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Mana Tohu Mātauranga o Aotearoa
New Zealand Qualifications Authority

Level 3 Education for Sustainability 2024

90831 Analyse the impact that policies have on a sustainable future

EXEMPLAR

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Marine Policies in New Zealand to Protect Native Species

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Brief Statement

Environmental policies set in New Zealand can provide stability to biodiversity, global warming, pollution, marine, etc policies in New Zealand. This report will analyse the purpose and validity of two policies regarding issues to the New Zealand marine ecosystem, 1) Marine Mammal Protection Act 1978, and 2) Marine Protected Area Policy 2005, 2010, both created by the Department of Conservation. Globally, marine life is an issue to modern day society as hopes for a sustainable future will not be maintained. Therefore, the nation of New Zealand had created these two policies to highlight change and responsibilities to increase marine biodiversity and decrease harm to marine life.

Policy 1:

Section 1: Introduction

The 'Marine Mammal Protection Act 1978' was created to focus on maintaining sustainable actions to protect the marine environment and biodiversity. The policy likes to target suspects of whom may harm marine mammal species living in New Zealand waters to receive appropriate consequences of their actions. Before the 1978 policy was set in place, fish-related species were under threat in New Zealand waters. Therefore, suspicion of issues relating to marine biodiversity like food chains were the result of the reduction of species. So, with the implementation of the Act, it reassures marine-related organisations and the people of New Zealand to have a healthy ecosystem contributing to a sustainable future. The Department of Conservation, along with other marine-related groups/organisations like Project Jonah formed the agreement of the protection act to marine mammals in New Zealand. The framework of the MMPA 1978 includes regulations of authorial power, and legal actions to be performed to reduce injury/death to marine mammals.

As said above, Project Jonah is a voluntary organisation helping with the implementation of the policy in New Zealand. Project Jonah had “helped develop the 1978 Marine Mammal Protection Act, the first of its kind in New Zealand”. (*Project Jonah, 2024*). This organisation pushed the policy to happen as their project had the purpose to protect and help marine animals. They did this through social awareness campaigns, advocating, raising awareness of the issue, submissions to the Ministry for Primary Industries (MPI), etc.

Section 2: Policy Development Progress/ Background

Using PESTLE, there are many ways the policy has been developed due to the influence of external forces.

Economic:

Tourist attraction of marine mammal watching is a popular activity done in countries like New Zealand. Growth development to the economy of the industry allows bigger improvements and plans to environmental areas. In 2019, New Zealand’s GDP has a total of 5.5%, equivalent to \$16.2 billion NZD. (*Ministry of Business, Innovation and Employment, 2024*).

Yet, currently New Zealand's tourism funds have a huge economic contribution to our country. Since Covid-19, globally and domestically, the world’s economy has dropped. Supply chains, organisations, and travel and tourism industries have also dropped, causing a major economic loss and lower GDP. The graph above shows a graph of New Zealand’s real



(CIEC Data, 2023)

GDP over the course 3 years, from 2020-2023. In July 2020, the global pandemic economically dropped the GDP into the negatives with -9.590. The drastic change is located in early to late 2021. During this period, the national GDP went up to 18.822, meaning that the GDP increased by 28.412 per capita. However the economy decreased again for the following years as seen at the end result of early 2023 being 1.795 GDP per capita. The decrease to the economy of the country can put the protection of marine mammals at risk due to the lack of resources, tools, etc.

Sociocultural: As there had been many environmental groups that were aware of the issue of overfishing and the public harm to marine mammals, the creation of the act was a way to protect these mammals. These groups can include Project Jonah, International Whaling Commission, and other voluntary marine groups. Advocating and raising concern for the issue helped build the implementation for the protection of marine mammals in New Zealand.

Mammals such as sea lions and dolphins hold such cultural significance to the country and can influence the implementation of the plan due to it being so treasured. Sea lions are viewed as the guardians (kaitiaki) and dolphins being the spiritual guardians as they are a good “omen” to Maori. Maori “atua” like other cultural beliefs enables the religions to believe the appointed God

to be appointed an appropriate duty to watch over and protect groups and/or individuals. An aspect of this is the consideration of the concept of “Te hā o Tangaroa”. Although the MMPA 1978 does not mention “Te hā o Tangaroa”, it does recognise certain principles regarding the “life force of Tangaroa, the Maori God of the sea and fish”. (S. Ulrich, 2022). These species can also hold public interest in tourism giving opportunities to view the culture and increase New Zealand tourism. (R. Constantine, 1999).

