WELLINGTON
RECREATIONAL MARINE FISHERS'
ASSOCIATION (Inc)

WE RECOGNISE MANAGED FISHERIES

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This is a combined submission to both the Ministry of Fisheries and MAF Biosecurity NZ

Re Mfish Initial Position Paper October 2009-10 fishing year.
Beach cast seaweed harvesting areas – expand areas where commercial harvesting of beach cast seaweed is permitted within both North and South Island.
And
Re MAF Review of the Undaria Commercial Harvest Policy

Reason for submission:
We oppose all three options as listed in each of the proposals and propose that an additional option should have been made available. This should read:

Option 4 To eradicate all removal of beach cast seaweed as it provides an important food source for marine specie that keeps the oceans in balance, and also provides the food source for the prey of Hector Dolphins.

Reason 1 All commercial harvesting of beach cast seaweed including undaria by the use of machinery on beaches should cease. Machinery on beaches have proven to crush the life of the food source of Hector Dolphin, their prey is destroyed.

Reason 2 The use of beach cast seaweed, scientifically proven to absorb toxic petroleum, or endocrine chemicals or cyanobacteria varieties, as a food product for humans, should cease as this is extremely dangerous because these chemicals cannot be removed and the food product will then pass the chemicals on into our food chain either through using seaweed as fertiliser or directly through other products.

Reason 3 The MAF Biosecurity view that the seaweed undaria poses a threat to marine ecosystems is illogical when the MAF view is that it is edible and already used for human consumption, therefore a food source for marine specie and not a threat.

Dear Tracey, Maria, MAF and Mfish managers

The committee and members of the Wellington Recreational Marine Fishers Association totally oppose the commercial harvesting of any beach cast seaweeds. We are extremely concerned with the lack of research and obvious misinformation being presented by both Ministries as an option for their Ministers to consider in the belief that beach cast seaweed can be removed without any significant impact on marine specie. There is an obvious bias towards supporting those who wish to make money from beach cast seaweed as if its removal will have little impact on the wider marine environment. Both these proposals completely ignore the fact that the massive food chain is going to suffer and how, if there is a further increase in beach cast seaweed removal, it will only take a further five to six years before other fisheries begin to collapse.

The collapse will occur due to the lack of awareness of the life and function of the specie yellow eyed mullet which finds a major proportion of its food source in beach cast seaweed. This marine specie lives, spawns and feeds almost entirely in the intertidal zone and can be found in every harbour and estuary in New Zealand. Through our involvement in resource consent issues we realised the intertidal zone value to marine specie has been completely missed out of the New Zealand Coastal Policy Statement (NZCPS).

Throughout the draft of the Threat Management Plan for Hector Dolphins, then the final version, it was obvious that Mfish had little understanding of the intertidal zone and now this proposal to harvest beach cast seaweed confirms there is a serious lack marine knowledge within Mfish. The recent decision to allow shipping to travel at twenty knows through the Marlborough Sounds destroying the intertidal zone's ecosystems, without a word of protest or caution from Mfish, demonstrates clearly what we were told through the Sounding process, that Mfish have little interest and understanding of the marine environment that fish live in.

New Zealand is a small place and allowing an increase to the harvesting of beach cast seaweed places the Ministry of Fisheries in breach of the Fisheries Act 1996 Section 11 Purpose and Principles 9 Environmental principles subsection (C) *"Habitat of particular significance for fisheries management should be protected.*" Continually we are seeing the Ministry failing to implement this sub section and clause. The Marlborough Sounds has a recreational closure in place, yet the Ministry failed to protect, in the Sounds, the habitat critical to the food source of the prey of blue cod. The list never ends and the recent lack of marine knowledge was put on display again at a resource consent hearing to decide the potential of current generators in the Kaipara Harbour when Mfish are now on record as failing to name one species that spawns in the Harbour.

The marine knowledge within Mfish is seriously lacking and this is being constantly exposed through the plenary specie information sections where they have been carrying serious misinformation for years. Mfish's lack of intertidal marine knowledge was discovered when the Wellington Regional Council was planning the realignment of the Hutt River and they asked Mfish, DOC, NIWA and MfE what marine specie would most likely be affected and there was no one in these Government sections that could tell them. As a result I was asked and named quite a number of marine specie that travels well into fresh water to spawn or to feed. Selecting yellow eyed mullet to prove my marine knowledge, in one and half hours of target fishing I caught the first ever yellow eyed mullet with ripe running roe and that specimen is held at Te Papa thanks to Andrew Stewart and Clive Roberts. However Andrew insisted I collect more samples to see what they eat as that was also completely unknown to science and asked if I could keep a photographic record so that one day a science paper could be written.

