

Coastal News

Newsletter of the New Zealand Coastal Society

Number 13

A Technical Group of IPENZ

September 1999

Contents

Saundaun Tsunami - One Year On	3
Whats Hot on the Web	4
Living on the Edge	5
High Tide gets Even Higher	6
An Artificial Surfing Reef for the Mount	7
Waikato and BOP Branch Meeting	7
This is ESEE	8
ICS2000 Update	9
Committee News	9
Conference on Our Oceans	9
USACE Coastal Engineering Manual	10
Reminder: 1999 Seminar	11
Development Plan for NZCS	12

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Dong Won 529 Meets the Breaksea Group

On Tuesday October 6 1998, the stern trawler Dong Won 529 ran aground on the outer rocks of the Breaksea Group, which lies at the most eastern tip of Stewart Island. All the crew was rescued the following morning.

The Breaksea Group is owned by various iwi families who in the autumn harvest young titi or mutton birds. At the time of the accident, the titi had just arrived from the Northern Hemisphere for nesting. The area also has a commercial rock lobster, blue cod and paua fishery. Northwestwards, up the coast, is Patterson Inlet, a major estuary that includes Big Glory Bay, a significant marine farming area (salmon, mussels, oysters). In Patterson Inlet itself, one of New Zealand's rarest birds, the Southern New Zealand dotterel (about 120 birds in total), feeds on the foreshore. Offshore are Whero Rocks, a major Stewart Island shag colony.

In the morning after the stranding, Southland Regional Council staff flew over the vessel to observe that, overnight, the diesel spill from the

pierced forepeak tank had mainly dispersed. It was the start of an intense 13-day effort, initially coordinated by Southland Regional Council staff, who have statutory responsibility for Tier II oil spill response under the Maritime Transport Act.



The Council involved Department of Conservation, iwi and fishing representatives. Initially, action taken was to determine the volume and type of oils remaining on board. The vessel, chartered by Sanfords, had very recently sailed from Timaru and had caught about 20 tonnes of barracouta. It still had on board diesel, lube and hydraulic oils totaling about 360,000 litres. At the same time, shoreline and sea searches had found no oiled birds.

Sanfords worked to coordinate the efforts to refloat the stranded vessel using, primarily, South Port tugs.

As a precaution, because of the very high fauna values of Stewart Island and its offshore islands, a rat bait drop operation was completed on the nearby islands. Of concern was the accidental introduction of Asian ship rat, a sub species known for its superior climbing ability, to

Coastal News

Stewart Island. Whilst well-kept vessels such as Dong Won 529 are generally rat free, there is always a risk that rats will climb aboard at night when in port. More recently, a yacht moored in Patterson Inlet had a rat climb on board which jumped ship into the sea to land on the rat free Ulva Island.

With the lack of success of the refloating operation, and the volume of fuel still on board, it was decided to upgrade the spill response to Tier III. That made the Maritime Safety Authority responsible for the oil spill response. The team arrived in Invercargill just before the Dong Won 529 fell off the rocks into the sea. By Thursday night, the team (MSA, SRC, DoC and other Regional Councils' staff) had rapidly assembled a large quantity of dispersants, vessels and aircraft for a Friday morning operation based on Stewart Island. The logistics of bringing a large quantity of dispersant from Auckland involved the New Zealand Air Force, specialised forklifts, and special sailings of the Foveaux Strait ferry.

The first people on the scene found a large pile of debris at the site and an oil spill extending almost as far North as Whero Rock. Spraying of dispersant was commenced immediately using two helicopters and a spotter craft with the aim

of stopping the spill from entering Paterson Inlet. This operation was successfully completed. Debris was removed by local fishing vessels and shoreline searches for oiled birds continued. A bird rescue centre was set up by Massey University staff in the old Invercargill Conon Street pool. It was, in the end, not required.

Over the next ten days, the major oil spill response continued. At its peak 140 people were involved. Team members were regularly rotated to ensure fresh hands on the task.

After the main response, the remaining fuel on board was pumped out and the vessel left on the seabed. Subsequent investigations by the Transport Accident Investigation Commission highlighted lax procedures on board the Dong Won 529 that resulted in the vessel's grounding. An independent team reviewed the spill response. The owner of the trawler has now pleaded guilty to discharging a harmful substance into the sea. A fine of \$20,000 was incurred. Clean up costs were met by the company.

Overall it was a successful response by teams that rapidly put theory into practice. The vessel's use of marine diesel rather than light fuel oils made the clean up easier.

