



Wednesday 18th November 2020

Presentations with Live Q & A

10.00am	MC Welcome Acknowledgment of Country Overview of how the day will run <i>Richard Davies, Department of Planning, Industry and Environment</i>
10.05am	Welcome from The Hon. Shelley Hancock, MP, Minister for Local Government
10.15am	Keynote Presentation: How Vulnerable are Coastal Wetlands to Sea Level Rise? <i>Professor Neil Saintilan, Macquarie University</i>
11.00am	Wamberal Coastal Protection Assessment <i>Ed Couriel, Manly Hydraulics Laboratory & James Carley, Water Research Laboratory of UNSW Australia</i>
11.30am	Wamberal Beach Emergency Response <i>Adrian Turnbull, Royal HaskoningDHV</i> The year 2020 has been interesting indeed, starting off with bushfires, followed by flooding, then COVID-19 throwing everything sideways, and just to keep everyone on their toes, successive storms in July caused significant erosion at a number of locations along the NSW coast. The Central Coast Council local government area was particularly affected, with a number of properties at Wamberal Beach and The Entrance North Beach being impacted. Royal HaskoningDHV were engaged by Council from the second day of the storm event to provide on-ground coastal engineering advice and support, working closely with Council staff and NSW government agencies to deliver emergency coastal protection works to prevent further erosion and property damage. A significant and coordinated effort by all involved saw the deployment of a 250 tonne crane to lift 2 and 4 tonne rock-filled bags onto Wamberal Beach, forming a protective toe (the first use of this technique on the open coast of NSW), as well as placement of rocks and backfilling with sand at locations where beach access by machinery was possible. These emergency measures proved effective, mitigating further damage, and enabling evacuated residents to return to their properties.
12.00pm	Coastal Emergency Responses at Collaroy-Narrabeen Beach – It's all about Perspective <i>Craig Morrison, Northern Beaches Council</i> This presentation considers the events since June 2016 East Coast Low at Collaroy-Narrabeen Beach from the perspective of Northern Beaches Council and some of the residents whose homes were evacuated during the storm. It considers both perspectives and the shared experiences in working to implement solutions to a long standing problem.

CoastSat Data Analysis Delivering a Beach Management Strategy for Wooli

Rick Plain & Joshua Simmons, Royal HaskoningDHV

Wooli Beach has a long history of coastal instability and the village of Wooli is at significant risk from storm erosion and longer-term recession. The Coastal Zone Management Plan (CZMP) prepared in 2016 recommended a Beach Management Strategy comprising periodic sand back-passing and supplementary beach scraping. The beach nourishment scheme is a short to medium term action intended to reduce, but not eliminate, risk of damage to assets due to storm erosion.

12.30pm

The Beach Management Strategy was informed by an updated coastal hazard analysis. The analysis involved a multiple lines of evidence approach that included a review of photogrammetry data and a CoastSat investigation. CoastSat is an innovative tool developed by Killian Vos at the Water Research Laboratory (WRL) that enables extraction of shoreline position time-series and behaviour at any coastline worldwide from 30+ years of satellite imagery. The coastal hazard analysis was beneficial in developing a strategy that 'works with nature' to achieve a cost effective and efficient outcome.

1.00pm –
1.30pm

Lunch Break

Coastal Council Session

Annelise Tour, Chair of the NSW Coastal Council

Q&A from Coastal Council Members:

Emeritus Professor Bruce Thom AM; Dr Kate Brooks; Pam Dean-Jones; Martijn Gough; Dr Hannah Power; Dr Shay Simpson

1.30pm

Accounting for Local Adaptation Planning – Swansea and Surrounds

David Wainwright, Salients, Neale Farmer & John Gilbert, Lake Macquarie City Council