Environment:

Globally and nationally as a country, environmental issues started to arise in the 1970s. Several legislations and environmentally-interested groups like Green Party NZ, Reserves Act, and of course the Marine Mammal Protection Act. As the Act focuses on specialising on the protection of marine mammals, and other considerations like pollution, and climate change can also impact the marine habitat. Toxic chemicals found in air and waste pollution can interfere with a species' senses. The ability to direct and communicate with other mammals will be negatively affected due to suffrage to harm to one's health. Climate change on the other hand, with alteration of sea levels and sea temperatures can impact food supply to mammals. (Marine Mammal Commission, 2024). Recreational activities placed in marine areas can affect marine mammals. Intense amounts of sound pollution developed on waters can damage mammals hearing, make an impact on their behaviour, and communications. (L. Ellis, 2024). Damage to mammal hearing is specified mostly towards whales and dolphins. These sounds can be produced from “transportational technologies”, also more commonly known as mortality, e.g. boat strikes, strandings, etc, are able to create large sounds to interrupt the recovery and/or marine life of species. Additionally, reduced biodiversity and loss of nutrients to the marines affected. If this were to happen, the food chain will be minimised and ecosystems would be vulnerable to these environmental changes. Problems like this, humans would not live up to the acceptance of maintaining the responsibility of keeping a healthy marine ecosystem. However, people are the main cause of this issue. Pollution of waste, noise, and air, and climate change all come from the same source of human activity. Environmentally, the implementation of the Act will allow a reduction in these problems and control power over the protection of marine mammals.

The Marine Mammal Protection Act 1978 includes practices such as permits, committee inclusions, reports, and penalties.

Permits: Sections have explained the application, conditions, register of marine mammals and granting of a permit. A person who holds a permit under the Director-General, and the “binded” of the Crown and Minister/Department of Conservation (DOC). People without the permit are prohibited from taking mammals which acts as a protection blanket from the Act.

Committees and agencies: The responsibilities of maintaining the marine mammals protection and population control relies on committees and agencies who are set in the Act. These include groups such as the Department of Conservation, or Fisheries New Zealand.

Reports: Related injury or death of marine mammals are to be reported to officers, the Director-General, and the DOC. Marine mammal officers have the power to inspect and search as of the requirements for the Act. (New Zealand Legislation, 2024). The practice of reporting for such activities can help authorities to register these situations and prescribe penalties.

Penalties: Violations and breaches of the Act will result in penalties like fines. These fines can go up to such numbers of \$10,000. (*New Zealand Legislation, 2024*). This is to keep control of people around marine mammals and to be cautious of the fines related to it.

Attended practices such as species protection, management of human interactions, and regulations complying with Treaty obligations.

Protection of species: As the protecting marine mammals is the main point of the Act, management towards maintaining and rehabilitation of key areas in New Zealand water.

Recreational activities: Human interactions such as vessels approaching close to marine mammals. These activities include risks of incidents which can occur causing the management team to address these issues.

Treaty obligations: The MMPA 1978 is to comply and give into the Treaty of Waitangi's principles. On top of this, the Act should contain levels of support to international involvement in marine mammal management. (*R. Suisted, D. Neale, 2004*).

Section 3: Discussion of Policy Implementation

The Department of Conservation has developed the 1978 act for the protection of marine mammals in New Zealand. Therefore, the department is responsible for actions held by the act. In the discussion of implementing the policy, major sections were to be talked about.

