

Office of the Minister for Biosecurity

Chair  
Cabinet Business Committee

## **REVISED POLICY GOVERNING THE COMMERCIAL USE OF UNDARIA—AN EXOTIC ASIAN SEAWEED**

### **Purpose**

1. This paper seeks Cabinet's agreement to a new regime for managing the commercial use of *Undaria pinnatifida* (undaria). The proposed regime allows for the greater commercial use of this species.

### **Executive summary**

2. Undaria, an Asian seaweed, was accidentally introduced to New Zealand in the mid-1980s. It is likely to have moderate adverse impacts on marine values, particularly environmental values. While undaria is now widespread throughout New Zealand some valued areas still remain undaria free.
3. There are potential commercial uses for undaria. The Ministry of Agriculture and Forestry (MAF) has undertaken a review of a 2004 undaria harvest policy that allows limited commercial harvest of undaria. The primary objective of the review was to determine the feasibility of allowing greater commercial use of undaria without significantly increasing its adverse impacts on existing or new sites.
4. As part of the review process MAF released a public discussion document in June 2009. Stakeholders' views were diverse and did not clearly support any one option presented in the discussion document.
5. As a result of the review, it is proposed that the 2004 policy be revised to allow greater commercial use of undaria. The general scope of the proposed regime includes: allowing undaria to be farmed in certain heavily infested areas; allowing undaria to be harvested when it is growing on artificial surfaces (e.g. marinas) or when it has been cast ashore onto the beach. The proposed regime prohibits the harvest of undaria when it is growing on natural surfaces, unless part of a programme specifically designed to control undaria.
6. It is proposed that undaria remain an unwanted organism under the Biosecurity Act 1993. This allows MAF to maintain national oversight over commercial use and constrain activities to those proposed for the new regime.

## Background

7. Undaria is an invasive Asian seaweed that was accidentally introduced to New Zealand in the mid 1980s. It is now found in most ports and harbours along the east coast of New Zealand, Taranaki, the top of the South Island, Stewart Island and Snares Islands / Tini Heke. The west coast of the South Island, large areas of the North Island's west coast, Fiordland and the Chatham Islands remain free of undaria. Where it is present undaria is not always in high density. There is no nationally led management of this species and limited regional initiatives.
8. Undaria has a moderate impact on all values that marine biosecurity aims to protect. The most significant impacts are on environmental values, through among other things, reduction in species richness, changes to native habitats and reduction in species abundance. Moderate impacts on other values, such as economic activities, include increased costs of harvesting farmed products, reductions in areas suitable for aquaculture, and increased costs of maintaining and cleaning vessels. Impacts are more or less severe in different locations.
9. Undaria is an unwanted organism under the Biosecurity Act. As such, any commercial use of undaria requires permission under the Biosecurity Act. A 2004 commercial use policy only allows undaria to be harvested in limited situations.
10. Potential commercial markets for undaria include: human consumption; health and pharmaceutical products; fertiliser; and fish food. It is difficult to estimate the commercial value of any New Zealand product as the limited scope of the 2004 regime has discouraged market development. Aquaculture New Zealand (AQNZ)<sup>1</sup> advises that the value of undaria would vary due to the quality, origin of the product and end use. It estimates that undaria could return between NZ\$ 500/t for bulk seaweed used in agricultural products through to more than \$1000/t for high grade undaria (such as for human consumption). However, based on overseas values, some argue that AQNZ underestimates the economic potential of undaria.
11. MAF has reviewed the 2004 policy in response to:
  - a Cabinet directive from the previous Government that officials review restrictions on the commercial farming of undaria [POL Min (08) 8/10]; and
  - a scheduled review incorporated within the 2004 undaria harvest policy.
12. The primary objective of the review was to determine the feasibility of allowing greater commercial use of undaria without significantly increasing its adverse impacts on existing or new sites.

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<sup>1</sup> Aquaculture New Zealand was formed to provide a single voice for the New Zealand aquaculture sector.

13. As part of the review process, MAF released a public discussion document<sup>2</sup> seeking comment on three options:
- Option 1: would allow harvest of undaria only when part of a control or by-product operation (status quo).
  - Option 2: would allow harvest anywhere undaria is established but prohibits farming.
  - Option 3: would allow harvest anywhere undaria is established as well as farming in heavily infested areas.

## **Comment**

### ***Proposed approach for managing the future commercial use of undaria***

14. For the purposes of this Cabinet paper, commercial use is classified as either harvesting or farming and defined as:
- harvesting – the process of gathering undaria, for commercial purposes, from areas where it has become:
    - established on natural or artificial surfaces; or
    - unattached (e.g. as a result of a storm) and cast ashore (beach cast);
  - farming – the process of actively seeding and/or breeding undaria for commercial purposes.

