


The Secretary  
Standing Committee on Climate Change, Water, Environment and the Arts  
House of Representatives  
Parliament House  
PO Box 6021  
Canberra ACT 2600

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Date Received:	30-5-08
Secretary:	

**Re: Inquiry into climate change and environmental impacts on coastal communities**

**By Professor Alistair McIlgorm, Director, The National Marine Science Centre, ( A joint centre of The University of New England and Southern Cross University), Coffs Harbour NSW.**

Dear Sir,

I wish to submit some perspectives on Australian coastal impacts.

The coast issue raises its head every 10 years or so and then seems to be forgotten, until another enquiry comes along. The coasts seem to be poorly managed to start with, and now the advent of climate change impacts, risks compounding the issue. The coasts do not seem to sit well with existing structure and levels of government and tend to be on the margin in all governance and legislative systems.

### **1. Layers of government**

Even the three layers of government, Federal, State and councils have had a fourth layer of catchment management authorities added by the previous government. Why have we a system in which the Commonwealth makes much of the key coastal policy, the states plan themselves into grid lock and the local council have lots of issues and hurdles put on them by Federal and state government, which they seem ill trained and un-resourced for? Surely the layers of government can relate more effectively to prepare for climate change impacts?

Canberra and the States planners need more of a handle on the issues faced by the average Council under a weight of Federal and State planning and environmental policies.

After years of environmentalism why do we have only handful of Councils who really have a vision for an environmentally sustainable coast? Such awareness rests with a few key individuals at the local government level who can lead on these issues. We need to address how to build human capacity at the local government level.

**Proposal 1: A study is required of the human capacity needs in local government and the requirements to assist local government staff to plan and to face climate change impacts. This is a priority. Scholarship programs could be offered.**

## 2. The marine economy

My area of expertise is in the economics of marine and coastal economies and fisheries management.

The major shortfall in all layers of government dealing with the coast is a lack of understanding the structure of the marine economy. The Marine Economy is:

*"...the economic contribution of marine based industries to the economy" (Allen, 2001, p1);*

*"...to compile data on those industries which have been categorised as a marine industry on the basis of their relationship with the marine environment - be that through the use of a marine resource (such a commercial fishing, offshore oil and gas), the provision of services through marine transportation (such as shipping and port based industries) or taking advantage the positive attributes of the marine environment (such as marine tourism). (Allen, 2004; p37).*

In addition it can move to more than a national accounts approach.

*"Part of the conceptual challenges facing such a valuation, is the summation of extractive and service values and the inability of current information to support the inclusion of non-use values of the sea. The compilation of annual industry production values in national accounts is potentially deficient in not accounting for reduction in natural resource stocks and also inherits the limitations of national accounts data which insufficiently measures environmental values" (McIlgorm, 2004) .*

Only then can we evaluate the changes that are taking place with potential climate change.

We usually see a physical science based approach with a socio-economic addendum. This is a short sighted view as coastal vulnerability is inherently economic.

Example – The coastal vulnerability of Kernel, NSW. Predictions of tsunamis point to a potential epicentre in the Kermadec's north of New Zealand. The science can predict likelihood and the ecologists say xyz etc etc. But the real policy driver is the potential loss of 50% of the petro chemical refining /supply of East Coast Australia!

What vulnerability is government addressing? It is also noteworthy that the sand dunes at Kernell were nature's mitigation, and were mined and sold to US/ Hawaii in the 1960-70s. It will be the economic loss that will drive the generation of alternative responses to climate change impacts, though even in the wake of hurricane Katrina alternative housing and reconstruction have been slow.

**Proposal 2: There needs to be greater recognition that coastal vulnerability has an economic cost.**

### 3) The US experience

I would refer the enquiry to [www.oceaneconomics.org](http://www.oceaneconomics.org) which has been an academic institution/ US government project to locate and hold national data sets for the US coastal economy. Dr Judith Kildow is Director of the program and has completed several studies of the coastal economy of California and impacts of climate changes. She also analysed the impacts of hurricane Katrina for the US government.

**Dr Kildow was a special guest of the National Marine Science Centre (NMSC) in 2006 and key note speaker at the NSW Coastal Council's conference in Coffs Harbour in 2006. The conference agreed the presentation on the coastal economy was the missing link in NSW.**

Part of the material presented was the study of the California Coastal economy. Up front in the submission I indicated the problem in Australia of the three layers of government. Here is the feedback for the US study:

#### **PRESS RELEASE July 23, 2005**

*LONG BEACH - California's coastal economy, which generates more money than any other state's, is growing partly by generating more low-paying jobs for service workers who increasingly cannot afford rising housing costs.*

*That's one key finding of a \$100,000 report touted as the most comprehensive study ever of the state's coastal economy.*

*The 158-page study, presented yesterday at a meeting of the California Biodiversity Council in Long Beach, underscores a growing disparity between the wealthy and the poor in California's coastal zone, where 77 percent of the state's population lives. Statistics gathered for the study cover 1990-2000.*

*Five years ago, California's coastal economy generated \$42.9 billion through coastline construction, harvesting of offshore minerals, shipbuilding and repair, tourism, port activity and other maritime transportation.*

*Most new coastal jobs are part of the tourism and recreation sector. These positions typically pay \$18,000 or less per year, said Judith Kildow, a California State University Monterey Bay professor who co-authored the study with University of Southern Maine economist Charles S. Colgan.*

