



Non-Commercial Wild Food in New Zealand

NZFSA Position Paper: No. 02/07

October 2007

[Online]

ISBN number 978-0-478-31154-9

ISSN number 1178-4040

[Print]

ISBN number 978-0-478-31153-2

ISSN number 1177-0287

IMPORTANT DISCLAIMER

Every effort has been made to ensure the information in this report is accurate.

NZFSA does not accept any responsibility or liability whatsoever for any error of fact, omission, interpretation or opinion that may be present, however it may have occurred.

Further copies

Requests for further copies should be directed to:

New Zealand Food Safety Authority

P O Box 2835

WELLINGTON

Telephone : (04) 894-2500

Fax : (04) 894-2501

Website

A copy of this document can be found at www.nzfsa.govt.nz

Table of Contents

1	Executive Summary.....	4
2	Background.....	6
	No intention to regulate non-commercial wild food	8
	Exclusions from the review.....	8
3	The Wild Food Review.....	10
	Current knowledge and activities.....	10
	Current situation	10
	ESR literature search report.....	11
	Non-commercial marine biotoxin monitoring programme	12
	Information NZFSA currently offers on wild food	14
	Restricted procurement areas	14
	Data gaps	15
	Data on harvesting activities	15
	Data on consumption	16
	Relationship between pesticide use patterns and residue profiles	17
	Knowledge of natural toxicants	17
4	Going forward- the Wild Foods Project.....	18
	Priority for action.....	18
	Ways forward for Māori	21
	Objectives	22
	Project Scope	22
	Shellfish	23
	Communications.....	23
	Data Gaps	24
	Excluded from scope	25
	Timelines.....	25
	Appendix 1.....	26
	Summary of proposals from the Draft Position Paper	26
	Appendix 2.....	29
	Submissions on the Draft Position Paper	29
	Information gathering.....	29
	Information sharing	30
	Interagency collaboration.....	31
	Programme funding	31
	Proposals for Māori.....	32

Appendix 3.....	34
NZFSA Publications.....	34

1 Executive Summary

The New Zealand Food Safety Authority (NZFSA) is responsible for protecting public health from risks that may arise from the consumption of food.

NZFSA has undertaken a review of non-commercial wild foods to gain a better understanding of their consumption in New Zealand and to determine if there is a risk to public health, and if there is, to develop ways of ensuring that risk is managed or reduced.

Non-commercial wild food includes animals, fish, plants and insects that are hunted or harvested for personal consumption. The gathering of wild foods is outside of the food safety regulatory systems currently in place (which regulate food *for sale*). Wild food is not subject to monitoring or risk management in the way that commercially available food is, and the risks of consuming wild food had not been comprehensively assessed until this review was undertaken.

The freedom to harvest food from the wild is part of the “kiwi” way of life. The intention of the review has been to gauge the risks to public health from this activity, and to look at non-regulatory options to manage or reduce those food hazard risks. It is **not** proposed to regulate wild food hunted or harvested for personal consumption.

As an initial step in the review, NZFSA commissioned a report from the Institute of Environmental and Scientific Research Ltd (ESR) to assess the chemical and microbial risks that may be present in a wide range of wild foods. ESR undertook a search of available scientific and research papers, and published reports (including public health data). The resultant report presents a significant body of evidence on food/hazard combinations that may pose risks.

The ESR research led to the conclusion that wild food does not present a major risk of human exposure to foodborne hazards in New Zealand. However, the research showed that there is a lack of reliable information on harvesting and consumption patterns of wild food, along with poor information generally about the sources of foodborne illness (for example, whether food is from a commercial source or not).

NZFSA released a draft position paper in July 2005, accompanied by the ESR report as a companion document, and invited submissions on the proposals suggested in the paper.

This Final Position Paper sets out the background and process of the review, and, on the basis of the feedback received from consultation, NZFSA's plans in relation to managing public health risks arising from the consumption of non-commercial wild foods.

The Wild Foods Project aims to implement the outcomes of the Wild Food Review, and comprises three sub-projects:

- (a) Shellfish - "Right-sizing" the Marine Biotoxin Programme including review of the data-purchasing arrangement with the shellfish industry; and development of mechanisms to address wider public health issues associated with recreational collection of shellfish
- (b) Communication – assessing resources, developing networks and appropriate communication tools to ensure key food safety messages are picked up by gatherers and consumers of wild food
- (c) Data gaps – focussed on social research, including examination of reasons why shellfish warnings are not heeded; information on quantity of consumption, frequency and location of gathering; identifying sources of foodborne illness, and identifying new and emerging risks from wild foods.

The importance of wild-gathered food for Māori communities was an integral part of the review. A key point made by the Māori reference group formed to provide input into the review was the importance of identifying the tikanga around traditional food gathering and handling practices, and to ensure that where relevant, this is incorporated in food safety messages targeted at whanau, hapu and iwi. NZFSA's Strategy for Involving Māori in Food Safety and Consumer Protection Issues will underpin the implementation of the Wild Foods Project.

Details of activities and progress in implementing the Wild Foods Project will be available on the NZFSA website.

2 Background

In late 2001, routine monitoring picked up high levels of brodifacoum poison (a vertebrate toxic agent) in wild pigs that had been presented for commercial processing. It was likely that other wild pigs from the same area were hunted for non-commercial purposes and consumed by hunters and their friends and families, without them knowing the meat was contaminated.

Brodifacoum is commonly used to kill possums in the bush, and the wild pigs may have consumed contaminated possum carcasses, ingesting low levels of the poison.

These concerns highlighted a need to examine the potential contaminant status of wild food, and NZFSA commenced a review of non-commercial wild food in New Zealand in July 2004.

The purpose of the review was to gain a better understanding of wild food consumption in order to determine if there were risks to public health, and if so, to explore ways to manage or minimise that risk.