Practice 1: Management Plans and Strategies

To be able to improve and maintain the preservation of marine mammals, management plans and strategies are needed to help guide the foundations. The policy is always in need of more ideas to build the marine ecosystem, therefore, these plans allow discussion and shared responsibilities to prevent injuries to marine mammals. The 'Conservation Management Strategy' (CMS) enables implementation of management practices to assist local iwi and communities. In the Marine Mammals Protection Act, section 3C, subsection 1 reads "every conservation management strategy shall establish objectives for the integrated management of marine mammals under this act" . (*New Zealand Legislation, 2024*). While the CMS may only be required to "establish objectives" for the Act under New Zealand legislation. Partnerships with other organisations are set globally to aim for higher and achievable goals. This allows global incorporation and contribution to discuss various issues surrounding marine mammals in the world today. Therefore, as a result of these encounters, it enables global plans to ensure benefit to protection of other environmental-related concerns. Another management plan is the 'Population Management Plan'. Under the Marine Mammal Protection Act, the preparation and approval for the population management plans should be followed. This is included in section 3H, which overall talks again about the power the Director-General holds and the roles they are needed to play. The responsibilities this role holds to the preparation and approval of the plan is large. For example, in subsections 1a-m, talk about the acts draft, submission, and publish requirements which include public participations, summaries, consultations with the board, etc. Other subsections like 2a-c, are regarding the notices such as maximum allow abilities or inspections from the Department of Conservation (DOC) held in the gazette. These maximum allowed levels towards fisheries fall under the topic of the protection for marine mammals in

New Zealand. Because this issue holds the mortality and life to a distinct mammal, this must be notified in the gazette, for the public.

Practice 2: Authority, Power, Restrictions

Authority and power given to marine mammal officers allowing reassurance and protection to marine mammals. Officers are able to board any vessel with the authority of the Director-General, for the appropriate uses which are contradicting the movement of marine mammals. This is applied in section 12, which applies the accommodation and subsistence of officers. Then the power of search in section 13 is again used for officers. The main idea of this section is for officers to have control to approach anyone as a suspect of breaching the Act. Yet, are unable to do so without a legal pilot/owner of 'hovercraft'. In section 15 reads the protection towards officers for allowance of carrying out regulations. Section 16 is for the report of accidental death or injury of a marine mammal. Subsections 1- 3 contain information towards report details to officers. Therefore, when a report for a deceased or injured mammal is called, the officer is needed to carry out plans to resolve, and convict offences.

Restrictions involving marine mammals will lead to certain penalties for officers. To determine the right for a person's action and responsibility, they must hold authenticity or a permit. Sections including the restrictions include: Section 4, is the restriction for holding/taking possession of marine mammals. Section 22, restrictions to respect sanctuaries. Section 23, the penalties for committed offences. Section 27A-I, infringement orders. These sections cover all areas which range to get the result of legal actions or fines. This enables control to humans who may harm the mammals. Therefore, there are certain things people will be able to do to disturb the marine environment. This means if someone were to disobey the rules, their privileges will be taken away depending on the damage made.

Depending on the granted permit, a person is allowed to hold their activity in the given area/situation. A person may like to register a marine mammal permit via section 5- 10. Conditions of the permit are given in section 7. These include requirements regarding the taking of marine mammals in subsection a and b, methods and equipment used and restrictions used with the permit is in section 1 subsections c-e, section 2 and 3, and the authorisation of the permit in section 1 subsections f-g. Section 28 reads the regulations for the issue of permits. From subsection 1b-e are the prescribable conditions under the Act.

Practice 3: Marine Mammal Sanctuaries

The Department of Conservation is responsible for the marine mammals sanctuaries. Like said before the sanctuaries are too respected by the public. These areas are not to be owned by other national parks as an order from the Ministry is to impose restrictions if actions are applied. The sanctuaries allow marine mammals to be protected by anthropogenic impacts. (*Ocean Science Consulting, 2013*). Section 21 is about the "advisory, research, and technical committees" which relates to the policy implementation as this requires for meetings to be set to report marine mammal related issues. This enables a very precise and easy way for groups to investigate certain issues relating to marine. By implementing the policy, the Department of

Conservation is in charge to lead and take control/ responsibility over the Act. With the discussions listed above, from plans to authority from the Act, these are all entitled and administered to this department.

Successes and Challenges:

With the intended practices explained above, the Act had performed many successes to marine life, however there are also negatives to this. The legal framework of the Act enabled an increase of protection to other marine areas and recovery to many species.

- In terms of commercial activities, the spread of public awareness of protecting marine mammals was positive, allowing minimal disturbances to mammals while increasing and stabilising the population.
- Authority and permits to the minimization of species being harmed can also be an area of the policy. By implementing these regulations, officers are given the right to investigate marine mammal issues in New Zealand waters. Therefore, regarding the control of the public, it allows more attention to the protection of these mammals.

