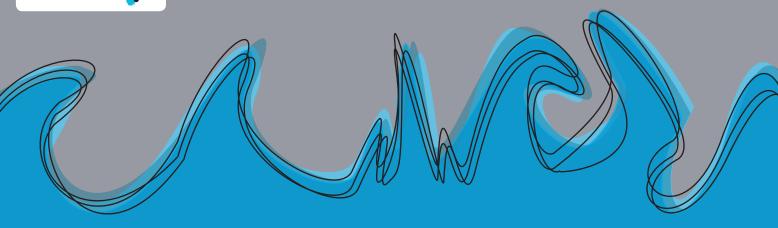
Current and future impacts of climate change on marine fisheries and biodiversity Submission 3 - Attachment 3



Change in coastal fishing communities: Queensland Bowen,



What's unique about Bowen and small coastal communities?

Bowen is a medium sized coastal town of just over 10,000 people. In some aspects Bowen is typical of Australian coastal towns that are beyond commuting distances. For instance, secondary industries such as accommodation and food services are increasingly dominating the economy over commercial fishing. But despite a decline in the

primary industries nationally, coastal communities like Bowen still have a higher proportion of people in the aquaculture and fishing industries. Reef line fishing, especially for coral trout, is the main commercial fishery in Bowen and prawns and barramundi form the backbone of land based aquaculture industries. Recreational fishing and dive operators make up the marine tourism sector.

The marine sector in a small coastal community

Coastal communities traditionally have major industry sectors that harvest resources from the sea or invest in recreational marine pursuits. Most people (32%) who work in fishing and aquaculture in Queensland live in coastal communities of up to 30,000 residents. Recreational fishing, charter fishing, and the dive sector are often locally

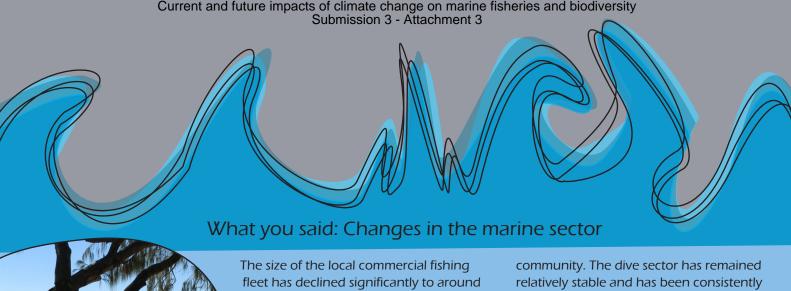
very important with increasing participation rates fuelled by higher disposable incomes. Generally, tourism related activities (like restaurants and accommodation), some of which can be linked to marine activities, are of greater relative economic importance in small coastal communities compared to the larger centres, especially in Queensland.

The flow-on effects of the marine sector

The link between the marine sector and other economic sectors in the mining sector. Although in the community are constantly changing. For instance, there is a noticeable impact from a decline in active local fishing boats over the last decade on associated marine industries such as slipway operators, vessel maintenance and marine chandlery as well as fish outlets, restaurants, and processing facilities. Even though employment in fisheries has been impacted, some have

found alternative employment there has been a negative impact from a dwindling local commercial fishing sector, the growing recreational fishing sectors provides some economic benefits to associated industries such as fishing and tackle shops. The aquaculture sector has many flow-on benefits particularly with respect to local full-time and part-time employment.





The size of the local commercial fishing fleet has declined significantly to around 10 active boats. Marine park zoning and changes in management partly explained this decline. The social implication of a declining fleet and change in fishing behaviour has been noticeable in the local

relatively stable and has been consistently present in the area for a number of years. Even though there had been a charter fishing operator in the area it was difficult to operate without cross-subsidisation from other business (much like the dive sector).

What you said: Changes in the marine environment

Decline in abundance of several commercial species was due to a number factors including: commercial and recreational fishing pressure and climate related factors (especially the effect of cyclones and storms but also coral bleaching). Misinformation about the physical infrastructure

and marine environment destruction after cyclonic events was responsible for prolonged economic hardships in the local community with tourists staying away. However, at present the local marine environment seemed to be 'repairing' benefitting the dive charters.

What the Scientists Say

There have been a number of cyclonic weather events that have had destructive effects on the marine environment in the past years. Marine species respond

differently to these destructive effects with the recovery rate of some species being higher than others and the ability of some species to move to more suitable places.

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Photo credits: 1, 2, 3 & 5. J. Shaw; 4. Diagram from Richardson and Poloczanska 2009

Disclaimer: The information presented is from a range of sources including Census data, published reports, and interviews held for the Blueprint project. The aim of the flyer is to present some preliminary and highly simplified information. Further details will be provided after the full project finishes at the end of 2013.

Coral

Queensland

New

South Wales

asmania

Victoria

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Census and other existing research information were combined with information collected from 3 coastal towns in Australia, St Helens TAS, Bowen QLD and Geraldton WA. The information presented here is preliminary and should not be considered final for the 'blueprint for coastal community adaptation planning' project. The 'blueprint for coastal community adaptation planning' project will be finalised by the end of 2013.



western australian marine science institution





Department of Climate Change and Energy Efficiency









