Environment Institute of Australia and New Zealand Inc.

Symposium

With support from...

greater WELLINGTON
REGIONAL COUNCIL
Te Pane Matua Taiao

eos ECOLOGY

ANDREW. STEWART

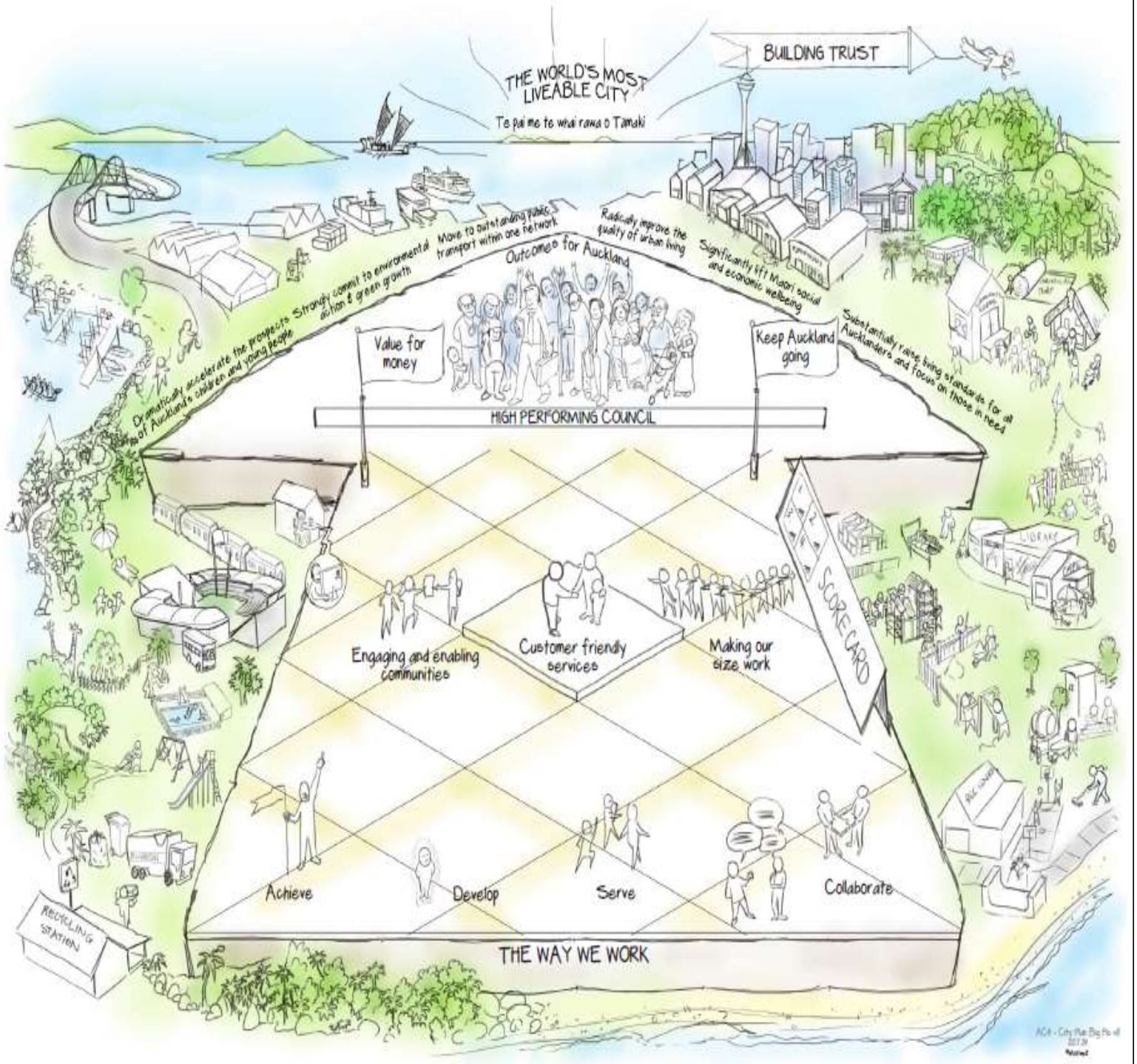
NIWA
Taihoro Nukurangi

Hauraki Gulf Forum
Tikapa Moana

Achieving effective engagement across multiple agencies: the case of the Hauraki Gulf Marine Park

Environmental Institute of Australia and New Zealand Symposium
Wellington, 27 March 2015
Tim Higham, Executive Officer, Hauraki Gulf Forum


ANZ


THE WORLD'S MOST LIVEABLE CITY
Te pai me te whai rawa o Tamaki
BUILDING TRUST
Outcomes for Auckland
Dramatically accelerate the prospects of Auckland's children and young people
Strongly commit to environmental action & green growth
Move to outstanding public transport within one network
Radically improve the quality of urban living
Significantly lift Māori social and economic wellbeing
Substantially raise living standards for all Aucklanders and focus on those in need
Value for money
Keep Auckland going
HIGH PERFORMING COUNCIL
Engaging and enabling communities
Customer friendly services
Making our size work
SCORECARD
Achieve
Develop
Serve
Collaborate
THE WAY WE WORK
RECYCLING STATION

VISION

CREATING THE WORLD'S MOST LIVEABLE CITY


THE
AUCKLAND
PLAN
Auckland
Council


THE
AUCKLAND
PLAN_
AUCKLAND
UNLEASHED_
THE AUCKLAND PLAN
DISCUSSION DOCUMENT_
Auckland
Council

We will be thought leaders on:

nzherald.co.nz Canon NEWSPAPER OF THE YEAR THURSDAY, AUGUST 11, 2011 $2.00

The New Zealand Herald

DIAMOND THEFT
TV STAR'S ANGER
Elderly mum's ring stolen from finger A3

Eden Park's useless seats
Yours, for $160 each A6

WESTPAC RUNAWAY
New charges, new baby A3

Telfer v Veitch
Three off-air, on-air dispute A3

TimeOut
NZ, HERE I COME
Taylor Swift's new tour

OUR TOXIC GULF PARADISE

Adidas: Party's OVER

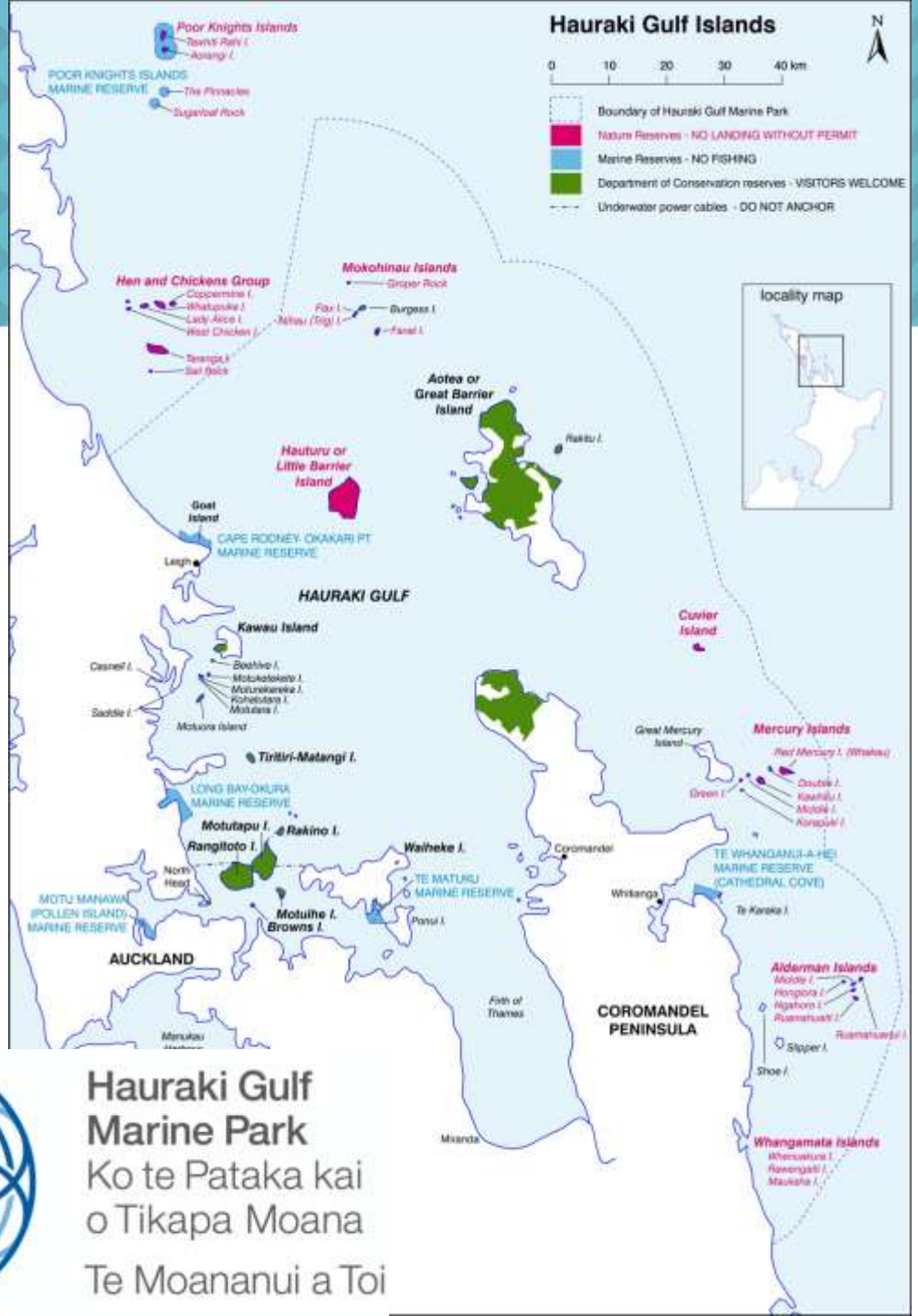
Fish and marine life
75%

Water quality
14 out of 42 Auckland beaches monitored between 2008 and 2009 unsafe for swimming

Rubbish
More than 450,000 litres collected every year from the ocean

Plunging fish numbers, dirty beaches, rubbish galore — new study makes distressing reading

"It is deteriorating, and we need to take notice of it."
John Tregidga, Forum chair