The gut content was recorded over a number of seasons and we found another food source was salps. The importance of that discovery was not realised until I was introduced by Hugh Logan the then Director General of DOC to marine scientist Ian West after other NGO's at a DOC NGO forum asked that I be introduced to a scientist so that what I was discovering in the intertidal zone could be written up as a science paper. The discovery that yellow eyed mullet eat salps in huge numbers has made a number of scientists very interested as, when the Firth of Thames gets invaded with salps, recruitment levels for snapper show a marked decline in the corresponding later years. So besides providing a food source for other specie and dolphins, yellow eyed mullet preform a very important function by keeping down the numbers of fish egg eating salps.

To find what else yellow eyed mullet eat Ian West and I went target fishing and together we made another discovery as to the food sources of yellow eyed mullet when we captured them full of kelp fly maggots. The science paper we co wrote was assisted by Alan Heath, New Zealand's leading authority on fly identification. Unfortunately for those involved compiling these proposals in MAF Biosecurity and Mfish, the information remains unpublished in a science journal. Although presented to the NZ Royal Society for Marine and Freshwater Research and DOC for their science publications they still today have failed to publish the only study made of the life in beach cast seaweed for marine specie. The failure has resulted in proposals that, if implemented, will have massive negative impact on all marine specie.

So rather than sitting in a file in the ninth floor of a University so that no one sees the work, I have included the discoveries into stories that people of all ages can understand. The discoveries we have made describing what yellow eyed mullet eat has also been presented to the Board of Enquiry to the New Zealand Coastal Policy Statement and the Board of Enquiry to the Proposed National Policy Statement for Freshwater Management with the request that the value of the intertidal zone be recognised as it is twenty times more productive than the sea and four times that of the land. New Zealand cannot afford to have MAF, Mfish, DOC, MfE, NIWA, and regional and local councils displaying so much ignorance of the value of the intertidal zone to marine specie ever again.

The value of beach cast seaweed to the marine specie yellow eyed mullet was presented by the WRMFA at the resource consent hearing for the Meridian West Wind turbine proposal. We described Ohau Bay as quite special due to it having beach cast seaweed essential for providing the mackerel and yellow eyed mullet with a food source, as they gather there in their thousands in summer feeding. These schooling fish then attract dolphins and orca that also arrive, taking turns to feed. At other times baby orcas can be seen driving onto Makara Beach while feeding on yellow eyed mullet.

In our submission and presentation at the hearing, we asked that a wharf be built in Oteranga Bay as an alternative to Ohau Bay, so that the beach cast seaweed in Ohau Bay would still be able to arrive there to feed the yellow eyed mullet and mackerel. Our presentation and power point slides proved that yellow eyed mullet eat the life in beach cast seaweed and this was immediately accepted by Meridian. Later at the appeal hearing the information was acknowledged by the New Zealand Environment Court.

In 2002 when told at a DOC NGO forum that they intended to recommend to the Minister of Conservation that the NZCPS be rolled over for another ten years we wrote to the then Prime Minister Helen Clark and highlighting the fact that the intertidal zone had been completely missed out of the Policy. She acknowledge our concerns in a three page letter and subsequently three months later she announced the review of the NZCPS. We have been involved in the three stages of the review to date asking that the importance of the intertidal zone be included.

It is distressing that, after presenting information for ten years to Government and the NZ Environment Court describing the value of beach cast seaweed to marine specie, no one in MAF Biosecurity and Mfish could even look in Google for information as to its value. I have letters from past Ministers of Conservation thanking me for my research and thousands who have read my stories and have gained knowledge from them, and still we have two proposals full of errors and misinformation describing that beach cast seaweed has no value other than a commercial value. This marine knowledge has allowed me to take part in the Stage Two of the Oceans Policy review and a number of other MfE working groups.

