



Voyage ss2010_v03

Physical Forcing of Productivity on the Kimberley Shelf

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Contribution to Australia's national benefit:

Given exponential population growth, it is not surprising that we have exploded into an age where humans profoundly impact the ecology of the planet. This project is designed to provide scientific support for management regarding the environment. This science team has a track record of characterising aquatic ecosystems with the goal of understanding how these ecosystems function so that the costs and benefits of any management decisions can be estimated.

Our voyage to the Kimberley quantified the key fluxes of carbon and nitrogen through a combination of measurements and experiments. More insights into these fluxes were gained from the application of sophisticated

flow cytometry and genetic techniques. We quantified the flux of carbon and nitrogen from the air and water into the animals and plants. Sophisticated modelling allows us to extrapolate our measurements while rigorously tracking the uncertainties to produce a verifiable accounting of these fluxes. This approach can tell us how much carbon is naturally sequestered around Australia. It can be used to predict effects impacted on endangered biota or to make scientifically-sound, local decisions regarding development.

Itinerary

Departed Broome,
Wednesday 14 April 2010

Arrived Port Hedland,
Wednesday 5 May 2010

> Transit voyage track ss2010_v03