## *Overview*

15. As a result of the review, it is proposed that the 2004 policy be revised to allow greater commercial use of undaria. MAF considers that the proposed regime creates minimal additional risk over and above that already occurring. The scope of the proposed regime, and how it differs from the current situation, is outlined in Table 1.
16. The proposed regime is a variation of Option 3 presented in the discussion document, which allowed harvest anywhere and farming in heavily infested areas. It deviates from Option 3 in that:
- it prohibits the harvesting of undaria that is attached to natural surfaces, unless part of a control programme; and
  - it also considers the following factors, in addition to an area's level of undaria infestation, when identifying areas for farming:
    - the values<sup>3</sup> in, or within close proximity to, these heavily infested areas; and
    - local governments' controls and / or views on farming undaria, with specific regard to relevant regional pest management strategies under the Biosecurity Act and regional coastal plans under the Resource Management Act 1991.

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<sup>2</sup> Review of the Undaria Commercial Harvest Policy. June 2009. MAF Biosecurity New Zealand. ISBN 978-0-478-33875-1 (print); ISBN 978-0-478-33876-8 (on-line); ISSN 1176-8398 (print); ISSN 1177-7532 (on-line).

<sup>3</sup> MAF has already undertaken a project to document the geographic location and relevant information of different social, economic, environmental and cultural values in the marine environment including, the location of marine protected areas and sanctuaries and at risk and threatened species.

Table 1: An overview of the situations when undaria can be commercially taken under the existing and proposed regimes.

Activity	Under existing regime	Under proposed regime
<i>Harvesting</i>		
– when part of an undaria control programme	√	√
– as a by-catch of another activity (e.g. mussel farming)	√	√
– from natural surfaces, if not part of a control programme or by-catch of another activity	X	X
– from artificial surfaces, if not part of a control programme or by-catch of another activity	X	√
– as beach cast undaria, if not part of a control programme or by-catch of another activity <sup>b</sup>	X	√
<i>Farming</i>		
– in selected areas <sup>4</sup> already heavily infested with undaria	X	√
– the farm can source stock from different locations around New Zealand	N/A	√

<sup>b</sup> Limited to areas where the Fisheries Act 1996 allows harvest of other beach cast seaweed

17. MAF will need to determine the areas where it is appropriate to farm undaria prior to the implementation of the farming component of the proposed regime. To identify these areas, MAF will convene a group of experts to identify those areas around New Zealand that are heavily infested. MAF will then consider the values in the vicinity of these heavily infested areas and liaise with local government to determine their views and / or what controls on farming might be necessary.

### *Rationale*

#### Harvesting

18. It is proposed the harvest of undaria attached to natural surfaces be **prohibited**, except when taken as part of a control programme. The rationale being that:

- harvesting could disturb or remove the large native species (canopy species) in the surrounding area and lead to a proliferation of undaria;
- harvesting could have unknown impacts on associated and dependent species / fisheries e.g. paua, and rock lobster; and
- risks associated with harvesting undaria, as part of a control programme, will be outweighed by reducing undaria in localised areas.

19. It is proposed the harvest of undaria attached to artificial surfaces be **allowed**. The rationale being that harvesting undaria from artificial surfaces, such as wharves and marinas, will reduce the proliferation of undaria. In addition, there

<sup>4</sup> Applications to farm undaria outside heavily infested areas will still need to be considered, however, as the biosecurity risk of farming in areas with low levels (or no) undaria is high these applications are likely to be declined.

may be some potential biosecurity benefits by providing commercial incentives to land any undaria, collected as part of another activity (eg cleaning), rather than returning it to the marine environment.

20. It is proposed the harvest of beach cast undaria be **allowed** in the same areas as those where harvest of beach cast seaweed is allowed under the Fisheries Act.

The rationale being that:

- in general, the likelihood of a biosecurity impact as a result of harvesting beach cast undaria is likely to be minimal as the undaria has already been naturally removed from the marine environment; and
- the wider impacts of harvesting beach cast undaria on the ecosystem are likely to be similar to the impacts of harvesting other beach cast seaweeds.

### Farming

21. It is proposed that farming in selected heavily infested areas be **allowed**. The rationale being that minimal additional risk of spread is created as:

- undaria is already present in the five main marine farming areas<sup>5</sup>;
- the undaria inadvertently growing on the marine structures in the above areas is already able to grow to maturity and release reproductive material back into the environment; and
- the movement of equipment and stock already occurs between these marine farming areas to support other types of marine farming operations.