Those compiling these proposal must have known there was little information and said nothing as, when I was invited to participate in a $32 million Foundation Research Science

and Technology (FRST) programme on Natural Ecosystems at the first meeting, we were told that there would be no Government funding into the inter-tidal zone until a commercial end user is found. This caused me a great deal of concern and I embarked on a study of yellow-eyed mullet, a specie that has received virtually no scientific research as it is not commercial specie. I then discovered the value of beach cast seaweed to marine specie and the life in the intertidal zone. This concern has led me to co-write the science paper describing one of the yellow eyed mullet's food sources but there is so little known scientifically about the intertidal zone I could easily write another sixteen papers. My experience on the FRST programme also lead to the discovery that of our eight national important databases four have serious errors and misinformation that under the present marine science discovery system can not be corrected. It follows that there will only be informal marine knowledge describing the intertidal zone.

Dr J Morgan Williams the past Parliamentary Commissioner for the Environment in 2004 in his foreword to another excellent document called *See Change* said "we need a much deeper understanding of the demands and pressures of our current society on the health and long term sustainability of our natural resources". In 1999 he produced a document called *Setting course for a sustainable future: the management of New Zealand's marine environment* in which he had this to say: "New Zealand's lack of marine knowledge is a serious environmental and economic risk". He also said in the same document: "However, in an information scarce environment like the marine environment, informal information will often be a resource that marine managers cannot afford to neglect or ignore."

(1999, p.74),

School children are being taught the value of beach cast seaweed and, available on the internet are articles describing the life in beach cast seaweed that school children are accessing. For example:
http://www.marinebio.net/marinescience/03ecology/sblife.htm

The implications of widespread harvesting of beach cast seaweed will be immediately known to the many school children who are using the stories I have written in the NZ Fishing Coast to Coast magazine. These I write so that people of all ages can understand the marine environment and the impacts upon it. Increasing the removal of beach cast seaweed will be very quickly seen by these children as denying Hector Dolphins of a food source and this knowledge will place the Ministries in ridicule by children and the wider public in a very short space in time.

By accessing the summary of submissions to the Board of Enquiry to the New Zealand Coastal Policy Statement and the Proposed National Policy Statement for Freshwater Management, it will be impossible not to realise very quickly that almost nothing is known about the intertidal zone. Looking up the submissions to the Boards it should be of great concern to both MAF Biosecurity and Mfish that the submission of the WRMFA was only submitter to describe the value of the intertidal zone to marine life. However, to fully understand the intertidal zone it really needs a presentation supported by photographs as the few words in a submission are not enough when there is so little known by Mfish, MAF and the public.

Option 4
To eradicate all removal of beach cast seaweed as it provides an important food source for marine specie that keeps the oceans in balance, and also provides the food source for the prey of Hector Dolphins.

The Mfish proposal Assessment of Management Options 244-247 is totally inadequate and displays a serious lack of research and marine knowledge. To describe beach cast seaweed as only having a function when it washes back into the sea is unresearched and is simply guessing. Once it has been on a beach it no longer floats to provide the habitat for juvenile fishes as the proposal suggests. As for suggesting old seaweed when it is washed off a beach is then consumed by paua and urchins, this statement clearly indicates a Ministry that is completely out of touch with the marine environment and has no one with any marine knowledge able to peer review their proposals.

The Mfish proposal clearly indicates that they have no idea as to the function or the life in beach cast seaweed in the statement *If beach cast seaweed washes back into the sea* where *decomposed* it is *consumed by detritivores* as if that was its only function.

Both proposals only mention the impact on birds from removing beach cast seaweed. This clearly describes the Ministries' lack of intertidal marine knowledge and research.

We have serous reservations with this proposal as it has failed to identify that the life in beach cast seaweed provides a major food source for yellow eyed mullet, moki, flounder, mackerel, blue cod and red gurnard and down through the marine food chain to dolphins and whales.

There can be no excuse as although our paper describing the food source found in beach cast seaweed value to marine specie remains unpublished to science that is not the fault of those who researched and wrote the paper. However, the findings of our science paper have been published through the NZ Fishing Coast to Coast magazine in a number of articles and the information is now being used in schools and other learning places. The paper itself has also been provided to Mfish through the South-western Regional Forum….

Mfish have used unpublished science papers before and this paper remains the only paper describing this important food chain link.

