

NZCPS 2010 Guidance note Policy 3: Precautionary approach

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Policy 3

- 1. Adopt a precautionary approach towards proposed activities whose effects on the coastal environment are uncertain, unknown, or little understood, but potentially significantly adverse.
- 2. In particular, adopt a precautionary approach to use and management of coastal resources potentially vulnerable to effects from climate change, so that:
 - a. avoidable social and economic loss and harm to communities does not occur;
 - b. natural adjustments for coastal processes, natural defences, ecosystems, habitat and species are allowed to occur; and
 - c. the natural character, public access, amenity and other values of the coastal environment meet the needs of future generations.

Overview of the policy

Policy 3 of the New Zealand Coastal Policy Statement 2010 promotes a precautionary approach to managing activities in the coastal environment when the effects of those activities are uncertain but potentially significantly adverse. The policy particularly directs a precautionary approach where the use and management of coastal resources that are potentially vulnerable to effects from climate change.

All readers of this policy guidance note should also refer to the NZCPS 2010 Implementation Guidance Introductory note¹. The Introductory note contains general information and guidance that is important for implementing all of the objectives and policies in the NZCPS 2010.

Rationale

There remain knowledge gaps in relation to coastal information and a relative lack of understanding about coastal processes and the actual and potential effects of activities and developments on coastal processes.

Climate change effects are an important instance where a precautionary approach is relevant. The drivers and impacts of climate change are uncertain and complex. When combined, they create a high degree of uncertainty about the likely effects on the environment and people. There is however a high potential for climate change effects in the coast to cause significant damage and loss, with increasing recognition that the effects of climate change may cause:

- Social and economic losses and harm to communities
- Impacts on ecosystems, habitats and species
- Potential changes to natural character, public access, amenity and other values and so potentially impacting on the needs of future generations.

Adopting a precautionary approach to the management of climate change effects will better assist the establishment of more durable adaptation responses over time.

¹ http://www.doc.govt.nz/nzcps-introductory-note

Related objectives, policies and provisions

This section covers the links (in terms of the precautionary approach) between the various provisions of the NZCPS 2010, the Resource Management Act 1991 (RMA), and other legislation.

NZCPS 2010

Giving effect to Policy 3 of the NZCPS 2010 requires careful consideration of all NZCPS 2010 objectives and policies.

Key objectives and policies	Other related objectives	Other related policies
Objectives—All		
Policies—All		

There are very strong links between Policy 3 and all other NZCPS objectives and policies.

Specific other objectives and policies make reference to the identification and management of climate change effects, particularly in relation to the extent and characteristics of the coastal environment (Policy 1), integration (Objective 4, Policy 4), reclamation and de-reclamation (Policy 10), public open space (Objective 4, Policy 18) and hazards (Objective 5, Policies 24 – 27). Implementation of Policy 3 is also relevant to decisions considering the social and economic loss and harm of climate change (Objective 6, Policy 6), natural adjustments for habitats and species (Objective 1, Policy 11), and protection of natural character (Objective 2, Policies 13 and 14).

Resource Management Act 1991

Key Resource Management Act 1991 (RMA) provisions relevant to Policy 3 include:

- Section 6 (a), (b), (c), (d) recognises that preservation and protection of coastal environment, contributing features and access is a matter of national importance.
- Section 7 (i) recognises that in achieving the purpose of the Act, particular regard must be given to the effects of climate change.
- Section 17 imposes a general duty to avoid, remedy or mitigate adverse effects on the environment.
- Section 30(1)(d)(v) of the RMA provides the functions of a regional council in respect of any coastal marine area in the region, the control (in conjunction with the Minister of Conservation) of—(v) any actual or potential effects of the use, development, or protection of land, including the avoidance or mitigation of natural hazards and the prevention or mitigation of any adverse effects of the storage, use, disposal, or transportation of hazardous substances.

