Redesigning Communications in Coastal Management

An innovative approach using Tweed Sand Bypassing as a case study

Restoring Coastal Sand Drift - Improving Boating Access
“Nature evokes an emotional response”

Professor Brian Cox

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“sense of place” – we attribute specific meaning to the coast. The ‘sense’ is “made up of experiences, mostly fleeting and undramatic…..a unique blend of sights, sounds, and smells, a unique harmony of natural and artificial rhythms such as times of sunrise and sunset, or work and play” The feel of a place is “registered in one’s muscles and bones”

Professor Yi-Fu Tuan
The problem

- Needed to determine what the community knows
- To correct misinformation
- Create community understanding, acceptance and support moving forward

Management meets to 'break the Superbank'

A management meeting later this week may see changes to sand flow on the southern Gold Coast. Swellnet has been informed that management at the Tweed River Entrance Sand Bypass System (TREBPS) are considering changing how much sand will flow to various outflow points of the pumping system. The result would be different volumes of sand – and hence different wave shape – at Duranbah, Snapper, and other waves further down the Superbank.
The research

• The why has been lost
• Need to gain community trust in Project governance.
• Need to engage younger generations.
• Shift from creating awareness to building understanding and engagement.
Vision – to implement a communications strategy that recognises and supports the ongoing operation of the Project, and promotes the Tweed Sand Bypassing identity.
Identity / core values

1. Protects coastal assets and the economic viability of the Tweed River.
2. Supports the coastal lifestyle that is an integral part of the region’s identity.
3. Demonstrates strong governance.
4. Collaborates, is open, and harnesses the power of citizen knowledge.
5. Builds, shares, and promotes coastal science knowledge.
Goals

1. Strong and consistent Project identity.
2. All stakeholder groups understand the importance and ongoing need for the Project.
3. Increase community and stakeholder knowledge of the Project’s operational environment.
4. Engage in meaningful and effective communication with stakeholder groups.
5. Effective knowledge sharing.
TWEED SAND BYPASSING

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Understanding sand

Sand, an important sediment, is a key part of the materials that make up a significant proportion of the Australian coast. It's the foundation of many coastal ecosystems and plays a crucial role in the functioning of the marine environment.

Sand is a sediment that is made up of the remains of small marine organisms and the weathering of rocks. It is a mixture of grains that vary in size from silt to coarse gravel.

Sand transport is influenced by various factors, including wind, waves, and currents. These forces move the sand across the shore and can shape the coastline over time.

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At the heart of the Tweeds by Bypassing project, understanding the movement of sand is crucial. By enhancing the natural processes of sand transport, we can improve boating access and enhance the ecological health of the coastal environment.
Moving sand

Tweed Sand Bypassing has been a part of the Tweed and Southern Gold Coast community for many years. An ongoing, evolution of project, it is currently ranked as the New South Wales and Queensland’s largest government-funded project (with Project 444) and is one of the largest coastal erosion mitigation projects in Australia. The Tweed Sand Bypassing project was designed to address the very real environmental, social, economic and cultural impacts posed by an increasing coastal population and associated resultant infrastructure demand and sand scarcity. Bypassing has been the most common method of coastal erosion control and has been practised by nation states since the 1950s. Finding a solution to sand bypassing the coastal sand drift and its impact on such tourism in the Tweed River basin is key. Implementing a solution that would support the economic and social growth of the community has been in the interest of the people and the Tweed River basin. This project, which is known as Tweed Bypassing, was constructed and Tweed Sand Bypassing was completed.

Since 2001, the project has been a focus on how to move the sand to the ocean that would otherwise affect the environment and the community and to move sand to the ocean in such a way that the community and the environment would not be affected.

River of sand

WHERE DOES THE SAND IN NORTHERN NSW AND SOUTH EAST QUEENSLAND COME FROM?

The sand that forms the Tweed River drift sand drift is sourced from the intersection of the Northern NSW and South East Queensland coastal sand drifts. The drift occurs at the intersection of the Northern and Southern sand Drifts. The drift forms a large sand drift that extends from the Northern NSW coast to the Southern Queensland coast.

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The Bypass Surgeon

FOR CIVIL AND COASTAL ENGINEER IAN TAYLOR, WORKING ON TWEED SAND BYPASSING SINCE ITS INCEPTION IN THE 1990s HAS BEEN CHALLENGING, REWARDING AND INFINITELY INTERESTING.

How did the Project come about?

The Queensland Government had planned to use the Gold Coast's Main Beach lagoon as the focus for beach erosion management, however, a proposal was made to remove sand from the lagoon to form a new beach for the Gold Coast. The proposal was met with opposition and the project was eventually abandoned.

In recent years, the beach erosion in the Tweed has been a significant issue, with the beach experiencing frequent erosion and needed to be widened. The project was seen as an opportunity to address the erosion problem and to benefit the local community.

The Project

The project involved the construction of a new jetty and the relocation of existing structures to create a new barrier to protect the beach from further erosion. The project also included the improvement of access to the beach and the creation of new recreational areas.

The project was completed in 2003 and has been well received by the community, with the new beach and recreational areas providing a significant improvement to the local area.

Ian Taylor, the project engineer, commented on the project:

"I am honored to have been a part of this project. It was a challenging and rewarding experience, and it was great to see the community benefit from it."

The project was a significant achievement for the local community and has had a positive impact on the area.

Ian Taylor

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The project has provided improved access to the beach for boating and has created new recreational areas for the local community.

Ian Taylor

The project has been a significant achievement for the local community and has had a positive impact on the area.

Ian Taylor
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Rainbow Bay

Queensland's Southernmost Beach, Rainbow Bay, is known for its iconic beauty and world class surfing conditions. It is also one of the few beaches on the East Coast of Australia that faces north.

The beach is a popular location for picnics and swimming, particularly during the summer months. The sand is fine and white, and the water is crystal clear. The beach is Outline map of the area marked by the surf zone, showing the relative positions of key features such as rocks, reefs, and sandbars. The beach is surrounded by bushland and is a popular spot for birdwatching.

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Take home messages

• Have a hard hitting communications plan
• Design is essential
• Invest in photography for visual storytelling
• Embrace various communication methods such as infographics, interviews, illustration, poetry and narratives
• Don’t be afraid of social media
• Consider developing school resource material
“Give me miles and miles of mountains and I’ll ask for the sea”

Damien Rice