

# Climate change in 2021-31: A practice note

Society of Local Government Managers – July 2020





## WHAT IS THIS GUIDE?

This guidance reflects the thinking of SOLGM's Planning Working Party regarding approaches that councils might take to reflecting the issues, risks and opportunities that climate change may pose for the community in their 2021-31 long term plans (LTPs). The need for this guide has been identified in the November 2019 workshops that SOLGM held for managers and staff in local authorities.

This is not a guide to preparing climate change risk assessments and climate change adaptation plans. Other publications such as the Ministry for the Environment's *Coastal Hazards and Climate Change*<sup>1</sup> and *Exposed: Climate Change and Infrastructure*<sup>2</sup> provide local authorities with approaches to take to identify risks and opportunities to begin adaptation planning. The note that follows discusses what of that material should be reflected in the LTP, along with the 'where' and the 'how'?

We preface the remainder of this guidance note with a critical caveat. The discussion in your 2021-31 LTPs around climate change will not be perfect. What's important in the 2021-31 LTPs is that your council has given thought to:

- the effects of climate change
- the impacts climate change will have on the council and on the community
- what the major issues, risks and opportunities are
- what big decisions the council and the community need to take (and roughly when) and
- what the consequences are.

### A word on terminology

For the purposes of this guide, a climate change effect refers to some change in the climate such as higher temperatures, or higher rainfall. We use the term impacts to refer to second-order results of these effects such as drought conditions leading to security of supply issues for drinking water. The impacts might be for council's activities or on the community as a whole such as changes in rainfall making some types of primary production unsustainable and impacting on the local community.

While this guide is not intended as a technical treatise it's also useful to remind ourselves that:

- *mitigation* refers to actions taken to reduce emissions and increase the ability of natural processes to absorb emissions (such as tree planting) and
- *adaptation* refers to the process of adjusting to the effects of climate change – for example by retreating from coastal areas impacted by sea level.

<sup>1</sup> Ministry for the Environment (2017), *Coastal Hazards and Climate Change – Guidance for Local Authorities*.

<sup>2</sup> Local Government New Zealand (2019), *Exposed: Climate Change and Infrastructure – Guidance for Councils*.

## WHY IS CLIMATE CHANGE AN ISSUE FOR THE 2021 LTPs?

On average the world is about one degree warmer than the pre-industrial era. As a consequence, New Zealand is experiencing more frequent, and more intense weather events. In 2018 NIWA reported that climate change had increased flood risk by up to 40 percent and drought risk by up to 20 percent.<sup>3</sup>

That is to say that regardless of the view that your council might take on causes of climate change, some of the impacts of climate change are with us now. Impacts of climate change will be reaching levels that have significance within the period covered by the infrastructure strategy covered in the 2021-31 LTP.

The effects of climate change will impact on a councils' ability to deliver services to their community in both the financial (e.g. insurance) and physical terms (roads falling into the sea etc). Effects and the ongoing Impacts are being felt now, and their cumulative nature will mount by the end of the period covered in the infrastructure strategies. The wider impacts on the community will flow through to the local authority.

Councils themselves have signalled that climate change is a significant future issue for their local community. More than 60 of the 78 council leaders signed the so-called 2017 Leaders Declaration. At the time of writing (June 2020) SOLGM is aware of 17 local authorities that have declared climate change emergencies and many others that have publicly identified climate change as a significant risk to the community. Your LTP is a chance to communicate what progress has been made. Having created an expectation that your council is doing something, the community will expect to see progress in the LTP.

Local authorities are required to prepare the prospective financial information in their plans using the best available information and assumptions.<sup>4</sup> We are all making assumptions under great uncertainty. What we do know is that assuming away climate change (i.e. assuming none) is not a sustainable position to take.

## CLIMATE CHANGE AND THE 2021 LTP: THE FUNDAMENTALS

What's expected in the 2021 LTPs around climate change? Essentially, we regard climate change and its impacts as a set of forecasting assumptions that should be treated as you would others.