Current best practice for local adaptation planning, based on NSW Government Guidelines and Lake Macquarie Council's experience is to involve the community to a level which would have been improbable prior to the turn of this century. Using the IAP2 spectrum, we have moved beyond the "Inform" and "Consult" modes of public participation towards "Involvement", "Collaboration" and "Empowerment". In recent years Lake Macquarie Council has aimed to further embed deliberative governance in the co-design and implementation of local adaptation plans, thus improving transparency and accountability. The community is increasingly involved in the up-front work of hazard and options assessment which would have previously been undertaken by qualified professionals 'behind closed doors'. Establishing and maintaining community relationships in this evolving setting brings a unique set of rewards and challenges. The collaborative approach has potential benefits to community awareness, ownership, and acceptance of the local adaption plan, alongside improvements to accountability, decision making, trust development (and maintenance). Additionally, there broader benefits in better understanding and accounting for organisational risk tolerances. The NSW Coastal Management Framework guides coastal communities in responding to coastal management challenges and opportunities. The related CBA Guidelines require a relatively detailed cost-benefit analysis to assess coastal management options. Where possible, coastal risks should be expressed probabilistically using Monte Carlo modelling or other suitable approaches to characterise the 'likelihood' of coastal hazards. One of the prominent challenges of the co-design approach has been building the capacity of the community to understand the scientific methodologies and limitations, and the nature of making decisions in the face of uncertainty. Our aim in this presentation is to provide an account of our experience in navigating the challenges involved in co-designing a community owned and implemented LAP. The judgements that need to be made along the way are based on complex, inherently technical information and many questions have arisen. We want others to be aware of some of the obstacles and opportunities we have experienced along the way.

2.15pm

2.45pm	<p>Probabilistic Cost-Benefit Analysis to Inform Coastal Management: A Mollymook Case Study <i>Chris Beadle, Water Technology</i></p> <p>The NSW Coastal Reforms have emphasized the need for decision making in coastal management to be informed by a sound understanding of costs and benefits of potential actions. This presentation will outline a recent case study where probabilistic cost-benefit analysis (CBA) was used to assess and rank potential management actions to address coastal hazard risk, for a number of at-risk coastal assets for Shoalhaven City Council. Using the methods laid out in the NSW Coastal Management Manual, and a robust Monte-Carlo methodology, this study allowed Council to understand risk from a probabilistic standpoint and make sound planning decisions. A brief overview of the study methods will be provided.</p>
3.15pm	<p>Cooks River Coastal Management Program <i>Tom Sinclair, Cooks River Alliance</i></p> <p>Located in the heart of Sydney, the Cooks River represents an archetype of urban degradation over 150 years, compounded by a legacy of highly fragmented governance. The Cooks River has been dismissed, maligned and designated as the most polluted urban river in Australia. In 2018, the Cooks River Alliance and its member councils began engaging local government, state agencies, industry, Aboriginal representatives and community groups to develop a 'whole of catchment plan' to protect, enhance and restore the river. The plan is driven under the Coastal Management Framework, with the Alliance acting in the role of facilitator to mediate competing interests and coordinate stakeholders. This approach has been underpinned by an inclusive and egalitarian governance framework, with the plan being developed, owned and actioned by a collective united under a common vision. The plan has utilised an early community visioning process creating a unified goal, which set a robust foundation and affirmed the river's value to the local community. Placing community at the forefront has facilitated strong engagement and decision-making across a number of often disparate stakeholder groups, shifting the narrative from most polluted to most loved with a focus on its broader values and iterative improvements. Whilst the ongoing development of the plan is the culmination of over 20 years of successes and failures, the underlying governance framework represents a replicable model to establish a transboundary platform for negotiating sustainable and equitable management of urban waterways at multiple scales.</p>
3.45pm	<p>Byron Shire Scoping Study for Northern Shire - What's the Forward Plan <i>Chloe Dowsett, Byron Shire Council & Damion Cavanagh, BMT</i></p>
4.15pm	<p>Preparing a Coastal Vulnerability Area Map <i>Daniel Rodger, JBPacific</i></p>
4.45pm	<p>CLOSE OF DAY ONE PRESENTATIONS</p>
<p>Wednesday 18th November 2020 – Evening Program (Everyone grab a drink)</p>	
5.00pm	<p>Grab a drink and relax to tunes by Neil Kelleher</p>

