

AT A GLANCE

State of our Gulf 2020

Hauraki Gulf / Tīkapa Moana / Te Moananui-ā-Toi
State of the Environment Report 2020



**Hauraki Gulf
Marine Park**
Ko te Pātaka kai
o Tīkapa Moana
Te Moananui-ā-Toi
20 years ngā tau e rua tekau



Hauraki Gulf Forum
Tīkapa Moana
Te Moananui-ā-Toi

KA MAHI NGĀTAHI TĀTOU, KA ORA AKE A TĪKAPA MOANA

Healing the Hauraki Gulf – together

I am a living, breathing embodiment of mauri.
The life force that connects us all, ki uta ki tai, from the
mountains to the sea.

Look at me on a good day and all seems well.
But the truth is I've been hurting. Shellfish beds
decimated. Fish stocks low. My seabed suffocating
with plastic and sediment. A mighty ecosystem
brought to its knees.

The healing process will take time,
hard mahi, and co-operation.

And it will also take more than just aroha. I need a true,
unrelenting partnership. One of protection and active
restoration. Every one of us has a role to play in this,
but we'll also need to work as one.

Only when my mauri is fully restored will this journey
end. Back where it all began. A healthy, teeming,
abundant taonga, with kaimoana and opportunity for all.
Mauri ora!

I can be healed. I need you all by my side.
Working together, our future looks bright.

'Healing the Hauraki Gulf – together' was the result of an exercise conducted at the 2019 Making Waves conference. Nick Sampson (Director of Strategy at Principals Brand Agency) took on the challenge of facilitating this, which saw attendees work together in groups to populate a 'story structure' about the Marine Park. The drafts were read aloud and the results were inspiring, with many common themes. Principals took the stories away and helped develop the story above, which represents a collective narrative about the Marine Park.

Sunrise at Te Arai. Photo by Shaun Lee.

E HURI ANA NGĀ TAI The Turning Tides

*//Papaki mai ngā nunui, wawaratia ngā tai
rere, e ripo e ngā ngaru nunui, te rehu tai,
hei konei ra"*

– na Makareta Moehau Tamaariki.

It is essential to recognise the spiritual, cultural and historic connections mana whenua have with the Hauraki Gulf / Tīkapa Moana / Te Moananui-ā-Toi. This report has endeavoured to capture equally and weave together Māori and Tauīwi perspectives.

Ki uta, ki tai, from the mountains to the sea. There are constant reminders that our taiao – environment is changing. The environment and the kaupapa for preservation and protection of this taonga we call The Hauraki Gulf / Tīkapa Moana / Te Moananui-ā-Toi, must come first.

Let us be the voice for the voiceless. At the Hauraki Gulf Forum's 2019 Making Waves Conference all attendees were asked what they would say if they were the moana of the Hauraki Gulf, Tīkapa Moana, Te Moananui-ā-Toi. Their beautiful collective story, 'Healing the Hauraki Gulf – together', is published on the previous page.

As we enter into this new decade, we reflect on all that has been accomplished and what more needs to be done to ensure our tamariki and mokopuna can enjoy this taonga.

In May 2019 the Hauraki Gulf Forum set two major goals; 1000 square kilometres of shellfish restoration and at least 20% marine protection of the Hauraki Gulf Marine Park. These goals are a starting point from which to grow dreams and aspirations. Through good management, collaborative strategies and plans in action, the dreams and aspirations of a healthy and vibrant Hauraki Gulf, Tīkapa Moana, Te Moananui-ā-Toi will be a reality.

It is important to acknowledge the dedication and efforts of mana whenua, government agencies, local government, philanthropic organisations, learning institutions, local businesses, community groups and individuals collectively committed to making a difference.

In addition, work by local and now central government to take forward the Sea Change – Tai Timu Tai Pari Marine Spatial brings with it both hopes and expectations. The increasingly positive relationships with local and central government, in particular with the Ministers of Conservation, Fisheries and Māori Development, are a source of strength for the moana.

After 20 years of the Hauraki Gulf Marine Park, it does feel like the tides are starting to turn for the better. Together we will achieve great results.

He waka eke noa – We are all in this waka together

"Who's willing to get their butt wet?"



Ms Moana Tamaariki-Pohe
**Deputy Chairperson,
Hauraki Gulf Forum
Feburary 2020**

WHAKARĀPOPOTANGA MATUA

He taonga a Tikapa Moana me Te Moananui-ā-Toi. He taonga na te mea he ataahua ngā mea katoa mai te whenua ki te moana. Mai tātahi me ngā pari teitei, mai ngā motu - ahakoa te rarahi ahakoa te pakupaku, huri atu ki ngā waitai, ngā toka, ngā wahapū, ngā ngutuawa, me te nuinga atu o ngā taonga o te taiao. He taonga mo te maha, me te rerekētanga, o ngā nohoanga o taua rohe. He taonga na te mea he tohu rangatira.