A key objective of the first stage of the review was to identify data gaps and food/hazard combinations for further investigation and research, and to identify areas where education would be beneficial. The chemical and microbial risks people are exposed to via wild food in New Zealand had not been comprehensively assessed, so NZFSA commissioned Environmental and Scientific Research Ltd (ESR) to assess these risks in a wide range of wild foods.

As part of the research and consultation process, a focus group of Māori experts was convened to provide a forum to inform the review. The Māori Focus Group identified species for inclusion in the ESR review and had input into the preparation of the draft position paper.

The Māori Focus Group did not function as a representative body of iwi authorities or other Māori organisations, but rather drew upon its members' individual knowledge and that of their personal networks and experience to assist NZFSA with the review by identifying:

- potential food safety issues for Māori arising from the harvesting and consumption of non-commercial wild foods

- food preparation practices that have been, are being, or could be used to address food safety issues
- how to obtain information on the types of animals, fish, seafood and plants that are consumed by Māori, and also the frequency of consumption
- existing research/information which refers to issues for Māori in the harvesting and consumption of non-commercial wild foods
- key Māori groups, stakeholders and appropriate communications processes for NZFSA in working with Māori, should ongoing issues be identified by the Focus Group in the review
- if there is a role for NZFSA in terms of further research, information sharing etc to assist with raising the level of awareness concerning food safety issues related to the customary harvesting and consumption of non-commercial wild foods.

In July 2005, NZFSA released a Draft Position Paper, which set out proposals to better manage the safety of wild foods (see Appendix 1). The Paper was accompanied by the completed ESR report. The Draft Position Paper (drawing on the ESR paper) concluded that though wild foods may not present a significant food safety risk, there was a lack of reliable information on harvesting, consumption and contamination.

NZFSA sought the views of interested people on ways to gain a more comprehensive understanding of wild food consumption and on the proposals set out in the Draft Position Paper. Submissions and comments received (see Appendix 2) were analysed, and used to inform the preparation of work relating to wild food that NZFSA has committed to undertake, and which is outlined in this paper.

Scope

For the purposes of the review, and for related future work that NZFSA will undertake, wild food has been defined as:

“Any food that is naturally present or occurring in the New Zealand environment that is

- (a) non-commercially harvested, gathered or taken from that environment
- (b) is not traded or sold

(c) is for human consumption, either raw or processed.”

As such, wild foods include:

- feral land animals (e.g. deer, goats, pig, rabbits)
- birds (e.g. waterfowl, pheasants, mutton birds)
- fish (marine and freshwater, including eel, whitebait, trout)
- marine invertebrates (e.g. shellfish, paua, kina, sea snails)
- freshwater invertebrates (e.g. crayfish, mussels)
- insects and insect products (e.g. huhu grubs, wild honey)
- plants (e.g. puha, poroporo, ferns, nettles)
- water plants (e.g. watercress, seaweed)
- fruit (e.g. berries, nuts, seeds)
- fungi.

No intention to regulate non-commercial wild food

The freedom to harvest food from the wild is considered part of the ‘kiwi’ way of life. There is no intention to regulate the hunting and gathering of wild food for personal consumption; the purpose of the review was to gauge the risks to public health from such activities, and to look at non-regulatory options to manage or reduce those food hazard risks. NZFSA’s future work relating to wild food will focus on non-regulatory activities.

Exclusions from the review

The review focused on the food safety and public health aspects of wild food consumption. Issues outside the scope of the review included:

- the sustainability of harvesting flora and fauna
- conservation and habitat restoration

- pest control (types of poisons, delivery methods, etc)
- pollution of waterways and the shoreline
- traditional harvesting rights (relating to kaitiaki , tikanga, mahinga kai, etc)
- fishing and shellfish quotas and restrictions
- medicinal plants.

Though many of these issues are related and were mentioned in the review, they were only looked at in relation to current knowledge and activities. Proposals that would impact on areas that are the responsibility of other areas of government, such as the Department of Conservation (DoC), the Environmental Risk Management Authority (ERMA) and local and regional councils were not considered. However, the review took "connecting the dots" look at what these agencies are doing that could assist people to hunt and gather safer food, such as information DoC holds in relation to pest poison programmes, or ERMA's recent review of 1080.

3 The Wild Food Review

Current knowledge and activities

The review set out to ascertain and compile information on current knowledge and activities relating to the harvesting and consumption of wild food in New Zealand in order to better understand and evaluate the risks, and to form a basis for future action.

Current situation

The harvesters and consumers of wild food are a diverse group from a wide range of ethnic backgrounds and cultures. Recreational hunting and fishing, as well as other gathering of wild foods for personal consumption and use, encompasses a range of different motivations including sport, recreation and sustenance. There is also a wide assortment of species of wild food that are harvested, occurring in a diversity of habitats throughout New Zealand.

Under the Animal Products Act 1999, recreational hunters and fishers can kill and process their own animals and recreational catch, or have it done for them by certain identified persons, outside the normal regulatory requirements of the Act, provided that the animal or recreational catch is for their own use or consumption and is not traded.

In spite of the popularity of hunting and fishing as a recreational activity as well as a source of food for subsistence, there is a level of unawareness in the hunting and fishing communities regarding what is safe to eat and what isn't. There is confusion about safety risks, with both under and over estimation of risk factors.

There is anecdotal evidence that people are either unaware of certain risks associated with the gathering of wild food, or they are ignoring public safety signs advising the presence of toxic material. The Māori Focus Group that was convened as part of the review identified some areas of concern, such as the gathering of puha in known polluted areas, for example near metropolitan areas and on roadsides.

Priorities also differ for people and the strong desire for some foods in certain instances may make food gatherers disregard dangers, such as pollution, or closures that allow stocks to re-grow. The Māori Focus Group also pointed out that, even when signs are put up warning that

pollution is present in certain waterways, some people may be so reliant, for example, on shellfish for food that they may be forced (through economic necessity, or lack of awareness) to eat contaminated kaimoana rather than do without it.