22. In addition, only allowing farming in certain heavily infested areas, rather than all heavily infested areas, allows MAF to consider:

- the values<sup>6</sup> in, or within close proximity to, the heavily infested areas to be considered; and
- the views of local government with regard to farming undaria in areas within their jurisdiction.

23. To reduce incentives to spread undaria, it is proposed that: heavily infested areas be determined based on the state of infestation at a date that predates the release of the revised policy; and that these areas not be reviewed for at least five years.

24. It is also proposed that, in order to stock a farm, the movement of the different undaria strains already in New Zealand be **allowed**. The rationale being that:

- internal movement controls would be very difficult to enforce as only limited baseline information exists on the extent or distribution of different strains around New Zealand; and
- there are no controls on other vectors inadvertently moving different strains of undaria around New Zealand.

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<sup>5</sup> Firth of Thames, Marlborough Sounds, Golden Bay/Tasman, Banks Peninsula and Southland (Bluff and Stewart Island).

<sup>6</sup> MAF has already undertaken a project to document the geographic location and relevant information of different social, economic, environmental and cultural values in the marine environment including, the location of marine protected areas and sanctuaries and at risk and threatened species.

### *Legislative and management regime*

25. It is intended that undaria remain an unwanted organism, under the Biosecurity Act, and as such any commercial use will require a Biosecurity Act permission. Retaining undaria's unwanted organism status will support the proposed regime by:
- ensuring national oversight, important where regional neighbours may have differing objectives in relation to undaria; and
  - constraining harvesting and farming to the proposed scope, which will ensure any harvesting or farming does not significantly increase undaria's impact.
26. The primary legislative regime governing the commercial **harvest** of undaria will remain unchanged, and will consist of permission under section 52 and/or 53 of the Biosecurity Act. Unlike for the harvest of other marine species, a fishing permit under the Fisheries Act 1996 will not be required to harvest undaria. A special permit, under the Fisheries Act, may be required if the harvesting technique is out of the ordinary or if the proposed areas for harvest are generally closed to fishing.
27. To **farm** undaria, permission under the Biosecurity Act will be required in addition to generic legislative requirements relating to aquaculture. The proposed regime for undaria is consistent with reforms around aquaculture presented to Cabinet on 15 March 2010 [CAB Min (10) 9/2].
28. It is proposed that an applicant would secure the necessary Biosecurity Act permission for an undaria farm **prior** to seeking approval to establish an aquaculture operation under the Resource Management Act and Fisheries Act (if necessary). There will be no charge for a biosecurity permission.
29. To the extent possible, MAF will streamline the process for gaining the Biosecurity Act aspects of any approval to harvest and/or farm undaria. This will be achieved by:
- MAF taking the approach that permission to harvest will generally be issued as long as:
    - concise information is provided on the applicant, the operation and the proposed use of the end material;
    - the proposed activity is within the scope of the new policy;
    - the proposed activity does not contravene a regional pest management strategy, regional coastal plan, or other recognised biosecurity management activity; or
    - the proposed activity is not considered a high risk activity because of, among other things, its location to recognised high value areas;
  - MAF identifying, prior to the implementation of this policy, selected heavily infested areas where MAF would consider approving farming applications; and
  - MAF developing a standardised template for farmers that identifies potential biosecurity risks and how they can be mitigated.

30. It is proposed that any permission issued to harvest or farm undaria include generic conditions to reduce the risk of the proposed activity. MAF does not expect problems with compliance as the types of conditions to be placed on undaria farms are likely to be based on good husbandry practices that prevent the spread of nuisance species generally. MAF issues Biosecurity Act permissions for a range of different unwanted organisms and is currently reviewing the resource implications of ensuring compliance with such permissions.

### ***Stakeholder feedback***

31. Forty one submissions were received on the discussion document from a wide range of stakeholders including government, industry, environmental groups, Maori, science providers, recreational organisations, and individuals.

32. Substantive issues raised by submitters and how they are addressed in the revised policy are outlined below.

- Concerns about the impacts of harvesting undaria on the wider marine environment are addressed by prohibiting harvesting from natural surfaces.
- Concerns about the impacts of harvesting beach cast undaria on the food chain of native marine species are addressed by prohibiting beach cast harvest in ecologically sensitive and vulnerable sites.
- Concerns were raised that allowing farms to source stock from different locations around New Zealand will result in the spread of different strains of undaria, potentially leading to increasing the overall impacts. MAF does not consider that it is possible to enforce measures preventing the movement of stock around New Zealand and as such did not regulate this activity under the new regime.
- Concerns were raised that a new regime for undaria should not be established until decisions have been made on the current aquaculture reforms and foreshore and seabed legislation. The new regime for undaria will not have any impacts on these major policy / legislative initiatives as it does not propose any changes to legislation or regulation.
- Concerns were raised that the discussion document under-represented the negative impact of undaria on New Zealand's marine environment. MAF did not consider it necessary to widen the scope of the current review as:
  - no substantially new information was provided on the impacts of undaria that would significantly challenge the previous risk assessment; and
  - MAF determined that the proposed regime could be implemented without significantly increasing the adverse impacts of undaria.

