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NZCS Conference 2001: An overview

"Sand, Sea, Surf and Settlements: Managing the Coast" was this year's theme for the Coastal Society Annual Seminar held in October 2001 at Tahuna Beach, Nelson. The NZCS out-going president Richard Reinin-Hamill welcomed about 80 participants who were presented with an opening address by the Minister of Conservation, Hon. Marian Hobbs.

The Seminar explored managing the coast to cope with sand, sea, surf and settlements in a changing global climate. The Hon. Marion Hobbs was encouraged to see a large group of professionals and academics working closely together to share ideas and experiences on managing expectations with a changing climate. The minister discussed the Oceans Policy, which NZCS has made a submission to (see page 19), specifically why it is needed, what is it, what is the context and how is this to be achieved, with the focus on the need for an overarching framework for direction.

Relative Sea Level Rise and Coastal Engineering

Tony Dalrymple

The keynote speaker at the Seminar was Professor RA (Tony) Dalrymple. Tony is the Edward C. Davis Professor of Civil and Environmental Engineering and Professor of Marine Studies at the University of Delaware. He is well known in coastal circles

as the originator of COASTAL LIST, a specialist coastal email discussion group. Tony gave the keynote presentation as well as a presentation of the local issues facing the Delaware State.



The USA statistics on risk were staggering. 66% of the SE coast of the US is developed and 85% is eroding. There is US\$3 Trillion of insured infrastructure within the hazard areas and US\$1 billion worth of damage occurs every hurricane. Equally staggering were the statistics on the value of beaches. Miami Beach attracts more

tourists than the top 3 National Parks in the US and beach tourism brings more money into the economy than the US receives in exports.

Beach nourishment is the tool of choice in the USA both as protection and as providing an amenity. Due to the value of shoreline properties, it is generally the most cost-effective solution. Lots of money is spent on nourishment with substantial funding from the federal government. However, other funding sources, such as a levy on tourist accommodation is also used to fund nourishment schemes. The National Flood Insurance Programme was also created for people who live in hazard zones. Many of the issues seemed the same as in New Zealand but the scale was significantly greater; larger hazards, greater risk, more



development. The clear message was that now is a great time to do some long-term planning.

By Richard Reinin-Hamill (Tonkin and Taylor)

Climate change effects on coastal hazards

Rob Bell (NIWA) and Terry Hume (NIWA)



The presentation and workshop addressed the impacts of climate-change and global warming on coastal margins. The key findings are:

- "... most of the global warming observed over the last 50 years is attributable to human activities" (IPCC, 2001);
- NZ can expect a relative rise in sea level of 0.14 – 0.18 m by 2050 and 0.31 – 0.49 m by 2100, and a rise in mean air temperature of 1.6 – 2.2C.
- Coastal development is on a "collision course" with climate change effects.
- Climate change will exacerbate historical erosion and accretion trends.
- Wind and wave changes will alter coastal productivity/fisheries.
- There will be lowland river flooding and impacts on water quality from increased estuarine sediment loads;
- Aquatic ecosystems will be affected;
- Education is needed to engender acceptance of sea level rise effects;
- The capacity of ecosystems and human systems needs assessing;
- Pre-planned retreat is the only long-term option in undeveloped areas.
- Managed retreat or adaptation is the only long term option for vulnerable communities;
- Physical protection options for highly developed beaches are the only medium-term solution.
- Topography and cadastral data for coastal margins needs upgrading so that impacts in low-lying areas can be assessed.

Climate change effects on coastal margins are taking place slowly so we have time to plan.

We have prior knowledge of impacts. There is a robust planning and policy framework already in place to manage and mitigate hazards, under the umbrella of the R.M.A, although some fine-tuning is needed.

Education, discussion, and adjustment are now vital adaptation strategies.

Note - A full report on "Planning for climate change effects on coastal margins" is available at www.climatechange.govt.nz/sp/resources/resources_publications_alt.htm

By Harvey Brookes (ARC)

Workshop on planning for climate change – implications for coastal margins

Following the address by Rob Bell and Terry Hume the 80 coastal society members split into six groups to debate the issues reported below. All groups addressed an additional question: "What role can NZCS play in climate-change issues?"

Coastal climate-impact assessments – do they have a role?

There is a need for focused assessments of coastal hazards due to climate change. The methodology and process for prioritising assessment sites should be established nationally to ensure consistency. Sites for assessments should be prioritised at regional and local levels with an emphasis on vulnerable areas with existing or imminent development potential. Existing frameworks used to prepare Coastal Hazard Assessments and Comprehensive Stormwater Management Plans may be expanded to include Coastal Climate Impact Assessments.

Assessments should include consideration of both bio-physical and socio-economic factors. Considerations of the socio-economic factors are particularly important in areas of existing coastal development.

Coastal Climate Impact Assessments could be undertaken as a component of a Resource Consent application or as part of a Structure Plan process. Either way, the outputs could be given greater effect through incorporating results into District Plans/Resource Consent. It will be particularly important to implement assessments across the boundaries of MHWS, between Regions and between the RMA and Building Act.

Physical process information on tides, waves,

storm surge on sea level rise at a local level, is important. There are geographic and temporal gaps in this information. Data collection and making best use of existing information requires improved national coordination.

There are large gaps in the state of marine ecological knowledge, both at a baseline level and in terms of ecological response to climate change. The domain of socio-economic information is also sparse. Community willingness to pay for coastal hazard works is not well researched. Non-market values such as public access and natural character are inherently difficult to factor into cost/benefit considerations.

The NZ Coastal Society could:

- Advocate Central and Local Government politicians on issues of concern, about which the society's members have expertise.
- Assist in establishing guidelines for Coastal Climate Impact Assessments.
- Bring together 'experts', practitioners and community groups on climate change.
- Consider greater alliance with the Coastal Dune Vegetation Network.
- Assist in the development and dissemination of education material on climate change.

By Hugh Leersynder (ARC)

Education and community awareness of hazards & climate change – how do we increase the level of public awareness?

The general public are bombarded with hundreds of messages every day, everything from have you bought your LOTTO double dip to brush between meals! The challenge for the NZCS is to break through the clutter and engage local communities with a clear and simple message about what climate change and coastal hazards are and what it means to them.

Our workshop team waded through the series of probing questions drafted by Terry and Rob and

agreed that the NZCS should take a lead role to improve public awareness of climate change at three levels - community, regional and national level. During the workshop session our creative juices ran hot and produced a series of ideas, one that would capture a wide TV audience, targeting specific audience such as politicians. One hot idea was NZCS sponsoring surf reports or Real TV "When storms go bad" adding information about coastal hazards & climate change!

Our team emphasised that national action would be a key driver and suggest that NZCS should lobby for a National Policy Statement on Climate Change. We also agreed that the general public need to be exposed to a clear and concise message that will reinforce what climate change means to them. The group clearly identified that, in order to move forward, NZCS needs an active communication strategy that identifies key stakeholders and similar societies that could work with NZCS. The strategy would also include the different types of media , TV, radio, editorials. The education strategy includes the how and what to include as the message. The idea is that the outcomes from each strategy overlap and creates added value.

The key question is that as a NZCS member are you keen to take on the challenge, to actively become involved reaching out to communities, participate in active regional forums and perhaps drive change at the national level?

By Stacey Devine (ARC)

National versus local solutions to climate-change impacts

Central government should take a lead in providing information and education on sea level rise (SLR) impacts. The first task is to standardise the methodology for determining the level of risk to SLR which can applied by regional governments (e.g., National Standard).