An evaluation report of a Pacific Island home food safety radio campaign in 2001 indicated that over half the respondents reported ignoring warning signs about shellfish collection from closed sites¹. The evaluation report further noted that such risk behaviour should be targeted in future campaigns.

ESR literature search report

The chemical and microbial risks that humans are exposed to via wild foods in New Zealand had not previously been comprehensively assessed. A report commissioned by the NZFSA from ESR brought together a significant body of data to show that wild foods in their natural state can be associated with a number of hazards, and may also be associated with hazards that arise from human activity. The ESR report presents information on food/hazard combinations that may pose some risk to human consumption.

While the report indicated that many wild foods can be associated with chemical and microbial hazards, as a whole the information does not lead to the conclusion that wild food presents a major potential for human exposure to foodborne disease in the New Zealand population. However, the report highlighted many data gaps, which prevent an adequate assessment of risk.

The hazards that New Zealanders may be exposed to when consuming wild food will depend on the type of food they are harvesting. For example, animals such as deer and pigs have been associated with several bacteria, parasites and chemical contaminants, and some berries and other plants contain natural toxins that can induce severe illness. The hazards

¹ Fakalago, Paul. [2001] Pacific Island home food safety radio campaign: evaluation report. Auckland District Health Board, Unpublished

associated with a wild food will also depend on where or when a food is harvested. For example, watercress harvested from streams receiving effluent run-off could carry pathogenic bacteria, and animals harvested during a pest control programme could contain pesticide residues. In certain growth stages some New Zealand plants are highly poisonous.

Based on public health data obtained on incidents and outbreaks of human illness that may have been associated with wild foods (the records are not always clear on the source of the food), ESR reported that *Campylobacter* and *Salmonella* were the most frequently identified causative organisms, and were associated with the greatest range of foods. Other organisms of concern, due to their prevalence or severity of illness, were *Shiga toxin producing Escherichia coli (STEC)*, *Yersinia*, *Cryptosporidium* and *Giardia*.

From the data available, it also appears that for some wild foods, heavy metals, anticoagulant vertebrate toxic agents, and polychlorinated biphenyls (PCBs) can exceed the regulatory maximum limits applied to commercial foods. Other than toxins from some marine phytoplankton (the cause of toxic shellfish poisoning, TSP), most of the natural toxins identified by ESR have been associated with foods that are not likely to be consumed in significant amounts. However, ESR found that some toxins pose particularly severe hazards to the consumer and have the potential to cause death. The risks posed by chemical hazards are often difficult to quantify, as health effects may only arise over a long period of low exposure. Public health data does not provide evidence of chronic illness arising from chemical hazards.

Overall, the ESR report concluded that there is a lack of reliable information on wild food harvesting and consumption patterns in New Zealand.

Non-commercial marine biotoxin monitoring programme

NZFSA manages the non-commercial marine biotoxin monitoring programme, along with the commercial shellfish programme. The non-commercial monitoring programme gathers data on shellfish toxicity and phytoplankton so that consumers of non-commercial shellfish can be advised when shellfish in their area is unsafe to collect and eat due to the presence of marine biotoxins. Secondary aspects of the non-commercial programme include undertaking operational studies such as validating test methods, investigating toxicity in multiple shellfish species during toxin events, and data reviews. The programme costs around \$1.5 million per

annum and is the only area of non-commercial food gathering activity or procurement where NZFSA currently funds specific monitoring activities.

The primary monitoring tool is weekly phytoplankton monitoring in all areas of New Zealand where significant accessible shellfish stocks are found. When pre-set trigger levels are exceeded in water samples shellfish flesh samples are taken and analysed for toxicity. Shellfish flesh samples are also taken routinely in areas where significant recurrent toxicity has been found. Public warnings are generally issued only after toxin levels exceeding the pre-set limits are found in shellfish. The limits are consistent with regulatory limits both in New Zealand and internationally for traded product.

The main priority for the monitoring programme is paralytic shellfish toxins because they are most widespread at high levels and have the potential to be life-threatening based on the levels found and overseas experience. All areas that have recorded above the regulatory levels have weekly flesh samples taken for specific analysis. This includes much of the North Island. Other poisons monitored for, in order of priority, are as follows:

- Amnesic shellfish poison (*Domoic acid*). This has not resulted in any confirmed illness in New Zealand; however the incident in Canada that led to its discovery did result in several deaths and permanent brain injury amongst some of its victims. It is primarily a problem in scallops in the northern part of New Zealand. Scallops in these areas are tested weekly through the period October to February when levels are likely to be high. Other areas are monitored primarily using phytoplankton. Because the highest concentrations of amnesic shellfish poison are found in the gut and skirt of scallops, the public are advised never to consume these parts of the animal, and monitoring is confined to the adductor muscle and roe portions normally consumed.
- Diarrhoeic shellfish poison (*Okadaic acid and its esters*). This causes acute diarrhoea and has been found to recur in several South Island areas. A number of confirmed acute illnesses have resulted. These areas have weekly flesh samples taken for specific analysis. Phytoplankton monitoring provides sufficient coverage for the remaining areas of New Zealand as the presence of diarrhoeic shellfish poison correlates well with the presence of toxic phytoplankton species.
- Neurotoxic poison. This was confirmed as present during the initial event that led to the creation of the biotoxin programme in 1993, however it has not been found since and the

causative organism was never conclusively isolated. Shellfish samples are only taken and analysed for neurotoxic shellfish poison in response to high levels of phytoplankton likely to produce toxins, or if environmental indicators show a problem e.g. Respiratory Irritation Syndrome in people.

