

GLOSSARY

REFERENCES

ATTACHMENTS

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Climate model - A numerical representation (typically a set of equations programmed into a computer) of the climate system. The most complex and complete climate models are General Circulation Models.

Climate projection – A projection of future climate based upon simulations by *climate models*.

Climate scenario – A plausible and often simplified representation of the future climate, based on an internally consistent set of climatologically relationships.

Delve Deeper (level of adaptation) – Targets specific projects that have a well-defined goal and need to reach a specific investment decision, whether these are small or large.

Intergovernmental Panel on Climate Change (IPCC) – The leading international body for the assessment of climate change, and a source of scientific information and technical guidance for Parties to the United Nations Framework Convention on Climate Change (UNFCCC).

Key areas of decision making – An area of decision making in an organisation, sector or region within which adaptation *options* may be needed to manage the impacts of climate change on an asset, value or service.

Plan (level of adaptation) – Explores a range of activities across a government, region, sector or organisation in order to identify where to focus further effort.

Scan (level of adaptation) – Aims to engage the right stakeholders and frame subsequent studies appropriately (for very small organisations, this may provide enough information to act).

Thresholds – The point at which a system starts to operate in a significantly different way. Thresholds can be social, economic, environmental or physical.

Triggers – When a monitored system driver (e.g. sea level rise or temperature rise) changes to a point where existing response options should be reviewed and new options implemented, i.e. a decision point is triggered. A trigger may occur without a *threshold* yet being reached (e.g. a degree of sea level rise not yet expressed in terms of a bad flood because a storm tide has not yet happened), but the conditions are set for a system *threshold* to be crossed before decision-makers can do anything about it. Note that a trigger should be easily monitored, for quick action.

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ATTACHMENT A – PRINCIPLES FOR OPTION APPRAISAL

Principle	Description
Address risks associated with today's climate variability	Address risks associated with today's climate variability and extremes as a starting point towards taking anticipatory actions to address risks and opportunities associated with longer-term climate change.
Build economic resilience	Adaptation planning should proceed on the basis that individuals and organisations are best able to adapt when they are profitable and sustainable.
Continuous improvement	Review the continued effectiveness of adaptation decisions by adopting a continuous improvement approach that also includes monitoring and re-evaluations of risks
Decision making context	Understand and address barriers that influence the decision making context
Develop SMART objectives	Frame and communicate SMART objectives/outcomes before starting out.
Don't limit future adaptation	Avoid actions that foreclose or limit future adaptations or restrict adaptive actions of others.
Identify long lifetime decisions	Planning needs to ensure that decisions made today that have long lifetimes, such as major infrastructure initiatives and land use planning, consider long term climate change impacts in their design.
Look for win/wins	Recognise the value of no/low regrets and win-win adaptation options in terms of cost-effectiveness and multiple benefits.
Manage climate and non-climate risks	Assess and implement your approach in the context of overall sustainability and development objectives that includes managing climate and non-climate risks.
Manage priority climate risks	Identify key climate risks and opportunities and focus on actions to manage these.
Prepare not repair	Investment decisions need to focus on investing in adaptation and mitigation actions rather than repairing damage once the impacts of climate change are experienced.
Seek out and avoid cross sectoral maladaptation	Future adaptation needs to consider the interactions between different sectors. In some instances, an adaptation action in one sector could have negative consequences for another, leading to maladaptation.
Take joint responsibility	While sectors are individually responsible for their own adaptation planning they are jointly responsible for regional scale, cross sectoral adaptation.
Understand risk and thresholds	Understand risks and thresholds, including associated uncertainties
Use adaptive management	Adopting a flexible decision making process and using adaptive management – or “learning by doing, and adapting based on what's learned” – can help keep options open, and be more responsive to changing situations.
Windows of opportunity	Look for ways of incorporating climate response strategies into mainstream activities, and think about how they work with or against other strategies.
Work in partnership	Identify and engage the necessary community and ensure they are well informed.