- Section 30(1)(ga) provides in respect of a region that the functions of a regional council include the establishment, implementation and review of objectives, policies and methods for maintaining indigenous biological diversity.
- Section 31(1)(b) of the RMA provides that one of the functions of territorial authorities is the control of any actual or potential effects of the use, development, or protection of land, including for the purpose of—
 - "(i) the avoidance or mitigation of natural hazards; and
 - (ii) the prevention or mitigation of any adverse effects of the storage, use, disposal, or transportation of hazardous substances; and
 - (iia) the prevention or mitigation of any adverse effects of the development, subdivision, or use of contaminated land"
- Section 32 requires consideration of alternatives, costs and benefits including section 32(4)(b): 'the risk of acting or not acting if there is uncertain or insufficient information about the subject matter of the policies, rules, or other methods'. This means it is important to consider the risks of 'acting or not acting' in a situation of uncertainty about the adequacy of information.
- Section 35 of the RMA places a duty on local authorities to monitor the
 exercise of the resource consents that have effect in their region or
 district/city, and to take appropriate action (having regard to the methods
 available under the Act) where that is shown to be necessary. Section 35(1)
 requires local authorities to gather such information and undertake or
 commission such research as is necessary to carry out their functions under
 the RMA.
- Section 104(1)(a) states that consent authorities should have regard to any actual and potential effects on the environment of allowing the activity.
- Section 108 allows consent authorities to grant a resource consent on any
 condition that the consent authority considers appropriate. These conditions
 can include requiring the consent holder to undertake particular
 measurements for monitoring and to provide that information to the consent
 authority.

Other legislation

The Fisheries Act 1996, the Hazardous Substances and New Organisms Act 1996 and the Civil Defence Emergency Management Act 2002 each apply a precautionary approach. There is an indirect reference to the term in the Biosecurity Act 1993. Precautionary decision making is an underlying principle in the New Zealand Biodiversity Strategy 2000².

² http://www.biodiversity.govt.nz/pdfs/picture/nzbs-whole.pdf

Origins of the policy

Policy 3(1) is similar to the precautionary approach policy from the New Zealand Coastal Policy Statement 1994 (NZCPS 1994). Policy 3(2) is new and specifies outcomes to be avoided or promoted by taking a precautionary approach in relation to the effects from climate change.

The concept of a 'precautionary principle' was developed in the early 1970s due to concerns about the potential effects of rising pollution levels. It is sometimes referred to as the 'foresight principle'. It was used to promote a precautionary approach in Principle 15 of the Rio Declaration³ in 1992 and has been applied internationally.

New Zealand's courts have identified key points about how the precautionary approach is to be understood in the RMA context, particularly that it is relevant where there is scientific uncertainty. Disagreement between experts does not necessarily justify a precautionary approach.

The Board of Inquiry⁴ also noted:

"[W]e .. do not consider that applying the precautionary principle in the coastal environment of itself requires consent authorities to refuse consent for proposals involving new technology or innovation." (p49)

Climate change impacts were discussed extensively by the Board of Inquiry. The Board concluded that effective regulatory responses are needed to implement 'risk based precaution', and including 'adaptive management'. These concepts are discussed further in the next section: 'Implementing the policy'.

Selected case law references are listed in the 'Resources' section.

Policy 3(2) acknowledges the potential impact of climate change on the coastal environment but that the nature and scale of the likely effects are uncertain, unknown or little understood, and potentially significantly adverse. The uncertainties include the nature and scale of the losses to indigenous biological diversity in the coastal environment, and effects such as habitat loss, modified ecosystems (such as estuaries, inter-tidal zones), and interruption of ecological corridors.

For further information refer to the NZCPS Board of Inquiry Report, Volume 2, pp. 45–51⁵.

³ http://www.unep.org/Documents.Multilingual/Default.asp?documentid=78&articleid=1163

 $^{^4 \}underline{\text{http://www.doc.govt.nz/upload/documents/getting-involved/consultations/closed-consultations/nzcps/NZCPS-2008-board-of-inquiry-vol-2.pdf}$

 $^{^{5} \ \}underline{\text{http://www.doc.govt.nz/getting-involved/consultations/results/new-zealand-coastal-policy-statement/proposed-new-zealand-coastal-policy-statement-2008-board-of-inquiry-report-and-recommendations/$

Implementing the policy

While guidance is provided here on implementing Policy 3, it is also necessary to consider the entire NZCPS 2010 when implementing each policy. Please also refer to the NZCPS 2010 Implementation Guidance Introductory note⁶ which covers the matters that are relevant in giving effect to the NZCPS 2010.