Ken Murray, Department of Conservation



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Saundaun Tsunami - One Year On

Shortly after sunset on the 17th July 1998, a tsunami consisting of three large waves struck the northern coast of Papua New Guinea. The tsunami completely destroyed three large villages on the eastern sand spit at Sissano Lagoon, and mostly destroyed a fourth village on the western spit. The final death toll was 2,202 with a further 1000 injured and 10,000 losing their homes and personal possessions. This tsunami attracted the attention of the media like no other event before it, and has resulted in a world-wide interest in tsunami hazard. Many groups of researchers have now visited the area in order to measure the tsunami impact and determine the causes of the events that occurred. So what do we know a year later?

The Saundaun Tsunami was unusual in that the tsunami produced 10-15 m high waves, considerably larger than would normally be expected for an earthquake of magnitude ~7. Based on the analysis of several hundred tsunami events, the two earthquakes associated with the Saundaun Tsunami should have produced waves only about 1 m in height. However, tsunami researchers recognise a class of tsunami events, generated by earthquakes with a 'slow' release of energy, that are much larger than normal. These slow or tsunami earthquakes are typically low angle thrust events intersecting the continental slope within subduction zone deformation fronts. It has been suggested that this type of earthquake generated the Saundaun Tsunami, with additional amplification caused by subsidence of the nearshore area.

The consensus view of tsunami researchers is



Remains of a house at Bliiri River. Houses in the foreground were totally destroyed, while those in the background were badly damaged. Wave height varied from 3 m to 11 m over a distance of about 250 m

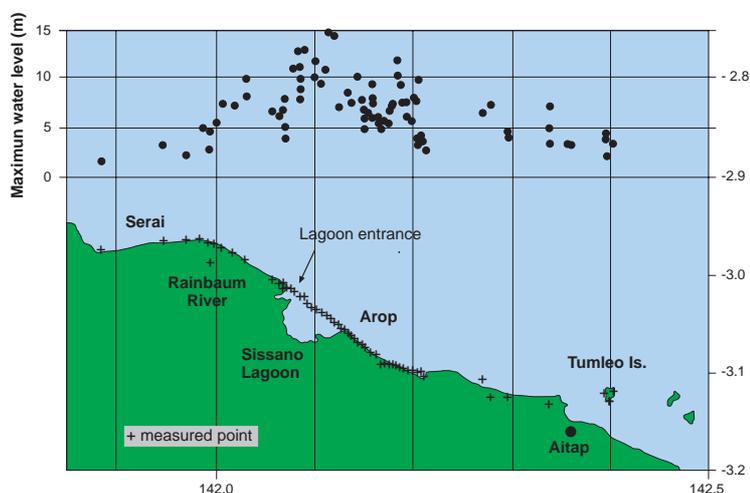
that a submarine sediment slump triggered by an earthquake is the likely cause of the Saundaun Tsunami. The main reasons for this are:

- The tsunami is much larger than can be accounted for by any direct seismic mechanism.
- The two earthquakes associated with the tsunami did not show the characteristics of a slow or tsunami earthquake.
- The tsunami was highly directional, displaying a wave decay pattern consistent with known slump generated tsunami and inconsistent with a seismic source.
- The tsunami arrival time distribution indicates that the tsunami was generated 8-10 minutes after the main earthquake, and 10-12 minutes before the after-shock.
- The flow velocity data obtained from bedforms and damage indicate a

higher tsunami phase speed than normally produced by seismic sources.

- Seismic, side-scan and ROV examination of the seabed offshore have revealed the presence of a fresh submarine slump of sufficient size to account for the tsunami.

These findings are of interest to New Zealand because there are quite a few similarities between the tectonic setting of northern Papua New Guinea and New Zealand. In particu-



Graph of measured maximum runup heights

continued on page 4

Coastal News

continued from page 3

lar, the region between Hawke Bay and East Cape shows the same features as that recently observed off Sissano Lagoon, including shore normal submarine canyons, large slumps, thick sedimentary deposits, and gas/mud diapirs. In 1947 the coast north of Gisborne experienced two tsunamis with the same characteristics as the Saundaun Tsunami. These events were associated with even smaller earthquakes (magnitude 5 - 5.5). Numerical modelling indicated that the tsunami was generated in the vicinity of a series of large diapirs on the continental shelf.

However, the numerical modelling assumed the same phase speed as seismic tsunami. The recent research into the Saundaun Tsunami indicates that the waves may travel up to 1500 km h⁻¹. If the revised values were adopted, the source of the 1947 tsunami would be near the base of the continental slope. Recent surveys along the eastern margin of New Zealand indicate that there are many submarine slumps

that could have produced the 1947 events. Work is presently starting to remodel the 1947 tsunami to see if submarine slumping is a valid source mechanism.