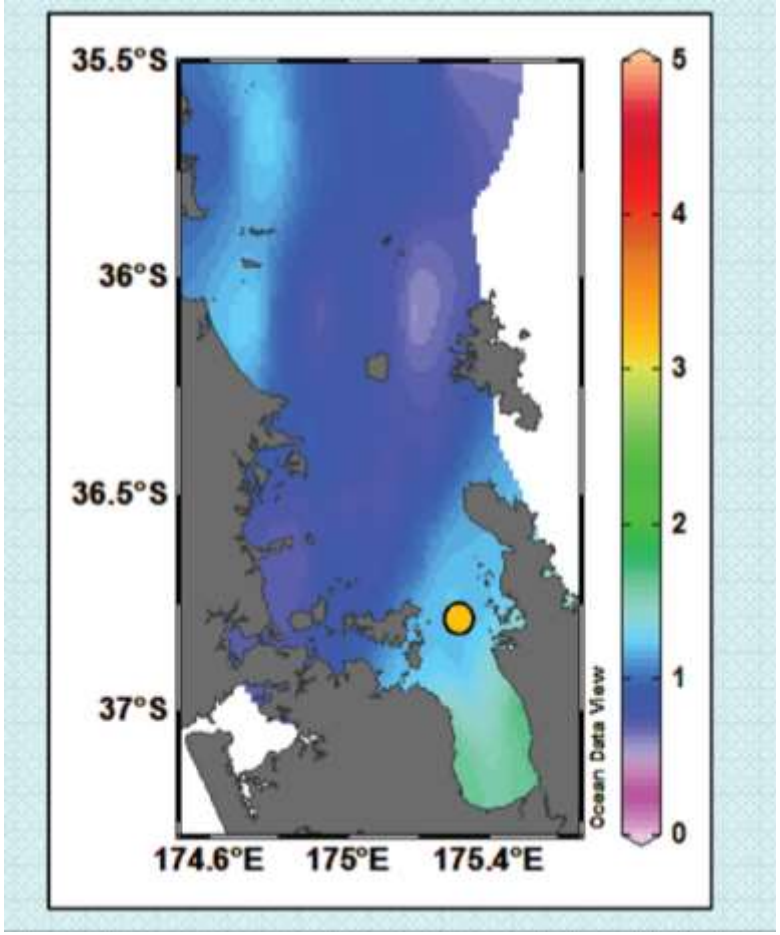
Hauraki Gulf Forum
Tikapa Moana

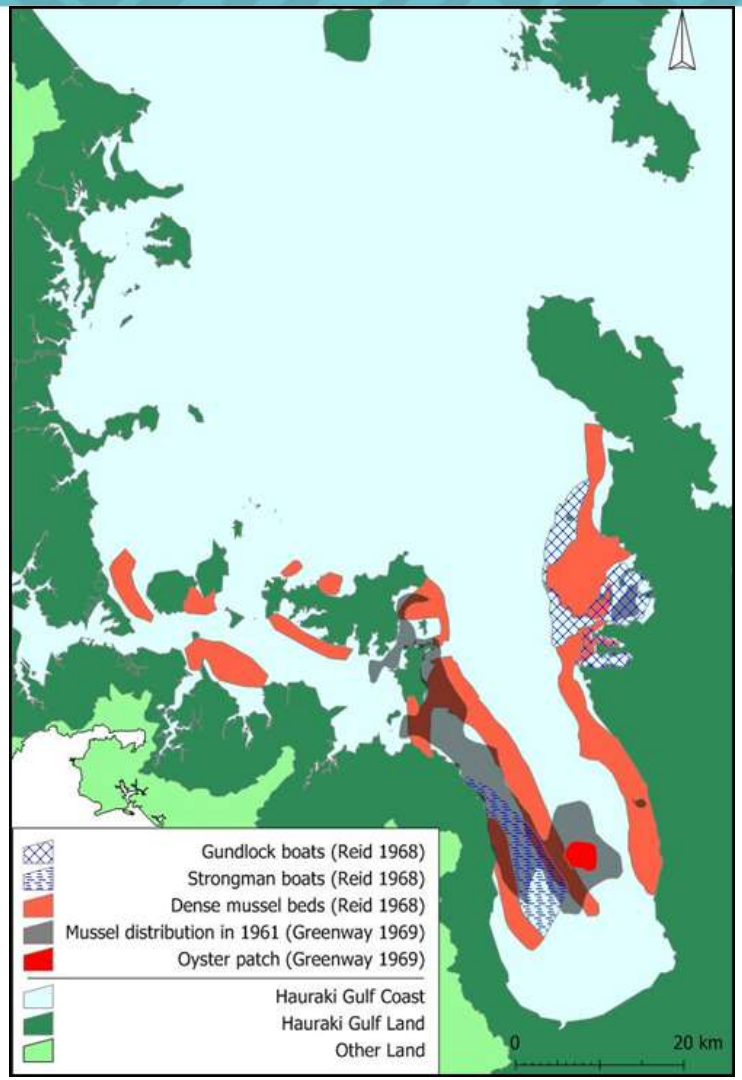
Hauraki Gulf Marine Park
Ko te Pataka kai o Tikapa Moana
Te Moananui a Toi

Hauraki Gulf Forum
Tikapa Moana

Hauraki Gulf Forum
Tikapa Moana

Hauraki Gulf Forum
Tikapa Moana

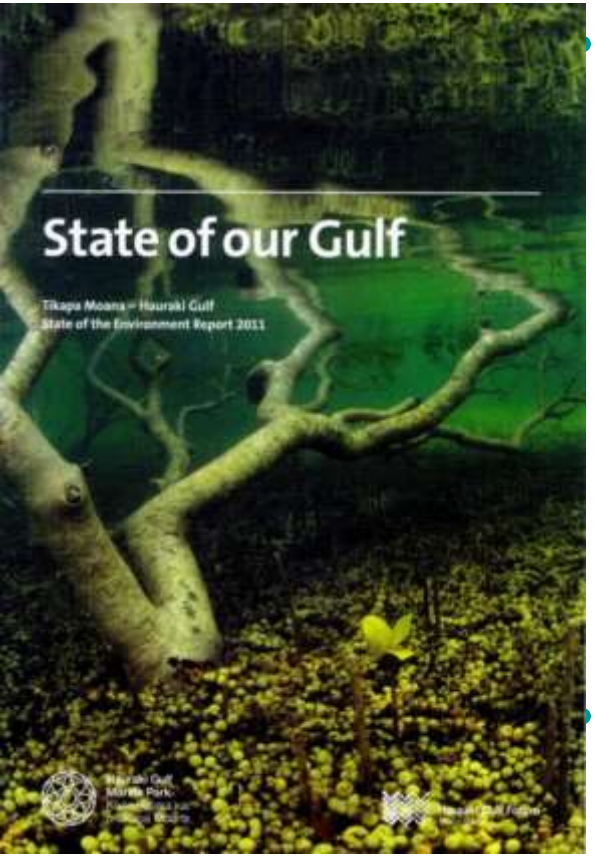

35.5°S
36°S
36.5°S
37°S
174.6°E
175°E
175.4°E
5
4
3
2
1
0
Ocean Data View


Gundlock boats (Reid 1968)
Strongman boats (Reid 1968)
Dense mussel beds (Reid 1968)
Mussel distribution in 1961 (Greenway 1969)
Oyster patch (Greenway 1969)
Hauraki Gulf Coast
Hauraki Gulf Land
Other Land
0
20 km