The application of the precautionary approach is a risk management approach rather than a risk assessment approach. It is when the risk of potential significant adverse or irreversible environmental effects cannot be adequately assessed (because of uncertainty about the nature and consequences of human activities or other processes) that a precautionary approach to risk management becomes appropriate.

Policy 3(1) does not specify how proactively or reactively the precautionary approach should be applied. The applicability and weighting of Policy 3 will be a matter for case-by-case assessment. However, the explicit requirements for the precautionary approach to the use and management of coastal resources potentially vulnerable to effects from climate change, under Policy 3(2) makes it clear that a precautionary approach in these circumstances will be forward-thinking and consider the development of appropriate strategies for the future management of coastal resources. Refer also to guidance notes on the management of coastal hazards (Policy 24–27) and indigenous biodiversity (Policy 11).

Significant matters concerning implementation of Policy 3 are discussed below under:

- Prudent avoidance approach
- Adaptive management
- Precautionary approach and climate change.

Prudent avoidance approach

Part of a precautionary approach is where circumstances warrant it, to ensure environmental harm is avoided, not merely remedied and/or mitigated, to the extent possible. If there is uncertainty regarding possible environmental damage arising out of a proposed course of action, then risk avoidance or management becomes appropriate. However, what is reasonable or appropriate in this context will also be important in implementing Policy 3 and depends significantly on the context and issues of the particular case.

Where deemed to be relevant to a particular situation, the precautionary approach can be implemented through appropriate provisions in regional policy statements, regional and district plans, and other regulatory decisions. This approach can take the form, for example, of a precautionary policy or methods, and/or constructed on a

⁶ http://www.doc.govt.nz/nzcps-introductory-note

precautionary basis with limits set accordingly. In situations where the precautionary approach applies, then a careful analysis of alternatives is also desirable, including the option of prudent avoidance. The guidance note on 'Policy 7: Strategic planning' is relevant and includes discussion of options to set limits to change.

Plan change and consent applicants are required to provide an appropriate level of assessment of potential environmental effects (RMA section 88 and Schedules 1 and 4). As part of this assessment, applicants would also be expected to consider relevant precautionary policies and other provisions, and evidence of this consideration would be submitted with the proposal. Where the precautionary approach is relevant, this assessment can involve seeking sufficient evidence that an activity will not create significant adverse effects, despite there being scientific uncertainty, before the activity or modified activity may be approved.

Adaptive management approach

Whether decision-makers choose to adopt an approach which requires an activity to be avoided until sufficient study has been done into its likely effects (as in the prudent avoidance approach), or whether they choose to adopt an approach which allows an activity, but subject to complex and detailed conditions and a programme of specified testing and monitoring (as in adaptive management), is a matter for local authorities to decide on a case-by-case basis after a careful assessment and weighting of relevant matters.

Adaptive management⁷ is a method allowing consent authorities to make decisions about the management of complex systems in the coastal environment where information on which to base decisions is uncertain or incomplete. While adaptive management should not be a substitute for a well prepared Assessment of Environmental Effects (AEE), it can be useful in situations involving complex systems and where a management decision is required.

Similarly, where there are known scientific uncertainties in respect of potential effects and no response to those uncertainties, review conditions alone should not be relied on. One method to overcome scientific uncertainty about the potential effects of a proposal is to use adaptive management measures.

Adaptive management involves clearly specified staging of development, monitoring of staged development, and review. Adaptive management enables a 'plan-do-check-act' approach where ongoing monitoring and reporting provides for the most appropriate response or solution to be utilised. Adaptive management is an analytical process involving structured experimentation and responses. Management is adjusted to achieve performance objectives.

Adaptive management recognises that knowledge about natural resource systems is uncertain and that some management actions are best conducted as experiments or "learning by doing". A key issue in implementing an adaptive management approach is to ensure that conditions clearly specify the level of effect that is anticipated. If

⁷ See glossary for definition of 'adaptive management'.

monitoring shows this threshold to have been reached, then the conditions (in the case of a resource consent) should provide for the activity to be adjusted.8

There are also some situations where an adaptive management approach will not be appropriate; for example, where no monitoring is proposed of the issues of concern (such as vulnerable populations of native species), or where the adaptive management cannot remedy the effects that might have arisen, before they become irreversible (such as species loss). An adaptive management system needs to provide certainty in both these regards.