Once a standard methodology has been set local



Derek Todd leads a workshop group discussing 'National versus local solutions to climate-change impacts'





government should decide for themselves what is the best response option for their situation and existing developments. The responses will vary with local government perception of the value of the area/asset at risk, the perception of the need for the area/asset to remain in its current location, the finance available for the protection option and the availability of other suitable sites for retreat. For new developments, the regional government should be applying adaptation measures (land use controls, floor level restrictions) to ensure that land use reflects the level of risk and that the value of assets at risk is not increased.

Who should pay for climate change response options? Due to inequality of finance available at a local level to fund response options, central government should set up a contestable fund for regional & local government to apply for assistance in funding response options for areas/assets of national importance. No central government finance should be available for protection of private developments. However through the central government funded information and education programme, a "buyer beware" policy should be used to promote a market-driven retreat from areas at risk. No finance should be available for protection of new developments located in areas of risk.

The NZ Coastal Society could develop a role from merely being a lobby group for safe practice in the coastal zone. It should become an advisory group on such matters as the national methodology of risk definition, the regional zoning & land use of areas at risk, and the design and likely success of adaptation and protection options. To implement this role it is recognised that NZCS will have to advance

from its current position of small-scale finances and volunteer workers.

By Derek Todd (DTec Consulting Ltd)

Information, research and monitoring requirements (coastal climate-change and coastal hazards)

In addressing the question "who plays", the group considered that the main stakeholders were; educational institutions, Crown Research Institutes, consultants, and regional and district councils. Ideally, it was felt that, while all these groups may have a role in collecting data, carrying out research and monitoring, the regional councils were probably best placed to collect regional data in a co-ordinated form that could eventually become part of a national database, held by central government.

In addressing the question "who pays", the most likely source of funding for the collection of regional data was considered to be district and regional government through rates, and from developers through the AEE process.

There is a large variety of coastal data that the group considered desirable. This is listed in Table 1 under three headings. Note, this list is not necessarily all-inclusive, and some information fits other categories as well.

All this information was considered important but it is clear that there are significant gaps and priorities that will vary from region to region. There is little evidence of any of this information being available in a national database. Here, the Coastal Society can and must help. Lobbying at a national level is very important. NZCS must become an advocate for coastal issues and the promotion of coastal knowledge. An internal,

Table 1: Coastal data considered important for a national database

Environmental	Geological	Sociological
Current data*	Beach profiles*	Economic profiles*
Wave data*	Hazard vulnerability	Social profiles*
Tide/water levels*	Sediment transport	Infrastructure
Storm surge	Historic change*	Ownership characteristics
Tsunami	Stormwater run-off	Uses
River flows	Estuarine sedimentation	Awareness/perception
Water quality	Topographical data*	Archaeological information
Meteorological records		
Ecosystem descriptions		
Vegetation characteristics		

* Considered essential information

Richard Reinin-Hamill's group discussing 'Education and community awareness of hazards and climate change' — or just enjoying the Nelson sunshine!



E-mail based discussion group, to further develop these ideas, was considered desirable.

By John Lumsden (Consultant)

Resource management structure, coastal hazards and climate change

The group addressed the question “Is the current statutory system enough to take us through climate change over the next 50-100years?” The strengths of the current systems were seen as being inter-generational, having a focus on the coast and recognising geohazards, and being well positioned to provide national guidance and promote strategic planning. The weaknesses were identified as a lack of consistency, litigation issues, being an adversarial system and political influences. Opportunities to improve the system exist in the form of possible integration cross-administrative boundaries, increased consistency with increased guidance and removing the ownership issue from the RMA. Litigation was seen as a threat to operation of the current statutory system.

Changes are needed to the NZ Coastal Policy Statement. It is not specific enough in terms of time horizons for climate change and other parameters. The roles of DoC and MfE need to be revisited. There should be a stronger input from Regional Councils. There should be greater guidance for Regional Coastal Plans and District Plans. The NZCPS should spell out key performance measures. There should be handbook/prescriptions for ‘technical’ plans.

The NZ Coastal Society is in a position to determine priorities for research then lobby groups to: improve the definition on cadastral and

topographic maps of coastal margins, develop comprehensive case studies/scenarios for what climate change means and the potential impacts, and prepare a best practice’ publication targeted at “Hazard assessment and community involvement”. NZCS should also establish key lines of communication to increase linkages with research agencies and produce a stakeholder management plan. MfE was identified as a key body to bring groups together.

By Lucy Brake (Environment BOP)

Protection of well-developed coastal communities and infrastructure

The group was asked to consider which response options were likely to prove to be the most appropriate approaches to managing hazard risk to coastal communities in the longer term, including consideration of RMA compatibility.

It was generally felt that hard engineering structures (shoreline armouring, groynes, offshore breakwaters) would only prove appropriate long term options where high value public assets required protection – with houses specifically excluded!

Environmentally softer options (e.g., artificial surfing reefs, beach nourishment) were thought likely to have some applications (with beneficiaries paying), though beach nourishment was seen as a short-medium, rather than longer term solution.

There was general agreement that, ultimately, threatened communities would largely have to retreat– other options simply not being sustainable over the longer term. There was little time to discuss the myriad of practical/political difficulties associated with this reality, though emphasis was





given to “managed retreat” (i.e., humans making the choices as to when and how retreat occurred) rather than the more simplistic “leave it to nature” approach. The question of “who pays?” was only briefly discussed. There was general agreement on the “buyer beware” liability of owners, though also recognition that practical solutions would require more complex cost sharing arrangements.

Having decided as facilitator to keep my views to myself, I was very surprised at the outcome and the degree of unanimity. It is clear that most coastal management practitioners can now see the writing on the (my) wall. However, all were equally aware that these ultimate realities are still a long way removed from the present realities of coastal management in New Zealand.

By Jim Dahm (Coastline Consultants)

Coast care and communities — “Living in the hit zone”

Jim Dahm (Coastline Consultants) and Bronwen Riddle (EW)

Jim and Bronwen opened their address by stating that “*Even without global warming effects and climate change we have some serious effects (of inappropriate coastal management)*”. They then proceeded to illustrate this with respect to the eastern Coromandel coastline.

Coastal development within the Environment Waikato Region has been quantified with a staggering 75% of Coromandel beaches recorded as developed or partially developed (1996, EW research). Historically, coastal development has been close to the beach and it seems the trend is still occurring with a shift from the old kiwi bach to people buying to build bigger and even closer to the beach.

The eastern Coromandel beaches are relatively benign with interdecadal shoreline fluctuations less than 30m (except near estuary entrances). Nonetheless, scores of properties and dwellings are so close to the sea they lie within this area of the active beach and hazard problems are already being experienced.

The historical and current trends in coastal development demonstrate our limited cultural and adaptive capacity to change our past practices. Superimpose the effects of projected climate change on the present situation and the problems are potentially astronomical. Our culture is going one way; the coast is going the other!

Jim and Bronwen emphasized the need to involve

beachfront owners and the wider community in the management of coastal hazards, to promote awareness and to build capacity for adaptation and sustainable coastal management. Inclusive three-way partnership engaging the community, and regional and territorial authorities. Inclusive participation should highlight all community issues and values (including the values of the local beach environment), not just beachfront property values.

They noted the particular need to promote natural buffers, through set backs, dune care and the protection of sand resources within beach systems.

Jim summed up by saying “It took us a number of decades to get us into this hole, and it’s going to take another couple of decades to get us out”

By Stacey Devine (ARC)

Managed retreat

Richard Reinin-Hamill (Tonkin and Taylor)

In his presentation Richard explored the theory, practice and challenge of managed retreat.