The ESR report discussed the risks associated with shellfish consumption, and identified norovirus, *Salmonella*, marine phytoplankton toxins, Hepatitis A virus and *Campylobacter* as the most important shellfish hazards.

It has been noted that when reports of area closures and illness from eating non-commercial shellfish appear in the New Zealand media, there have been numerous instances of reactions from overseas markets, including temporary bans on the importation of New Zealand commercial shellfish.

Information NZFSA currently offers on wild food

NZFSA currently makes a number of information papers and pamphlets about wild food available to the general public, through its publications programme and through its website (See Appendix 3). The information is primarily directed at those aiming to 'go commercial' and become approved suppliers to commercial businesses. However, the publications are relevant to recreational hunters and fishers, although these groups are not specifically targeted.

The residue monitoring programme operating across the commercial animal products industry also acts as a sentinel of wild animal procurement from pesticide-free areas. However, as the programme includes only wild animals processed for commercial trade by two processors located in the South Island, there are some limitations associated with drawing any conclusions about the safety of non-commercially taken wild game throughout New Zealand.

Restricted procurement areas

A restricted procurement area is an area of land from which certified suppliers of wild game can only supply animal meat for trade if it is tested for residues before release to the market. This is because the use of vertebrate toxic agents, such as brodifacoum and 1080, in the

area increases the likelihood of contamination of wild game with toxic residues that exceed the maximum residue level (MRL). A restricted procurement area is notified under section 81(2) of the Animal Products Act 1999.

The only current commercial restricted procurement area is in Marlborough. The area was gazetted by Notice issued in August 2004. At this time the restricted procurement notice applies only to pigs killed from the specified area that are sold to game processors. Even though deer may be affected by vertebrate toxic agents, there is no evidence to suggest that high levels of toxic residues are present in deer in this area. The most likely reason for this is that, unlike wild pigs, deer do not scavenge on rats and possums that may have ingested toxic agents.

The publication of a restricted procurement area provides information to recreational hunters and allows them to avoid this area of potential risk if they so wish, or to take other steps to reduce the potential risks e.g. careful identification of target location, hunting only for a trophy, not consuming certain parts of the animal.

Data gaps

The review highlighted that there is a lack of information on the harvesting and consumption of wild food.

Data on harvesting activities

Whilst NZFSA is reasonably confident that it knows the range of wild foods that are harvested, there is a lack of reliable and up to date information on harvesting activities. It is difficult to distinguish the fishing and hunting for sport that exists separately from fishing and hunting for consumption. Fishing, for example, is one of the top five sport and leisure activities for 47% of Māori adults, for 36% of the general New Zealand population and for 36% of Pacific Island adults.²

² SPARC Facts Series (1997-2001) at <http://www.sparc.org.nz/research/sparcfacts> - July 2005

There is also a lack of reliable data on the quantities of plants, fruits and berries harvested, and the frequency with which each wild food is harvested.

Data on consumption

There is little reliable and up to date information on how much of what is hunted, gathered and harvested is actually consumed. There is a lack of data on the frequency of consumption or the amounts consumed.

According to anecdotal evidence provided by the New Zealand Deerstalkers' Association (NZDSA), 90% of what is hunted ends up on the table. It would be helpful to have such information substantiated by research to clarify the level of consumption. Anecdotal evidence about deer may not be relevant to other species.

While it is known that hunting, and therefore consumption of game animals, occurs over the whole country, there is limited knowledge of the geographic location of other wild food consumption. Fisheries managers in New Zealand also generally face a paucity of information in respect to recreational fishing.³

National consumption surveys, as they are currently framed, have limited capacity to provide information on non-commercially obtained food that is consumed. The Adult Nutrition Survey, the principal national consumption survey, can not tell us where wild food is sourced from unless a specific question on wild food is included.

Therefore, not enough data is available on the quantities of wild food consumed to accurately conduct an exposure assessment; that is, to assess the level of risk to human health from consuming particular foods based on hazard prevalence data, patterns of harvesting and consumption, and the characteristics of the consuming population.

³ Williamson, Scott [2000], Ministry of Fisheries, *The Economic Value of New Zealand Marine Recreational Fishing and its Use as a Policy Tool*

Relationship between pesticide use patterns and residue profiles

The relationship between pesticide use patterns and residue profiles in wildlife, including wild game meat, is not well tested or documented. We know that brodifacoum lasts many months or even years in animals that have eaten it by scavenging on carcasses of other smaller animals that have been poisoned. There are no known cases of ill health directly linked to humans eating wild animal meat contaminated with brodifacoum. However, brodifacoum residues that have been found in wild pigs that have been presented to the commercial sector (and thus able to be tested) indicate that there may be a potential food safety risk from hunter-gathered/hunter-eaten wild pig in some catchment areas, based on dietary exposure probabilities. Information on exposure and its related risks would be needed so that appropriate mitigation measures, if required, could be identified, and to assist in determining if other research is necessary.

Knowledge of natural toxicants

Not enough is known about natural toxicants occurring in plants, and what effect preparation may have on their safety. ESR found little data on the prevalence of natural toxins, but their report notes that the most severe hazard associated with land plants appears to be natural toxins. Examples of foods associated with natural toxicants that may have health impacts are:

- stinging nettle and a toxin that is a mixture of histamine, acetylcholine and serotonin (5hydroxytryptamine)
- poroporo and glycoalkaloids
- bracken fern and ptaquiloside toxin
- fungi such as field mushrooms and the toxin agaritine.

4 Going forward- the Wild Foods Project

The Wild Foods Project aims to implement the outcomes of the Wild Food Review and to refine and focus available resources on the management, study and promotion of wild food issues that may cause avoidable food-borne illness.

Taking into account ESR findings, comments and suggestions from submitters (see Appendix 2), and further analysis and development within NZFSA, the fourteen suggested proposals for future activities outlined in the Draft Position Paper (see Appendix 1) have been developed into a series of practical and viable projects that are being implemented by NZFSA.