2 TONNES

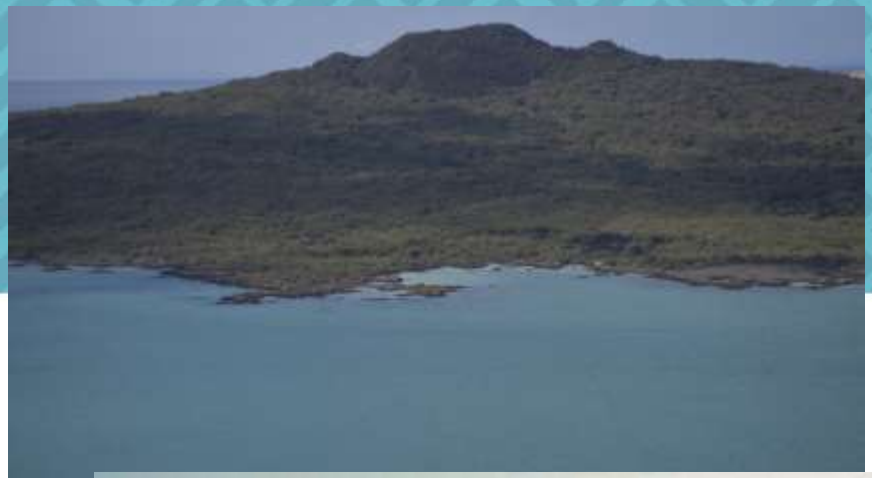
State of our Gulf 2011

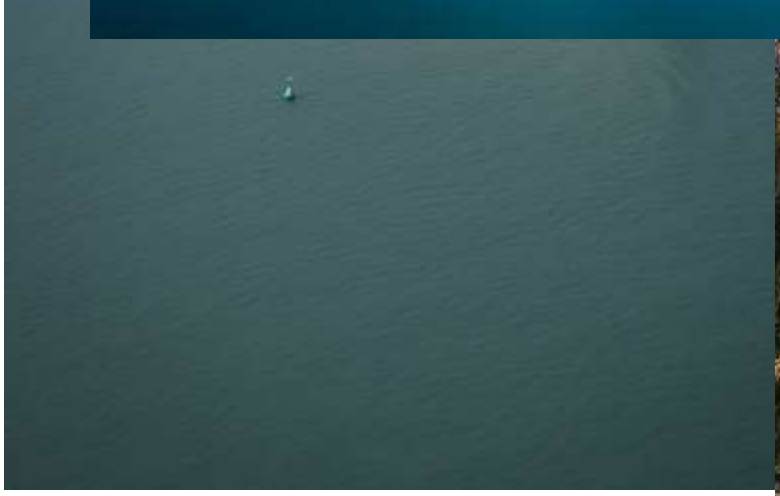
Hauraki Gulf Forum
Tikapa Moana

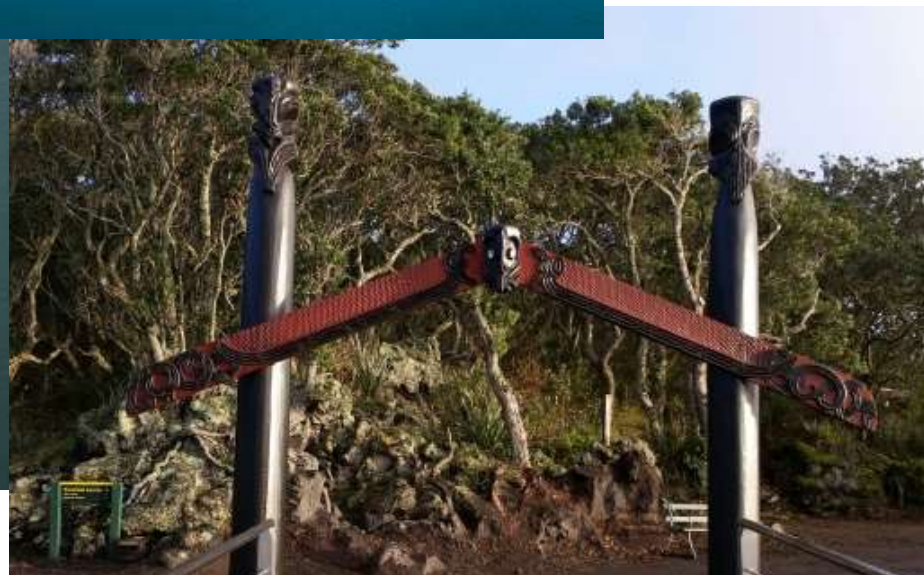


- “The Hauraki Gulf has undergone an incredible transformation over two human life spans. That transformation is continuing in the sea and around the coast with most environmental indicators either showing negative trends or remaining at levels which are indicative of poor environmental condition.
- It is inevitable that further loss will occur unless bold, sustained and innovative steps are taken ….”

Hauraki Gulf Forum
Tikapa Moana







Hauraki Gulf Forum
Tikapa Moana

Hauraki Gulf Transit Protocol for Commercial Shipping

The Port of Auckland is located on the east coast of New Zealand's North Island, in the Hauraki Gulf Marine Park. This marine park is one of the few places in the world with a semi-resident population of Bryde's whales. The local whale population is small, and is listed as critically endangered in New Zealand.

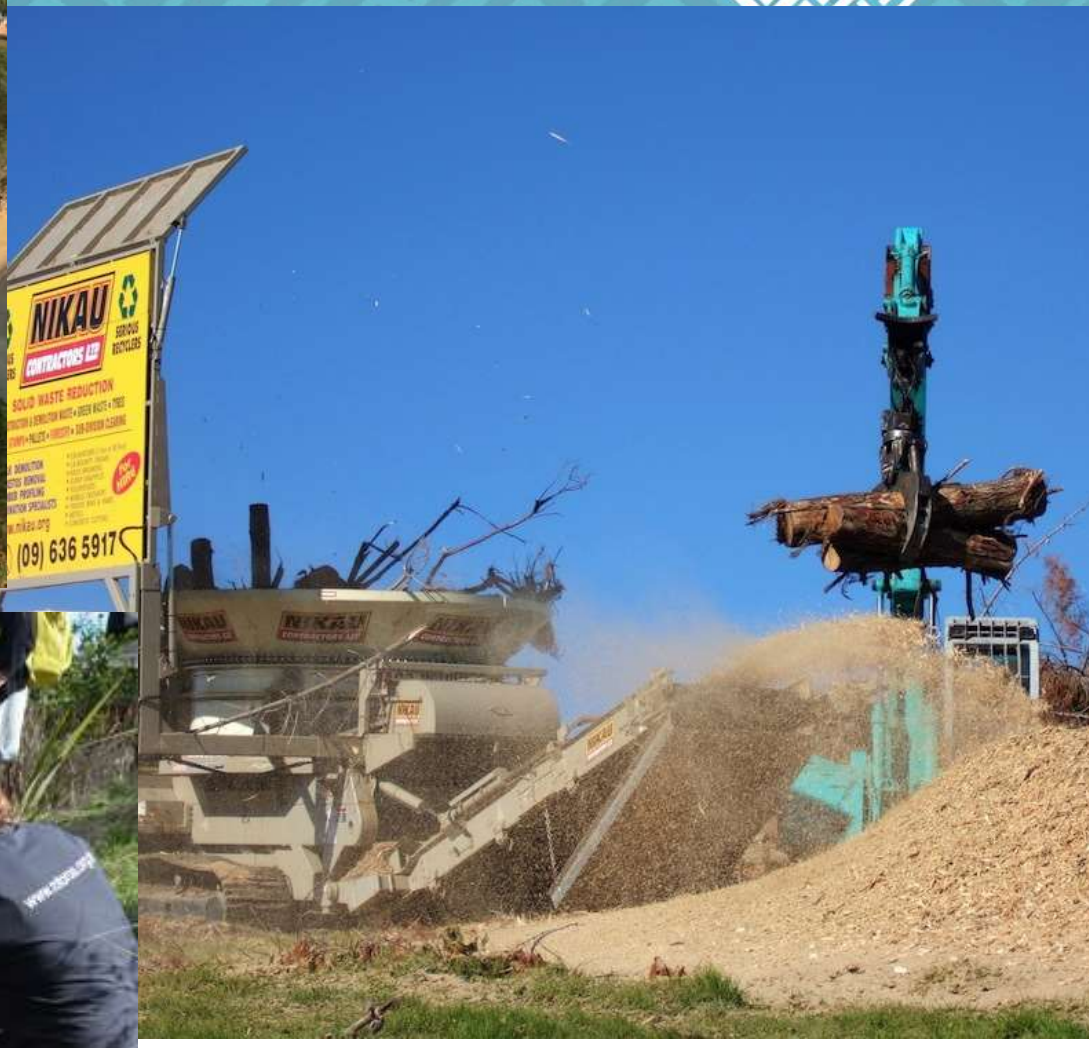
The whales are vulnerable to ship strike which is a threat to the local population's long-term survival. That is why Ports of Auckland (POAL), the shipping industry, New Zealand's Department of Conservation (DOC), and Auckland University, are leading efforts to find ways to reduce the risk of colliding with a whale.