Implementing adaptive management is often complex due to such things as the large number of interconnected potential scenarios, the range of variables, and related uncertainties. These difficulties result in challenges in designing an appropriate system, or even deciding whether adaptive management is appropriate, and are summarised in *Crest Energy Kaipara Ltd v Northland Regional Council* NZEnv A132/2009⁹:

[228] We are mindful of the findings of the court in *Director General of Conservation v Marlborough District Council and Drs (Clifford Bay)*, that we should not place the applicant in the position of having to have carried out all necessary research before making an application or before a hearing by the court, simply because it is seeking a privilege from the Crown. It would be unfair and unreasonable to hold that an applicant must try to anticipate and research all hypotheses that may occur to someone during the course of an application process.

[229] The converse is that the applicant must establish sufficient of a case to persuade the court to grant consent on the basis of allowing the adaptive management processes to be embarked upon. That is, the court must be satisfied that the environmental management plan can operate in a way that will serve the purpose of the Act.

This and other relevant Court decisions are given in the 'Resources' section below.

Precautionary approach and climate change

Policy 3(2) singles out in particular the 'use and management of coastal resources potentially vulnerable to effects from climate change', and states outcomes to be achieved in relation to particular coastal resources. Despite current uncertainties, local authorities and applicants are required to implement risk-based precaution in responding to the effects of climate change on the coastal environment.

⁸ Mainpower NZ Ltd v Hurunui District Council [NZ Environment Court 384/11, para 250]. http://www.nzlii.org/cgi-bin/sinodisp/nz/cases/NZEnvC/2011/384.html?query=384

⁹ Decision not yet available on NZ Environment Court database http://www.justice.govt.nz/courts/environment-court/search-environment-court-decisions-from-2006

There is existing guidance on the management of climate change effects on coastal resources, in particular the Ministry for the Environment report 'Coastal hazards and climate change: a guidance manual for local government in New Zealand'¹⁰, and 'Coastal adaptation to climate change: pathways to change'¹¹ prepared by the National Institute of Water and Atmospheric Research (NIWA). The guidance notes for other NZCPS 2010 policies are also relevant, including but not limited to guidance notes on integration (Policy 4), indigenous biological diversity (Policy 11), natural character (Policy 13), and natural hazards (Policies 24–27).

Relevant RMA processes include planning and regulatory decisions taken in relation to areas of responsibility including new greenfield development, existing developments, infrastructure and services.

A precautionary approach in this context is necessary to build the adaptive capacity of the human and built environment, as well as natural coastal systems, to adapt and manage the responses to climate change. An integrated and precautionary approach is desirable to limit the scale of damage from climate change. In part this approach should maximise the potential for natural coastal systems to absorb much of the potential consequences of climate change including sea-level rise. Other potential changes arising from climate change include a change to the magnitude of effects from land-based activities over the long term, for example, associated with the rate and generation of sedimentation and delivery of nutrients to the coastal environment.

The relevance of the precautionary approach to this type of planning is highlighted in *Tasman District Council [Environment Court 47/11*¹²]:

"[16] I consider that the following factors are relevant considerations in favour of making the order sought in this case:

- PC 22 is directed at the protection of people and land from the effects of
 coastal erosion, coastal and freshwater inundation in a specifically identified
 area which (on the face of the information provided to the Court) is highly
 vulnerable to those effects. It accordingly requires consideration of people's
 and communities' social, economic and cultural wellbeing and their health
 and safety which lie at the heart of sustainable management.
- Allowing the rules contained in PC 22 to have legal effect will enable the
 Council to immediately manage the use and development of land pending PC
 22 becoming operative, in a manner where the effects of coastal erosion,
 coastal and freshwater inundation are given due weight in its considerations.
 This represents a precautionary approach to management of the District's
 land resource which I consider to be appropriate when regard is had to the
 potential effects of coastal erosion, coastal and freshwater inundation. This

 $^{^{10}}$ http://www.mfe.govt.nz/publications/climate/coastal-hazards-climate-change-guidance-manual/coastal-hazards-climate-change-guidance-manual.pdf

 $^{^{11}\,}http://www.niwa.co.nz/sites/default/files/pathways_to_change_nov2011.pdf$