However, the negatives of this would be issues regarding tourism and species decrease.

- Although the policy does have protection to marine mammals and has authorised marine mammal officers to help control this, there are still issues to a few species population.
- Species such as the NZ sea lions, Maui Dolphins, Hector's dolphins, and Bryde's whale, have been on the radar of close extinctions. As said before sea lions and Maui Dolphins of New Zealand are considered to have a cultural significance to many. With Act's purpose of keeping the support both the community and marine mammals wellbeing from harm. This would not regulate well with their intentions with the creation of the policy. Discussions regarding the extinction of Hector dolphin have been a hot topic to New Zealanders recently. On March 23, the SailGP 2024 was cancelled due to marine mammal activity in the racecourse. (*S. Kemp, 2024*). The cancellation of the event led to many public discussions including if the cancellation was even necessary. People like the chief executive of SailGP, Sir Russel Coutts said about the species of Hector's dolphins not being endangered. This sparked heated controversies among the public including dolphin expert and professor Liz Slooten. Slooten was caught in these discussions, completely disagreeing with Coutts, yet relieved with the agreement of cancelling the event. (*1News, 2024*). These public discussions can be seen more often due to the upbringing issue of the close extinction of these marine mammals.
- Regulations regarding vessel interactions with marine mammals have also been an issue with tourism. (*R. Constantine, 1999*). With the regulations of protecting marine mammals from harm's way, less interaction with mammals are to be shown. Therefore, affecting tourism and the economy.

Section 4: Conclusion

In conclusion, the Marine Mammals Protection Act 1978 is to provide reassurance to marine mammals in the New Zealand waters. From the four pillars of sustainability, the environmental and social aspects have been created most in relation to the Act. Because the Act is revolving around species of marine mammals located in New Zealand waters, and the protection and management needed to do so.

The environmental aspect of the Act concludes with both its successes and negative impacts. The success of the Act enables priority for marine mammals safety and development. Therefore, they do this by prohibiting harm like injuries to all marine species with legal management and actions to outlaw further incidents. However, the negatives with the regulations presented in environmental terms is for the inconsistency to control all the environmental effects like seafloor habitats and biodiversity of mammals. As not all areas of the regions are protected with the power of implementing marine reserves, improper management and tools of the policy is utilised.

Socially, the Act is responsible for any risk of injury to marine mammals so with the incorporation of legal actions and authority of search from marine mammal officers allow less accidents to occur. With the creation of permits, few recreational activities are allowed to occur, letting the tourism industry open up, leading to economic benefits as well. Yet, potential of losing cultural significance due to improper protections and management to specific areas lead the Act to its negative side. Concerns regarding the enforcement to these areas can cause public discussions and debates to other related marine issues like rights of Maori benefits. These include fishing rights to Maori, or clarity of size of marine reserves that are not flexible to Maori. (*N. Taylor, B. Buckenham, 2003*).

The MMPA 1978 consists of regulations that contribute to a sustainable future. As said above, the management included in the policy to protect harm from any marine mammal is under the Department of Conservation's concern. The cooperation between other marine mammal specialised committees and agencies as viewed in section 21 of the Act. The allowance of cooperation and management of protection gives access to feel that the future will also be able to hold the Act as well as right now. Therefore, biodiversity for marine mammals enables a healthy ecosystem which is key to a sustainable future. Being able to preserve and restore the nature's wellbeing can effectively aid the biodiversity of marine species living in New Zealand waters. However, not only the species living in the ocean will be benefited from this, but also for humans and plants, ensuring a beneficial and sustained future for humanity.

Policy 2:

Section 1: Introduction

Marine Protected Area Policy 2005

The 'Marine Protected Area Policy 2005' is another policy pushed by the Department of Conservation. The policy aims to protect certain areas in the New Zealand marine waters, manage and implement biodiversity conservation. The Department of Conservation implemented this plan and was pushed due to a number of reasons. These included international policies, community-led actions and research attention. "The form of marine protected areas trace their origins to the World Congress on National Parks in 1962". (Wikipedia, 2024). Due to this and the Marine Mammal Protection Act 1978, New Zealand were highly influenced to also implement this policy. The main way of raising awareness of the issue of threats towards marine mammals can be helped by New Zealand locals and communities. They were able to take action before the policy was made, which influenced many citizens to go against the issue and improve the sustainability of New Zealand's marine environment. Furthermore, the research to back up the resolution of implementing a policy to protect marine areas were scientifically proven by experts.