The Theory: is where there are properties and assets at risk, for example on an eroding dune system, then they are moved away from the area at risk.

The Practice: Richard helped to explain this using a case study. In the 1960’s, sand dunes at Waihi Beach, Bay of Plenty, were subdivided. As a result of the stormy 1970’s, this beach eroded placing the houses at risk, the solution was the placement of a rock wall to provide protection. Subsequently, the houses have been upgraded and now there is pressure to further upgrade the seawall.

District Plans are very focused on environmental protection and identification of coastal hazards, but there is still a high demand for property and demand for beach recreation. Where hazard zones are identified in District Plans they are often disputed by the beachfront property owners as such a zone can significantly decrease property values.

The Challenge: In areas all around NZ, large numbers of houses with existing use rights within 50 m of the shoreline and within the natural zone of shoreline fluctuation has resulted in significant problems. Managed retreat must ensure that the coastal environment is protected, that the resource of the coast is maintained for the population and that it is socially just.

The Methods: This can be achieved by delineating hazard areas, by quantifying natural values,

assessing and planning for community needs, using setbacks to manage new development, reducing the intensity of subdivision, promoting safer alternatives for water development, such as Whitianga Canal Development, and looking at the option of regional and local authorities purchasing properties in hazard areas.

With the strong likelihood of increased storminess on the Pacific coast of New Zealand the issue of managed retreat is only going to intensify.

By Ken Murray (DoC)

Marahau rehabilitation

Eric Verstappen (TDC)

Marahau is a small holiday settlement at the southern gateway to the Abel Tasman National Park. It has experienced a sharp rise in tourism, and a 50 million dollar resort development has recently been granted approval (under appeal) on low-lying land that is also subject to severe foreshore erosion. The road past the settlement passes between the houses and coast and is protected by a rock wall.

After extensive community consultation, the Tasman District Council has just applied for consents to widen the road reserve and construct a revetment structure, two groynes and boat ramps and undertake beach replenishment. The present poorly located boat ramp experiences 65-80 tractor and trailer launching movements daily over the summer.

Aside from the large scale of the proposed resort, of greatest concern is the site chosen to take some 25,000 m³ of sand for beach stabilisation works. This site is seaward off the distal end of a significant sand spit across the mouth of the Otuwhero Inlet, and immediately to the south of the community.

Locals fear that extraction may destabilise the spit and would prefer extraction from an offshore site. However offshore dredging is not practical, could destroy shellfish beds, and an alternative site requires access to land identified by local Maori as waahi tapu.

By Jo Fagan (WRC)

Coastal planning

Mike Jacobson (KDC)

Mike presented his view of realpolitik for coastal development in New Zealand. He is pessimistic that managed retreat can be treated as a politically realistic option.

Coastal development has substantial support and short term benefits for key participants, with future risk and costs downplayed, while climate change issues are long term, incremental and have limited understanding and support. Blame follows damage.

Case studies of Wainui Beach in Gisborne, the aptly named Water's Edge Subdivision in Paraparaumu and Rosetta Road in Raumati, were presented. All showed sequences of subdivision and development followed by erosion and loss of the coastal margin and legal/consent/construction activities by residents seeking to protect or develop their properties:

Lessons from the case studies are:

- Repeated erosion does not reduce residents' faith in seawall solutions.
- Unauthorised works are not easily addressed by current policies.
- Managed retreat is practically impossible against concerted opposition.
- The perception of an erosion problem and willingness to pay, lags behind the protection level required to properly address the problem.
- It is a brave and well-insured Consent Manager who will require the removal of a seawall when this is allowed by a consent.
- Coastal squeeze is ongoing – the process of intensifying development on the coastline.

Mike concluded that:

- Current legislation and policies do clearly not assist the management of coastal changes that can be expected with climate change.
- There is a need for integration of national lessons and guidance into each District Plan.
- There is a need for commitment to education and consultation.
- We need to focus on a shift from temporary engineering solutions to long term social, economic and cultural goals.

By Peter Steel (Beca Carter)

Tahuna Beach issues

Andrew Petheram (NCC) and Gary Tear (NCC)

Nelson City Council (NCC) is responsible for the management of the beach system of Tahunanui. The beach and adjacent reserve land are important community assets which are highly valued by the people of Nelson. The Council is undertaking a two pronged approach to manage the erosion





along the beach which is impacting on the reserve.

Firstly, NCC are supporting CoastCare initiatives along the centre of the beach, which include installing screen mesh, planting spinifex and establishing defined and controlled access points to the beach. This work, aimed at stabilising the foredunes, is just commencing.

The second prong aims to address sections of more rapid erosion at the western and eastern ends of the beach. Although there is limited fetch, and a relatively benign wind climate, erosion at the ends of the beach is of concern.

A range of engineering solutions were investigated. The preferred option at the western end is to create a 'hard point' of geotextile tubes/reno mattresses to dissipate the wave energy. At the eastern end of the beach the proposed options include diverting existing stormwater off the beach and piping it along the seaward base of an existing seawall. It is also planned to reduce reflected waves from the seawall by constructing a more gently battered face to the wall, incorporating the diverted stormwater pipes.

By Hugh Lyeersnyder (ARC)

NZCS Strategic Plan

Harvey Brookes (ARC)

Just minutes after his election by the Management Team to replace outgoing Chairperson Richard Reinen-Hamill, the new Chairperson, Harvey Brookes, outlined some possible future changes to the focus and delivery of the NZ Coastal Society to its members and the public of New Zealand at large.

The details of the Chairman's proposals are outlined on the NZ Coastal Society web page at www.cae.canterbury.ac.nz/nzcs/nzcs.htm and also on page 16 of this newsletter.

Harvey suggested that changes need to be made to ensure that the NZCS delivers what its members want. He felt the members would like to see: a continuation of the annual seminar, more general debate on coastal topics, a regular newsletter in professional format, an increase in the profile of the Society, perhaps by way of a lobby group, the Society taking part in the formulation of national policy, by way of submissions on such issues as the Oceans Policy, a raising of the awareness of the Coastal Society with key government departments, and forming email discussion groups for use by members in their professional life as providing a tool to shape Society opinion

so that the opinions of the NZCS are heard and reflected in future legislation.

An emphasis needs to be placed on organising a greater number of regional branch meetings where members can listen to keynote speakers and discuss topics of interest while meeting and socialising with other NZCS members. The first of these was held in Hamilton at Environment Waikato on 20 November.

Another area of importance is the development of the NZCS web page and links to provide discussion group feedback to members plus other matters of interest.

Harvey outlined the importance of all members reading information on the web and in the newsletter and providing feedback to any Management Committee member on the direction the Society should take.

The committee rely on members to have their say, so that the wishes of the membership drive any changes to the Society rather than a Management Team deciding for the majority.

By Paul Baunton (TDC)

Field trip – Nelson Area

The field trip component of the Seminar allowed participants the opportunity to view Nelson's famous coastline. First stop was Marahau, the gateway to Abel Tasman National Park. Local residents talked to the group about the increasing number of tourists to this area and the impact on the community and environment. The locals illustrated and discussed the extent of shoreline retreat along this coast.

Next was Kaiteriteri, a golden sand beach where the road is parallel to the beach and there is no dune system. Kaiteriteri is a highly popular beach during summer. At the time of the field visit machinery was working on the beach re-contouring and preparing for a new carpark. Sand is regularly collected from the adjoining river and placed upon the beach.