¹²_http://www.nzlii.org/cgi-bin/sinodisp/nz/cases/NZEnvC/2011/47.html?query=tasman

This and other relevant legal decisions are given in the 'Resources' section below.
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Related and on-going work

'Coastal adaptation to climate change: pathways to change' (2011) and associated documents and work

http://www.niwa.co.nz/sites/default/files/pathways to change nov2011.pdf

A NIWA-led team has recently produced the guidance document 'Coastal adaptation to climate change: pathways to change', a resource for local authorities that sets out a step-by-step guide to best practice planning which aims to help make New Zealand communities more robust to the potential impacts of climate change in our coastal areas. It does this by setting out the incremental stages of adaptation to coastal hazards and climate change and invites councils to undertake that journey with the guidance provided.

The work in relation to preparing 'Coastal adaptation to climate change: pathways to change' also resulted in:

- A review of current council planning practice, leading to the 'Report on Local Government Planning Practice and Limitations to Adaptation', June 2010.
- An investigation on how best to engage and inform communities, involving a community case study in Whitianga that included working with the Mercury Bay Area School and other parts of the community.
- An ongoing project to revise and improve work already done to map the sensitivity to coastal hazards of New Zealand's coastal areas. The goal is to include additional new parameters (oceanographic, land-use, and socioeconomic) and deliver a consistent national-regional level assessment of coastal sensitivity for all open-coast soft shoreline regions of New Zealand.

'Coasts and climate change'—Professor Bruce Thom

http://www.edsconference.com/content/docs/2011 presentations/Thom%2C%20Bruce%20ppt.pdf

Professor Bruce Thom presented a conference paper at the Environmental Defence Society Conference in 2011 titled 'Coasts and climate change'. Coastal adaptation has been identified as a national issue for Australia. Major storm events and future sealevel rise are major considerations for adaptive coastal planning and management. Erosion, inundation and climate change are dominant coastal hazards. To manage these issues the country is mapping coastal stability, assessing dune systems as a natural buffer for the open coast, and assessing inundation risk and elevation modelling. Management recommendations are based on the six guideline principles below:

Risk identification

- 1. Assess and evaluate coastal risks taking into account the sea-level rise planning benchmark
- 2. Advise the public of coastal risks

Land use planning

- 3. Avoid intensifying land use in coastal risk areas
- 4. Consider options to reduce land use intensity in coastal risk areas

$Development\ assessment$

- 5. Minimise the exposure to coastal risks from proposed development
- 6. Implement appropriate management responses and adaptation strategies

Relevant case law

Precautionary approach

- Wratten v Tasman District Council, 16-22. [Environment Court W8/98] 13
- Jackson Bay Mussels Ltd v West Coast Regional Council [Environment Court C077/2004 198] 14

Adaptive management

- Golden Bay Marine Farmers v Tasman District Council [Environment Court $W42/01^{15}$ and $W19/03^{16}$]
- Clifford Bay Marine Farms Ltd v Marlborough District Council [Environment Court C131/03¹⁷]
- Oruawharo Marae Trust v Auckland Regional Council [Environment Court A083/06¹⁸]
- Crest Energy Kaipara Ltd v Northland Regional Council [Environment Court A132/2009¹⁹]
- Mainpower NZ Ltd v Hurunui District Council [Environment Court, C384/11 para 250²⁰]
- Tasman District Council [Environment Court C47/11²¹].

http://www.nzlii.org/cgibin/sinodisp/nz/cases/NZEnvC/1998/65.html?query=title(Wratten%20and%20Tasman%20District%20Council%20)

¹⁴ http://www.nzlii.org/cgi-bin/sinodisp/nz/cases/NZEnvC/2004/198.html?query=jackson%20bay

¹⁵ http://www.nzlii.org/cgi-bin/sinodisp/nz/cases/NZEnvC/2001/150.html?query=W42/01

¹⁶ http://www.nzlii.org/cgi-bin/sinodisp/nz/cases/NZEnvC/2003/101.html?query=W19/03

¹⁷ http://www.nzlii.org/cgi-bin/sinodisp/nz/cases/NZEnvC/2003/348.html?query=C131/03