Priority for action

The ESR research into wild food/hazard combinations identified areas that should be a priority for NZFSA action. Although the research led to the conclusion that wild food does not present a major risk of human exposure to foodborne hazards, it identified areas where further information is required, and areas that represent higher risks to consumers of wild food.

The ESR report showed that there was a lack of reliable information on the level of harvesting, and the consumption patterns, of wild foods in New Zealand, along with poor information generally about the sources of foodborne illness.

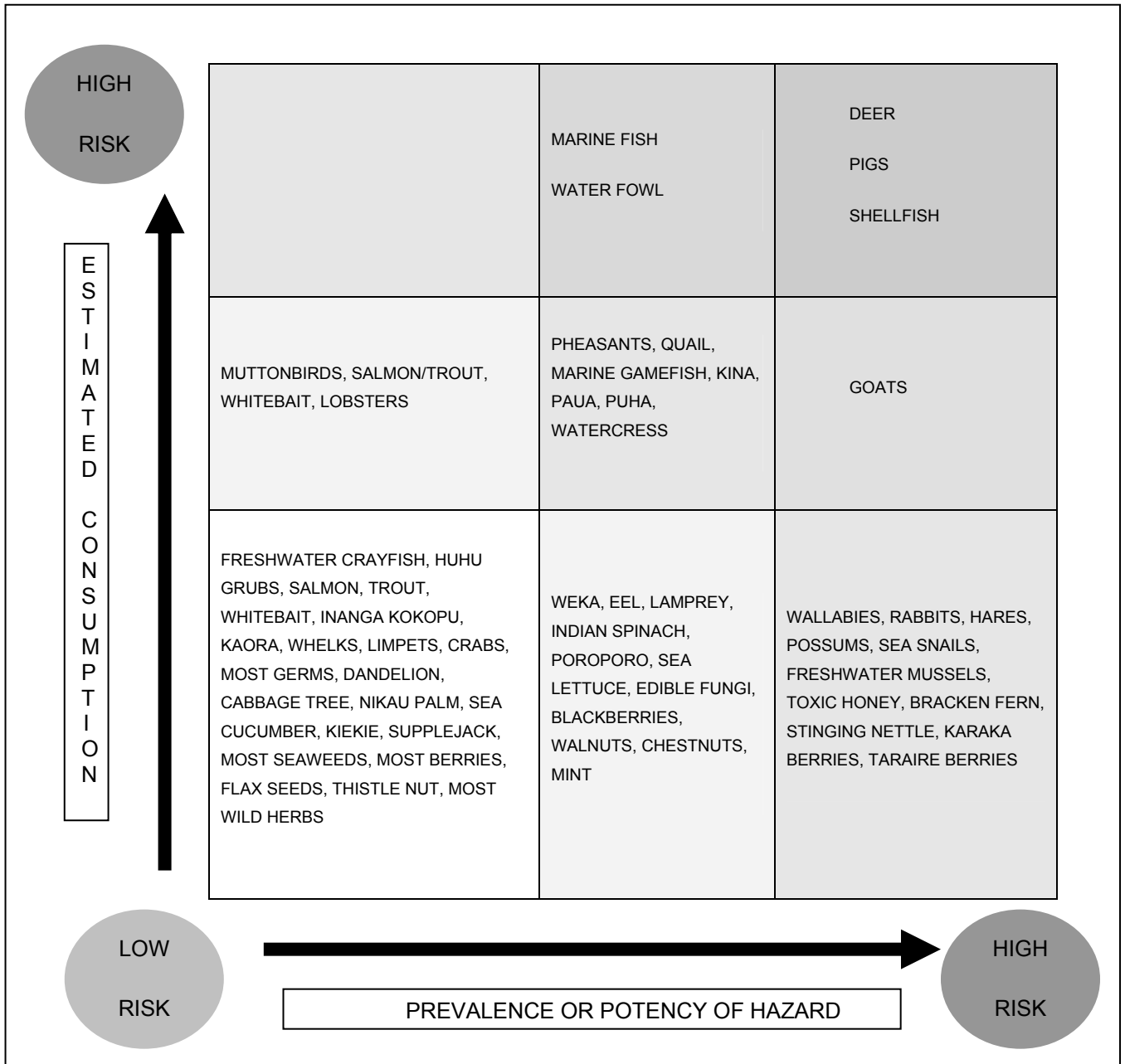
Within these constraints, the available information was used to assign a qualitative risk ranking to wild foods (see diagram below). A wild food was considered high risk when estimated consumption was likely to be high, and the hazards associated with the food were likely to be prevalent or potent. The wild food groups with the highest risk ranking identified were shellfish, pigs and deer. Marine fish and waterfowl were the next highest.

The ESR report also noted that filling the identified data gaps would provide information necessary to more definitely assess the risks and assign rankings. The significant gaps that need to be filled are:

- harvesting activities
- consumption patterns
- the relationship between pesticide use and residues
- risks from naturally occurring toxicants e.g. those from fungi, plant alkaloids.

The ESR report provides a baseline against which NZFSA can measure progress in filling these data gaps.

A classification of the risks posed by wild food to consumers



Source: Review of Non-Commercial Wild Food in New Zealand, Report to New Zealand Food Safety Authority from the Institute of Environmental Science and Research Ltd, February 2005.

Māori

The importance of wild-gathered food for Māori communities was an integral part of the review. A key point made by the review's Māori reference group was the importance of identifying the tikanga around traditional food gathering and handling practices, and to ensure that where relevant, this is incorporated in food safety messages targeted at whanau, hapu and iwi, using a collaborative and inclusive approach.

