

# FISHERIES DECLINE (3.4) & REVIEW (3.5)

## OVERVIEW

When fish are fished unsustainably the number of fish declines. This has environmental, social, cultural and economic consequences.

The first set of activities provided here investigate the consequences of declining fish stocks, and look at some real world examples of fisheries / kai moana species that have declined and how the actions that have been taken here in Aotearoa New Zealand.

The second set of activities review key concepts learned across topic 3.

See also slide sets [When fish stocks decline](#) and [Reviewing key concepts](#).

## FOCUS QUESTIONS

- *How are people and environments impacted when fisheries are fished unsustainably?*
- *What new words and concepts have we learnt?*

## LEARNING OBJECTIVES

- Explain two or more impacts on people and environment when fisheries are fished unsustainably
- Use scientific and fishery related vocabulary

## LOCATION

Indoors

## DURATION

45 mins +

## LEVEL

Level 3 – 5+

## CURRICULUM

Science, Social Science,  
Tikanga-ā-iwi, Geography,  
Pūtaiao, Hauora

**Key competencies:** Thinking;  
Managing Self; Relating to others

## NEXT STEPS

Other topics

- Well managed fisheries (5.1)
- Environmental impacts of fishing (4.1)

Prior learning:

- Overfishing (1.2)
- Sustainable fishing (1.4)




# MATERIALS

- Slide set [When fish stocks decline](#) (including table on slide 33)
- This [Teacher Outline](#)
- Copies of news items (page 6) about fisheries in decline (one item per group)
- Question cards (page 7; one per group)
- Something to write on and with
- Slide set [Reviewing key concepts](#)
- Internet access – Kahoot and/or quiz slides (slides 36-45)

# PROCEDURE

## [When fish stocks decline](#)

1. BRAINSTORM what impacts there are on the environment and people when fish stocks decline and CATEGORISE answers under one of the three headings: (1) Environmental, (2) Economic and (3) Social and Cultural (Category diagram provided on slide 33) [slide 33]
2. READ about some Aotearoa New Zealand examples of fish stocks declining and quota being cut by completing the following activity
  - Break into small groups
  - Each group has one of the following news items (page 6). Spend 10 - 20 minutes reading and discussing the article using the questions provided (page 7) to guide discussion.
  - Present back to the wider group.
  - Conduct a 'values continuum'. Learners place themselves on the values line between one end of 'Reduce fishing – I am In favour of reducing quota/catch' and the other end 'Keep fishing – I am against reducing quota / catch'. Learners must be prepared to justify their position. Then have them take on the position of a commercial fisher – where would they stand?
  - INVESTIGATE rāhui as a traditional response to fish stock decline [slide 34].
  - WATCH the [Guardianship](#) [4:48] film clip that looks at kaitiakitanga and rāhui in response to declining fish stocks.
3. Review: Use the following inquiry to reflect on what we have learnt? What more would we like to learn. Where might we find this information?

- 
- a. What different perspectives exist around the decline of fish stocks and the removal of access to declining fish?
  - b. How might a decline in fish stocks and/or ban on taking kai moana affect you and your family?
  - c. How do we know when a fish stock is declining? What changes occur when fish stocks decline and people are banned from fishing a certain species?
  - d. How do bans, reductions in quota, rāhui actually work?
  - e. Who has responsibility for deciding when a stock is declining and who decides what action should be taken?
  - f. What do bans, rāhui, reduction in quotas mean for people in real life?
  - g. Why do fish stocks decline and why do we even need to take action?

#### Review of key concepts

1. ACT out your own definition of one of the key concepts covered in this topic.
2. Complete the topic summary QUIZ on Kahoot or make your own Kahoot [slide 35] or use the review quiz on slides [35-45] (Answers provided).

## KEY WORDS

Impacts

Fish stocks

Social and cultural sustainability

Rāhui

Environmental sustainability

Economic sustainability



# CURRICULUM LINKS

## **Nature of Science (Level 3-5)**

- Investigating in science
- Communicating in science
- Participating and contributing

## **Living World (Level 3-5)**

- Ecology

## **Science (Level 6+)**

- Participating and Contributing
- Ecology

## **Social Science (Level 3-5)**

- Understand how cultural practices vary but reflect similar purposes (Level 3)
- Understand how people make decisions about access to and use of resources (Level 3)
- Understand how formal and informal groups make decisions that impact on communities (Level 4)
- Understand how people's management of resources impacts on environmental and social sustainability (Level 5)


## **Geography (Level 6, 7, 8)**

- Geographic research
- Contemporary New Zealand geographic issue
- Geographic topic at a global scale
- Application of geographic concepts

## **Pūtaiao**

- The Natural World: The Biological Environment: Investigate the effect of human actions, and natural processes, on an Aotearoa ecosystem (Level 6+)

## **Hauora**

- 
- Relationships to earth and sky (natural environments) (Level 4+)

**Tikanga-ā-iwi (Level 3-5)**

- *Kotahi tonu te matua o te tangata Māori, ko Ranginui e tū nei, ko Papa-tū-ā-nuku e takoto nei.* Place and Environment
- *E tama, e hine, tangata i ākona ki te whare, tū ana ki te marae, tau ana.* The Changing World
- *E kore e ngaoko te rākau ki te tīkina i te pūtake whakangaoko ai engari, me tiki ki te matamata.* The Economic World





## NEWS ITEMS

1. Pāua quota cut in half in South Island to allow stocks to recover  
<https://www.stuff.co.nz/environment/117495745/pua-quota-cut-in-half-in-south-island-to-allow-stocks-to-recover>
2. Quota cuts threaten fish industry jobs <http://www.stuff.co.nz/national/45011/Quota-cuts-threaten-fish-industry-jobs>
3. Hoki quota cut to cost millions - fishing industry  
<https://www.rnz.co.nz/news/national/367402/hoki-quota-cut-to-cost-millions-fishing-industry>
4. Fishing industry 'rolls with punches' on tarakihi catch 10 percent cut  
<https://www.rnz.co.nz/news/national/399922/fishing-industry-rolls-with-punches-on-tarakihi-catch-10-percent-cut>
5. New Zealand hoki quota owners opt to cut catch...  
<https://www.undercurrentnews.com/2018/09/26/new-zealand-hoki-quota-owners-opt-to-cut-catch/>
6. Fishing industry announces 22 per cent reduction in hoki quota  
<https://www.stuff.co.nz/business/107405977/fishing-industry-announces-22-per-cent-reduction-in-hoki-quota>
7. Tarakihi quota cuts  
<http://www.gisborneherald.co.nz/local-news/20191002/tarakihi-quota-cuts/>
8. Pāua populations plunge due to overfishing: 'They're talking tons'  
<https://www.rnz.co.nz/news/national/407177/paua-populations-plunge-due-to-overfishing-they-re-talking-tons>



## QUESTIONS (2 COPIES – FOR EASY PRINTING)

### Questions:

1. What happened?
2. When and where did this happen?
3. Why did this happen?
4. How will this affect (a) the environment (b) people
5. What different viewpoints are there about this?
6. What action (if any) do you think should be taken?

### Questions:

1. What happened?
2. When and where did this happen?
3. Why did this happen?
4. How will this affect (a) the environment (b) people
5. What different viewpoints are there about this?
6. What action (if any) do you think should be taken?