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Mass Whale Strandings Indicate "Sick Oceans"

Friday, 6 August 2010, 12:04 pm

Press Release: New Zealand Underwater Association

Mass Whale Strandings Indicate "Sick Oceans" in Deep Trouble

The New Zealand Underwater Association applauds scientist Steve O'Shea for sharing his research findings on the television documentary-Deep Trouble

<http://www.3news.co.nz/Deep-Trouble/tabid/371/articleID/169002/Default.aspx>).

It is truly disturbing to think that in ten years we may not have any whales left because mass strandings of whales may be due to dehydration and starvation a symptom of overfishing says marine naturalist, Peter Crabb.

Crabb says that the cascade effects of fishing on a key predator species was recognised by divers when New Zealand's oldest full no-take marine reserve was created at Goat Island in 1973. Snapper numbers returned in the absence of fishing and snapper prey on sea urchins or kina. Kina which are vegetarians had proliferated wildly in the absence of snapper and had completely reduced the kelp forest to a fuzz and the kina could be seen sitting out in the open on top of the reefs, a phenomenon known as "kina barrens". As snapper numbers built up, the kina numbers were once again held in check. The kelp forests grew back which in turn lead to a return of all of the many species which the kelp forest supported. These "kina barrens" which many divers had assumed were part of natural ecology, since they were common all around the coast, disappeared within the reserve. If we acknowledge that trophic cascades operate due to fishing it is likely that fishing 50 million kilograms of squid could be driving a much larger cascade system in the open ocean. Since squid, as O Shea has shown us, is a main food for whales, is having a cascade effect on the food chain and our marine mammals are starving to death, Crabb says.

Dr O Shea pointed out that fisheries management in NZ takes no account of the food chain and habitats of the target species and therefore does not adjust for such "trophic cascade" effects. Crabb says that it is well known that not only bottom trawling is destructive, but other fishing methods catch non-target species like sharks, sealions and even albatross. NZ's much lauded quota management system (QMS) is often held up as the panacea for fisheries management world wide but a more ecological view is needed before many current forms of fishing can be deemed sustainable, Crabb says. Many NZ fish stocks are in decline and fisheries managers with some of the best brains and technology at their disposal must regularly reduce quotas for many species. In addition, fisheries models work on the premise that there is removal of large old individuals that are no longer reproductive from the fished population. We now understand that large and old individuals provide important social and ecological functions which fisheries models cannot account for. Similarly fisheries management operates on the premise that a large biomass of the original population is removed in order to achieve mean sustainable yield (MSY) the holy grail of fisheries management.

While this may feel depressing we do have a solution at our disposal which requires no more science and is one that

we know works, says Crabb. An integrated network of marine protected areas provides a very simple insurance policy against the wanton behaviour of humans towards our oceans. In addition to providing locations where science can be conducted, marine protected areas can go towards mitigating the effects of poor land management practices, overfishing, sewage and plastic disposal and disasters both man induced such as submarine oil geysers or natural disasters like hurricanes and tsunamis.

Dr Bill Ballantine the father of marine reserves in NZ says that, even a five year old can understand that of course you would set aside areas of the ocean where you do nothing because in other areas of the ocean people are doing stuff that can go horribly wrong. Dr Daniel Pauly an internationally respected scientist and campaigner on the perils of overfishing, says that we must create a network of marine protected areas before the only thing we can catch from the sea is jelly fish soup.

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