ATTACHMENT B – MULTI-CRITERIA ANALYSIS CRITERIA

Criterion	Description
Ability to implement	Do decision makers or managers have the resources, technical knowledge and stakeholder support required to implement the option?
Administrative efficiency	Can this option be administered easily or will its application be neglected because of the difficulty of administration or lack of expertise? (17)
Alignment with conservation objectives	Does the option support the prioritized conservation objects and their benefits or ecosystem services important for adaptation (16).
Authority	Does the organisation have the authority to apply this option? If not, can other organisations with authority be encouraged to do so? (17)
Availability of data	Is the data available to support implementation of this option (18)
Barriers	Are the barriers to implementation too great? (you can either discount an option because the barriers are too great, or set about tackling the barrier first as part of the implementation plan) (19)
Can be monitored	Can the action be monitored through indicators? (16)
Co-dependency	Is there a reliance on other options being implemented first? (Smith, et al., 2008) (18)
Community response / Social acceptability	What is the reaction of the general public likely to be toward the option? (17; 18)
Compatibility	How compatible is this option with others that may be adopted? (17; 20)
Continuity of effects	Will the effects of the application of this option be continuous or short-term? (17)
Control	What is the organisation's control or responsibility over any or all aspects of the adaptation action?
Cost	What is the likely cost of implementing this option? Can focus on economic and financial costs but also environmental and social costs (14; 17; 18)
Cultural appropriateness	Does the action account for and respect local culture? (16)
Early action	Does this option take early preparatory action that avoids future damage costs (20)

Criterion	Description
Effectiveness	Will the actions meet your objectives? (14)
Effects on the environment	What will be the environmental impacts of this option? (17)
Efficiency	Do the benefits exceed the costs? (14)
Enhances social and gender equity	Proposed strategies should, at the minimum, not worsen gender inequalities and other social forms of discrimination and marginalization (16)
Equity	Does the action adversely affect other areas or vulnerable groups (14)
Flexibility	Is the option flexible and will it allow for adjustments and incremental implementation? (14)
Helps manage risk	To what extent will the option lead to a reduction in risk? (16; 17)
Individual freedom	Does this option deny basic rights? (17)
Learning by doing	Does the action lead to learning that increases the ability to act in the future? (21)
Legitimacy	Is the investment politically and socially acceptable?
Leverage	Will the application of this option lead to further risk-reducing actions by others?
Need for co-operation	Does the option require input from multiple stakeholder organisations or implementation partners? (21)
Political feasibility	Political feasibility: Running into strong political resistance with certain activities may even undermine other less contentious activities (16)
Practical	Can the action be implemented on relevant timescales?
Resources to implement	Are the resources available to implemt the action? (18)
Risk creation	Will this option itself introduce new risks? (17)
Robust	Is the option able to cope with a range of future climate projections? (14)
Speed of benefit	How long will it take for the benefits of the implemented option to be experienced? (17)
Supports a large number of beneficiaries	How many people are likely to benefit from an intervention? (16)

Criterion	Description
Supports vulnerable actors	Does the action support the most vulnerable socioeconomic people in the community? (16)
Sustainability	Does it contribute to sustainability objectives and are they themselves sustainable? (14)
Alignment with other strategic objectives	Does it help to achieve other objectives?
Urgency	How long will it take for the option to be implemented? (14; 21)
Vulnerability reduction	Does the option result in a criterion that directly reduces climate change vulnerability (21)
Win-win	Does the option represent a win-win outcome? (18)

ATTACHMENT C – PROJECT READY CHECKLIST

Experience from councils has shown that there are a range of factors to consider when determining if a project is ready to implement. The following checklist serves as a guide on what questions to ask before your region, organisation or team starts to deliver a project.

Project ready checklist	✓ or X?
Is the “window of opportunity” open for implementing the project?	
Has an implementation plan been prepared that identifies the steps required to implement the project?	
Is sufficient finance available?	
Does the project design consider the long-term impacts of climate change?	
Have the full range of key climate variables been considered in the project design?	
Have key responsibilities across and within organisations been identified? Are they ready for implementation?	
Has community engagement been undertaken or is it planned?	
Have you identified any barriers or enablers that can help or hinder your project?	
Has a monitoring plan been developed and indicators identified?	