He wāhi motuhake tēnei ki ngā tangata whenua na rātou te whakapapa me ngā kōrero kua tiritiria ki papatuanuku. Rātou e pakari ana na te huhua o te kai, na ngā rauemi me ngā tohu katoa kua puta mai i te whānuitanga āke o tēnei rohe. Rātou e kaha nei te whakapakari i te mātauranga o a rātou whenua, a rātou wai, a rātou rākau me a rātou kararehe. Ā, kua tupu ake a rātou tikanga kia mau tonu a āke tonu atu.

He taonga ki ngā iwi i tipu mai i reira, i neke mai no whenua kē pea, i haere mai hei manuhiri noa iho. He taonga ki ngā whānau e haere mai ana ki konei i te raumati hararei ai. He taonga ki ngā iwi e noho ana i reira na te mea e pai ana ki a rātou te noho wehewehe. He taonga ki a rātou e tiroiro haere ana, e hī ika ana, e tākaro ana, ā, e whakataetae ana. He taonga ki ngā tāngata ruku kai, ki ngā kairangahau taiao, me ngā tāngata kohi kai. He taonga ki a rātou kei konei katoa a rātou herengi e puāwai ana.

He taonga, ēngari inā noa atu te paruparu.

Kua pēnei, nā te mahi kino a te tangata, ahakoa ka kitea kāre rānei e kitea, ahakoa te tere te pōturi rānei, ahakoa ka tarea te whakatika.

Te nuinga kāre rawa atu e taea te whakatika.

Kei roto i te ture e kiia nei ko te Hauraki Gulf Marine Park Act ka kitea te mana o tēnei rohe mai Aotearoa whānui. I whakatinanatia tēnei ture mai te Hui Tanguru o te tau rua mano. Na konā ka whakatūngia te Marine Park me te Hauraki Gulf Forum. Ko te mahi o te Hauraki Gulf Forum he whakaohoho ake i ngā mahi whakahaere o te Marine Park. Na te putanga mai o te Marine Park ka whakaarotia anei pea te rongoa kia whakaora ai te taiao e patua haere nei tātou. Te nuinga kāre ano kia whakaora. Ēngari ngā mahi whakatikatika i ngā motu, kāre ārikarika. Ko te mate kē kei te mamae tonu te moana.

He tino uaua te mahi whakatikatika i te Gulf. E rite ana ki te hoe waka. Ka hoe tahi ka pai. Ki te kore ka hurihia koe e te tai. Ma te kaha me te pakaritanga ka kore koe e kotiti. Ēngari mena ka pīrangi ū koe ki uta me tino kaha ake tō hoe. Ki te kore kua ngaro koe.

Ki te maanu koe kāre e hapa ka tutuki koe i te toka, ka tahuri. Mena ka tarea koe te maka haika, kia rahi tonu, kia kaha tonu ki te pupuri ki te toka. Ko ngā haika o tēnei rohe, ko ngā motu kua whakatikahia, me ngā tāpui taimoana. Kei kona e tiaki ana a tātou taonga, a tātou whakapapa; ngā manu, ngā ngārara, me ngā hua rākau; ngā rimu; ngā kōura me ngā tāmure.

Ki te ngoikore ngā haika, he paku rawa pea, kāre e mau, ka riro i te tai.

Kia maha ngā kaihoe kātahi ka taea pea te haere whakamua. Ēngari me whakaara, me kaha, me tino ora pai rātou, ka taea.

Āpiti atu ki ēnei ko te ture, ko te mahi whakaū, ko te kaitūao, ko ngā mahi kōkiri a ngā hāpori me ngā marae. Ēngari, kei te patua tonu te moana e te tini tangata me a rātou mahi hokohoko.

Koiane ngā kōrero kua kōrerotia mai ngā tau rua tekau, me ngā ripoata o te Gulf kua tuhia, mai te tīmatanga o te Marine Park. Kei te piki haere tonu te tini tangata, me ngā mahi hokohoko, ēngari kua tata pau te hau o te taiao. Kei whea ake he kōrero.

Heoi anō, he mahi kōkiri kei te haere, ēngari mena ka tutuki pai, ka hinga rānei, ko wai ka mōhio. Ākuanei ko te pātai kē mena he tika te whakatakototanga o ngā uara i roto in te ture mo te Hauraki Gulf Marine Park - ngā uara e pā ana ki te taiao, ngā mea e pā ana ki te mahi hokohoko, me ngā uara e pā ana ki te taha tangata. Ākuanei pea kei tua ake ētahi atu huarahi hei whakatika i ngā mahi whakahaere o te Gulf. Koiane anake te ture mo te katoa o Aotearoa e hāngai pono ana ki Tikapa Moana me te Moananui-ā-Toi, kia pūmau ai te tiaki, te whakapiki ake, me te mau tika i ngā uara e kōrerotia nei. Ēngari kāre te ture nei e kaha ki te whakatika haere i ngā raruraru e tuhia nei.

Heoi anō he nui ngā huritanga o te Marine Park, ēngari kei raro kē e putu ana. Kāre e taea te aha mo ngā mahi i mahia, mo ngā mahi kāre i mahia. Engari ka taea te whakarite i te huarahi ki mua. He tino taonga ngā uara o Tikapa Moana me Te Moananui-ā-Toi, me tiakina pai. Ma tātou tonu e whakarite te ao a muri ake nei, ā, ma tātou anō e hangā.