Ruby Bay was the third stop, a rocky (largely river gravel) beach. Eric Verstappen (TDC) talked about coastal erosion protection being undertaken on a section of this beach to protect property. Waimea Estuary and Tahuna Beach were also visited. Eric provided excellent commentary with a radio link between the two buses ensuring everyone could hear the discussions!

By Jason Ward (DoC)

Sea Spurge (*Euphorbia paralias*): Floating New Zealand's way

Over the last 50 years or so a number of exotic species have been introduced to southeast Australia to stabilise active dune systems. Many of these species, including Sea Wheat Grass (*Elymus farctus*); Marram grass (*Ammophila arenaria*); Pyp Grass (*Ehrharta villosa*); and Bitou Bush (*Chrysanthemoides monilifera ssp. rotundata*), have become naturalized. Very few active dune systems are now free of exotic species and most, including significant conservation areas, contain a range of exotic species. Marram grass, for example, has spread south of Strahan in southwest Tasmania, and is established within the World Heritage Area.

This history of introduction, naturalization, dispersal and belated understanding of the impact of these species in Australia is similar to New Zealand's experience, although several potentially damaging foredune species have yet to cross the Tasman Sea. One of these, Sea Spurge (*Euphorbia paralias*) is probably floating New Zealand's way. This species poses a significant risk to the natural character of New Zealand's remaining active dune systems (see Coastal News #17 for feature on active dunes). The purpose of this article is to raise awareness of this species in the hope initial infestations can be identified and eliminated.

Sea spurge is a perennial herb of semi-vegetated coastal dunes native to southern Europe and the Mediterranean Sea. It occurs from the Netherlands (N. Lat. 53°) as far south as Mauritania in northern Africa (N Lat. 24°). The northern limit coincides with increasing frost and ice days. The southern limit of its range corresponds with climates with low annual rainfall (less than, around, 200mm). In Australia it occurs across the southern coastline of Australia between Perth (S. Lat. 32°) in Western Australia and Batemans Bay (S. Lat. 35°) in New South Wales, including Tasmania (S. Lat. 43°). Bio-climate model predictions, based on the climate of recorded sites, indicate Sea Spurge will disperse further north in Australia. There may be no environmental constraints to the establishment of the plant in New Zealand's active dune systems.

Sea Spurge is generally identified as a species of incipient foredunes in Europe and the Mediterranean. In western France it tends to occur on the primary foredune. In Australia, which contains larger transgressive dune systems, it occurs in all dune environments, except those that experience high rates of sand deposition. It is also able to establish within densely vegetated

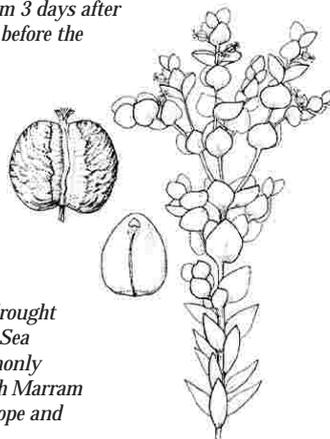
hinterland plant communities, including native herb-fields (marsupial or coastal turf), shrubland, native grassland and agricultural pasture.

My concern that this species will establish in New Zealand stems from the history of dispersal of Sea Spurge in Australia and the significant impact this species has had on indigenous dune flora in Australia. The species may have little difficulty crossing the Tasman Sea and establishing in New Zealand. According to Petrus Heyligers, formerly of CSIRO, it was accidentally introduced to Western Australia (Albany) before 1927 and South Australia (Port Victoria) before 1927, probably in ship's ballast. Sea spurge subsequently spread in an easterly direction, initially through long-

Sea Spurge is an erect, perennial herb with leafy wooden stems, 2-10 mm thick. Stems grow initially from the root crown and then later from a decumbent base. Fleshy leaves are glabrous and glaucous, and grow to 3 cm long. Plants in the United Kingdom have several stems that grow to 45 cm. Plants in Australia have one to nine stems and grow to 70 cm or more. Reproductive stems bear flowers in an umbel inflorescence and die off after flowering.

Sea spurge flowers from mid July to late September in the UK and from September to May in Australia. A vigorous plant can produce 60 inflorescences in a season, with 25 to 40 fruits per inflorescence. Three round seeds, ovoid-globose, 2.5-3.5 mm long, are produced per fruit, and annual production can be around 5,000 seeds per plant. Seed is shed throughout the year. Seed is sea dispersed. The seeds possess a layer of spongy tissue containing large air-spaces between the kernel and the hard testa, by which they float. Experiments by Petrus Heyligers, indicate seed may stay afloat in sea water for more than 8 years. After 2 years about half of the seeds in his experiment were still viable. Seeds have an initial dormancy period; many seeds kept dry remain viable for at least 7 years.

The plant is adapted to burial and will survive low to moderate rates of burial. Side branches can develop anywhere along the stem, allowing the plant to cope with high levels of sand accretion. The plant has a tap root which can grow to 5-6 cm 3 days after germination, before the cotyledons emerge, reaching 10-15 cm within 7-14 days, which allows it to minimize the exposure of seedlings to drought and erosion. Sea Spurge commonly associates with Marram Grass in Europe and Australia.





distance dispersal by coastal currents. Subsequent infilling over short to medium distances was achieved by wind-driven long-shore drift.

Natural dispersal from Albany and Port Victoria has been rapid. Sea Spurge reached Kangaroo Island, South Australia, in 1958; Wilson's Promontory, Victoria in the 1974; Flinders Island, Bass Strait, in 1982; the northeast coast of Tasmania in the early 1980s and the west coast of Tasmania (Strahan) in 1984. The species forms dense infestations throughout the Bass Strait Islands, is widespread along the north coast of Tasmania and is spreading down the west and east coasts of the state. The potential of the species to float to New Zealand is indicated by drift card experiments – cards released from Bass Strait oil rigs have washed ashore along the coast of the South Island. Basil Stanton, NIWA, believes material might take between 6 months and 2 years to make the trip, depending on several oceanographic factors. Given the abundance of the species in Bass Strait, the prevailing west to east surface drift and the ability of the seed to survive years in sea water, it is surprising the plant is not already established in New Zealand.

The impact of the species on the ecology and geomorphology of foredunes in Australia has

attracted relatively little attention. In a study of Sea Spurge in Victoria's Otway Russel Wilcock observed that the species “appears to occupy dune locations which may otherwise be devoid of vegetation” and that “the species ... occurs as dense stands, to the exclusion of other species”. I recently surveyed a large number of Sea Spurge sites in Tasmania and South Australia and observed large populations (hectares to tens of hectares in area), containing extraordinarily few indigenous species. It appears to displace *Spinifex sericeus*. Populations of Sea Spurge are self sustaining and appear to inhibit succession; mature plants are replaced from seed ejected by adjacent parent plants. Sea Spurge may suppress competitors by efficient extraction of nutrients, or perhaps by biochemical methods. Sea Spurge is unlikely to be grazed by animals as it contains a distasteful milky white sap.

Sea spurge has the potential to significantly modify the ecology of active dune systems in New Zealand. Given the ability of this species to produce and disperse large quantities of seed we must ensure initial populations are destroyed promptly. We can ill afford to add to the existing list of invasive dune species.

By Mike Hilton (Otago University)

Whitianga Waterways: Underway after consent delays

On 20 June 2001 Sandra Lee, the Minister of Conservation, issued the two Restricted Coastal Permits required to finally allow construction to start on the Whitianga Waterways project. While the issues surrounding the Ministers delay in releasing these permits have been extensively reported, debated and analyzed, the controversy has highlighted the need for all parties participating in RMA to be aware of their obligations and rights.