33. Seventeen submitters supported retaining undaria's unwanted organism status under the Biosecurity Act to provide national consistency, provide access to legislative tools (if required), and ensure the public continue to perceive undaria as an invasive species. In response to these concerns, and to ensure the new regime can be constrained to within its scope, undaria's unwanted organism status will be retained.

## **Next steps**

34. If Cabinet approves the proposed regime, MAF will be able to implement the harvesting component immediately. MAF will need to complete some initial work to establish the farming component of the new regime before it can be implemented (as noted in paragraphs 17). MAF expects to be able to complete this work within 6 months of Cabinet's approval.
35. After this initial period, it is expected that applications to harvest and / or farm undaria will become business as usual with MAF and local government in that:
- MAF will consider proposals to harvest and / or farm undaria along side similar section 52 and/or 53 Biosecurity Act approvals for unwanted organisms; and
  - local government and the Ministry of Fisheries will consider requests to farm undaria in the same way they would consider requests to farm other new species.

## **Potentially contentious issues**

36. Stakeholders' views on the commercial aspects of undaria are diverse and should be managed. The release of a revised policy on this issue may raise concerns by some stakeholders about the impacts of undaria on the marine environment. In contrast, other stakeholders are likely to be pleased at the opportunity to develop undaria-related industries.
37. In an attempt to address concerns by some stakeholders, MAF will ensure that the rationale underpinning the proposed approach is freely available (see paragraph 44).

## **Consultation**

38. The following agencies had an opportunity to provide input into the development of the revised policy as well as the contents of this document: the Department of the Prime Minister and Cabinet, Treasury, the Ministry of Economic Development, the Department of Conservation, Te Puni Kokiri, Environmental Risk Management Authority, Ministry for the Environment, Ministry of Fisheries, and the New Zealand Food Safety Authority.
39. Stakeholders were provided with an opportunity to provide input into the development of the revised policy via submissions on a discussion document released in June 2009.

## **Financial implications**

40. There are no financial implications of implementing the revised policy.

## **Human rights**

41. The proposals in this paper are consistent with the New Zealand Bill of Rights Act 1990 and the Human Rights Act 1993 and have no gender implications.

### **Legislative implications**

42. There are no legislative implications from implementing the revised policy.

### **Regulatory impact analysis**

43. The regulatory impact analysis requirements do not apply to this proposal, as it does not involve changes to legislation or regulation for the purposes of the Regulations (Disallowance) Act.

### **Publicity**

44. I will lead any media response to the release of a revised policy on the commercial use of undaria. Any announcements on this issue will clearly outline the rationale for the proposed approach and align with recent decisions relating to generic aquaculture reforms.

45. Following decisions and any announcements on the revised regime for undaria, MAF will distribute the revised policy to interested individuals and organisations. MAF will also publish the revised policy and associated Cabinet paper on their website.

## Recommendations

46. I recommend that the Cabinet Business Committee:

- 1 **note** that the Ministry of Agriculture and Forestry (MAF) has undertaken a review of the 2004 undaria commercial harvest policy.
- 2 **agree** that the scope of the proposed regime for managing the commercial use of undaria include:
  - prohibiting harvest when it is growing on natural surfaces, except when part of a control programme;
  - allowing harvest when it is growing on artificial surfaces;
  - allowing harvest when it is cast ashore in the same areas allowed by Fisheries Act controls; and
  - allowing farming in selected heavily infested areas;
- 3 **note** that under the proposed regime, undaria will remain an unwanted organism under the Biosecurity Act to constrain activities to the scope of the proposed regime and ensure a nationally consistent application of the policy;
- 4 **note** that MAF will need to complete some initial work to establish the farming component of the regime, but that the harvesting component can be implemented immediately;
- 5 **invite** the Minister for Biosecurity to announce the release of a revised policy on the commercial use of undaria; and
- 6 **note** that the Minister for Biosecurity intends to request that MAF publish the revised policy and associated Cabinet paper on its website.

Hon David Carter  
**Minister for Biosecurity**

/ /2010