Beyond the Gisborne region, submarine slumps appear to be a ubiquitous feature of the continental slope around New Zealand. It seems reasonable to assume that those associated with high terrestrial sediment supply adjacent to subduction zones are active features. If this is true, they represent a significant hazard for the New Zealand coast. Any event that triggers a slump may cause a tsunami. As occurred here in 1947, and at Sissano Lagoon last year, the tsunamis are likely to be large and the warning minimal.

So what strategy should we adopt to guard against the threat of this type of tsunami in New Zealand? The safest strategy would be to avoid the development of infrastructure in areas likely to be affected by slump-generated tsunami. Based on the Saundaun and 1947 events, this is typically 100 m - 800 m from the coast, depending on the slope. Clearly this would be difficult to achieve in New Zealand. It may be possible to develop protective 'structures'. Despite the large size of the waves at Sissano Lagoon, some protection was provided by clusters of trees and also by ridges and swales in the topography. An alternative is public education to improve the awareness of the hazard. Slump-generated tsunami typically involve a leading depression waveform, so the water recedes significantly. There may be sufficient time to escape if people flee as soon as the water is seen to recede.

Willem de Lange, Earth Sciences, University of Waikato

Coastal News



"Tintree" - roofing iron wrapped around a palm tree at Sissano Village

What's Hot on the Web

GIS in Coastal Engineering & Science: An Annotated Bibliography

A bibliography of articles that are pertinent to a topic where the techniques and tools are quickly gaining widespread usage in many fields, including coastal engineering and science. The dividing line between coastal engineering and science and related fields such as oceanography, environmental science and engineering, and regional planning and management is often unclear.

<http://www.engr.orst.edu/~wisel/coastGIS.html>

An artificial surfing reef under construction

If you would like to watch an artificial surfing reef being constructed as part of beach nourishment and coastal protection strategy on the Gold

Coast of Australia, then visit the site at:

<http://www.wrl.unsw.edu.au/CoastalImaging/>

A national strategy for beach preservation

This document produced in 1985 is still the most significant US document outlining the needs and means for realistic planning for the future of our retreating shores. The document holds that preservation of our beaches for future generations must be the keystone of American Coastal Management. It concludes that in the long run, in a time of rising sea level, retreat or relocation of buildings will be required. A number of practical ways to manage and preserve beaches are presented.

http://www.eos.duke.edu/Research/psds/psds_skidaway.htm

Living on the Edge: Hazard Management in the US

“Living on the edge” is given new meaning by these photos shown in Jim Dahm’s presentation on hazard management in the US.

The first photo (right), taken in North Carolina, shows a house on one of the many barrier islands along the eastern US. These islands are typically narrow and low-lying and many are migrating landward – with inevitable consequences for



Coastal News



development! Development in hazardous locations has been encouraged by a variety of direct and indirect cross-subsidies – including a national flood insurance programme, federally funded beach nourishment programmes and various other measures. Jim commented that changes to these programmes are occurring, but are being slowed by political pressure and also (sadly) by many

coastal management professionals who fail to appreciate the underlying social and economic drivers of the hazard problems.

The photo on the left taken on the Californian coast in the Malibu area (famous for its popularity with movie stars) shows unfettered market forces and property rights in all their glory! It would appear that the “beautiful people” can be quite ugly.

Jim commented that while management of coastal development in the US is generally poor (“at it’s worst, probably even worse than New Zealand!”), there were also some outstanding achievements. These include large parts of the coast protected in various national sea-shores and both State and County parks. A lesson for New Zealand - which to date has not protected many beaches and is losing undeveloped coastal sites at a worrying rate in some areas, especially the prime beaches of the North Island east coast.

Coastal Society Seminar

What: ‘Coastal conflicts – smoothing troubled waters’

When: 16-17 September 1999

Where: Te Papa, Wellington

This year the 1999 New Zealand Coastal Society Seminar will focus on an interesting range of issues facing the complex Wellington coastal environment. These issues vary from historic and recent port developments to the state-of-the-art Moa Point sewage outfall, to the sensitive Pauatahanui Inlet, and to sediment transport and erosion along the dynamic Kapiti coast. During each afternoon of the two seminar days, a field trip is programmed to study the issues “first hand”. The two hour cocktail and harbour cruise on NIWA’s research vessel Tangaroa on Friday evening will be a worthy conclusion to this coastal seminar.

also see article on page 11

High Tide Gets Even Higher

Coastal News

Just before noon on Saturday 17 April 1999, a rare coastal flood event (storm surge) occurred on the West Coast (and to a lesser extent on the East Coast) of the Waikato and Auckland Regions. High sea levels were caused by a combination of factors including low barometric pressure, high spring tides (Perigee), strong onshore winds, and high wave action. The result caused the sea water to "pile up" against the coast and inside harbours.