Ways forward for Māori

The Māori Focus Group considered that the best way to minimise foodborne illness amongst Māori people resulting from the consumption of wild food is to empower Māori as kaitiaki (protector, caretaker) to address the associated food safety issues. Kai (food) is an intimate issue for Māori and has always been an important part of the Māori way of life. Kai sustains and nurtures, and is related to Māori health needs. In terms of food safety, it is imperative that Māori solutions are found.

NZFSA recognises that unless processes appropriate and meaningful to Māori are followed, desired results will not be achieved. NZFSA's Strategy for Involving Māori in Food Safety and Consumer Protection Issues⁴ will underpin the implementation of the Wild Foods project. This strategy provides direction and guidance to enable NZFSA and Māori to work together in terms of information, consultation, negotiation and involvement. It will ensure Māori participation in project activities, including decision-making, monitoring and surveillance, research, education and evaluation. In particular, there will be strong links between the Wild Foods Project and NZFSA's Marae Food Safety Initiative.

⁴ [New Zealand Food Safety Authority Strategy for Involving Māori in Food Safety and Consumer Protection Issues](#) April 2007

Objectives

The objectives of the Wild Food Project are

1. To ensure that information is provided to gatherers and consumers of wild food with known significant risks on an ongoing basis (collectively or as specific target groups) in an appropriate way to enable them to keep themselves safe from avoidable food-related harm.
2. To identify, scope and carry out, as required, data ascertainment and collection activities to support Objective 1.

Project Scope

The Wild Food Project will encompass the following:

- (a) Review of the Non-commercial Marine Biotoxin Shellfish Monitoring Programme to
 - redesign and refocus the programme
 - reduce its costs
 - re-evaluate the NZFSA purchase of data from the commercial shellfish regulatory programme and
 - evaluate the effectiveness of public warnings, aiming to identify more effective ways to communicate the risk status of shellfish from area to area, on an ongoing basis.
- (b) Development of questions on non-commercial wild food consumption for inclusion in the New Zealand Adult Nutrition Survey, in consultation with the Ministry of Health.
- (c) Social research into the hunting, gathering, harvesting and food handling and consumption practices of non-commercial wild foods, with an initial focus on the consumers of foods with the current highest risk ranking (pig, deer and shellfish), and with the aim of better understanding how people perceive risks in relation to wild foods, and how they behave in relation to sourcing wild foods.

- (d) Development of information resources relating to wild foods, and particularly targeting at-risk populations and communities, underpinned by a wild foods communication strategy.
- (e) Improving the collection of food-borne illness statistics/information through working with general practitioners and public health officers to emphasise the importance of the source of the food implicated in causing foodborne illness – i.e. commercially produced food, domestically produced food, or non-commercial wild food.

The project comprises three sub-projects:

Shellfish

This sub-project focuses on one of the identified high-risk areas of wild food consumption and has two parts:

- (a) Completion of the “right-sizing” of the Marine Biotoxin Programme including review of the data-purchasing arrangement with the shellfish industry, development of a review document and consultation at a local, regional and national level.
- (b) Development of mechanisms, in conjunction with other stakeholders, to address wider public health issues (e.g. microbiological contamination) associated with recreational collection of shellfish. This may include technical guidance for Public Health Units and Territorial Authorities in managing microbiological contamination issues in non-commercial shellfish, and material to support the provision of information to the public on at-risk sources and appropriate mitigation measures. This will require thorough consultation with, and involvement of, relevant government departments, local and regional authorities, Public Health Units, Fisheries Officers, whanau, hapu and iwi and other interested parties in local Public Health Units areas.

Communications

This sub-project aims to improve communication of food safety messages to gatherers and consumers of wild food by:

- (a) Carrying out a stocktake of current resources e.g. NZFSA communication materials, DOC, National Poisons Centre, hunting organisations.

- (b) Developing networks with hunting organisations, recreational fishing groups, clubs, marae rūnanga, Māori trusts and incorporations, kaumātua, whanau, hapu and iwi.
- (c) Developing and implementing better ways of communicating with hunters to enable them to avoid food safety risks from contaminated carcasses. This will be done in consultation with hunting groups, whanau, hapu, iwi and other interested parties. Priorities to manage are brodifacoum in pigs and microbiological hazards associated with deer and other wild game.
- (d) Developing, in collaboration with relevant stakeholders, appropriate communication tools (including the NZFSA web site, DVD's, pamphlets and signage) to ensure key messages are picked up by target groups, and mechanisms for assessing the effectiveness of these tools.

Data Gaps

This sub-project is aimed at addressing the information gaps identified as significant in the ESR report

- (a) Social research, including examination of reasons why shellfish warnings are not heeded;
- (b) Advocate for inclusion of appropriate questions in the 2007/08 Adult Nutrition Survey, and design and develop a targeted survey of consumption and harvesting patterns;
- (c) Update and review of ESR priorities/recommendations for data gap filling, development of a prioritised list of data gaps that need to be filled, and development of risk profiles and recommended risk management options for selected food/hazard combinations; and
- (d) Establish mechanisms for the identification and management of new and emerging risks from wild foods.

Excluded from scope

The Wild Food Project will not cover:

- pest control methods
- hunters issues, for example access, environmental sustainability, habitat restoration, species viability
- controls on poisons use, or
- response mechanisms to hazards entering the food chain

Timelines

Details of project activities and progress towards completion will be available on the NZFSA website as appropriate.

Appendix 1

Summary of proposals from the Draft Position Paper

- **Inclusion of a question on wild food in the Adult Nutrition Survey**

Robust data on wild food consumption could be obtained through a stand-alone comprehensive survey of the population but this would involve considerable cost. The Ministry of Health's existing Adult Nutrition Survey gathers information on average food consumption in New Zealand. The Ministry of Health is due to conduct another Survey in 2007/08, and the inclusion of a question on wild food could give more accurate data on the regularity of consumption of non-commercial foods

- **Proposals for Māori**

Empowerment of Māori as kaitiaki (guardians, protectors, caretakers); Māori involvement in decision-making, monitoring, surveillance, research, education and evaluation; research into traditional Māori food preparation.