Ēngari me tere te mahi, kei mahue tātou.



Photo by Shaun Lee



Photo by Shaun Lee

EXECUTIVE SUMMARY

The Hauraki Gulf / Tikapa Moana / Te Moananui-ā-Toi is special. It's special because of the beauty and variety of its land and seascapes. Sandy beaches, towering bluffs, islands large and small, clear open water, reefs, sheltered harbours, tidal estuaries, and a host of other natural habitats. It's special because the abundance and diversity of life those places support. It's special because it enriches our lives.

It's special to tangata whenua, whose ancestry and history are etched into its landmarks. Who prosper from the profusion of kai, materials and experiences it provides. Who continually build upon their knowledge of its land, waters, plants and animals. And who have developed and adapted customs and practices to enjoy the taonga of the Gulf, now and into the future.

It's special to the people who grew up beside it, moved to its shores, or simply come to visit. The families that spend summer days at its beaches. The island inhabitants, who treasure living in isolation and wilderness. To those seeking a more cosmopolitan experience beside its shores. It is special to the boaties that explore, fish, play and race in its waters. To divers, naturalists, and gatherers. And, to those who earn their livings from it.

It's special, but it's far from pristine. Many things have been lost or degraded.

It has been progressively reshaped by our activities. Sometimes visibly, sometimes invisibly. Sometimes slowly, sometimes fast. Sometimes reversibly. Often irreversibly.

The national importance of Hauraki Gulf / Tikapa Moana / Te Moananui-ā-Toi is recognised through the Hauraki Gulf Marine Park Act. That came into effect in February 2000, establishing the Marine Park and the Hauraki Gulf Forum, tasked with improving its management. The establishment of the Marine Park held the promise of halting or reversing progressive environmental decline by promoting a more integrated approach to its management. Yet many, if not most of the issues that existed when the Marine Park was established have not been resolved. Island restoration efforts have been a spectacular success, but the situation is not as good in the marine space.

Turning the trajectory of the Gulf around has proved to be difficult. It's like paddling a waka against the tide. Everyone needs to be pulling in the same direction. Ease off and you quickly drift back. Strength and stamina are needed to simply maintain your position. More is needed to move towards your destination. Gains can quickly be lost.

If you drift back, you could hit rocks and lose everything. You can throw an anchor out, but it has to be large and strong enough to hold. Our restored islands and marine reserves are an anchor. They protect our taonga, our heritage: indigenous birds, reptiles, insects and vegetation; the golden canopies of surging kelp forests; the grandfather kōura and tāmure that were once the masters of their domains. If those anchors are too weak or small, they will not hold against the tide.

Extra paddlers help us move forward, but they must be motivated, powerful and fit. Those paddlers are the rules that govern what we do, the enforcement of those rules, voluntary work, community and Māori initiatives, and other mahi carried out to protect and enrich the Marine Park. To date, they don't appear to have the strength and stamina needed to hold against the tide of population and economic pressures on the moana.

Similar stories have been repeatedly told in the 20 years and six State of the Gulf reports since the Marine Park was established. They essentially come down to the struggle between economic development and population growth on the one hand, and environmental loss on the other. There is no free lunch.

New initiatives are happening that may help or hinder. But perhaps it is time to also consider whether we got the balance between environmental, economic and social values right in the Hauraki Gulf Marine Park Act. Whether there are better options for delivering integrated management and improved outcomes for the Gulf. It is the only Act to directly recognise the national significance of the Hauraki Gulf / Tikapa Moana / Te Moananui-ā-Toi. To make special provision for the protection, enhancement, and maintenance of its values. But it doesn't appear to have the strength to turn things around.

Changes in the Marine Park have often been rapid and unidirectional. It is too late to reverse the effects of many past actions, or inactions. However, we can decide the future. The high values of Hauraki Gulf / Tikapa Moana / Te Moananui-ā-Toi still warrant special protection. It is up to us to determine what the future will be, and to take the actions needed to achieve it. That needs to be done quickly, because time is working against us.



Photo by Shaun Lee



Photo by Shaun Lee

TIAKINA TE PĀTAKA KAI

Preserving the food basket

What has changed since the Hauraki Gulf Marine Park was established in 2000?

TE MAHI HĪ IKA

Fishing

We are taking more fish commercially.

The total reported commercial catch of fish in the most recent three-year period was around 30% greater than in three-years before Marine Park was established.

The mix of fish caught commercially in the Marine Park has shifted. There has been a major shift in the relative proportions of the two key fish species landed commercially. Around 34% less tāmure (snapper) and 470% more blue mackerel were landed in the latest three-year period compared to when the Marine Park was established. The increase in blue mackerel is likely to reflect changes in where they are being caught (i.e. in the Marine Park), rather than a change in the overall catch.

Systems and processes have been refined and improved. The Harvest Strategy Standard introduced in 2008 provided a set of guidelines for fisheries decision making. Policies and plans including “Fisheries 2030”, and national plans for inshore finfish and shellfish followed. Other milestones have included the introduction of several species into the quota management system, and the roll out of electronic reporting and GPS tracking on commercial vessels.