The value of beach cast seaweed was also described to Mfish and DOC in our submission to the Hector Dolphin Threat Management Plan. (Refer Appendix 21)

To deny Hector Dolphins their main food source, now that you are totally aware of the value of beach cast seaweed to yellow eyed mullet, will without question **place both MAF and Mfish in breach of the Marine Mammals Protection Act** if you are going to intentionally remove the prey of these dolphins' main food source. A farmer would not put his prime breeding stock in a paddock that has been stripped of its grass as he would know they need protein to breed. It follows that if dolphins are also stripped of their protein rich food source at time of breeding they too will not breed successfully.

We find it strange that the Department of Conservation was not consulted in the formulation of these proposals as many in DOC have had access to my information and know the value of beach cast seaweed to marine specie. As mentioned above, it was through my involvement on the DOC NGO forum that the eco groups asked the then Director General of Conservation Hugh Logan to introduce me to a marine scientist so that my discoveries could be published. Almost all the remaining DOC scientists know of my research including those on the NZ Conservation Authority. The present Director General Al Morrison knows of my research and would have immediately questioned the proposals as both MAF and Mfish are introducing a policy that will further threaten our endangered Hector Dolphins. The research also failed to consult with those who would have known of my research within Mfish. The publication of our science paper should be made a priority by both MAF and Mfish as they should be extremely embarrassed writing a policy paper on beach cast seaweed and not having a clue as to its value to marine specie and dolphins including our endangered Hector Dolphin.

The importance of the life in beach cast seaweed was also provided to the Board of Enquiry to the Proposed National Policy Statement for Freshwater Management and not only is our submission on the internet but MfE have also posted on their website the entire 300 slide power point presentation. Both MAF and Mfish should have seen this if their research had been carried out correctly.

Through our representation of our region's recreational marine fishers on the Mfish South-western Regional Forum the chair Paul Creswell asked for and received the science paper we wrote. Yet it is not mentioned in either Ministries proposal. What happened? If the excuse for not recognising it is because it is an unpublished paper then that also has serious implications as other unpublished papers have been quoted by Mfish in the past, for example in blue cod research. Also Paul Creswell asked that I present my findings in a power point presentation to the South-western Mfish Regional Forum which was done, so he would have been able to provide that information?

This proposal would have to be the most poorly researched proposal we have seen by the Ministry of Fisheries or Ministry of Agriculture and Forestry Biosecurity NZ in the twenty three years we have participated on Government committees. Not once has the value of the life found in beach cast seaweed been mentioned with any conviction that its value is understood by the writer, or detailed so that a reader of the proposal could understand its value to marine specie.

To commercialise beach cast seaweed at a time when Government is warning the public about climate change is the very point we made in our submission to the NZCPS when we said Government departments and councils are using climate change to suit themselves. The media publishes dooms day information about sea levels rising when the biggest impact is already here. We are now seeing deeper low pressure systems and higher high pressure systems covering a greater area. The effects of these rapidly changing weather patterns is heavy rain, strong wind and big seas that is already causing serious damage to properties.

This proposed policy change is a perfect example of ignoring the implications of climate change. The Mfish proposal 247 states the obvious - that beach cast seaweed is important in the early formation of sand dunes and fails to expand on this fact. All around New Zealand councils are preventing buildings being built too close to the coast because of predicted erosion problems and here is a proposal that will strip the beaches of the means for the coast to be restored by nature. Councils are guiding locals as to how to retain their beaches by allowing beach cast seaweed to remain along with logs and debris and now MAF Biosecurity and Mfish want to allow commercial to strip their beaches of sand retaining seaweed.

While those who should have published the science papers have made it clear they have another agenda, the value of beach cast seaweed is becoming widely known through resource consents, councils and the Environment Court and the thousands of recreational fishers and others who are reading my stories in the fastest growing magazine in New Zealand, namely the NZ Fishing Coast to Coast magazine. However, it is not hard to prove the value of beach cast seaweed as now we see both Wellington City Council and Hutt City Council changing how they manage beach cast seaweed. The Hutt City Council have acted responsibly, as a result of my input in their Beach Care group, to reduce the grooming of Petone Beach and have reduced the grooming of other beaches on an only when required basis.

It is not hard to prove the value of beach cast seaweed when you visit a beach with seaweed on it or to describe what they will see. I was invited to a meeting called by the Wellington City Council in response to a local a group wanting the beach inside the Taputeranga Marine Reserve of Island Bay cleared of beach cast seaweed. In a very short space in time I was able to prove to them the value of beach cast seaweed to marine specie.