Reports of extreme high tide levels came from Kawhia, Raglan, Hoods Landing near Port Waikato, and Manukau Harbour. Initial reports indicate that the peak tide level recorded at Hoods Landing was about a metre above normal. Stopbank protection systems near Aka Aka were significantly tested (and in parts were overtopped), but performed as designed, protecting much of the Aka Aka drainage area.

Very high tide levels were also experienced on the East Coast, in particular on the Firth of Thames. Although coastal protection systems near Thames were also significantly tested, they too performed as designed. It was one of the

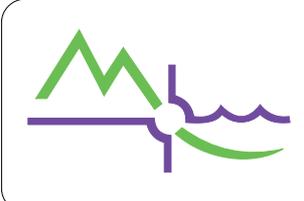
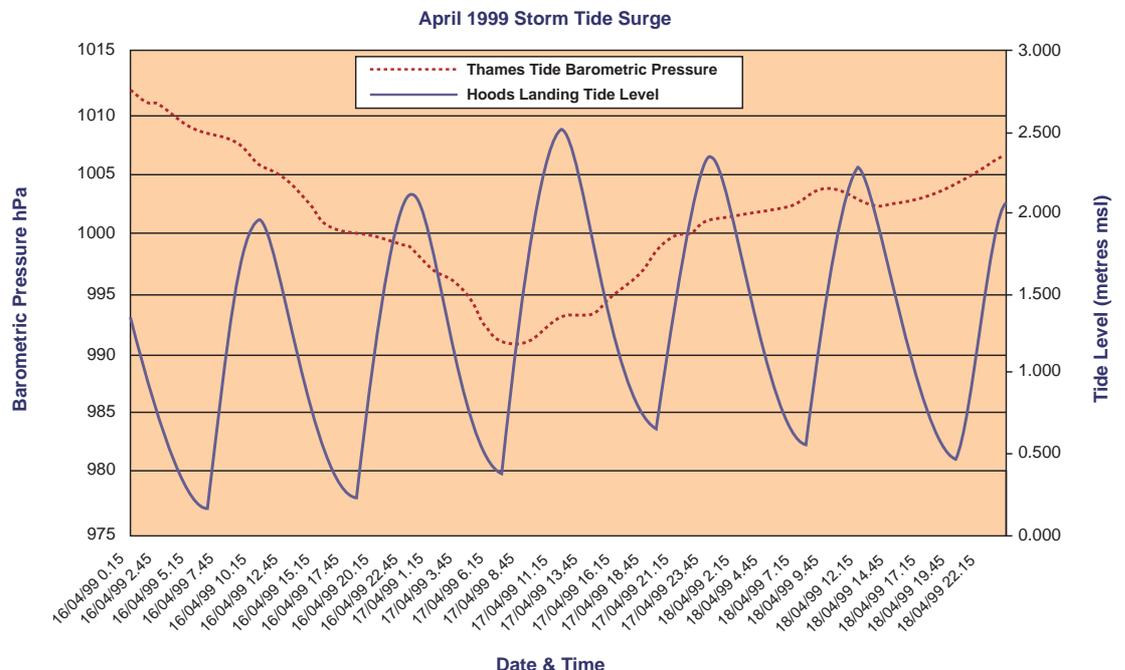
highest tide levels recorded since the July 1995 storm surge event in Thames which caused major damage.

Due to the rarity of these type of events, Environment Waikato issued a press release soon after the event, with the aim of collecting as much information as possible. The council was (and still is) eager to hear from any resident who either photographed or took reference marks (peggings) of the tide line.

The information will be used to further our understanding on these type of events, and to refine our flood warning and flood protection systems.

Analyses to date indicate that the main causal mechanisms were low barometric pressure (990 hPa) coinciding with a higher than normal high tide, contributing to about 300 mm extra rise in sea level. Strong onshore winds (60 knots +) probably contributed another 300 mm rise in sea level. The peak tide level recorded at our Port Waikato recorder was the highest on record (in 37 years).

*Adam Munro, Environment Waikato
e-mail: adam.munro@wairc.govt.nz*



Contributions to Coastal News can be made to:

Terry Hume, NIWA, National Institute of Water & Atmospheric Research & Joint Centre of Excellence in Coastal Oceanography and Marine Geology, University of Waikato, P.O. Box 11-115, Gate 10 Silverdale Road, Hamilton phone: (07) 856-1729 fax: (07) 856-0151 e-mail: t.hume@niwa.cri.nz

An Artificial Surfing Reef for the Mount

Last month the Tauranga District Council allocated \$150,000 towards the construction of the proposed offshore reef at Tay Street, Mount Maunganui Beach.