Section 2: Policy Development Progress/ Background

The influence of external forces can be found using the analysis tool of PESTLE.

Political: The main concern at this point is the issue with existing rights and properties people hold, which are being affected by the new governmental made protected areas for marine life. Thus, challenges between balancing conservations and the public. Public judgement and view of issues/activities surrounding the regulations of the act can hold many political impacts to New Zealand. Collaborations with authorial organisations and inclusiveness with "people of the land", tangata whenua, allow this to happen. As a political view, existing properties and held activity areas will conclude with conflict within communities with the same problem. Eventually, this would also arise economic external concerns such as restrictions to vessel interactions with marine mammals to be reduced. Therefore, this transcends the economic value for the fisheries industry as well as the tourism industry. However, this may do the opposite as there could be potential of more support to these industries, managing costs. However, the policy will have more chances to raise awareness of the protected areas to increase biodiversity.

Environment: One of the main purposes of the policy is the allowance of protection to marine species and managing the environmental state of reserves. This enables assurance to marine mammals and local communities that governmental authorities will ensure stable conditions within the marine protected areas. Again like the MMPA 1978 policy, global impacts like global warming and pollution can effectively give the policy positives, by using the power and authority to prohibit recreational activities like mining, dumping, etc. Activities like these can release toxicants and pollutants affecting the environmental and social sustainability to protected reserves for marine mammals. With the implementation of the policy, this enables more and better resources to be conducted within investigations for the purpose of bringing back and increasing marine biodiversity.

A variable to consider is the effect Maori will have on the implementation of the policy. These can include:

Cultural: Religious practices such as fishing are regarded as a sacred activity to Maori and are often prayed upon to their beliefs. When the policy is implemented, they are to be aware of the Maori customary fishing rights. These rights allow practices to be legally recognized and are to be performed as threats to Maori identity bring cultural significance to connections of Maori terminology. Therefore, these exercises can be passed down to future generations.

Values: By the implementation of the policy, values of Maori should be considered due to the historical background of New Zealand. The Treaty of Waitangi includes confirmation of the right of “full exclusive and undisturbed possession”. (*New Zealand Legislation, 2024*).

Attended practices are needed to manage the MPA and by doing so, the listed below allows this to happen.

Committee involvements: Involvements of other authorised councils, conservation and marine users, and tangata whenua. Again, this allows inclusiveness of stakeholders and shared responsibilities between groups regarding the decrease in marine area issues. This means management towards the health of the marine ecosystem is shared between the stakeholders listed in the policy.

Gap analysis: The recognition of the current state of the issue to the target achievement, that is wanted when the policy is implemented. (*A. Hayes, 2023*). This practice enables identification of existing habitats and future planning towards the marine protected areas, through scientific research.

Minimisation of concerns to existing users: Users who own property are guaranteed to be affected by the loss of land. Therefore, social and economic concerns should be considered in account of the balance of environmental impacts.

Section 3: Discussion of Policy Implementation

The Marine Protection Area (MPA) Policy 2005's implementation is discussed in Section 25 with groups of the following; Ministry of Fisheries, Department of Conservation, Maritime New Zealand, Biosecurity New Zealand, Ministry of Economic Development and local iwi. (*Department of Conservation, Ministry of Fisheries, 2005*).

From Section 30 - Section 35, the policy discusses the implementation of marine reserves. The reserves are to be explained to be protected by governmental decisions utilising tools from the MPA planning process. It reveals the involvements of marine communities, and the importance to preserve both national and international species and natural features of the marine ecosystem. Considerations to previous Acts should be accounted for, meaning involving them in the process of the implementation. This can be indicated in the policy, for example under Section 31, with considerations being made towards the Marine Reserves Act 1971. The connection between the two policies help maintain the goal of the reserves act being regulations and management towards recreational, research, and tourism activities affecting marine areas. However, when making proposals, the approval of the Director-General of Conservation is needed. The purpose of this section is for the basic foundation and framework of the policy to be built upon. This allows the establishment of the policy to authorise people to protect the

marine environment through marine reserves. To New Zealand, it enables reassurance to both the marine mammals and Ministry and Conservation for an increased marine diversity.