This protocol is part of that effort. It outlines steps Masters should take when planning their passage to and from Auckland, and what to do while transiting the Hauraki Gulf. Your help in protecting our local whales is greatly appreciated.

Tony Gibson
CEO, Ports of Auckland
January 2015

Reducing the risk of whale deaths

Hauraki Gulf Forum
Tikapa Moana


NIKAU
CONTRACTORS LTD
SERIOUS RECYCLERS
SOLID WASTE REDUCTION
(09) 636 5917

Hauraki Gulf Forum
Tikapa Moana

Nick Main: SWG independent chair

Jake Bartrom: Coromandel

Matt Ball: Auckland
Read more about Matt

Callum McCallum: Papakura
Read more about Callum

Raevyn Peart: Point Chevalier
Read more about Raevyn

Alan Procter: Whitianga
Read more about Alan

Laurie Beamish: Ngai Tai ki Tamaki

Conall Buchanan: Paeroa
Read more about Conall

Joe Davis: Ngati Hei
Read more about Joe

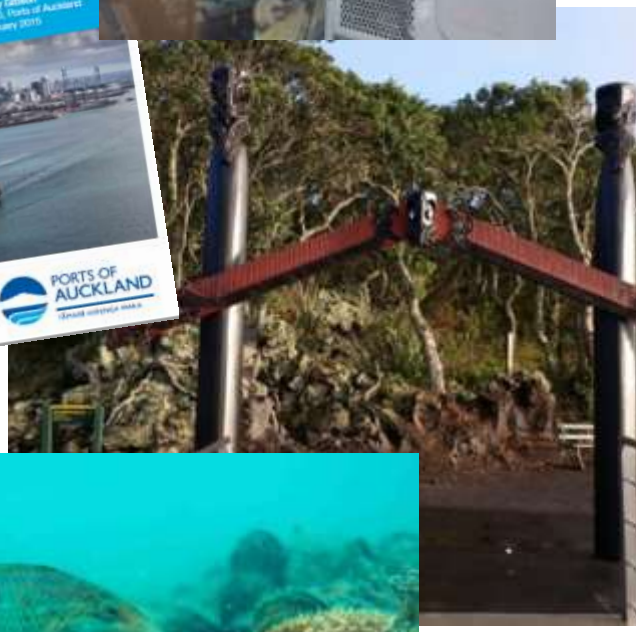
Dirk Sieling: Whitianga
Read more about Dirk

Tamie Te Rangi: Ngati Whatua

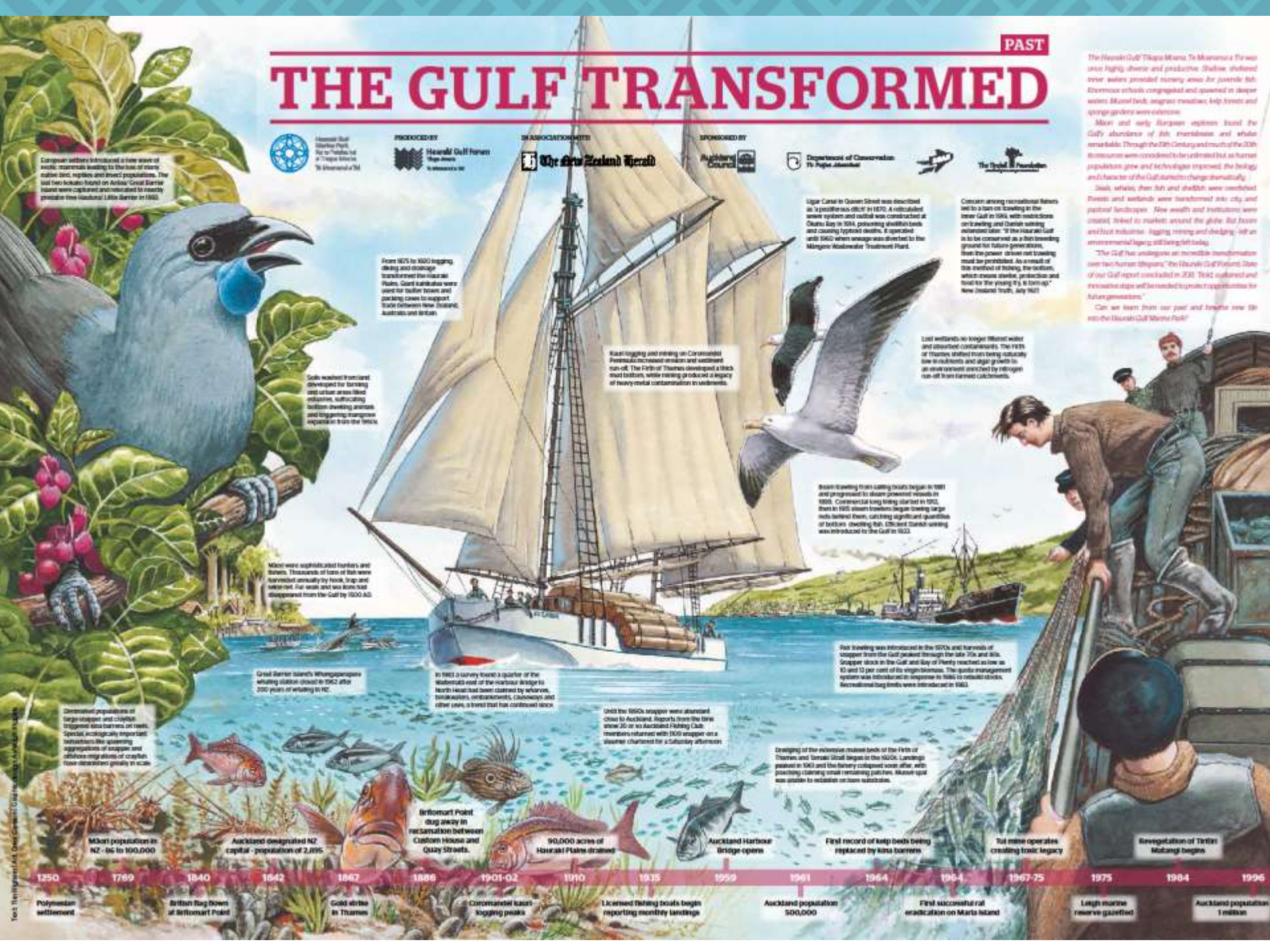
Lucy Tuhua: Ngati Paoa
Read more about Lucy