Project approval was in part delayed because the applicant, Hopper Developments, allowed a



Whitianga Waterways

consent authority the privilege of choosing when it would make and release a decision instead of demanding that decisions be given within the timeframe specified under the RMA.

Section 119 of the RMA gives the Minister 20 working days from receipt of ‘The hearing committees recommendation’, or, should there be a request for an inquiry into the recommendation, ‘The report of the planning tribunal’. At Whitianga there was no application for an inquiry into the recommendation to the Minister, therefore the Ministers decision was due 20 working days from date of receipt (20 November 1999). If the Minister believed that a challenge to the Environment Court against the decision of the Regional Council was a request for an inquiry, that was put to rest at the 20 March 2000 call-over when Judge Bollard, in ruling against an application to strike-out an appeal, stated in part:

‘These consents were duly granted by the Regional Council subject to conditions. Significantly, no appeals are before the Court in reference to these consents. They are beyond challenge.’ and ‘As noted above, the Regional Council’s decision is not

under appeal, simply the District Council's land-use decision.'

Hence, a decision could have been given 20 days from the date of release of that determination (6 April 2000).

Unfortunately, Hopper Developments allowed DoC to delay release of the Ministers decision until all outstanding challenges had been resolved, thus establishing a "precedent of convenience". This in itself is un-necessary conservatism as Section 119 (7) gives the Minister the ability to delay commencement of consents until outstanding issues had been resolved.

In our opinion it is now incumbent on all parties to RMA proceedings (be they applicant, regulator or legislator), to police the performance guidelines provided in the Act and to ensure that decisions are given within the permitted timeframes.

Further confusion over interpretation, application and delivery does nothing to the confidence of those whose livelihood is dependent on prompt, evenhanded decision-making.

By Evans Young (Hopper Developments)

The opinions in this article are those of author and not necessarily those of the New Zealand Coastal Society.



Conferences/Workshops

Coastal Dune Vegetation Network 2002 Conference and AGM, February 13-15, Palmerston North

The Conference and AGM is being organised as a partnership by CDVN (FRI), Horizons.mw (Manawatu-Wanganui Regional Council), Massey University, AgResearch and Ernslaw One Ltd. The theme being the Wild West Coast will focus on an overview of the West coast issues in relation to coastal dynamics and vegetation, updates and discussions on current CDVN Trials. An all day field trip to the Manawatu Coast looking at remnant coastal dune forests, rare coastal vegetation and management issues.

Further details from Diana Gainsford (CDVN) email: diana.gainsford@forestresearch.co.nz

7th International Coastal Symposium, March 25-29, 2002, University of Ulster, Northern Ireland

This is to be hosted by the Coastal Research Group of the School of Environmental Studies. Symposium Themes include: Coastal Change (Quaternary to historical); Contemporary coastal processes; Coastal engineering and management, and Coastal ecosystems.

Further details and initial registration of interest can be found at: www.science.ulst.ac.uk/ics2002/

Coastal Zone Asia-Pacific: Improving the State of the Coastal Areas, May 12-16, 2002, Bangkok, Thailand

The first international CZAP conference is organized as a response to an increasing need for a sharing and adopting of good, practical and feasible integrated coastal management programs. The overall aim of the conference is to bring *researchers, practitioners, educators, communities, industries, government and non-government groups* to develop national and regional strategies for integrated coastal management that will improve the state of our coastal areas.

Visit the web site for registration, abstract submission and more information (www.vims.edu/czap), or contact: Dr Ratana Chuenpagdee, Conference Coordinator, Virginia Institute of Marine Science, P.O. Box 1346, Gloucester Point, Virginia, 23062, Tel. (804) 684-7335, Fax. (804) 684-7843, e-mail: ratana@vims.edu

Seventh International Conference on Remote Sensing for Marine and Coastal Environments, 20-22 May, 2002, Miami, Florida, USA

This international conference focuses on the application of remote sensing and advanced geospatial information technologies in marine, inland water, and coastal environments to address real-world problems and improve decision-making. The conference also includes field trips, workshops, and an exhibition of products and services.

For further enquiries please visit www.erim-int.com/CONF/marine/MARINE.html

Ports and Coasts Conference 2003, Auckland

The NZCS will be hosting the Ports & Coasts Conference 2003, which will be held in Auckland, September 2003. A committee is being formed to progress the planning of the conference and details will be included in this newsletter and the webpage. So start thinking of all those papers that you have been meaning to put down and start on those abstracts! For further details, e-mail: Stephen Priestly at spriestly@beca.co.nz



Editorial

The annual seminar is the time when the Coastal Society members really get the most out of the Society. There is a swapping of experiences and meeting of a diverse range of disciplines and interest groups that make our society unique. The problem is that after the seminar all the enthusiasm goes a bit flat again as people get wrapped up in their own work. We use *Coastal News* as a tool to maximise the benefit of the seminar and spinout the communication a bit longer.

In this issue of *Coastal News* you will find items that capture key ideas from the seminar.

It is also a useful record of the society activities and, if you didn't attend the seminar, you can see what you missed out on. You will have noticed changes in *Coastal News* over the last several issues. There is more content, we are working towards a more standard format, and it's available in colour via the NZCS web site.

All this takes time, to date mostly mine, although NIWA has always supported my efforts as Editor. We pay Charles Hendtlass of CAE who has done a great job of compiling the Newsletter, organising the printing and putting it on the web. Your Committee have employed Lucy Brake of Environment BOP as Assistant Editor. The Assistant Editor now gets paid an honorarium of \$250 per issue for this work – this is a small recognition of the effort that goes into preparing the newsletter. Lucy assisted with the last couple of issues and this made my task much easier and more enjoyable. Lucy and I promise to get you three issues per year in December, April and July. This timing is organised about the October Seminar.

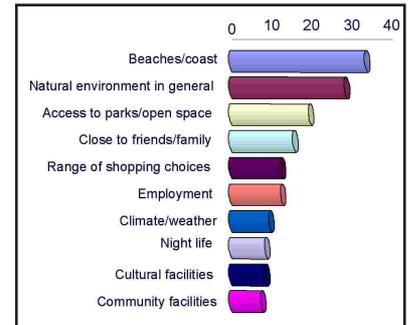
We are also working on content and ways of integrating *Coastal News* with the website. So expect to see continuing improvements. Our major goal is to make better use of *Coastal News* as a tool for keeping the communication in the Society going throughout the year. We need your help with that. So, send us articles on what you are working on and your thoughts on matters coastal. Contribute to *Coastal News* and make your society stronger.

Terry Hume (NIWA)

A "Sustainable Auckland" needs good quality beaches

There was little talk about the coast at the Sustainable Auckland Congress (18-20 September 2001), despite the fact that a recent Forsyth Research poll showed that Aucklanders rate 'beaches/coast' as the key contributor to the quality of life in the region.

Harvey Brookes and Terry Hume were the only speakers on



beaches and the coast at a conference, which spanned four days and was reported to cover all the key aspects of central concern to the future of Auckland. Their paper *'The contribution of city beaches towards sustainable development in Auckland'* showed how beaches in, and adjacent to, developed areas are threatened by loss of natural character and function.

There are few pristine beaches remaining in Auckland and those that exist are fragile and threatened by reductions in sediment supply due to changes in catchment runoff, seawalls, cliff stabilisation and reduction in shellfish populations, modifications in wave energy and sea level rise.

Management is difficult because there is little room for retreat and restoration of character. Management solutions by way of conserving beaches on the offshore islands, restoring those beaches in a semi-natural state by planting and laybacks, and re-creating beaches via well designed nourishment, provide opportunities to protect and preserve these key contributors to Auckland's unique qualities.