TE MĀTATORUTANGA O TE IKA

Fish stock sustainability

Knowledge about the status of fish stocks has improved, but gaps remain. The status of eight of the top 20 finfish stocks has been assessed (compared with three when the

Marine Park was established). The status of the remaining 12 stocks are unknown.

Stocks of some fish species have needed rebuilding. Tāmure and tarakihi were at levels where action was needed to actively rebuild their stocks (less than 20% of unfished stock biomass). Actions have been taken, and the rebuild of these stocks towards target levels is expected. The gemfish stock is also being actively rebuilt.

Other stocks have stayed within acceptable limits. Skipjack tuna, kahawai, gurnard and barracoota are fluctuating around target levels. John dory are possibly below target, but considered unlikely to require active rebuilding.

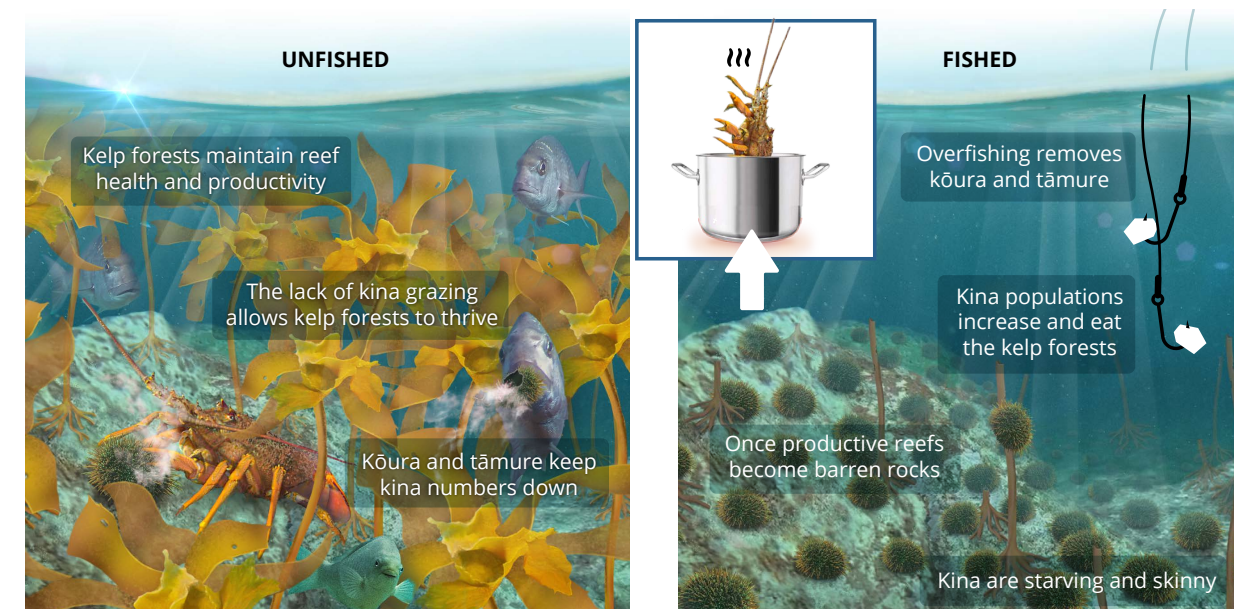
Recreational catches of tāmure, John dory and tarakihi have reduced. Tāmure is by far the main species caught by recreational fishers. Cuts in bag limits, increased size limits and fewer recreational fishers are likely to have contributed to recreational tāmure catches dropping by around 27% between the 2011–12 and 2017–18 aerial, boat ramp and national panel surveys. Catches of John dory and tarakihi also dropped, but more gurnard was taken in the latest survey. Little change occurred in kingfish and kahawai catches.

TE KŌURA

Crayfish

The kōura population has been substantially reduced. Kōura are now regarded as functionally extinct in heavily fished areas. In the Cape Rodney to Okakari Point (Leigh) and Tāwharanui Marine Reserves,

Child collecting tuangi. Photo by Shaun Lee.



Kina barrens are created by overfishing

numbers are now at levels similar to those in unprotected areas in the mid-1990s (this is primarily attributed to fishing around their boundaries). Commercial fishers struggled to catch their quota and have voluntarily shelved catch. In 2018, large cuts in catch allowances were made to allow the stock to rebuild towards target levels.

TE TIPA

Scallops

The status of scallop beds is not known.

The last scallop survey was carried out in 2012, so the current status of scallop beds in the Marine Park is uncertain.

TE TUANGI

Cockles

Shellfish gathering has reduced the availability of harvestable tuangi (cockles).

There has been a universal decline in the density of harvestable (>30 mm) tuangi over the last 20 years at the 12 monitored sites where harvesting is allowed year-round. Increases in harvestable tuangi have only occurred in monitored sites where seasonal harvesting bans are in place (Umupuia, Eastern Beach and Cackle Bay).