*Philip King, a San Francisco State University professor who specializes in coastal economies, said the study's conclusions support trends that housing and demographic experts have been talking about for years.*

*The report, he said, bolsters the argument that "tourism is now a critical component of the coastal economy, and it's likely to become even more important over the next 20 years."*

*The coastal zone is a magnet for the state's work force, skilled and unskilled, because it has 81 percent of all jobs in the state - an estimated 700,000, Kildow said.*

*In contrast to the growth in coastal tourism and recreation, commercial fishing and industrial activity such as ship building declined from 1990 through 2000, the report found.*

*Kildow said the study will be useful for policy-makers because it highlights areas that need greater government attention: public transportation, low-cost housing and other infrastructure needs along the coast.*

*For instance, the report indicated that many workers have moved inland, where housing costs are cheaper than along the coast, which means they must commute longer distances to their jobs.*

*California's population growth was 22.7 percent in inland counties, compared with an increase of 11.3 percent in coastal counties and 7.7 percent in the housing zone closest to the shoreline.*

*"This kind of information gives people an opportunity to see the warning signs before it's too late," Kildow said.*

*California Resources Secretary Michael Chrisman, who headed yesterday's briefing on the study, said the report is a "superb start" for better coastline management. "But what it really points out is the need for even more information and data, as well as the need for partnerships between local, state and national" groups, he said.*

*Del Mar Deputy Mayor Crystal Crawford, who attended the briefing, said the study will help San Diego's beach cities lobby for more state and federal dollars for combating coastal erosion.*

*"This provides us with data – more than the mere intuitive and anecdotal – that will give us the additional support we need to fund beach replenishment projects," Crawford said.*

This was 3 years ago and the research has developed to study climate change impacts.

What has Australia done in this area?

**Proposal 3: There is a need to use the experience available elsewhere to assist us to analyse our coastal economy.**

#### **4) What needs to happen in Australia to meet the climate change challenge?**

Work in bringing the coastal economy into the planning and decision making process in Australia has been limited due to lack of funding.

##### *Oceans policy*

Of the \$50m spent on Ocean Policy, one report measuring Australia's Marine Economy was funded by the Oceans Office in 2004 for a total \$25,000 (Allen Consulting, 2004). This is evidence of structural fault is departmentalisation of funding for multidisciplinary work....it just slips between the stools while the status quo prospers.

##### *NSW Environmental Trust*

Recently I was informed by the NSW Environmental Trust that I should withdraw my application entitled: "***A valuation framework for protecting coastal biodiversity in NSW***". The biodiversity grants, have all been science in the past and apparently economics had had its chance last year...and I should "*wait for some future year when economics might be included again*". It is any wonder that coastal NSW and the planet is in the state it is?

##### *APEC*

DEH have funded some work within APEC on the Marine Economy (McIlgorm, 2004), but this has not progressed to coastal valuation. The Bali Plan of Action was signed in Sept 2005 by all 21 Ministers of APEC and Australia has agreed to:

***“ Ensuring the sustainable management of the marine environment and its resources***

*To achieve this goal, it is necessary to: a) understand oceans, seas and coasts; b) manage the marine environment sustainably; and, c) manage living resources sustainably.*

*I.a. Understanding oceans, seas and coasts*

*A clear and comprehensive understanding of the oceans, seas and coasts will enable APEC member economies to accurately assess their potential and to manage them appropriately” Bali plan of Action (2005).*

*And later ...*

*“Understanding the value of the marine sector. A better understanding of the short-term and long-term market and non-market value of the marine sector would better enable stakeholders and decision makers to achieve sustainable, integrated marine management.*

*x. Study the market and non-market value of the marine environment and marine industries in the Asia-Pacific region, including by undertaking research, communication and information exchange on marine activities”.* Bali plan of Action (2005).

There have been a few small projects in the marine and coastal economy area, but socio-economics remain an add on component. What is needed in socio-economists working in multidisciplinary setting as equals with scientists.

The US experience shows that our national data sets only partially cover the required information needs for future management of the coastal economy and climate change impacts. There is a considerable amount of diagnostic work to do to set up the data systems required in the future. If we don't we will squander millions of dollars in the coming decades eventually discovering we don't have the right data to answer impact questions. ***In 50 years what data will someone wish we had started collecting now?***

#### **Proposal 4:**

**More research funds need directed towards coastal economy scoping work with research into the data requirements for future coastal impact assessment and mitigation.**

#### **References**

Allen (2004). “The Economic Contribution of Australia’s Marine Industries 1995-96 to 2002-03”, The Allen Consulting Group. A report to the National Oceans Office, Hobart.

APEC (2005) BALI PLAN OF ACTION -Towards Healthy Oceans and Coasts for the Sustainable Growth and Prosperity of the Asia-Pacific Community. A Joint Ministerial Statement, The 2nd APEC Ocean-Related Ministerial Meeting (AOMM2), Bali, 16-17 September 2005.

McIlgorm, A. (2004). “Economic Value of the Marine Sector Across the APEC Marine Economies”. Draft report to the APEC Marine Resource Conservation Working Group Project (05/2004), by The Centre for Marine Policy, University of Wollongong, Australia.