*By Terry Hume (NIWA)
Harvey Brookes (ARC)*

Test your knowledge: where is this coastline?



(answer page 20)

Global perspectives on coastal zone management

During 2001 I spent 3 months travelling to America, United Kingdom and Australia on a Winston Churchill Memorial Scholarship visiting with coastal management agencies, scientists, consultants and community groups to look at different techniques and strategies used to look after the coastal zone. On my return I completed a full report on recommendations for New Zealand for my sponsors and have given a number of presentations.

East Coast of United States of America

There are a wide range of coastal management issues to contend with over a vast geographical area. Prior to 1988 hard structural coastal defence measures were used to control erosion; this had generally led to a loss of the natural beach environment but some protection of the infrastructure behind (as shown by Photograph 1). There is a definite move now towards the use of soft structural coastal defence measures and bioengineering, including beach nourishment and revegetation.

Due to the huge investment in both public infrastructure and private development along the east coast, which is subject to severe erosion as a result of hurricanes and wave action, the United States Government has invested millions of US dollars into coastal defence projects.

The biggest concerns for people involved in managing the coastal zone are population pressures, sea level rise and sustainability of sand supply for renourishment projects. Techniques to improve the beaches for tourism, such as mechanical beach cleaning, were being used methodically along the coast and having a long term negative effect on beach and dune development.

United Kingdom

The UK has a long history of coastal management where coastal defence work was carried out in

response to localised erosion issues with little consideration to the effects of this work on the natural coastal processes taking place in each location and further along the coast. Today with major financial investment along the coast the Government has recognised the need for better planning and has been instrumental in implementing measures to support this. UK coastal zone management is guided by the European Union legislation which is currently focused on protection of habitats and species.



Figure 1: Structure of Coastal Forum in UK

The UK has been divided into management 'cells' based on natural coastal processes which cross over administrative boundaries and a Coastal Forum has been set up for each 'cell' to assist with management of that area (Figure 1 shows the typical structure of a forum). This appears to be extremely effective and allows communication and co-operation between interested parties to encourage good management practices. These Forums provide a voluntary partnership approach to the long-term protection and preservation of the coast and are made up of business and industry representatives, voluntary organisations, community members and government agencies.

Concerns in UK include coastal squeeze, where structures are introduced to an environment and

continued on page 17



Photo 1: Example of existing coastal protection structure in USA



Photo 2: Example of Coastcare revegetation project in Australia



What's hot on the WWW

Coastal News



www.commondreams.org/headlines/031100-01.htm

This is a news item written about the "Perpetual Battle With Erosion" in the USA. Describing how in the last 50 years, taxpayers in the USA have paid \$600 million to protect coastal real estate, and that in the next 50 years, the bill could come to \$5 billion. Interesting reading!



www.ea.gov.au/water/quality/nwqms/index.html

The new ANZECC Guidelines for water quality
The revised Australian and New Zealand Guidelines for Fresh and Marine Water Quality (2000) and the Australian Guidelines for Water Quality Monitoring and Reporting (2000) are now available. Information about how to order the ring-binder and CD package can be found on the NWQMS web site.



www.metservice.co.nz

For free national forecasts including mountain, recreational marine, coastal and oceanic forecasts, or satellite and radar images.



www.dar.csiro.au/publications/projections2001.pdf

www.marine.csiro.au/iawg/impacts2001.pdf

Climate change in Australia

CSIRO has produced a number of brochures outlining the "Climate Change Projections for Australia" and "Climate Change Impacts for Australia". These provide great summaries of the climate change issue.



www.weatherworkshop.co.nz

This website covers all of NZ including isobar maps and you can subscribe to a Long Range Weather and Trend Forecast.



www.climatechange.govt.nz/sp/resources/resources_publications_alt.htm

Climate change on coastal margins. The on-line copy(pdf) can be found at that above address.

Weather forecasts – most of us are familiar with looking to the skies and taking a punt on today's weather, but for a more specialist, local or long-range forecast, try some of the online services published in the May 2001 edition of Consumer Magazine (www.consumer.org.nz).



www.ofu.co.nz/graph/tides.htm

This website will provide you with up to date information on tides around the country.



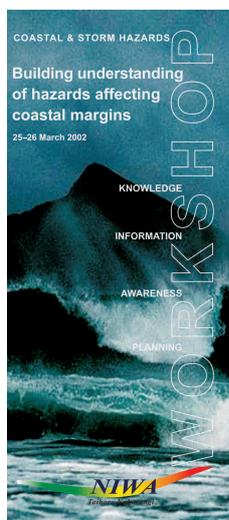
<http://ens.lycos.com/ens/may2001/2001L-05-29-06.html>

California salt marsh may contribute to ocean pollution — a team of California researchers have uncovered evidence that a manmade saltwater marsh is a source of potentially hazardous faecal bacteria, contaminating the swimming and surfing waters of one of the state's most popular beaches. The study suggests that environmental managers should take care in designing artificial wetlands. This website is a must visit for anyone involved in this industry.

Coastal and Storm Hazards Workshop: 25-26 March 2002 in Hamilton

NIWA are facilitating a workshop on building understanding of hazards and risks to coastal environments and communities.

Attendees will have the opportunity to contribute in workshop sessions designed to tease out the long-term strategy needed to build coastal knowledge and information on mitigating coastal hazards and create improved public awareness of the issues. Coastal hazards to be addressed include: coastal erosion,



storms, cyclones, damaging waves, sea-level rise, climate change, storm surge and flooding, tsunami, tides, strong currents, maritime operations, oil/pollutant spills, surf conditions, and rips.

The workshop is aimed at regional council and TLA staff, engineers, planners, scientists and Government agencies.

For further information contact Tania Billing, NIWA (t.billing@niwa.cri.nz) or Rob Bell, NIWA (r.bell@niwa.cri.nz).

Coastal News



Wellington's marine environment: Values and vision of the community

Wellington Regional Council conducted two types of community survey on the marine environment in 2001. A quantitative telephone survey of 1000 people throughout the Region asked specific questions relating to people's values and activities in the marine environment. A qualitative survey of people's attitudes used "focus groups" from each geographical area within the Region. These focus groups were used to determine more in-depth information about what people actually thought and felt about the marine environment.

The quantitative survey produced some interesting results. People rated the marine environment highly, with greater than 85% rating it as very important to fairly important. Generally, people appear to value the fact that the marine environment actually exists (economists call this 'option demand'), although many may not have

experienced the ocean first hand.

Over 50% of recipients felt that pollution either from rubbish in the sea or from sewage was the most pressing problem. Other problems noted were over-fishing, drift net fishing, oil spills and algal blooms.

Over 65% of recipients declared that they knew not much, or hardly anything, about the marine environment.

The qualitative focus group sessions attempted to derive more in-depth responses from people about the marine environment.

Many expressed a dissatisfaction with the current state of our marine environment. This was often directed at visible forms of pollution like plastic bags and other rubbish floating in the sea, but people also talked about depletion of fish and shellfish in the Region as indicating something was not quite right with our marine environment.

Participants were asked to place their "connection with the sea" on a diagram with other common features like rivers, bush, and cities. The results made interesting reading. Most rated their connection with the sea quite highly, except for those from the Wairarapa who placed more emphasis on lakes and rivers.

From the results of these surveys and additional information the Wellington Regional Council has been able to articulate a vision statement for the

continued on page 17



Wellington's coastal environment
—Castle Point

A Strategic Plan for the NZ Coastal Society

Coastal News



The NZCS has reached a point in its history where the members are presented with a choice as to the future direction of the Society.