Sections 47-49, and 53-54, also implies protection areas for marine mammals. These include sanctuaries, wildlife refuges and management reserves, cable protection zones, and other conservation zones. These sections are very similar with the section explained above, being about marine reserves. Yet, all these areas have their purposes being the same of protecting biodiversity of marine life and the ecosystem. The systems allow prevention and little harm to marine mammals if recreational activities were to happen around these areas.

In Sections 36 - 45, it is about tools used as a framework to take control on managing and prioritising plans to appropriately address problems to the associated Act. Controlled power specified to certain groups allow minimal damage and protect marine areas by prohibiting activities if necessary. In addition, Sections 55-61 is similar with the involvement of other Acts. These Acts include the 'Crown Minerals Act', 'Maritime Transport Act', and the 'Biosecurity Act'. The intended purpose of this practice to the policy is to share responsibilities for enabling enough protection to the marine protected areas.

Furthermore, the establishment of the policy's purpose was utilised as the success of the regulations allowed consistent approaches to protect certain marine areas. As the policy proposed for involvements of other groups, it enabled shared responsibilities to lead and create a "network" to protect marine habitats and the ecosystem. (A. Rovellini, M. Shaffer, 2020). Yet, there were a few issues contained in the policy. This includes the placement of marine reserves, and responsibility difficulties. Because marine reserves are only located in remote and coastal regions, this is not spread throughout the whole country. (Controller and Auditor-General, 2019). This is a disadvantage as the point of the policy is to implement more stable amounts of marine reserves in other regions. As the policy consists of many contributions, the policy has struggled with the lack of taking on responsibilities, meaning the process of a healthier ecosystem is slow. Another problem with this is due to existing rights, for example Maori rights which are verified on the 'Treaty of Waitangi'.

Section 4: Conclusion

In conclusion, the Marine Protected Area Policy 2005, allows shared responsibilities to enable the right to keep harm away from marine species and habitat. The four pillars of sustainable development have been contributed to the policy. The most important 2, however, are cultural and environmental. Culturally, like said before, practices performed by Maori have existed for multiple generations in New Zealand. The MPA was able to help support Maori practices, values, and beliefs as the policy includes the consideration of "engagement with tangata whenua". (New Zealand Legislation, 2024). As these practices include gathering sea products/ seafood, it holds such cultural significance to be implemented into the plan giving the effect of traditional acknowledgement. Environmentally, the policy enables positive results of the restoration of marine areas which have fulfilled the purpose of the implementation. Marine life,

habitat, and species all benefit from the policy which develops healthy natural features while increasing biodiversity.

I believe the MPA will contribute to a sustainable future due the purpose the policy desires to implement to protect our Kaitiakitanga. As part of the Kaitiakitanga contains the guardianship of the sea, the policy is enabled by the following evidence;

- Set for 10% protection of New Zealand's environment by marine reserves. (*Environment Guide, 2018*).
- Contributions with marine committees, international and national groups interested in marine areas.
- Aim to protect and create more areas for marine biodiversity and sustainable living

The connection between the 'Marine Mammals Protection Act 1978' and the 'Marine Protected Areas Policy 2005, 2010' is the similarity to achieve the protection of marine species and an increase to marine biodiversity and healthy ecosystem in New Zealand areas of the Pacific Ocean. Identification of both of the policies ensure involvements between shared responsibilities to implement actions and plans to the improvement of the main objective of maintaining stable health and protection to the health of New Zealand marine mammal species. They have considered many factors to the existing laws/rights, authorisation, permits, collaborations, etc to do this.

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Merit

Subject: Education for Sustainability

Standard: 90831

Total score: 06

Task	Grade score	Marker commentary
One	M6	<p>The candidate has presented sufficient evidence to meet the criteria for Merit. The response offered a thorough explanation of how various forces have influenced at least two policies within the context of sustainability. For each policy, two forces were discussed, and the impact of the policies on a sustainable future was analysed in detail.</p> <p>Reference has been made to a Māori concept relating to the natural environment (kaitiakitanga).</p>