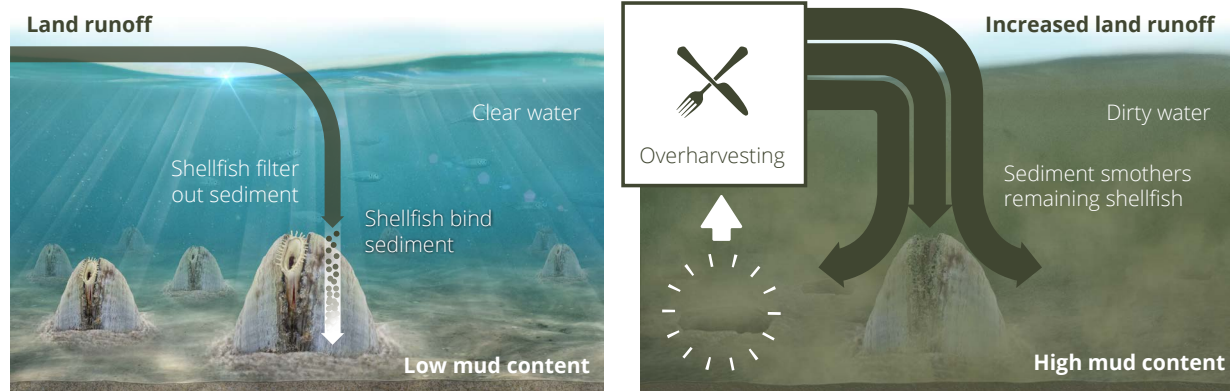
ĒTAHI ATU TUKUNGA IHO O TE MAHI HĪ IKA

Indirect effects of fishing

The use of commercial methods that

disturb the seabed have been stable or declining, but Danish Seining is frequently occurring in areas where regulations prohibit it. The number of bottom trawls in the latest three-year period was 51% less than when the Marine Park was established, while numbers of Danish Seine sets were similar. Between 2016–17 and 2018–19, around 22% of Danish Seine sets occurred in 300 km² where regulations prohibit this method. Fisheries NZ acknowledges there is a discrepancy between how the legislation, which defines this area, has been interpreted and presented in this report, and what is currently understood and enforced in practice. They have committed to reviewing this discrepancy as part of management actions put forward in a fisheries plan for the Hauraki Gulf, that is being developed as part of central Government’s response to the Sea Change Hauraki Gulf Marine Spatial Plan. Numbers of commercial scallop dredge tows have fluctuated with most dredging occurring in the inner Mercury Bay area.

Kelp forests have been replaced by kina barrens. Research suggests that reductions in populations of tāmure and kōura (crayfish) have allowed kina to flourish: causing the loss of kelp forests, and expansion of urchin barrens on the Marine Park’s subtidal reefs. It is not known whether fisheries targets for tāmure and kōura have been set high enough to reverse the change.



Filter feeders keep the ocean healthy

Tāiko (black petrels) fishing fatalities are unlikely to be sustainable. Fatalities have declined but there is still estimated to be a 70% likelihood that mortality rates from commercial fishing are greater than what the population of threatened tāiko can sustain.

Some fishing effects can potentially be addressed through regional council plans.

The Court of Appeal recently found that the Resource Management Act (RMA) does not prevent regional councils from controlling fisheries resources through their RMA functions, provided they are not doing so for Fisheries Act purposes.

The area of the Marine Park protected by marine reserves has only increased by 0.05%. Marine reserves cover 0.3% of the Marine Park. The only new reserve to be created since the Marine Park was established is Te Matuku Marine Reserve, on the southern side of Waiheke Island. The application for that reserve was lodged before 2000.

TE MATEMATENGA
Mass mortalities

Mass mortalities of fish and shellfish are a common occurrence. There have been 10 recorded mass mortality events in the Marine Park over the last 10 years. Four of these events were in Whangateau and Okura Estuaries, where shellfish populations appeared to be stressed by adverse environmental conditions.