Either the society is a relatively passive coastal science and engineering communication organ or the society has the (as yet untapped) potential to take a leadership role in coastal management in New Zealand (which it inevitably would if it decided to pursue the goals set out in the development plan).

Option A. Status Quo (Institution Model)

Strengths

- Society can continue to function as it currently does with no greater commitment required
- The society, in terms of internal communication and discussion, is reasonably successful as shown by its existence for nearly a decade
- The current purpose creates a natural alignment to IPENZ, and gives a feeling of belonging to a significant proportion of the society members – as well as a reduced financial commitment
- Very little/no chance of ever being judged a failure (due as much as anything to a lack of performance targets other than financial security)

Weaknesses

- The actual value that the society creates (either to its members or the wider coastal community) is unclear
- The role that the society has had in effecting change/improvement in coastal management practices is difficult to quantify
- Membership confers little to the member
- The society is practically ignored by lead coastal management agencies
- Discussion via the newsletter or at seminars is not connected to a desired outcome, so the outcomes of those discussions are impossible to judge

Opportunities

- Continue to improve the quality and readership of the newsletter – with a balanced focus between future as well as past ICZM issues
- Grow the society's ability to communicate in a professional manner through low level appointments
- Develop an e-mail discussion group
- Reduce the size of the committee and improve focus on core commitments

Threats

- The society becomes increasingly irrelevant to the development of leading edge policy and decisions on national, regional and local coastal management
- Those with interests beyond coastal science and engineering become disenfranchised with the society, and membership drops
- Other groups (such as the EDS, F&B, Maruia) take centre stage in discussions on coastal development leaving the NZCS to a lower level role
- In the worst case, members become completely disillusioned, membership slumps completely and the society is forced to wind-up.

Option B. Higher Strategic Vision (2 Year Development Plan Model)

Strengths

- The society positions itself as the key (non political) technical and professional forum for coastal management issues in NZ
- The society becomes a key source of advice for policy makers and decision makers at the national and local level
- By changing its Objective Statement, the society expands membership into non-technical, conservation, business, development, ecological and heritage interest groups
- The Society sets and commits to goals which it can measure itself by each year. The chair and the committee are elected or voted off, on the strengths of their achievements against the goals
- The society creates a wide and strong series of links with technical groups like IPENZ, but also EDS, F&B, Maruia, coastal developers, government etc

Weaknesses

- The society loosens its connections with the original intent of its creation
- The society finds it increasingly difficult to justify being a technical group of IPENZ and has to look for affiliation elsewhere, or exposes itself to increased administrative costs
- Possible alienation of members who are comfortable with the status-quo
- Increased burden for strategic thinking and action on committee members

Opportunities

- Gives the society a wider profile and increases its ability to make a difference- better chance of being judged as a success in terms other than financial
- Allows for a re-structuring of the society with a greater emphasis on regional groups operating under a clear nationally co-ordinated direction
- Gives direction to discussions and seminars and may foster even more debate
- Provides an opportunity for co-ordination and implementation of changes for ICZM on a national level
- Potential for long term direction for ICZM nationally

Threats

- Society may be 'biting off more than it can chew'
- Higher chance of being seen as a failure if strategy not implemented
- Possibility of higher membership fees
- Members are completely turned off by the new format, membership slumps and the society is forced to wind-up.

It is now up to each of you as a member of the Coastal Society to contact your local Management Committee representative and discuss with them your thoughts so these can then be compiled with those of other members around New Zealand. It is time to make a stand and be involved in the future of NZCS. For further information or thoughts please contact Harvey Brookes, Auckland Regional Council, e-mail: hbrookes@arc.govt.nz

the coastal processes are unable to adjust naturally, as well as sea level rise and the impact of humans on habitats. Techniques being used in UK include managed realignment of seawalls to allow the natural environment to become restored, beach renourishment and development of research partnerships.

Gold Coast, Australia

Australia has been proactive in recent years towards recognizing the need for effective coastal zone management, in Queensland 85% of residents live in the coastal zone and this creates intense pressures on the natural coastal environment.

In Australia the Coastcare programme encompasses the entire coastal zone, including marine projects, coral reefs, salt marsh areas, wetlands and of course sand dunes (Photograph 2 shows a Coastcare revegetation project). Coastcare groups apply for funding on a yearly basis and they use this money to undertake projects around the coast. There are co-ordinators who assist the groups with writing application forms and managing the funds. The Coastcare programme is now looking at devolved funding, similar to the Bay of Plenty model, as a way of streamlining the process and ensure the community groups spend their time undertaking work they want to be involved with rather than filling out forms!

A number of recommendations have been made as to strategies and techniques, which can be implemented or supported in New Zealand, particularly in the Bay of Plenty:

- To continue to protect and preserve the coastal zone it is vital that a minimum set back area for infrastructure from MHW is included in any plans and policies for development of areas. From observations made during this study this is integral to effective management

of the coastal zone and recommended as a key strategy for management agencies.

- In my opinion the role of a national Society to provide a forum for networking and partnerships to deal with coastal issues is vital. The New Zealand Coastal Society brings together a range of organisations with an interest in the coast to ensure the development of cooperation and collaboration agreements improving communication and coordination between stakeholders to implement positive change. It is essential that this form of cooperation be widely supported.
- From my observations public awareness is key to the success of understanding of coastal processes and government policies to protect or develop the coast.
- There needs to be a commitment of time and resources for long term implementation of strategies and techniques to ensure they are effective.

We are extremely privileged to inherit what has been generally effective coastal planning in New Zealand, it is now up to us to ensure we protect and preserve what we have by undertaking sustainable management of the coastal zone.

I would like to thank my sponsors for all their assistance, without which this research would have been impossible: Environment B.O.P, Tauranga District Council, Department of Conservation (Bay of Plenty Conservancy), NZ Coastal Society, Professor Terry Healy (University of Waikato), School of Environmental and Marine Science (University of Auckland), Papamoa Beach Holiday Resort, Design Mobel, Zonta Club Tauranga, Papamoa Lions Club, Altrusa Mount Maunganui.

A copy of the full Report is available on request.

By Lucy Brake (lucy@envbop.govt.nz)

marine environment for 20 to 50 years time.

“New Zealand’s oceans are in a healthy state: Informed people make prudent decisions for the benefit of all, now and into the future”.

To reach this vision, some changes will need to occur in our society and government across a number of areas.

- Reduced marine pollution.
- Greater accessibility to the ocean.
- Better informed communities.

- More scientific research and information.
- New Zealand sovereign land extended to include the continental shelf.
- Sustainable marine ecosystems.
- New systems of resource utilisation and conflict resolution.
- More marine ecosystem reserves.

For further information on these values and visions please Paul Denton at the Wellington Regional Council (paul.denton@wrc.govt.nz).





Coasts and Ports 2001

The 15th Australasian Conference on Coastal and Ocean Engineering was held on the Gold Coast, Australia from 25 - 28 September. This is a biennial meeting combining the Australasian Coastal and Ocean Engineering Conference and the Australasian Port and Harbour Conference. The 2001 edition of this biennial meeting attracted nearly 200 participants, largely from environmental consulting companies, port operators, government agencies, universities and research institutes: unfortunately only 15 of the attendees were from New Zealand.