Tai Timu Tai Pari
Sea Change
Hauraki Gulf Marine Spatial Plan

Hauraki Gulf Forum
Tikapa Moana



ROTOROA AN ISLAND APART


PAST
THE GULF TRANSFORMED
PRODUCED BY
Hauraki Gulf Forum
IN ASSOCIATION WITH
The New Zealand Herald
SPONSORED BY
Auckland Council
Department of Conservation
Te Papa Atawhai
The Tindall Foundation
The Hauraki Gulf/ Tikapa Moana Te Moananui a Toi was once highly diverse and productive. Shallow, sheltered inner waters provided nursery areas for juvenile fish. Enormous schools congregated and spawned in deeper waters. Mussel beds, seagrass meadows, kelp forests and sponge gardens were extensive.
Māori and early European explorers found the Gulf's abundance of fish, invertebrates and whales remarkable. Through the 19th Century and much of the 20th, its resources were considered to be unlimited but as human populations grew and technologies improved, the biology and character of the Gulf started to change dramatically.
Seals, whales, then fish and shellfish were overfished. Forests and wetlands were transformed into city and pastoral landscapes. New wealth and institutions were created, linked to markets around the globe. But losses and boat industries - logging, mining and dredging - left an environmental legacy still being felt today.
"The Gulf has undergone an incredible transformation over two human lifespans," the Hauraki Gulf Forum's State of our Gulf report concluded in 2011. "Bold, sustained and innovative steps will be needed to protect opportunities for future generations."
Can we learn from our past and breathe new life into the Hauraki Gulf/ Marine Park?
European settlers introduced a new wave of exotic mammals leading to the loss of many native bird, reptile and insect populations. The last two kokako found on Aotea/ Great Barrier Island were captured and relocated to nearby predator-free Hauturu/ Little Barrier in 1993.
From 1875 to 1920 logging, clearing and drainage transformed the Hauraki Plains. Giant kahikatea were used for butter boxes and packing cases to support trade between New Zealand, Australia and Britain.
Soils washed from land developed for farming and urban areas filled estuaries, suffocating bottom-dwelling animals and triggering mangrove expansion from the 1960s.
Māori were sophisticated hunters and fishers. Thousands of tons of fish were harvested annually by hook, trap and seine net. Fur seals and sea lions had disappeared from the Gulf by 1500 AD.
Great Barrier Island's Whangaparapara whaling station closed in 1962 after 200 years of whaling in NZ.
Diminished populations of large snapper and crayfish triggered kina barrens on reefs. Spatial, ecologically important behaviours like spawning aggregations of snapper and offshore migrations of crayfish have diminished greatly in scale.
Māori population in NZ - 86 to 100,000
1250
Polynesian settlement
1769
Auckland designated NZ capital - population of 2,895
1840
British flag flown at Britomart Point
1842
Gold strike in Thames
1867
Britomart Point dug away in reclamation between Custom House and Quay Streets.
1886
Coromandel kauri logging peaks
1901-02
90,000 acres of Hauraki Plains drained
1910
Licensed fishing boats begin reporting monthly landings
1935
Auckland Harbour Bridge opens
1959
Auckland population 500,000
1961
First record of kelp beds being replaced by kina barrens
1964
First successful rat eradication on Maria Island
1964
Tui mine operates creating toxic legacy
1967-75
Leigh marine reserve gazetted
1975
Revegetation of Tiritiri Matangi begins
1984
Auckland population 1 million
1996
Kauri logging and mining on Coromandel Peninsula increased erosion and sediment run-off. The Firth of Thames developed a thick mud bottom, while mining produced a legacy of heavy metal contamination in sediments.
Ligar Canal in Queen Street was described as "a pestiferous ditch" in 1870. A reticulated sewer system and outfall was constructed at Okahu Bay in 1914, poisoning shellfish beds and causing typhoid deaths. It operated until 1962 when sewage was diverted to the Māngere Wastewater Treatment Plant.
Concern among recreational fishers led to a ban on trawling in the inner Gulf in 1914, with restrictions on trawling and Danish seining extended later. "If the Hauraki Gulf is to be conserved as a fish breeding ground for future generations, then the power driven net trawling must be prohibited. As a result of this method of fishing, the bottom, which means shellfish, go under/ood and food for the young fry, is torn up." New Zealand Truth, July 1927
Lost wetlands no longer filtered water and absorbed contaminants. The Firth of Thames shifted from being naturally low in nutrients and algae growth to an environment enriched by nitrogen run-off from farmed catchments.
Beam trawling from sailing boats began in 1881 and progressed to steam powered vessels in 1899. Commercial long lining started in 1912, then in 1915 steam trawlers began towing large nets behind them, catching significant quantities of bottom dwelling fish. Efficient Danish seining was introduced to the Gulf in 1933.
In 1963 a survey found a quarter of the waterfront east of the harbour bridge to North Head had been claimed by wharves, breakwaters, embankments, causeways and other uses, a trend that has continued since.
Until the 1950s snapper were abundant close to Auckland. Reports from the time show 20 or so Auckland Fishing Club members returned with 1500 snapper on a steamer chartered for a Saturday afternoon.
Dredging of the extensive mussel beds of the Firth of Thames and Tamaki Strait began in the 1960s. Landings peaked in 1963 and the fishery collapsed soon after, with poaching claiming small remaining patches. Mussel spat was unable to establish on bare substrates.
Fish trawling was introduced in the 1970s and harvests of snapper from the Gulf peaked through the late 70s and 80s. Snapper stock in the Gulf and Bay of Plenty reached as low as 10 and 13 per cent of its virgin biomass. The quota management system was introduced in response to 1986 to rebuild stocks. Recreational bag limits were introduced in 1983.
Text: Tim Higham/Art Direction: Graham Stanley/Design: Andrew Hudson

PRESENT

THE GULF AT CROSSROADS

PRODUCED BY Hauraki Gulf Forum

IN ASSOCIATION WITH The New Zealand Herald

SPONSORED BY Auckland Council

Department of Conservation

The Tindall Foundation

Regular monitoring shows sediments continue to wash into the Gulf, after heavy rainfall events, from bare subdivision sites and rural properties where forestry has been felled and heavy stocking occurs. Beaches scattered around the Gulf show increasing muddiness and changes in animal life.

A community group known as Gulf Restoration Network Tāmaki is pioneering the restoration of seafloor communities and has so far introduced over 3.5 million live adult mussels to regenerate several football field-size beds. Other important habitat types, such as seagrass meadows, may also be restorable.

In 2020, the Gulf is at a crossroads. The latest state of the environment assessment by the Hauraki Gulf Forum shows populations of whales and seabirds are still at risk, our coastal waters getting muddier and nutrient-rich, and a hopeful bounce in fish stocks has stalled after good progress since historical lows.

Residents rank the Gulf the highest among the things they love, and many volunteer on island and coastal sanctuaries, clean beaches and even restore mussel reefs. Innovation is also happening on our farms and fishing fleet, and exciting projects are happening around Auckland's waterfront.