Through my contact with the past DOC Conservator in Gisborne, who shared an interest in the marine environment, he was able to use my information to change the way the Council groomed the beaches there.

In 2003 the Ministry of Fisheries commissioned Kingett Mitchell Ltd to review the "*Environmental impacts of harvesting beach-cast seaweeds in New Zealand*". The review was carried out by Zemke-White, Speed, McClary in 2002/03 and was entitled KBS 2002/03-KMA. In the section Summary – Objectives 1-2, they made the following comments:
When not collected beach-cast seaweed plays a role in terrestrial, beach and near shore food webs. Removal changes structure/density of beach fauna. <u>No data on the impacts of removal on near shore food webs.</u>

When DOC published the NZCPS review, through a DOC NGO agenda item, I identified areas that were missing and was invited to review it. I identified 35 areas where we are legally destroying the inter-tidal zone. The Minister, Chris Carter, advanced the review to another stage when he instigated a division to identify Issues and Options of the NZCPS, which required further submissions. We supplied 48 pages and 200 pages of attachments. When the NZCPS review went to the Board of Enquiry they identified a major problem in recognising the value of the inter-tidal zone. Of all the submissions they received, the

WRMFA submission which included 230 power point slides, was the only submission or presentation that described the importance of the inter-tidal zone.

The information describing the value of beach cast seaweed to marine specie has been available. It would appear that the Ministry of Fisheries and Ministry of Agriculture and Forestry and Biosecurity NZ have selectively used science to suit their own agendas, just as the private marine consultants do through resource consent process.

The Parliamentary Commissioner for the Environment identified this as a major problem through the resource consent process. In a publication called *Missing Links* he had this to say *:*

"There are questions about whether science used in some adversarial approaches to environmental policy and decision making contribute to sustainability. For example there is the potential for scientific evidence to be selectively used in resource consent hearings for the purpose of gaining or maintaining a particular interest or position, which could be to the detriment of the broader principles of sustainability.
There are issues around the roles and influence of science and expert scientific witnesses in legal proceedings on environmental issues (S1.3.1, p16)."

This concern can now be labelled a concern for Government in their own departments.

Reason 1
All commercial harvesting of beach cast seaweed including undaria by the use of machinery on beaches should cease. Machinery on beaches have proven to crush the life of the food source of Hector Dolphin, their prey is destroyed.

Both proposals fail to identify or put in place measures to mitigate or control the methods as to the impact that harvesting vehicles will have on the intertidal life that lives in sand.

There are some machines that dig into the sand 300 mm therefore removing a valuable food source and they would be having a massively adverse impact on marine ecosystems and the whole marine food web.

Not once has Government funded any research into the value of beach cast seaweed to marine specie. We have forty three councils grooming beaches; removing beach cast seaweed and sticks. If the quantity of beach cast seaweed that has been removed from Petone Beach by the Hutt City Council is an indication of what is happening all around New Zealand then the impacts on the marine food chain is already massive without allowing the commercial harvesting of seaweed. Wellington Harbour thirty years ago had massive schools of yellow eyed mullet with dolphins arriving in the Harbour and staying for weeks. Then the Wellington Regional Council destroyed their spawning grounds in the Pencarrow and Fitzroy Lakes, Waiwhetu Stream and Hutt River while the Hutt City Council removed their food source and now there are very few yellow eyed mullet in the Harbour. The impact on dolphins is massive for without a food source they now rarely stay more than a couple of

hours, whereas prior to the 1970s when there were large schools of yellow eyed mullet in the harbour dolphins stayed for days.

The lack of scientific studies into the inter-tidal zone has been perfectly illustrated in a just released NIWA publication (2008) *A review of land based effects on coastal fisheries and supporting biodiversity in New Zealand* by Morrison, Lowe, Parsons, Usmar and McLeod (this paper was received as a result of my involvement in the Mfish Inshore Working Group). They stated that little is known scientifically about our inter-tidal zone or the impacts of our actions upon it. On page 25, they make a very important statement which must be taken very seriously by both Ministries when they described the impact of mud and silt on marine specie.