¹⁸ http://www.nzlii.org/cgi-bin/sinodisp/nz/cases/NZEnvC/2006/213.html?query=A083/06

¹⁹ Decision not yet available on NZ Environment Court database http://www.justice.govt.nz/courts/environment-court/search-environment-court-decisions-from-2006

²⁰ http://www.nzlii.org/cgi-bin/sinodisp/nz/cases/NZEnvC/2011/384.html?query=384

²¹ http://www.nzlii.org/cgi-bin/sinodisp/nz/cases/NZEnvC/2011/47.html?query=tasman

Examples of plan provisions

Tauranga City District Plan

http://www.tauranga.govt.nz/council-documents-reports/councils-regulatory-documents/city-and-district-plans/district-plan.aspx

Tauranga City Council has developed a policy approach to the management of coastal erosion and harbour inundation. Coastal Hazard Zones and maps have been developed for current, 50-year and 100-year erosion risk zones along the open coast.

Tauranga City Council has developed a Coastal Hazard Environment Protection Area (CHEPA) to improve the management of coastal hazard risk within beachfront areas, and is a result of direction from the Environment Court and evolving best-practice over the past decade. Rules relating to the CHEPA can be found in Chapter 17 of the Operative Tauranga District Plan and Chapter 8 of the proposed Tauranga City Plan. http://www.tauranga.govt.nz/council-documents-reports/councils-regulatory-documents/city-and-district-plans/city-plan.aspx

Tauranga City Council has developed a set of guidelines for activities within the CHEPA to provide a means of compliance, or 'Acceptable Solution' for permitted activities undertaken within the Tauranga City Council's CHEPA boundaries.

Reports, websites and additional information

- Ministry for the Environment (July 2008), 'Coastal hazards and climate change:
 a guidance manual for local government in New Zealand'. 2nd edition.
 http://www.mfe.govt.nz/publications/climate/coastal-hazards-climate-change-guidance-manual/coastal-hazards-climate-change-guidance-manual.pdf
- Treasury (2006), 'Environmental management in New Zealand Is there scope to apply a more generic framework? Application of the precautionary principle in New Zealand'. http://www.treasury.govt.nz/publications/research-policy/ppp/2006/06-06/06.htm
- Bay Area (San Francisco, USA) Working Group on the precautionary principle http://www.takingprecaution.org
- Environmental Defence Society:
 - RMA community advice: http://www.rmaguide.org.nz/index.cfm
 - Precautionary approach case law summary:
 http://www.rmaguide.org.nz/rma/keyissues/coastal.cfm?section=precaution.
- Science and Environmental Health Network http://www.sehn.org/precaution.html
- Somerville, R (2002) 'Sustainable development, environmental risk management and the Environment Court'. Resource Management Law Association. http://www.qp.org.nz/pubs/3728.pdf

Glossary of terms and definitions

NZCPS 2010 glossary

No relevant definitions.

Other definitions/explanations:

Adaptive management is 'an experimental approach to management, or "structured learning by doing". It is based on developing dynamic models that attempt to make predictions or hypotheses about the impacts of alternative management policies. Management learning then proceeds by systematic testing of these models, rather than by random trial and error. Adaptive management is most useful when large complex ecological systems are being managed and management decisions cannot wait for final research results.' (Definition from the New Zealand Biodiversity Strategy 2000²², p. 137)

Effect: Is defined as including:

- '(a) any positive or adverse effect; and
- (b) any temporary or permanent effect; and
- (c) any past, present, or future effect; and
- (d) any cumulative effect which arises over time or in combination with other effects—

regardless of the scale, intensity, duration, or frequency of the effect, and also includes—

- (e) any potential effect of high probability; and
- (f) any potential effect of low probability which has a high potential impact.'
- (Definition from section 3 of the RMA)

Precautionary approach

There are many different definitions and uses of the precautionary approach.

The Commentary of the NZCPS 1994 defines the precautionary approach as 'one that adopts prudent foresight' (NZCPS 1994 Commentary).

The full wording from the Rio Declaration is:

In order to protect the environment, the precautionary approach shall be widely applied by states according to their capabilities. Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost effective measures to prevent environmental degradation.

(Principle 15 of the Rio Declaration 1992)

²² http://www.biodiversity.govt.nz/picture/doing/nzbs/contents.html