New partnerships are emerging with the iwi and hapū of Tīkapa Moana/Te Moananui a Toi, fresh leadership can be seen within the business community, and the Sea Change - Tai Timu Tai Pari project is engaging the communities of the Gulf in mapping out its future.

Can we address both the legacy of our past and incremental decline in many important indicators? How might we put the remarkable back in the Hauraki Gulf Marine Park?

Over 1800 recreational fishing vessels can be out fishing in the Gulf at any one time on a busy weekend. 2016/17 estimates suggest recreational fishers catch more snapper than commercial fishers in the inner Gulf (Leigh - Great Barrier - Coromandel bp).

The snapper stock in the Hauraki Gulf - Bay of Plenty area is estimated at 19 percent of its original biomass, an improvement on the historical low of 11 percent, but it is still around half the size it should be. Initial actions taken in 2013 should prevent the stock from falling in the short term, and a stakeholder group is considering ways to increase fairness and value from the fishery.

Concern about the frequency of ship strikes on the usually resident population of 50 or more Bryde's whales in the Gulf led to the introduction of a voluntary transit protocol for large vessels in September 2013. An internationally-recognised safe speed around whales is 10 knots, but this is not yet standard practice. The most recent strike was in September 2014, the sixth recorded fatality since 1969.

Legal-sized crayfish are fished sustainably at around 20 to 30 percent of the stock level recorded in 1969, across the largest CRA2 fisheries area. However, in many places, numbers have been reduced to a point where they no longer play an important ecological role.

Bottom trawling and dredging captures, disturbs and injures target and non-target species and removes seafloor animals like sponges and horse mussels. Bottom trawling accounts for about 30-40 percent of the total snapper catch in the Gulf and is prohibited south of a line from Kawau Island to Colville. The area dredged for scallops has expanded in the last few years.

Tāiko, black petrels once occurred on the NZ mainland but less than 1500 pairs now breed only on Great Barrier and Little Barrier Islands. After research showing their vulnerability to capture in long line fisheries, fishing boats are now being recruited in seabird smart fishing training, and accidental captures are being closely monitored.

A network of 36 predator-free islands in the Gulf and several fenced coastal sanctuaries provide important habitat for endangered birds, reptiles and insects. Outside of them introduced animals like mice, rats, cats, possums, and stoats continue a heavy toll on vegetation and native wildlife - such as the New Zealand robin or tīeke/saddleback, which can fly out of protected areas.

The intensively dairy farmed Hauraki Plains generate nutrients that enter the Gulf and enrich the water column, effecting algal growth, acidity and oxygen levels. Phosphorous inputs from rivers have decreased through improvements in factory and municipal water treatment plants. Nitrogen loads, mainly leached from cow urine patches, have increased slowly over the past decade linked to the number of dairy cows in the catchment.

The spotted shag or parekareka is one of 24 species of seabird which breed in and around the Gulf. Once widespread, it now breeds in the Gulf on Tāraketē Island and rock stacks off eastern Waiheke and some of the Coromandel islands.

Four new marine invasive species have been reported in the Gulf since 2015, one of them, the Mediterranean fanworm, could potentially cause serious problems.

The new Central Interceptor sewer will reduce wastewater overflows in worst-affected parts of Auckland, but pressures on aging infrastructure remains a challenge. Low level sediment quality guidelines are frequently exceeded for copper, zinc and lead in city harbours.

2000 NZ Storm petrel 'returns from extinction'

2003 Hauraki Gulf Marine Park gazetted

2004 2.7 km predator-proof fence completed at Tawharanui

2004 Cow numbers on Hauraki Plains peak

2006 Census finds nearly half Coromandel dwellings unoccupied

2006 Survey finds 17% of Auckland households own a boat

2009 60-80% cockles at Whangateau die-off from bacterial infection

2011 Rangitoto-Motutapu declared pest free

2011 Aquaculture reforms designate new fish farming areas

2011 Rotorua Island opens as a public park

2012 Co-governance of Te Hauturu-o-Toi with Ngāti Manuhiri

2012 1500 vessels, 100 cruise ships visit port

2013 Snapper stock around half the interim target of 40% virgin biomass

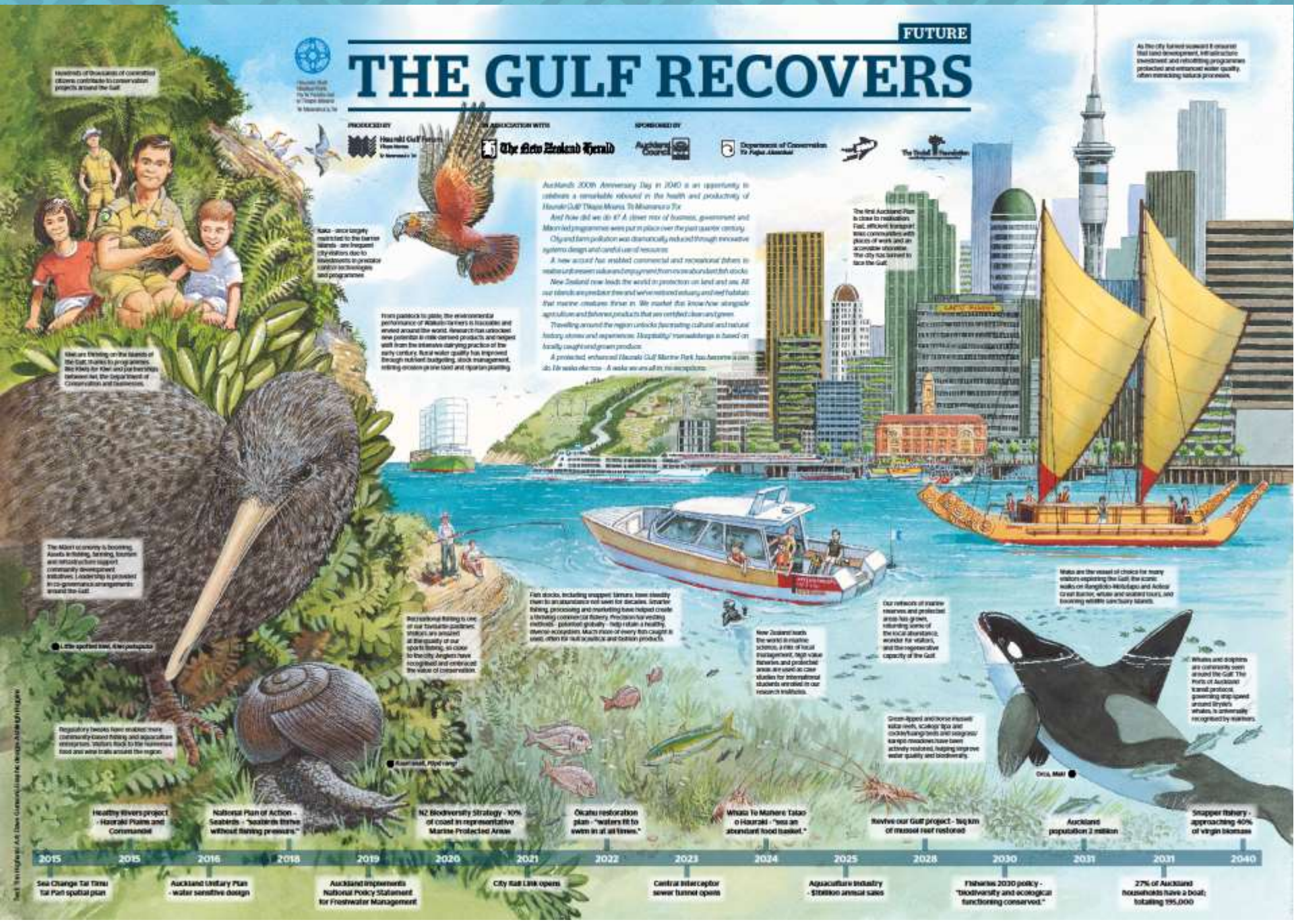
2013 Precision Seafood Harvesting net unveiled