This represents a significant contribution towards the estimated \$450,000 that is required to complete the construction of the reef. The multi-purpose reef proposed by the Centre of Excellence in Coastal

Oceanography and Marine Geology at the University of Waikato and NIWA, has been designed to incorporate coastal protection, and amenity and environmental enhancement, which includes a world-class surfing wave, a wider recreational beach area, habitat for marine organisms and potential for a fishing and diving



location. Although the application for resource consent has been with Environment Bay of Plenty (EBoP) since December 1998, processing has been delayed by a lack of funding for consent fees and

technical review of the environment impact. A Trust will be responsible for the allocation of funds for construction, ownership and environmental liability of the reef. Support for the project has also come from the Port of

Tauranga, which has indicated it will donate the 5000 m³ of clean beach sand required to fill the geotextile bags of which the reef will be constructed. Construction of the reef is planned to commence in the autumn of 2000, and after the summer cyclone season is well and truly over.

Shaw Mead, ASR Limited

Coastal News

Waikato and Bay of Plenty Branch Meeting

A 'North American theme' and hospitality by Environment Waikato, attracted 35 persons from as far away as Whakatane to a branch meeting on 7 July.

Terry Hume, Malcolm Green and Andrew Swales from NIWA gave their impressions of coastal science and management in the USA, following their recent trip to the Coastal Sediments'99 conference in Long Island, New York. The conference theme was 'scales of coastal sediment motion and geomorphic change' and papers presented described studies ranging from boundary layer phenomena, like suspended sand over ripples, to regional-scale studies of sand transport, and budgets incorporating geological studies, numerical modeling and GIS approaches. Fuelled by Coney Is hot dogs, the lads made visits to Long Island beaches that reminded us of the continuing cost of keeping the beaches the way humans have shaped them, and unfortunately now the way the 1-2 million users per day want them. Beaches on Long Is were originally comprised of narrow strips of sand. During the

past century 98 million m³ of fill have been added to the 190 km of Long Island shore to build wide beaches. The added volume equates with 5.7 m³ per m of beach per year. To put this in context, this added volume is about half the magnitude of the annual change in beach volume (between the foredune and low water) that takes place at the centre of Waihi Beach in the Bay of Plenty.

Robin Britton and Jim Dahm from Environment Waikato gave presentations on their study tour to Canada and the USA last year. They attended the Coastal Canada Conference on Vancouver Is, followed by visits to coastal agencies on both the west and eastern coasts. A focus on integration of issues between agencies and across the land-water interface was a key theme. Achieving integration has resulted in a range of different partnerships with different agencies and community groups being developed, and a real emphasis on providing training to groups to enable them to be fully involved in management issues. This was particularly evident in areas where coastal erosion was a real

threat to housing developments. There has been an increasing emphasis in the past few years on living with the threat, rather than trying to “tame” the environment. The trip really rein-

forced the view that coastal management in NZ is ahead in some areas and has lessons to learn in others.

Also see article on page 5

Coastal News



Coney Is beaches were crowded - even in 1941!

This is ESEE

Estuaries get it from both sides – sediment is eroded from catchments and delivered to headwaters by streams and rivers, and waves and tides push marine sediments in through the mouth. What happens to the ecology when changes in landuse or other activities change the amount and type of sediment deposited in the receiving estuary? That question is being addressed in NIWA’s research programme ‘Effects of Sediments on Estuarine Ecosystems’, funded by the Public Good Science Fund. The programme is bringing together scientific expertise from many quarters. Ecologists are working to understand how benthic communities (including shellfish) are affected by increased sedimentation and turbidity, and how mangroves spread in sediment-impacted estuaries. Geomorphologists are putting together an estuarine classification scheme for implementing indicators of estuary health. Oceanographers are investigating how sediments are dispersed and



deposited in estuaries, and modellers are putting it all together in numerical models in order to be able to predict change. The aim of the programme is to plug those knowledge gaps that presently limit the quality of technical advice needed to underpin management decisions and to maintain the value of New Zealand’s estuaries. The programme is now in its second year. For more information, visit the programme website at: www.niwa.cri.nz/pgsf/eseef/index.html.