Traditional Māori knowledge about plant and animal species and the wider environment is in many cases locally based, specific to a tribal area, and not always structured in ways compatible with conventional Western scientific methodology.

The Māori Focus Group concluded, and were concerned, that many of the traditions that were valued highly in the past have diminished; that certain rituals practised and respected by Māori, such as knowledge of karakia and culturing/harvesting traditions, are not always being passed on. As a consequence, there is a loss of those aspects of indigenous knowledge that were aimed at keeping Māori safe with regard to the consumption of wild food.

However, customary traditional practices may not address current and new hazards such as environmental issues. As well, cultural boundaries are changing. In many circumstances traditional methods need to adapt to modern circumstances and food safety requirements.

- **Work between NZFSA and other government agencies**

Improving or establishing inter-agency collaboration between government agencies such as Department of Conservation (DoC), Ministry for the Environment, Ministry of Health, Public Health Units and local and regional governments, in collecting and collating data and disseminating information to key target groups
- **Utilising data held by regional councils**

Data collected by regional councils under the Resource Management Act (e.g. on poison drops) could be used to develop a greater understanding of the potential for contamination of wild foods. For example, it could assist in conducting risk assessments
- **Improved communication with hunters/fishers/gatherers**

Developing closer links with recreational organisations, such as hunting and fishing clubs, in order to communicate information about wild food hazards
- **Applicability of commercial information to the non-commercial sector**

Better use of information aimed at commercial hunters and fishers in relation to traded foods, to assist non-commercial hunters and fishers
- **Effective means of disseminating information about the location of poisons**

Information about poison drops is sometimes available on the NZFSA website, but it is normally configured for commercial users. There is scope to tailor this existing information for non-commercial users
- **NZFSA website**

Make NZFSA's website more user friendly and dedicate a section to information relevant to hunting, fishing and harvesting wild food
- **Education and awareness campaign**

Develop education and awareness campaigns, run on a regular basis, targeting key groups of wild food gatherers, conveying information on risks, times to harvest/hunt or avoid harvesting/hunting, as well as safe food preparation and storage
- **Use of Global Positioning (GPS) & Geographic Information Systems (GIS)**

The Department of Conservation and the Animal Health Board undertake pest control using toxic agents, recording the location of poison via GPS, while images of the locations are viewed via GIS. This information could be useful to hunters

- **Sources of data for possible future collection**

A number of government agencies, such as ERMA, DoC and LandCare, collect information that could be accessed and added to the knowledge base on wild foods

Homekill and recreational catch service providers are obliged under the Animal Products Act to keep records of each animal slaughtered. This could be a useful source of information about wild game consumption

- **Data on sources of food in cases of foodborne illness**

It can be difficult to establish the source of foodborne illness. Investigations into the source of a foodborne illness incident or outbreak are principally undertaken by Health Protection Officers in Public Health Units; developing better approaches to investigating and establishing sources is part of ongoing work being undertaken by NZFSA in conjunction with Ministry of Health, ESR and Public Health Unit staff

- **Value of current expenditure of funds on non-commercial food monitoring**

Re-evaluate NZFSA's expenditure on wild food-related activities, in terms of cost-effectiveness. While shellfish has been identified as amongst the highest risk wild food, consideration needs to be given to the continued expenditure of \$1.5million per annum on monitoring for non-commercial shellfish biotoxins only, in light of other areas of activity relating to managing risk from wild food that could be undertaken

- **Scope for future specific research**

Possible areas include aspects of wild food preparation and handling; data on harvesting activities; the relationship between pesticide use patterns and residue profiles; and research on biological control of pests (rather than chemical control)

Appendix 2

Submissions on the Draft Position Paper

NZFSA received 13 submissions on the Draft Position Paper on the review of non-commercial wild food in New Zealand. Four were from hunting groups, three from Public Health Units (PHUs), three from local and central government agencies, one from an industry group and two from individual hunters. We also received some feedback from the hunting community at the SIKI Competition and Trade Show held at Taupo in September 2005. Most supported the review; however, many raised issues that were outside of the scope of the review (see Exclusions, Section 2).

The fourteen proposals included in the Draft Position Paper have been grouped into the following five main categories:

- information gathering
- information sharing
- interagency collaboration
- programme funding
- proposals for Māori.

Submitters made the following comments on issues in these categories.

Information gathering

There was general support from the submissions for initiatives to address the absence of reliable consumption and illness data and it was considered, particularly by PHUs, that such initiatives should be given higher priority.

The proposal to include an additional question about individual New Zealanders consumption of wild food in the Ministry of Health's 2007/08 Adult Nutrition Survey was seen as a good idea.

The Game and Forest Foundation recommended that research be undertaken to better understand the risks associated with privately harvested wild game animals, and it would be willing to assist in the design and implementation of such a study.

There was support for proposals to increase understanding about pesticide use patterns and residue profiles in wild game.

NZFSA has entered a Memorandum of Understanding with Landcare New Zealand. Poison information from this data will be a future source of information for monitoring the status of potential contaminants affecting wild food.

Information sharing

Submissions were generally supportive of initiatives to educate and inform the public on the dangers with wild food so they can make safe decisions about the wild food they collect and eat.

It was suggested that activities and information should be targeted to specific user groups, and that food safety messages developed should be simple, appropriate for the end user and easily accessible. Both the Game and Forest Foundation and the New Zealand Deerstalkers' Association offered to assist with education and awareness programmes for hunters.

Information accessible for commercial operators on NZFSA's website may be of assistance to recreational hunters. However, a view was expressed that web based systems alone do not suit the general recreational hunter and a communications system needs to be tailored to suit the hunting community. For example, information could be disseminated to recreational hunters when they apply for hunting permits. Rural school newsletters may also be a possible way to reach rural communities.