TE PARAKORE
Harmful algae

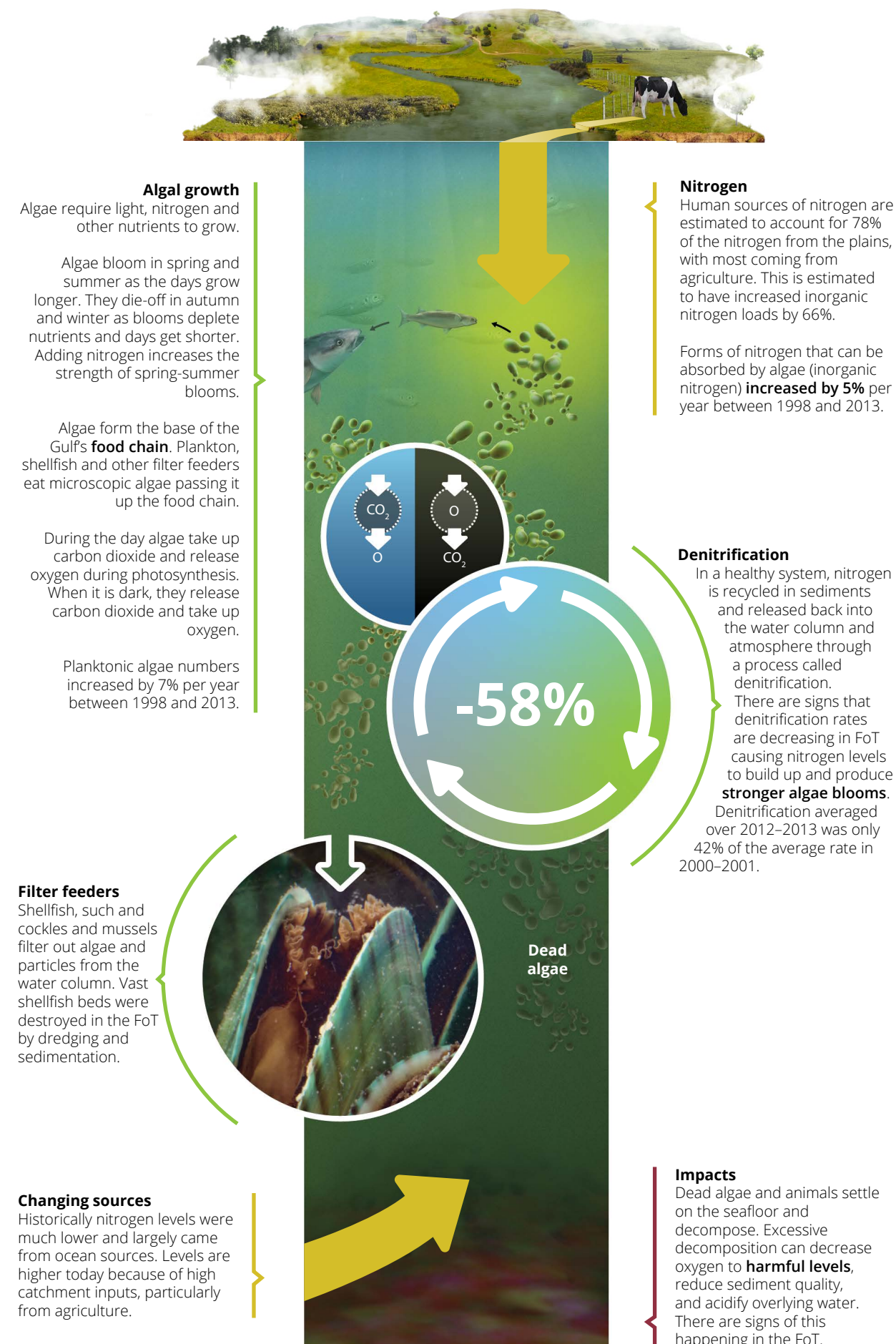
Potentially toxic algae blooms are now common. Aotearoa's first recorded cases of shellfish poisoning caused by harmful algae occurred in 1993. Nine harmful algal blooms between 2000–2019 resulted in harvest closures and/or public warnings.

TE MAHI AHUMOANA
Aquaculture

The scale of marine farming has increased substantially, particularly in the Firth of Thames. Available data suggests that marine farms occupied around 685 ha of space in 2000. Today, consents for shellfish farms in the Waikato Region cover around 1562 ha (2690 ha if Wilson Bay farm zones A and B are used instead of farm footprints), with another 390 ha zoned for fish farms. In the Auckland Region, existing farm footprints cover around 240 ha, with recent approvals allowing for farms in another 960 ha, and applications being processed for around 334 ha. Applications for around 2270 ha of spat catching space, made prior to a 2001 moratorium halting such applications, also remain on hold.

Further growth in aquaculture is expected. Central Government's recently released Aquaculture Strategy seeks to grow the industry from one that produces \$600+ million in annual sales nationally, to \$3 billion in sales by 2035.

Signs of nitrogen effects in the Firth of Thames (FoT)



KI UTA KI TAI Mountains to Sea

What has changed since the Hauraki Gulf Marine Park was established in 2000?

TE WHAKAWHĀNUITANGA ATU KI TE MOANA

Coastal urban and ocean sprawl
Our population has increased more rapidly than expected. Estimates from 1999 indicated Auckland's population could increase from 1.2 million people in 1999 to 2 million in 2050. By 2018, it had already grown to 1.7 million people.

Coastal development has mainly occurred around existing towns and settlements. All current coastal towns and settlements, and many man-made coastal structures already existed when the Marine Park was established. Since then, substantial, localised development has occurred in coastal towns and settlements north and east of Auckland, and in and around most, if not all, towns and settlements on the Coromandel Peninsula. Areas away from existing towns and settlements have largely remained free of substantial development.

The number of marinas has increased. Numbers have risen from 13 in 2000, to 18 (built or consented) today. In addition, two canal developments are now present on the Coromandel Peninsula and new marina has been proposed for Coromandel Harbour. Provision has also been made for a canal development along Wairoa River near Clevedon.

Mooring numbers appear to have declined in the Auckland Region. The home ports of (by far) the greatest number of boats, is in the Auckland Region. There are currently estimated to be around 4,300 swing and pile moorings in that region of the Marine Park, compared with 5800 in 2000.