They say: "*…most of our current knowledge concerning the effects of suspended sediments on fish are based on freshwater species*" and *"…most existing information of the effects of suspended sediment is based on acute exposure laboratory experiments, with little empirical information available on chronic responses to high concentrations for extended periods, especially for marine species, or under natural field conditions."*

Reason 2
The use of beach cast seaweed, scientifically proven to absorb toxic petroleum, or endocrine chemicals or cyanobacteria varieties, as a food product for humans, should cease as this is extremely dangerous because these chemicals cannot be removed and the food product will then pass the chemicals on into our food chain either through using seaweed as fertiliser or directly through other products.

Through our submission to the Wellington City Council we opposed the discharge of waste water into waters less than fifty metres deep and 500 metres from highly used recreational reefs. We successfully argued that endocrine chemical testing should become part of the resource consent conditions and we backed this up with other information. Unfortunately this will only occur when the MfE catches up with overseas research and produces guidelines setting a limit for endocrine chemicals. It is also subject to the Regional Health Authority carrying out water quality testing to a lot higher standard than they are prepared to do at present. However, the condition has been included in resource consent through our input and it is the first time endocrine testing will be carried out in New Zealand.

A number of science papers have been published describing how chemicals are absorbed into seaweed. One study in the Hutt River identified how this could be used to gauge a river's health. Another paper described how the waste water being discharged in Dunedin sweeps past the sea lion haul out rockery and an outbreak of brucellosis in Dunedin also swept through the rookery as the sea lions did not have one live birth. A blood test carried out on the Akaroa Hector Dolphins found them to be also carrying brucellosis. In my experience dolphins must know they are entering an area contaminated with endocrine chemical and human diseases as they will not pass through the waste water slicks from the Hutt City wastewater outfall at Pencarrow or the Wellington City Council outfall in Lyall Bay.

Included in the power point slides are a pod of dolphins that immediately changed course as they entered the Wellington City Council waste water chemical slick coming past Island Bay.

We identified how the resource consent had been corrupted with misinformation and appealed the Commissioners' decision then refused to sign off the consent, forcing the NZ Environment Court to support the easily proven misinformation. We also identified studies as to how chemicals, human diseases and cyanobacteria are entering our food chain through our submission to the Proposed National Policy Statement for Freshwater Management. We explained that beach cast seaweed is continually being drowned in chemicals and human diseases from waste water and the seaweed is then eaten by sand hoppers, their larvae, kelp flies and their maggots and sand flies and beetles and they in turn are eaten by fish. There is not a waste water plant able to remove endocrine and petroleum chemicals or human diseases and they flow out of waste water pipes which are all in water less than fifty metres deep. Some waste water plants have to add a class eight chemical to meet the required ph levels in Wellington, that is 38,000 litres a week unless it rains then the quantity is trebled. The plants capacity is then exceeded and untreated waste water at 4,200 litres a second flows into every rock for over fifteen miles.

Chemical contamination of our coastline is a national disaster with rivers such as the Manawatu River collecting waste from two cites and a number of dairy related industries that use chemicals that cannot be removed. At times of flood these chemicals combine with cyanobacteria resulting in easily predicable toxic algae blooms sometimes causing massive fish kills but other times killing whales. There are over thirty science papers published a year describing how chemicals are killing fish, dolphins, sea lions and whales, while in some rivers fish larvae are being hatched with two heads.

The chemicals from waste water and chemicals that arrive with high river flows contaminate our shore line intertidal zone and flow into seaweed beds stunting their growth or turning the seaweed black rendering it useless for anything. The beach cast seaweed either side of the Wellington City Council waste water pipe in Lyall Bay and either side of the Hutt City Council pipe at Pencarrow both provides a perfect example of chemically destroyed seaweed. How these chemicals impact on fish I have discussed in a story about to be published as the feature story in the NZ Fishing Coast to Coast magazine called *Silent Killers …Natural colours of the sea?* This story features deformed fish caught by recreational fishers locally and identifies why we are now catching them in increasing numbers. Deformities and cysts on fish are common overseas that have closed waters surrounding by large populations discharging waste water. We can link these deformities to toxic algae blooms here and also directly prove that the death of over 100 Pilot whales at Coromandel was caused by a large toxic algae bloom three days before.

Biosecurity of NZ and Mfish you have been warned that if you now knowingly allow these chemicals and diseases into our food chain by allowing the harvesting of beach cast seaweed for commercial enterprise knowing that endocrine chemicals and cyanobacteria cannot be removed you have become a party to promoting a toxic product for human consumption and you will be found out.