Feedback on possible useful topics for hunters included what they should look for in wild animals to enable them to recognise diseased animals before killing, how to check carcasses for poisons, what offal to eat, and how to properly process foods to eliminate the disease risk.

Educational material related to safe shellfish and to other wild food harvesting could be made available to the general public. One PHU suggested that NZFSA could develop new wild food resources along the lines of past resources, e.g. the Hangi and Umu booklets.

Interagency collaboration

Some submissions commented on the importance of interagency collaboration for increasing understanding on risks associated with wild food. One submission considered collaboration between NZFSA, the Animal Health Board, DoC and regional councils to be essential and suggested that there was potential for establishing a “one stop shop” for information on risks (toxins and diseases) in particular areas.

There was support for further collaboration between local and central government to devise a strategy to address water quality issues for shellfish. This work should include consistency of standards regarding water quality management in terms of pollution discharges and harvest criteria.

Programme funding

The Draft Position Paper included a proposal to consider the continued expenditure on monitoring for non-commercial shellfish biotoxins compared to other areas of activity relating to wild food that NZFSA could usefully undertake. Feedback from hunters suggests that there are other areas that NZFSA could usefully monitor, including toxin levels in wild game animals, as well as in fish and riparian life.

The New Zealand Aquaculture Council Inc expressed concern about any reduction in effort and expenditure on recreational shellfish monitoring. One submission stated that in the event of widespread illness in recreational shellfish gatherers, there would be a significant adverse flow on effect on the reputation of the domestic and export commercial shellfish sectors, through bad “PR” by association. New Zealand’s reputation in the world tourism market as a clean and green country would also be tarnished to a degree.

Other criteria were suggested, in addition to cost effectiveness, for reviewing the non-commercial shellfish monitoring programme:

- consumption data

- gathering-location data
- real risk assessment
- overseas experience and knowledge
- ownership of commercial data.

The New Zealand Aquaculture Council considered that the commercial sector should be stakeholders in the review process.

Proposals for Māori

The Draft Position Paper proposed that the best way to minimise foodborne illness amongst Māori resulting from the consumption of wild food, is to empower Māori to address the food safety issues themselves. This would involve Māori participation in decision-making, monitoring and surveillance, research, education and evaluation.

The Draft Position Paper also suggested that a process is put in place so that whanau, hapu and iwi can identify their concerns with regard to wild food safety and then, in consultation with NZFSA (and other government agencies as appropriate), decide what can be done.

One submitter who commented in this area asked whether traditional knowledge is limited to Māori, and whether there was an opportunity for consideration of other peoples' traditional methods to also be promoted.

Specific comments from the Māori Focus Group were

- A collaborative approach is essential. The partnership between the Crown and Māori, based on Treaty principles, provides the overarching framework for engagement. Māori should participate in decision-making, monitoring and surveillance, research, education and evaluation. Public Health Units, Local Authorities, and community health providers should be encouraged to develop strong working relationships with kaumātua, whanau, hapu, and iwi.

A collaborative approach would not only improve generic delivery and responsiveness, but could also allow kaupapa Māori initiatives to be incorporated into solutions and re-orient the sector (i.e. two world views coming together to deliver common outcomes).

There is a danger that the concerns and views of Māori will otherwise become buried in the general concerns and lost in the process. The way forward is to work together, adopting the principles of partnership, participation and protection.

- Investigate the establishment of a national network/process whereby communities can identify their concerns with regard to wild food safety and then decide with NZFSA (and other government agencies) what can and needs to be done. NZFSA could lift its profile within Māori communities.
- Research -
 - There is scope for commissioned research on traditional Māori food preparation, with emphasis on documentation and analysis of traditional methods to prevent process failures and to ensure continued safe food handling/production. Regaining tikanga/traditional knowledge perspectives is considered a high priority. Māori need to re-emphasise knowledge of traditional foods and food gathering practices and also to make sure there is information readily available on how to use these foods safely. Research specifically targeting these issues needs to be conducted by and with Māori, in collaboration with other agencies.
 - There is a lack of research and science relevant for Māori when, for example, they rely on shellfish for kai (food) and don't know what to do when warning signs go up. For many communities the priority is just to have kai on the table. By providing appropriate information and education about toxins and biotoxins in kai, the role of kaitiaki could be utilised to share risk management responsibility associated with wild food.
 - The biotoxin monitoring programme does not look at holistic aspects of shellfish safety such as pathogen contamination arising from poor water quality. There is anecdotal evidence that some people are taking fish/shellfish from around sewerage and storm water outlets. It could be valuable if information on pollution was more readily available.

Appendix 3

NZFSA Publications

at <http://www.nzfsa.govt.nz/animalproducts/publications>

Information pamphlets relevant to wild food

Animal diseases
Background on toxic honey
Hunting – wild animals
Notice for procurement control of wild pigs
Overview of recreational catch
Specific questions about homekill and recreational catch use
Toxic residues in wild animals
Trichinella spiralis

Other documents

A Guide to homekill and recreational catch: Animal Products Act 1999
As a producer, harvester or hunter am I covered by the Animal Products Act?
Can animal material and product move between the non-regulated and regulated system?
Frequently asked questions about vertebrate pest control
Harvesting and Processing of Wild Rabbits and Hares
Homekill and Recreational Catch, Animal Products Act 1999, Statement of Policy
Hunting pesticide free game: becoming an approved supplier
Kaimanawa Horses – information for purchasers
Listed homekill and recreational catch service providers
Notice of animal product (homekill and recreational catch service provider records and information) specifications
Proposed enhancements to the procurement, supply and processing of game: Animal Products Act 1999
Recreational hunting
Restricted Procurement Areas – information for hunters
Vertebrate toxic agents – registration requirements