2013 Sea Change - Tai Timu Tai Pari project launched

2013 Auckland - 23% Asian, 15% Pacifica, 11% Māori

2014 New ownership and co-governance with Ngā Mana Whenua o Tāmaki Makaurau

2014 Auckland population reaches 1.5 million


FUTURE
THE GULF RECOVERS
PRODUCED BY
Hauraki Gulf Forum
IN ASSOCIATION WITH
The New Zealand Herald
SPONSORED BY
Auckland Council
Department of Conservation
Te Papa Atawhai
Hundreds of thousands of committed citizens contribute to conservation projects around the Gulf.
Auckland's 300th Anniversary Day in 2040 is an opportunity to celebrate a remarkable rebound in the health and productivity of Hauraki Gulf Tīkapa Moana Te Moananui a Toi.
And how did we do it? A clever mix of business, government and Māori-led programmes were put in place over the past quarter century.
City and farm pollution was dramatically reduced through innovative systems design and careful use of resources.
A new accord has enabled commercial and recreational fishers to realise unforeseen values and employment from ever-abundant fish stocks.
New Zealand now leads the world in protection on land and sea. All our islands are predator free and we've restored estuary and reef habitats that marine creatures thrive in. We market this know-how alongside agriculture and fisheries products that are certified clean and green.
Travelling around the region unlocks fascinating cultural and natural history stories and experiences. Hospitality' manaakitanga is based on locally caught and grown produce.
A protected, enhanced Hauraki Gulf Marine Park has become a con. Te waka ete roa - A waka we are all in, no exceptions.
Kaka - once largely restricted to the barrier islands - are frequent city visitors due to investments in predator control technologies and programmes.
From paddock to plate, the environmental performance of Waikato farmers is traceable and envied around the world. Research has unlocked new potential in milk-derived products and helped instil trust from the intensive dairying practices of the early century. Rural water quality has improved through nutrient budgeting, stock management, retiring erosion-prone land and riparian planting.
As the city turned seaward it ensured that land development, infrastructure investment and retrofitting programmes protected and enhanced water quality, often mimicking natural processes.
The first Auckland Plan is close to realisation. Fast, efficient transport links communities with places of work and an accessible shoreline. The city has turned to face the Gulf.
Kiwi are thriving on the islands of the Gulf, thanks to programmes like Kiwis for Kiwi and partnerships between iwi, the Department of Conservation and businesses.
The Māori economy is booming. Assets in fishing, farming, tourism and infrastructure support community development initiatives. Leadership is provided in co-governance arrangements around the Gulf.
Little spotted kiwi, Kiwi pukupuku
Recreational fishing is one of our favourite pastimes; visitors are amazed at the quality of our sports fishing, so close to the city. Anglers have recognised and embraced the value of conservation.
Fish stocks, including snapper, tāmure, have steadily risen to an abundance not seen for decades. Smarter fishing, processing and marketing have helped create a thriving commercial fishery. Precision harvesting methods - patented globally - help retain a healthy, diverse ecosystem. Much more of every fish caught is used, often for nutraceutical and fashion products.
New Zealand leads the world in marine science, a mix of local management, high value fisheries and protected areas has grown, rebounding stems of the local abundance, wonder for visitors, and the regenerative capacity of the Gulf.
Our network of marine reserves and protected areas has grown, rebounding stems of the local abundance, wonder for visitors, and the regenerative capacity of the Gulf.
Waka are the vessel of choice for many visitors exploring the Gulf, the iconic walks on Rangitoto-Motutapu and Aotea/Great Barrier, whale and seabird tours, and towering wildlife sanctuary islands.
Whales and dolphins are commonly seen around the Gulf. The Ports of Auckland transit protocol, governing ship speed around Bryde's whales, is universally recognised by mariners.
Regulatory tweaks have enabled more community-based fishing and aquaculture enterprises. Visitors flock to the numerous food and wine trails around the region.
Kuaotunoa, Pīpīwharauroa
Orca, Māki
Green-lipped and horse mussels, kaka reefs, scallop spa and cockle/tuangi beds and seagrass/ kaimoana meadows have been actively restored, helping improve water quality and biodiversity.
Healthy Rivers project - Hauraki Plains and Coromandel
National Plan of Action - Seabirds - "seabirds thrive without fishing pressure."
NZ Biodiversity Strategy - 10% of coast in representative Marine Protected Areas
Okahu restoration plan - "waters fit to swim in at all times."
Whāia Te Mahere Tātao o Hauraki - "sea an abundant food basket."
Revive our Gulf project - 1kg km of mussel reef restored
Aucklands population 2 million
Snapper fishery - approaching 40% of virgin biomass
2015
2015
2016
2018
2019
2020
2021
2022
2023
2024
2025
2028
2030
2031
2031
2040
Sea Change Tai Timu Tai Pari spatial plan
Auckland Unitary Plan - water sensitive design
Auckland implements National Policy Statement for Freshwater Management
City Rail Link opens
Central interceptor sewer tunnel opens
Aquaculture industry - $500km annual sales
Fisheries 2030 policy - "biodiversity and ecological functioning conserved."
27% of Auckland households have a boat; totalling 195,000

HAURAKI GULF MARINE SPATIAL PLAN

Hauraki Gulf Marine Park
Ko te Pataka kai o Tikapa Moana
Te Moananui a Toi

In partnership with mana whenua and the following agencies:

Hauraki Gulf Forum
Tikapa Moana
Te Moananui a Toi

Ministry for Primary Industries
Manatū Ahu Matua

Department of Conservation
Te Papa Atawhai

Waikato Regional Council

Auckland Council