While both Biosecurity and Mfish only have the increase of harvesting beach cast seaweed as a proposal we would seriously suggest both proposals be scrapped now. There is not a wastewater plant able to remove the endocrine chemicals now being discharged through waste water in increasing quantities, and cities that recycle waste water such as London are in big trouble. To give you some idea of the quantities of chemicals that are now used here in Wellington a tanker arrives at Seaview Wharf every three months loaded with chemicals and they all end up in the sea to float on the sea water before breaking down.

The more endocrine chemicals that enter our food chain the greater the risk of a segment of the population becoming immune to these chemicals over time and this will then lead to the need for stronger chemicals that will then in turn enter our food chain through fertiliser. However, the greatest impact will be on marine life and marine mammals who will ingest endocrine chemicals and human diseases in higher doses through eating fish that have had their food source contaminated by the chemicals in beach cast seaweed. As the Wellington City Council found at the city's recycling plant in Happy Valley, when they piped the solids to the plant to be mixed with green waste into fertiliser, no matter how much heat was used the endocrine chemical remained and the process had to be stopped.

The implications for both MAF and Mfish in ignoring this submission and the warnings will be massive.

The life in beach cast seaweed explained
Beach cast seaweed is mainly deposited on a beach in a spring tide which is every two weeks unless there has been a storm.

Beach cast seaweed provides the food for marine specie at the beginning of the food chain. This food is in the form of sand hoppers, sand hoppers eggs and larvae, kelp flies, kelp fly eggs and maggots, red beetles, sand flies and their eggs.

In the next high tide, or if there is storm, the life found in beach cast seaweed gets washed into the sea.

Reason 3
The MAF Biosecurity view that the seaweed undaria poses a threat to marine ecosystems is illogical when the MAF view is that it is edible and already used for human consumption, therefore a food source for marine specie and not a threat.

It is completely illogical to describe undaria as a threat when it is edible and breaks away in a storm as most surface seaweeds do to then form beach cast seaweed. That should be considered a bonus as the seaweed undaria is edible. For successful spawning of all specie including marine specie there must be protein and beach cast seaweed provides that and must not be harvested by commercial operators. It is major concern that we are rapidly approaching a situation in this country that is being described in the paper *Hungry Oceans, What happens when the prey is gone?* (Refer Appendix 20).

The proposal by both MAF and Mfish is promoting the destruction of the food source of the prey for our marine specie including that of Hector Dolphins, without acknowledging the research and papers available and the information on the internet and doing none themselves.

http://www.marinebio.net/marinescience/03ecology/sblife.htm
http://www.mfe.govt.nz/rma/central/nps/consultation/submissions-freshwater-management/
We are submitter 38 and the power point is attached to our submission. (See attachment 9 for summary)

Removing beach cast seaweed will deny Hector Dolphins with their major food source.

One of their prey's food sources begins at the very beginning of the food web. The kelp fly maggots can be found in spring and the early summer months where they convert the cellulose in the seaweed into protein. They in turn are eaten by yellow eyed mullet which coincides with the time yellow eyed mullet require protein for their successful spawning. Later they become the food source for other marine specie at their time of spawning, including dolphins and orcas and our endangered Hector Dolphin. Yellow eyed mullet feed and spawn in the intertidal zone and do not feed or stay when a stream or river runs dirty. Research has proven that Hector Dolphin arrive off streams and rivers when the water runs dirty to feed there.

If we have any chance of either saving our Hector Dolphins or improving our commercial fish stocks then the food source of the prey of Hector Dolphins must not be commercialised and lost to the marine food chain.

Summary

How Government manages beach cast seaweed must change.
The website of Seaweed Association NZ fails to even mention beach cast seaweed as having any value to marine specie. This failurehigh lights how marine science has been used to distort or corrupt others with misinformation through the RMA process. In their guiding principles they make the statement "*SANZ was formed to combine their knowledge and expertise to ensure the ecology integrity of the marine coastal eco system was not compromised whilst promoting a sustainable seaweed industry for NZ*".

While those at Seaweed Association received an award for enterprise others in Aquaculture editorials seriously questioned them as they had not disclosed the adverse impacts.