NGĀ PAIHANA

Toxic chemicals

Waitematā Harbour and Tāmaki Inlet have the highest levels of metal contamination. Multiple sites in those areas are in the amber (moderate) or red (high) ranges for copper, mercury and zinc. Copper and lead concentrations tend to be stable or declining, while zinc concentrations tend to be stable or increasing.

Sediment quality at the 20 Auckland sites monitored for at least 20 years has generally improved. More sites are now in the green (low) category for copper, lead and zinc than in 1999. However, more sites are also in the red category for zinc, mainly due to sites in the Southern Waitematā shifting from the amber to red.



Diver near Ponui Island. Photo by Shaun Lee.

With few exceptions, sediments from estuaries with mainly rural catchments have low levels of key metal contaminants.

The exceptions are a scattering of sites on the Coromandel Peninsula associated with historic mining activity (Tairua, Coromandel and Thames), and sites in the Upper Waitematā Harbour. At those locations, copper, lead, zinc, and/or mercury concentrations are in the amber or red ranges.

NGĀ KAIORA

Nutrients

Greatest man-made loads of nitrogen to the Marine Park come from rivers draining the Hauraki Plains. Between 2006 and 2015 total nitrogen loads from Hauraki rivers were estimated to be 3730 t per year. In comparison the load from Auckland's two largest, east coast wastewater treatment plants is around 245 t per year, while Auckland's largest river has been estimated to discharge around 120 t per year.

Combined loads of total nitrogen and total phosphorus in Hauraki rivers declined between 1991 and 2015. Those declines appear to be due to improved treatment of sewage, industrial wastewater and dairy shed effluent, rather than reductions in diffuse agricultural loads. However, trends from 2008–2017 indicate total nitrogen concentrations tend to be increasing at sites along Waihōu River (and its tributaries) and declining or stable along Piako River (and its tributaries) and Waitakaruru River.

Proposed fish farming could substantially increase nitrogen loads. The Waikato Regional Plan provides a potential discharge allowance up to 800 t of nitrogen per year for fish farms. Actual allowances will be considered during consenting.

Nitrogen concentrations increased in the Firth of Thames between 1998 and 2013. This was tentatively attributed to a reduction in the rate that nitrogen was being recycled back to the atmosphere (denitrification rates) rather than increasing catchment loads. There are signs that this is lowering oxygen levels in bottom waters of the Firth of Thames and making the water more acidic.

Nutrient levels on the Auckland coast tend to be lower than before the Marine Park was established. But, trends between 2009 and 2018 provide a confusing picture of more recent changes.

HE PAI MO TE KAUKAU
Suitability of water for swimming
Water quality at many of Auckland's urban beaches regularly poses a health risk for

swimmers. In 2017–2018 summer, modeling predicted 38% of 50 sites exceeded the high-level guideline more than 10% of the time; and 14% were predicted to exceed the guideline more than 20% of the time. Three sites were assumed to always exceed it.

Auckland's central interceptor project should improve water quality in the Waitematā Harbour. The project is designed to reduce the average annual overflow volume of wastewater in the central interceptor catchment (Auckland's worst) by 80%.

TE PARAWAI ME NGĀ NGĀRARA O RŌ WAI

Sediment and benthic health

High sediment inputs occur in some estuaries. This is reflected in the increasing proportion of mud and very fine sand of many monitored sites over the last 10 years.

Forty-six percent of monitored sites in the Marine Park have good or extremely good benthic health. The healthiest sites are located in the outer areas of Waiwera, Pūhoi, Ōrewa and Okura estuaries, while the poorest quality sites are in the Upper Waitematā Harbour, southern Firth of Thames and inner Tairua Estuary. The largest estuary-wide changes in benthic health have occurred in the Waitematā Harbour (7 sites have declined), Okura (3 sites have declined) and Ōrewa (5 sites have improved).

NGĀ MĀNAWA

Mangroves

Mānawa increased in monitored estuaries. Average cover increased by 1.6% per year between 1993–2000 to 2012–2017, with largest increases occurring in Tairua (6% per year) and Pūhoi (4% per year). In other estuaries, such as Whitianga and Whangapoua, there was little change in area covered, but mangrove density greatly increased.

Large-scale removals occurred in some places. Clearances have been carried out in Whangamatā and Tairua estuaries under the direction of WRC.

TE TAIAO Biodiversity

What has changed since the Hauraki Gulf Marine Park was established in 2000?

NGĀ KARAREHE ME NGĀ TIPU O NGĀ MOTU

Island biodiversity

More islands are free of mammalian pests.

Pests have been eliminated from 15 motu (islands) since 2000, increasing the number of pest sanctuaries from 25 to 40. This increased the pest free area available for threatened species on the Marine Park's motu from around 1,200 ha to 10,000 ha. Populations of many native animals have flourished, increasing their resilience against future threats.

More motu have been revegetated.

Significant revegetation has occurred on Motuora, Motuihe and Rotoroa, while moderate increases have occurred on Tiritiri Mātangi and Kawhitu.