Mal Green, NIWA

ICS2000 Update

The International Coastal Symposium commences on Easter Monday of the year 2000. The organisers are lining up three world-class keynote speakers that will stimulate some lively debate. The symposium runs over four days and includes field excursions on three of those days to (1) Ohiwa Harbour and Ohope barrier spit, (2) Tauranga Harbour and the port and the site of the proposed Tay St artificial surfing reef, and (3) a full day excursion to see Miranda shelly chenier ridges and muddy coast, the Firth of Thames, the Tairua Cam-Era site and beach erosion and coastal management issues at Pauanui and Waihi Beach.

The theme of the symposium, "Challenges for the 21st Century in Coastal Sciences, Engineering and Environment" is chosen to promote research and understanding of coastal sedimentary processes and associated issues to meet the challenges for the 21st century. It is a multi-disciplinary international symposium convened for scientists, engineers, planners and managers to discuss the latest advances in the science, engineering and environmental issues of coastal processes. It also provides a forum for the final meeting of SCOR Working Group 106 on Muddy Coasts, and for a special meeting of the Commission on Coastal Systems of the International Geographical Union.

Key Dates:

1 November 1999: for submission of abstract

15 December 1999: notification of acceptance

1 February 2000: submission of full paper in correct JCR format

April 24-28, 2000: symposium in Rotorua

For more information contact:

ICS 2000, c/- Professor Terry Healy, Coastal Marine Group, Department of Earth Sciences, University of Waikato, Private Bag 3105, Hamilton, New Zealand

email to: ics2000@waikato.ac.nz

www.erth.waikato.ac.nz/ics2000/ics2000.htm

Committee News

NZCS now has 292 members, with a further 50 or so out there still owing subs for the current year. We are in a sound financial position, but are keen for more members.

The content and regular publication of the Newsletter is an issue we are working to resolve. While John Lumsden and Charles Hendtlass have the editing and publishing end of things under control, we don't have a person who has the time to plan the newsletter, solicit articles and advertising

and turn Coastal News into something special. That's why we are advertising for an Editor to carry out these tasks (who is to be paid an honorarium). You will also notice that we have decided to run with a black and white newsletter, rather than the 2-tone colour to save on costs.

Related to the matter of getting news of our activities to people out there, is the development of a web site for NZCS. We expect to have this up and running by the end of the year. Watch out for the site address.

The Wellington delegates have worked hard to organise facilities and speakers for our Seminar at Te Papa in September, along with some interesting field trips to view Wellington's coastal issues first hand. Don't miss this exciting event! The AGM will be held during the Seminar and you are invited to attend this and become more involved in the running of the Coastal Society.

Another matter, we have been working on is a two year development plan for the Society (see page 12 of this newsletter). We would like feedback from members on the plan. Send your comments to the Secretary or raise matters at the NZCS Seminar in September.

CAE Conference on Our Oceans

New Zealand, potentially, has exclusive rights to the fourth largest area of ocean in the world. There are national assets of great value at stake and, except in a few areas, we have only limited knowledge of their extent.

The opportunities will, potentially, benefit many sectors of the economy. However, New Zealand must foster an environment that encourages exploring, developing and extracting resources, while at the same time managing these activities with sensitivity to the environment.

There is also a pressure of time. New Zealand's claim to its extended zone must be submitted to the UN Law of the Sea Commission by August 2006, or its rights to this area may be lost. Although the sea bed is starting to be mapped and the fishing industry has been active, there is still much to be done.

To highlight the opportunities and implications for New Zealand CAE has organised a conference to be held at Te Papa on 12-13 October. CAE is bringing together a wide range of people from both New Zealand and overseas and will be drawing heavily on world trends and experience.

For further information concerning this important event contact John Lumsden. Phone (03) 364-2219, e-mail: j.lumsden@cae.canterbury.ac.nz, or visit the conference web page at: <http://arrive.at/oceans>.

Coastal News

USACE Coastal Engineering Manual

Coastal News

During the past three decades, coastal engineering practice in the US Army Corps of Engineers (USACE) and throughout most of the world have been based on the Shore Protection Manual (SPM). However, the SPM (originally published in 1974 and most recently updated in 1984), no longer reflects the most up-to-date technology and knowledge of coastal processes and engineering.

In order to develop a "modern" technical document which incorporates all the tools and procedures used to plan, design, construct, and maintain coastal projects, the United States government, through the Coastal and Hydraulics Laboratory (CHL) (formerly known as the Coastal Engineering Research Center (CERC)), has initiated a program to prepare the Coastal Engineering Manual (CEM).

