



28 May 2007

To whom it may concern

RE Artificial Reefs on the Gold Coast

Dear Madam/Sir,

I am a research fellow at AIMS@JCU (aims.jcu.edu.au), a joint venture between the Australian Institute of Marine Science and James Cook University in Townsville. At present, I am carrying out scientific research investigating the physical environment and the ecology of wrecks and the surrounding seafloor, in particular of the iconic wreck of the *SS Yongala* near Townsville.

Ian Banks from divingthegoldcoast.com.au asked me to make a comment on the potential installation of artificial reefs on the Gold Coast. Although I do not have expertise with the Gold Coast region, and may not provide any specific information to support or otherwise a proposal to install artificial reefs in that region, I am happy to provide some general comments on the role that artificial reefs can play in coastal management.

It is well-established that artificial reefs such as wrecks can provide a habitat for a wide variety of marine organisms. The wreck of the *Yongala* is a prime example, boasting a biodiversity matching or exceeding reef habitats in a region of the shelf that otherwise provides little to no structural habitat and therefore comparatively low biodiversity. In highly productive marine ecosystems, such sites are usually settled or utilized quickly after installation, in particular by pelagic target species of recreational fishers. In ecosystems where productivity is high, availability of habitat often is an important factor in constraining distribution of organisms. In other words, in such systems settlement of a 'new' habitat is generally unlikely to result in a reduction of species or biomass at natural habitats nearby.

In order to make an informed decision of a specific proposal, effects such as connectivity to natural habitats, viability of fish stocks in the region, socio-economic benefits etc would have to be taken into account. However, in general in a marine

region where significant pressure on marine resources exists from development, fisheries and other usages of the marine environment, it is more likely than not that artificial reefs can make a net positive contribution to a sustainable resource management by mitigating pressures on the natural environment. For example, with careful site selection, a loss of habitat elsewhere from coastal development may be compensated for by installation of an appropriate artificial habitat. Many examples can be found in terrestrial natural resource management (e.g. artificial forests, wetlands etc), and although long-term information on this issue is to my knowledge not available in the marine realm, it is highly likely that similar considerations apply.

In my view, and without knowledge of any specific proposals, artificial reefs at the Gold Coast, and in the Great Barrier Reef, should be considered as a useful tool for a sustainable management for recreational fishing and dive tourism in the future, by reducing pressures from dive tourism and recreational fishing on natural reefs nearby.

I am happy to provide further information if requested,
Regards

A handwritten signature in black ink, appearing to read 'Thomas Stieglitz', with a long horizontal flourish extending to the right.

Dr Thomas Stieglitz
AIMS@JCU Research Fellow