Both Ministry proposals can now be seen to be in conflict with these SANZ principles and scientists tasked with peer reviews can now be seen as intentionally blocking science papers that describe the value of beach cast seaweed from being published. As we are continually finding through the resource consent process, this country is too small for a scientist to stand up and be counted for questioning the system,for to describe the adverse impacts of a proposal they have been contracted to support would be biting the hand that feeds them. The Ministry

of Fisheries have clearly sided with commercial at the expense of the greater marine environment and this will be used as an example to question the direction the Ministry is taking with other proposals, we are sure.

The Ministry of Fisheries has an obligation under the Fisheries Act which says: "*Habitat of particular significance for fisheries management should be protected"*

The Ministry of Agriculture and Fishery has an obligation to protect the food source of our endangered Hector Dolphins and not place themselves in breach of the Marine Mammals Protection Act.

Instead of looking for ways to make money from beach cast seaweed both Ministries should be carrying out a public education programme as to the value of beach cast seaweed as a means of improving our fishing resources and saving our Hector Dolphins.

Failure to change the way beach cast seaweed is managed will have far reaching serious implications. A proposal by MAF to ban the importation of bait fish will result in more bait fish being netted locally for the increasing recreational fishers. This will result it even less food for marine specie and dolphins. The belief that you can do what ever you want in the marine environment without a consequence is continually being explored in the NZ Fishing Coast to Coast magazine stories I write. One story called *They are killing our beaches…everything is connected* is attached. (Refer attachment 12)

Some years back I publicly predicted that unless Government makes a serious attempt to understand the importance of the intertidal zone and changes the way the intertidal zone is managed then by 2020 Hector Dolphins will have disappeared. Nothing in these proposals will make me change my views. The research I did with the assistance of scientists Ian West and Alan Heath should not have been left up to me representing a recreational association with limited funds and access to research material. Recently I was disheartened to hear that Mfish had lost this science paper which is critical to a sustainable marine environment.

Both of these proposals should be seen as a wake up call for the Ministries to make radical changes to the marine knowledge of their staff before our marine environment, fisheries and endanged dolphins are destroyed or lost through a lack of marine knowledge by Government.

A signed copy is in the mail with a CD of attachments attached.

Yours sincerely

Jim Mikoz
Vice President
Wellington Recreational Marine Fishers Association

APPENDICES

Summary of Comments Beach cast seaweed harvesting

1. Letter from Sandra Lee, Minister of Conservation. 28 March 2002.
2. Letter from Chris Carter, Minister of Conservation. 6 January 2003.
3. Letter from Chris Carter, Minister of Conservation. 7 February 2005.
4. WRMFA letter to Helen Clark, Prime Minister. 17 March 2002.
5. Letter from David Benson-Pope, Minister for the Environment. 17 March 2002.
6. WMRFA letter to David Benson-Pope, Minister for the Environment. 3 January 2006.
7. DOC NGO meeting agenda item *Autopsies of Stranded Mammals.* 17 February 2005.
8. Summary of Comments NZCPS
9. Summary of submissions NZPNPSFM we are submitter 38
10. Mikoz, J S, Heath, A C G, West, I F. 2006. Kelp fly larvae (Diptera: Coelopidae) in the diet of yellow-eyed mullet (Aldrichetta forsteri) at Makara, Wellington, New Zealand.
11. Mikoz, J S. 2005. NZ Fishing Coast to Coast. *Bad luck Hector you are dead meat.*
12. Mikoz, J S. 2005. NZ Fishing Coast to Coast. *They are killing our Beaches...Everything is connected.*
13. Mikoz, J S. 2007. NZ Fishing Coast to Coast. *The Royal killers of dolphins and marine life*.
14. Mikoz, J S. 2006. NZ Fishing Coast to Coast. *Recent happenings.*
15. Williams, B & Ellsworth, S. 13 January 2009. The Courier Mail. *Two-headed fish larvae blamed on chemicals in Noosa River.*
16. *Drugs in water causing troubling problems to fish, wildlife.*
17. Udanga, R. 30 October 2008. Manukau Courier. *Eels die fleeing stream pollution.*
18. Duddy, N. 5 September 2008. Eastern Courier. *Estuary life at risk from pollution.*
19. Greater Wellington Regional Council. 12 December 2008. *Toxic algal mats pose potential danger in parts of Hutt River.*

20 Hungry Oceans What happens when the prey is gone? Available on the internet

21 Hector Dolphin Threat Management Plan submission of the WRMFA