The purpose of the CEM is to provide a single, state-of-the-art technical document which incorporates tools and procedures to plan, design, construct, and maintain coastal projects. This engineering manual will include the basic principles of coastal processes, methods for computing coastal planning and design parameters, and guidance on how to formulate and conduct studies in support of coastal flooding, shore protection, and navigation projects. The CEM is intended to provide broader coverage of all aspects of coastal engineering than the present SPM. New sections will be added on navigation and harbour design, dredging and disposal, structure repair and rehabilitation, wetland and low-energy shore protection, risk analysis, field instrumentation, numerical simulation, the engineering process, and other topics.

The CEM contains two major subdivisions: Science-based parts and Engineering-based parts. The Science-based parts include "Coastal Hydrodynamics," "Coastal Sediment Processes," and "Coastal Geology." These provide the scientific foundation upon which the Engineering-based parts will reference, and are being prepared first. The Coastal Hydrodynamics Part is organized to lead the reader from the fundamental principles of wave theory and ocean wave generation through the process of wave transformation as the wave form approaches and reacts with the shore. Water-level variations and currents are

included in this part.

The Coastal Sediment Processes part includes chapters on longshore and cross-shore transport as well as chapters on shelf, and wind transport processes. The Coastal Geology Part includes chapters on geomorphology and coastal classification. The two Engineering-based parts of the CEM ("Coastal Project Planning and Design" and "Design of Coastal Project Elements") are oriented toward a project-type approach, rather than the individual structure design approach which characterized the SPM.

The CEM is written at a level suitable for a Bachelor of Science-level graduate civil or hydraulic engineer who has had no advanced academic training in coastal engineering or its related subjects. Although the target use is by USACE personnel involved in Corps coastal projects, it is expected that this manual, like its predecessor, will be used by coastal engineers and other specialists in academia and industry throughout the world. The CEM will incorporate technical advances made throughout the world and is being written, as much as possible, to be non-regional and non-United States-specific in its presentation of basic coastal engineering issues and practices.

Technical teams were used to plan and prepare each part of the CEM. Each chapter was written by or carefully monitored by coastal specialists at CHL. Outside consultants, who are the recognized experts in particular subject areas, helped prepare or review the appropriate sections. Workshops and peer reviews by research specialists, practising coastal engineers, and USACE users were conducted during the development of the CEM.

The CEM is designed to be a rapidly updatable document. A maintenance and update process is being programmed into the CEM development rationale. The final form of the CEM will be an Engineering Manual for US Army Corps of Engineers internal use and will also be commercially available as an interactive and enhanced electronic version that is being developed through a Cooperative Research and Development Agreement with Veri-Tech, Incorporated.

The personal computer version of the CEM will be a fully interactive, multi-media resource,

containing programmed formulas, live/interactive graphs, and animated visuals. It will be a Windows 95-, 98-, or NT-based CD-ROM document that incorporates all the tools and procedures used to plan, design, construct, and maintain coastal projects. The electronic CEM provides broader coverage of all aspects of coastal engineering than the SPM. Version 1.01, planned for release by the end of this calendar year, will include: Part II on Coastal Hydrodynamics, Part III on Coastal Sediment Processes, and Part IV on Coastal Geology. Version 1.02 is planned for release in the summer-fall of next year.

Some of those pieces of software like RCPWAVE, GENESIS and SBEACH developed by the US Army Engineer Waterways Experiment Station, that you probably have a DOS version of, have been updated in CEDAS (Coastal Engineering Design and Analysis System). CEDAS is an interactive, Windows 95/98 or NT-based design and analysis system. Its contents range from the simple technologies of the popular ACES package, to sophisticated models for multi-dimensional hydrodynamics, wave propagation, nearshore hydrodynamics and beach processes, inlet technology, and harbour oscillation.

You can find out more about the products on: <http://www.veritechinc.com/>

As each major part of the CEM has been completed, it has been released as an interim document for use and review by Corps of Engineers offices.

These interim releases are being used to gather comments on the suitability and effectiveness of each part. Preliminary versions of Parts II, III, and IV are currently available.

Comments from industry, state and local governments and overseas readers are welcome. The completed CEM will be available in the year 2000.

Coastal Society Website

A website for the Coastal Society is currently under development. Features of the site will include information about the society, back issues of coastal news, links to related sites and membership details. Suggestions are welcome. Contact Charles Hendtlass, Centre for Advanced Engineering, University of Canterbury, Private Bag 4800, Christchurch, or e-mail c.hendtlass@cae.canterbury.ac.nz

Reminder: 1999 Seminar

16 and 17 September 1999 ~ Te Papa

Just a last minute reminder. The 1999 New Zealand Coastal Society Seminar will cover an interesting range of issues facing the complex Wellington coastal environment. The seminar will start with the opening by our chair Victoria Caseley, followed by the keynote address "Managing the Wellington's Regional Coast" by Ian Buchanan of the Wellington Regional Council. After morning tea Derek Goring will present state-of-the-art techniques for the prediction and monitoring of the tides around New Zealand's coast, while John Spittal will discuss the recent changes in hydrography.