Thursday 19th November 2020

Presentations with Q & A

9.55am	<p>MC Welcome to Day 2 Overview of how the day will run <i>Nina Hardy, Department of Planning, Industry and Environment</i></p>
10.00am	<p>Byron Bay Erosion Controlled by Headland Bypassing – It Gets Worse Before It Gets Better <i>Thomas Murray, Griffith University</i></p>
10.45am	<p>Marine Estate Coastal Floodplain Study <i>Kylie Russell, NSW Department of Primary Industries</i></p> <p>Major sources of poor water quality across numerous NSW estuaries include acid sulfate soil (ASS) and blackwater runoff. To provide an improved strategic and evidence-based approach to reduce these water quality threats and better target remediation efforts, DPI has initiated the Coastal Floodplain Prioritisation Study in seven coastal floodplains in NSW. The studies are based on a method detailed in Glamore and Rayner (2014) and delivered by the Water Research Laboratory (WRL) of the School of Civil and Environmental Engineering at UNSW Sydney. The reports provide an evidence-based assessment of floodplain subcatchments that contribute poor water quality, along with localised and site specific management action recommendations over short and long-term time frames to address water quality impacts from ASS and blackwater drainage. The studies consider key environmental, social, economic, cultural, and regulatory criteria. The outcomes from the studies provide an overview of floodplain processes and datasets, potential management responses to poor water quality sources, and facilitate the streamlined implementation of remediation actions over coming years. This information will be invaluable for consideration in Coastal Management Plan development, community engagement and coastal floodplain infrastructure management.</p>
11.15am	<p>Improving the Health of Tilba Tilba Lake – A Shared Vision of Community and Government <i>Jaimie Potts, Department of Planning, Industry and Environment</i></p>
11.45am	<p>Coastal Litigation <i>Emily Ryan, Department of Planning, Industry and Environment</i></p> <p>In November 2020 Court of Appeal handed down its judgment in an appeal of the Land and Environment Court's dismissal of a challenge to the validity of the <i>State Environmental Planning Policy (Coastal Management)</i>. The judgment affirms the Governor's power to make an environmental planning instrument for the purposes of environmental planning by the State and concludes that the power to make the Coastal Management SEPP does not depend upon an objective jurisdictional fact about the characteristics of the land forming part of the "coastal wetlands and littoral rainforests area".</p>