TE PAKAKE

Bryde's whales

The number of whales dying from ship-strike has been reduced.

Only one Bryde's whale has been killed by ship strike since a voluntary transit protocol was introduced in 2013 to limit ship speeds. By comparison, six whales were killed by ship strike in the five years before the Marine Park was established.

The conservation status of Bryde's whales remains Nationally Critical.

Concerns remain about their prey being reduced by fishing.

NGĀ MANU O TE MOANA

Seabirds

More of our seabirds are threatened.

In 2000, 4% were classed as Threatened. Today 22% are.

New Zealand fairy tern are in a perilous situation.

Estimates of their population size vary slightly, but there is currently considered to be a maximum of only 43 adults left anywhere in the world. Numbers have not increased over the past decade. Fairy tern require intensive management, with habitat loss, disturbances, and predation identified as significant impediments to their survival and recovery.

Tāiko (black petrels) fishing fatalities are unlikely to be sustainable.

There is estimated to be a 70% likelihood that annual potential fatalities from commercial fishing are greater than what the population of threatened tāiko can sustain.

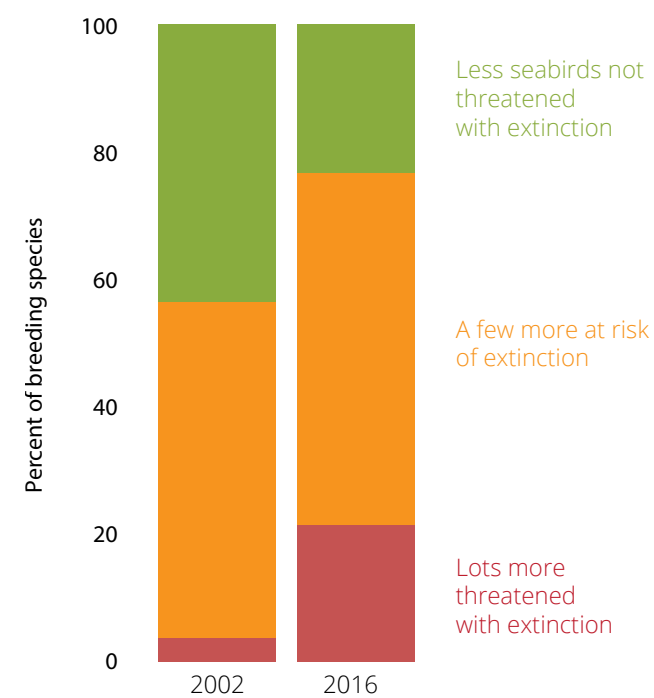
New Zealand storm petrel are 'back from the dead'.

Thought extinct for many years, New Zealand storm petrel were spectacularly photographed and videoed in 2003. They were subsequently found to be breeding on Hauturu, with a potential population of hundreds, if not thousands.

Bryde's Whale. Photo by Richard Robinson www.depth.co.nz



Grey-faced petrel at NZ Bird Rescue. Photo by Shaun Lee.



Changes in risk of extinction for Gulf seabirds

NGĀ MANU O TĀTAHI

Shorebirds

More of our shorebirds are threatened.

In 2000, three were classed as Threatened. Today five are.

The status of Northern New Zealand dotterel has improved. Active management since the 1980s has greatly increased their breeding success, with the population doubling since the programme began. As a bonus, variable oystercatchers, another 'At Risk' species, have benefited from the dotterel management programme as the two species share the same breeding habitat.

NGĀ TAONGA O TĀWĀHI

Non-indigenous marine species

The number of recorded non-indigenous marine species have increased substantially.

In 2000 around 66 species had been recorded, compared to around 144 today.

Six new marine pests have arrived.

In 2000, the Asian date mussel was the only known marine pest in the Marine Park. Today we also have wakame (Asian kelp), Mediterranean fan worm, Australian droplet tunicate, clubbed tunicate, Asian paddle crab and the carpet sea squirt.



The full report on the State of our Gulf 2020 is available from gulffjournal.org.nz

Cover: Kōura at the Cape Rodney to Okakari Point (Goat Island) Marine Reserve in 2009. Photo by Richard Robinson www.depth.co.nz

Under the Hauraki Gulf Marine Park Act 2000 the Hauraki Gulf Forum is required to prepare and publish, once every three years, a report on the state of the environment in the Hauraki Gulf, including information on progress towards integrated management and responses to prioritised strategic issues.

The Hauraki Gulf Forum is a statutory body charged with the promotion and facilitation of integrated management and the protection and enhancement of the Hauraki Gulf / Tikapa Moana. The Forum has representation on behalf of the Ministers of Conservation, Fisheries and Māori Development, elected representatives from Auckland Council (including the Aotea / Great Barrier and Waiheke local boards), Waikato Regional Council and the Waikato, Hauraki, Thames-Coromandel and Matamata-Piako district councils, plus six representatives of the tangata whenua of the Hauraki Gulf and its islands.

www.haurakigulfforum.org.nz



Hauraki Gulf Forum
Tikapa Moana
Te Moananui-ā-Toi