and Saumarez Reefs, contains a high proportion of endemic species, in particular demersal sponge communities. Southern Coral Sea reef and deep benthic communities are also not represented in the no-take zone, yet they provide potential stepping stones for southwards range expansions of tropical reef species to gain access to climate change refugia (Beger *et al.* 2011).

**4. Pelagic ecosystems need more protection.** The southern Coral Sea is a hotspot for apex predators such as yellowfin tuna, barracuda and sharks. Long-lining should be excluded from the entire Coral Sea because of bycatch of non-target species, among which are sharks and rays, turtles and seabirds, including rare and endangered species in many of these groups. Consequently, as with the adjacent Great Barrier Reef Marine Park, long-lining should not be considered a reasonable activity in the proposed Coral Sea marine reserve.

**5. Catch and release fishing in the Coral Sea is inadvisable.** Catch-and-release fishing on coral reefs, which will be specifically allowed under the proposed plan, is especially problematic because released fish are vulnerable to predation and to high rates of mortality from barotraumas, hook injury and physiological stress. Catch-and-release fishing also poses a threat to sharks, which are a frequent bycatch in recreational reef fisheries. For example, studies on the Great Barrier Reef shows that grey reef sharks in Blue (fishing) zones are reduced by 97% compared to Pink (no-go zones) (Robbins *et al.* 2006). Recreational fishing for pelagic species in the Coral Sea Conservation Zone from 1989-2009 amounted to only 0.8% of total catch of black, blue and striped marlin, sailfish, and shortbill spearfish that were caught (and released) in the Great Barrier Reef Marine Park (NSW Dept. of Primary Industries). Therefore, the economic and social cost of extending the Coral Sea no-take zone to the outer GBRMP boundary is negligible.

**6. Cost-effective management requires large no-take zones with simple boundaries.** A recent study of potential management costs for the Coral Sea (Ban *et al.* 2011) demonstrated that management costs would increase sharply with subdivision of the Coral Sea into multiple-use zones, compared to a single no-take zone, largely due to the increased need for compliance activities. Cost-effectiveness of management therefore requires that the extensive additional no-take zoning in the western Coral Sea should be made, contiguous with the proposed eastern no-take zone. A reserve of this scale and level of protection would provide unprecedented refugia for top ocean predators that are under serious pressure elsewhere in the world (Game *et al.* 2009), improve the resilience of the region's coral reefs to climate change, and provide a globally significant scientific reference site. We believe that our recommendations will have minimal social and economic costs due to the low levels of use in the region, will boost Australia's reputation and branding as a leader in marine protection and destination for wild nature tourism, and will provide a lasting legacy for future generations.

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