12.15pm	<p>Coastal Planning Legal Update Megan Hawley & Katie Mortimer, Lindsay Taylor Lawyers</p> <p>In 2019 the Land and Environment Court decided the first challenge to a Coastal Zone Management Plan made under the <i>Coastal Protection Act 1979 (CP Act)</i> and determined whether the Great Lakes CZMP adopted by MidCoast Council and certified by Minister Upton should be set aside. Three weeks ago the Court delivered a judgment on whether the Council and the Minister should be awarded their costs of the litigation, or whether the proceedings were properly classified as ‘public interest litigation’. In our presentation we discuss substantive issues that the Court grappled with in determining whether the CZMP had been properly made, and what this means for future for Coastal Management Programs made under the <i>Coastal Management Act 2016 (CM Act)</i>. We also discuss two discrete issues raised in the case – when a person or group will have a right to commence proceedings seeking to challenge decisions made under the CP Act and CM Act; and when proceedings will be classified as being brought in the public interest, such that an unsuccessful applicant will not be required to pay the costs of Respondents who have successfully defended a challenge.</p>
12.45pm – 1.15pm	<p>Lunch Break</p>
1.15pm	<p>Restoring Wetland Ecosystem Services in NSW Will Glamore, Water Research Laboratory, UNSW</p> <p>Since 1900, more than 50% of tidal wetlands have been lost and predictions warn that under the current loss rate a further 35% could be lost by 2100. This has been estimated to have a global economic impact of \$2.6 Billion USD per year due to the loss of ecosystem services. In response, the United Nations has declared 2021 – 2030 as the “Decade on Ecosystem Restoration” and many restoration projects are underway state-wide. This presentation will outline the current practices and scientific research underway to undertake large-scale tidal ecosystem restoration based on an ecosystem services approach. Linkages between hydrodynamics, ecosystem response and related ecosystem services will be highlighted.</p>
1.45pm	<p>ICOLL Form and Function - Implications for Estuary Management Angus Ferguson, Department of Planning, Industry and Environment</p>
2.15pm	<p>Changes and Impacts Resulting from Permanently Opening an ICOLL Danny Wiecek, Department of Planning, Industry and Environment</p> <p>The management of ICOLLs represents a number of challenges for both government and local communities. ICOLLs naturally experience widely fluctuating conditions, ranging from open tidal conditions, to closed periods of high water levels that lead to inundation of assets, as well as closed periods of low water levels in drought, both of which can trigger significant community angst and pressure on government to intervene. The ecological communities that occur in these systems are adapted to these conditions, and changes brought about through management intervention of the entrances can have profound impacts. This presentation will go over the changes that can occur to these systems as a result of entrance modification, with a focus on water quality, estuarine vegetation (mangroves, saltmarsh, seagrasses), fish and shorebirds, as well as opportunities for improving management of these systems. The monitoring of changes that have occurred in Lake Illawarra since its entrance was permanently opened in 2007 through twin breakwaters, and subsequent management of these changes will be used as a case study from which a number of lessons can be learned and applied to other estuaries.</p>
2.45pm	<p>Bushfire Impacts on South Coast Estuaries Aaron Wright, Department of Planning, Industry and Environment</p>

Terrigal and Coastal Lagoon Audit: A Deep Dive into Water Quality Management

Vanessa McCann, Central Coast Council & **Peter Scanes**, Department of Planning, Industry and Environment

3.15pm

Terrigal Beach received a poor water quality rating in the State of the Beaches Report between 2011 and 2018. Central Coast Council and the NSW Department of Planning, Industry and Environment have been working together to investigate the causes of poor water quality at Terrigal Beach, Terrigal Haven and the coastal lagoons in order to identify sources and target remedial action. The program provides a practical example of the NSW Government's Risk-based Framework and uses innovative techniques to address the problem. The program has evolved to include comprehensive sampling and analysis, numerical modelling of circulation patterns, microbial source tracing, community engagement and a comprehensive program of remediation. In response to the findings, to date more than 57kms of sewer mains, 1,800 maintenance holes and 344 private properties have been inspected. We have discovered 14kms of sewer mains needing repair, of which 87% is complete, and discovered 11 illegal connections as well as various other private defects. A series of nine reports have been published to summarise the program to date at yourvoiceourcoast.com/tcla

Coasts, Communities and COVID: A Case Study of Engagement in a Pandemic

Alysia Norris, Spectrum Comms & **Stuart Waters**, Twyfords

3.45pm

In this presentation we describe the engagement of the Central Coast community by the Tuggerah Lakes Expert Panel, throughout 2020. The Panel was keen to engage the many passionate locals, who were equally keen to have their say, and a comprehensive engagement plan was devised. Then with the re-emergence mid-year of what seemed to be fast-growing clusters of COVID cases, the engagement plan needed to change. This presentation describes the way the Panel responded, and we discuss some implications of going on-line to consult communities about such complex and contentious issues as water quality in coastal lagoons.

Advancements in Water Quality Logging Sampling Insights from the Richmond River

Damien Maher, Southern Cross University

4:15pm

4.45pm

Wrap up of Forum