There were some interesting lessons from a New Zealand coastal science perspective:

- Some of the Australian groups are well advanced in studying storm surge and storm-waves from tropical cyclones. There has been a particular effort on the Queensland coast (e.g. by Bruce Harper-SEA and Tom Hardy/Lance Bode at James Cook University), where past storm surges of up to 3-4 m provide plenty of incentive for State Government funding.
- With a highly erosional coastline squeezed by massive beachfront development, the Gold Coast illustrates many of the challenges in coastal management, that will be made even more pressing by climate change and sea-level rise. In the past they have engineered their way out of severe erosion through sea walls, beach nourishment, and expensive sand-bypassing schemes. As an example of the latter, we visited the Nerang and Tweed River schemes, which pump sand across jettied tidal entrances.
- Monitoring data on waves and sea level is available in abundance in Australia. For example, Queensland has a network of 20 storm-tide gauges and 15 wave buoy sites. But there are many possibilities to get more science out of the data collected. In particular, the 20-30 year Interdecadal Pacific Oscillation (IPO) is not well studied in Australia, and on the face of it seems to fit also with the relatively quiet "coastal climate" (storms and erosion) that the Queensland coast has experienced over the last two decades, as have New Zealand east coast beaches. But the IPO has now switched phases, so watch this space.
- Canal waterway estates have their problems, which we can learn from.

The next meeting will be in Auckland in 2003.

By Richard Gorman and Rob Bell (NIWA)

Final words from the departing Chairman



These are the last few words from me as former Chairman of the society. It has been a good two years and there are signs of the society maturing into a valuable focal point for coastal issues.

However, you out there are required to provide feedback to assist the committee in steering a course for the future. It is your society after all. At the seminar Harvey Brookes pointed out the two directions the society could go. More detail is provided in this newsletter and on our website. Think hard and respond! For me, I believe we do need to be more proactive and visible. However, this will need to be balanced by meeting the needs of all of our members.

The recent seminar was a useful reminder of the issues that we will continue to face are real and significant and we must all find ways of keeping climate change and its implications in the public focus. Some of it was preaching to the converted, although there were some refreshing reality checks! The bottom line is that policy is not always as robust as politics. To get the message across we need to be both smarter in hazard mitigation and recognise community needs and aspirations. Getting the message across also means education of both the community and the politicians. It also means getting a better handle on the value in \$ terms of the coastline and the beaches (see Tony Dalrymple's review on page 1 for details) to enable a balanced assessment of options.

Any solution needs to be long-term and recognise the local values and long term vision. Solutions should not be "either...or." with coastal development versus the environment but "this...and..". We need solutions that can achieve a win/win; if we don't, guess who will loose.

By Richard Reinen-Hamill (Tonkin & Taylor)

Instructions for authors

Your contributions to Coastal News keep Society members and the coastal community informed about coastal issues. Contributions can be advertisements for conferences or workshops, short news items or longer articles. We prefer articles of a maximum of 800 words (about 1-page in the newsletter), preferably with pictures or diagrams.

Submit articles by mail or electronically to the Assistant Editor, Lucy Brake, PO Box 364, Whakatane. Email: lucy@envbop.govt.nz

Submission by the NZCS on the New Zealand Oceans Policy

The NZCS made a submission to the Ministerial Advisory Committee on the NZ Oceans Policy. After canvassing opinions of members the key points of concern to the Society were that:

- The *open book* nature of the consultative process for the Oceans Policy has the potential to re-litigate matters well canvassed in the past, especially during the Resource Management Law Reform (RMLR) process in the late 1980's;
- This risk is amplified in the absence of a clear vision or intended outcome (other than the creation of a policy document) from central government. Such a 'blue skies' approach suggests that the outcome of the policy development process might be more procedural rather than substantive;
- Creation of the Oceans Policy carries a risk of creating more administrative complexity (a

bureaucratic outcome only), and may gloss over the underlying reason for additional special legislation, especially within the limits of the territorial sea, which is a lack of physical, administrative/jurisdictional, time and process integration;

- When looked at objectively, there is a significant reduction in the scale and intensity of management issues once one goes further offshore than the 12 nautical mile limit. Any management system must reflect that reality in the construction of its policy and not apply unnecessary administrative frameworks to areas for issues, which may never arise in certain places.

For a full copy of the NZCS submission contact Harvey Brookes, Auckland Regional Council (hbrookes@arc.govt.nz).

Coastal
News



NZCS Management Committee

Chairperson	Harvey Brookes – Auckland Regional Council (hbrookes@arc.govt.nz)
Secretary	Paul Baunton – Tauranga District Council (paulb@tauranga.govt.nz)
Treasurer	Eric Verstappen – Tasman District Council (Eric@tdc.govt.nz)

Committee

Terry Hume	NIWA (t.hume@niwa.cri.nz) (Editor, <i>Coastal News</i>)
Lucy Brake	Environment BOP (lucy@envbop.govt.nz) (Assistant Editor <i>Coastal News</i>)
John Lumsden	Coastal Management Consultant, Christchurch (j.lumsden@cae.canterbury.ac.nz)
Ken Murray	Department of Conservation (KMurray@doc.govt.nz)
Mike Hilton	Department of Geography, University of Otago (mjh@geography.otago.ac.nz)
Stacey Devine	Auckland Regional Council (sdevine@arc.govt.nz)
Jo Fagan	Wellington Regional Council (jo.fagan@wrc.govt.nz)

Correspondence to Paul Baunton (paulb@tauranga.govt.nz)
Website queries to Charles Hendtlass (c.hendtlass@cae.canterbury.ac.nz)

NZCS Mission Statement

“The New Zealand Coastal Society was inaugurated in 1992 to promote and advance sustainable management of the coastal environment. The Society provides a forum for those with a genuine interest in the coastal zone to communicate amongst themselves and with the public. The Society currently incorporates about 300 members. Members represent the wide range of coastal science, engineering and planning disciplines, and are employed in the engineering industry, local, regional and central government, research centres and universities.”

Applications for membership should be sent to the Secretary (see above)

Work of Interest...

Norwegian Institute searches for coastal zone research partners:

The Norwegian Institute for Nature Research NINA (<http://www.ninaniku.no>) is searching for partners who may be interested in network building, co-operation and international fund raising for projects on terrain modelling, marine habitat identification and classification and the use of landscape ecology approaches in the marine and coastal environment.

NINA has experience in the use of terrain modelling, landscape analysis, habitat classification, GIS applications, marine ecology, biodiversity and habitat, population and behavioural ecology.

Please contact Dr. Trine Bekkby at trine.bekkby@ninaosl.ninaniku.no

(Source: Coastal Guide News, Sept 2001)

Beach nourishment:

Environment Waikato is currently researching examples of beach nourishment around NZ to help develop guidelines providing information and guidance on beach nourishment, and assisting

in the resource consent process.

If there is interest EW may host a workshop on beach nourishment to exchange practical ideas and experiences. If you have any useful examples or comments to share on this issue please email: Bronwen.Riddle@ew.govt.nz.

EW have also recently released a coastal management bulletin called 'Fragile - A guide to Waikato dunes', if you would like a copy please contact EW at the above email.

MSc Thesis Topics relating to coastal issues:

Angela Burke (University of Auckland): Vessel wakes in the Marlborough Sounds: the relationship between gravel entrainment and the impact on nearshore biological communities

Sarah McDonald (University of Auckland): Prediction, measurement and analysis of high-speed craft wake wash propagation along Grove Arm, Marlborough Sounds.

If you would like information on any of these, or can assist in any way please contact Kevin Parnell, University of Auckland, email: k.parnell@auckland.ac.nz

Where is this coastline question (page 12): Answer, Nukutaharua Stream, Hicks Bay



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