Neil Bellingham will discuss the Pauatahanui Inlet, a very unique estuary, followed by a discussion of management issues concerning the Kapiti Coast by John Lumsden. After these presentations, buses will take the participants to the Inlet and along the Kapiti Coast to see and discuss the issues presented by Neil and John (bring sturdy footwear and rain coats!). Upon return in Wellington, the first official Coastal Dinner will be held at the Skyline Restaurant, with plenty of entertainment and opportunities to meet and discuss "the coast" with your colleagues.

The second day of the Seminar takes off with the NZ Coastal Society's AGM over breakfast, followed by Judge Shonagh Kenderdine giving the "Judges View on Coastal Conflicts". After morning tea four sessions will address the historic and recent developments in the port of Wellington, and include presentations by Ted Calvert on the Cook Strait Ferry Facilities, by Mike Price on the history of the Port of Wellington, by Ken Harris on CentrePort and by Bruce Green on the developments along Lambton Quay.

After the morning session a 4.5 hour bus trip will take the Seminar participants to some of the most interesting sites of the port and coast of Wellington, including visits to marinas, Oriental Bay beach development and the Moa Point sewage treatment facilities and outfall. A cocktail party and planned harbour cruise on NIWA's research vessel *Tangaroa* will complete the 1999 Coastal Society Seminar.

For more information and registration, please call Lisa Neville at the Wellington Regional Council (04 802 0337) or by e-mail coastal.seminar@wrc.govt.nz

Coastal News

Development Plan for NZCS

Coastal News

Objective	Implementation	Performance Measures
To establish the NZ Coastal Society as the acknowledged national focal point of professional discussion and promotion of the issues, values and uses of the coastal environment	<ul style="list-style-type: none"> Promote the views and opinions of the society to coastal resource management agencies, development and conservation representatives, and the general public Focus, over the next two years, on generating debate and leading progress in the following areas: <ul style="list-style-type: none"> coastal development climate change and sea-level rise monitoring of the coastal environment Providing regular forums for the sharing of individual's knowledge within the society Encourage Society members to present papers to appropriate conferences and other forums Comment on national discussion papers, within specified time frames Organise regional meetings and annual national seminars 	<ul style="list-style-type: none"> The production of a newsletter three times per year The presentation of papers, articles and posters to be submitted and presented at conferences in NZ and overseas (including the Society Newsletter) The provision of high quality written comment in response to policy statements, national guidelines and other documents affecting the coastal environment within statutory or required timeframes The holding of at least two NZCS regional meetings per year, per region, which discuss and advance issues in relation to: <ul style="list-style-type: none"> coastal development climate change and sea level rise monitoring of the coastal environment
To promote the Society and increase awareness and support for its actions and initiatives	<ul style="list-style-type: none"> Send newsletters to other groups, societies and organisations, and encourage reciprocation Provide press releases and letters to editors of the professional and general media on resolutions, views and outcomes of the society, especially in relation to the three key areas identified above Liaise with other relevant groups, societies and organisations 	<ul style="list-style-type: none"> Receipt by Society members and key associates of Coastal Society newsletter. Quarterly review by the committee of the response of the Society of coastal issues <i>vis a vis</i> the press and other media, with a target of 1 editorial or article in a major national newspaper or national magazine (e.g. <i>Planning Quarterly</i>, <i>NZ Geographic</i>) per annum. Quarterly report to the committee detailing the extent of liaison with other relevant groups, societies and organisations
To provide education and development opportunities and to assess the further training and development needs of members	<ul style="list-style-type: none"> Organise seminars and annual conference Focus on aspects of coastal science, management or development which members (including young practitioners) of the society can provide up to date information and techniques to other members at seminars and conferences Provide an annual grant for graduate research on matters relevant to the aims of the Society Provide papers both in the Society newsletter, and for submission to regional, national and international conferences Where appropriate, provide grants for society members to attend and contribute towards meetings and conferences and represent the society 	<ul style="list-style-type: none"> One national seminar and two regional meetings as above. Provide one annual grant (up to a limit of \$1,000) to be determined by the committee, by 1 December each calendar year. Review quarterly by the committee, the development of papers by society members for inclusion in the Society newsletter, and for submission to regional, national and international conferences to ensure adequate representation. Committee to provide guidance each year on the range of issues and topics which members could provide papers and articles and encourage their production.