This is not to downplay the importance of climate change in building an LTP – the effects are systemic and cannot be captured in a single assumption. A set of related assumptions will be required – which for convenience we'll refer to as a scenario. Your scenario will inform your judgements on the impacts of climate change and then establish a base for your activity and service planning.

The standard for the 2021-31 LTP is that your local authority:

- is using an evidence-based scenario on the effects of climate change which is being consistently applied across your local authority
- is making progress with identifying the local impacts of climate change on the council's activities and
- has identified and considered the impacts on the community and how these might flow through to the local authority (for example could changes in the pattern of economic activity have an impact on 'affordability').

<sup>3</sup> National Institute for Water and Atmospheric Research (2018), *Estimating financial costs of climate change in New Zealand – An estimate of climate change related weather event costs.*

<sup>4</sup> See External Reporting Board, PBE FRS 42 *Prospective Financial Information*

The Ministry for the Environment has developed up-to-date information on climate change effects by region (and recommends local authorities use this unless more detailed local modelling is available).<sup>5</sup> NIWA has been engaged by some councils to model expected effects at local level.

The discussion in an LTP should therefore draw on (but not replicate wholesale) material that already exists or is being undertaken already, as opposed to material that is prepared solely for the LTP. It's focus should be around risks, the impacts of those risks materialising and what decisions the local authority expects to take during the life of the LTP, and after.

Climate change and related matters will be woven through the content of the LTP and the processes that support the LTP. Your council might feel it needs a specific section covering climate change (especially if the size or nature of the investments your council proposes warrant making climate change an issue for consultation). Whatever the content that makes it into the LTP, it's the thinking and analytical processes that sit behind it that really reflect your approach to climate change.

### Tip for infusing climate change into the LTP

#### Scenario

1. Weave all your climate assumptions together into a single scenario.

## CONSULTATION DOCUMENT

The purpose of a consultation document (CD) is to

*“provide an effective basis for public participation in local authority decision-making processes relating to the (LTP) by*

- (a) *providing a fair representation of the matters that are proposed for inclusion in the long-term plan and presenting these in a way that-
 
  - (i) *explains the overall objectives of the proposals and how rates, debt and levels of service might be affected; and*
  - (ii) *can be readily understood by interested or affected people; and**
- (b) *identifying and explaining to the people of the district or region, significant or other important issues and choices facing the local authority and district or region, and the consequences of these choices; and*
- (c) *informing discussions between the local authority and its communities about (above matters)”*

SOLGM's guide to the CD recommends that local authorities apply the following five filters to the selection of issues for the CD:

- is the issue significant? (if the issue isn't significant it's generally not one for inclusion in the CD)
- is your local authority seeking feedback on two or more options to inform a choice? (if there is genuinely only one practicable option there is a weaker case for including the issue in the CD)

<sup>5</sup> Available from <https://www.mfe.govt.nz/climate-change/likely-impacts-of-climate-change/how-could-climate-change-affect-my-region>

- does the issue have significant cost or service implications? (if so, it may warrant inclusion in the CD as a significant issue from the financial and/or infrastructure strategies)
- is there a change in the level of service being provided to all or part of your communities for any activities? (if so, this matter may warrant inclusion in the CD as an 'other matter')
- is the issue otherwise important to the community? (if so, this might be regarded as an 'other matter' and included in the CD)?

Climate change is likely to 'catch' in one or more of the above filters – especially where:

- the council is proposing significant climate change initiatives that it wants feedback from the community on
- the climate change mitigation or adaptation measures are a major matter for inclusion in the LTP or
- climate change is a matter of public interest for inclusion in the council's infrastructure or financial strategy. This likelihood is that this would be the absolute minimum in terms of climate change related matters in the CD.

## DIRECTION-SETTING AND STRATEGIC STOCKTAKE

The LTP is a first opportunity for those councils that have declared climate change emergencies, adopting an action plan, or otherwise committed to making climate change a strategic priority to 'walk the talk'. The public will be looking for evidence of action (there may be both a positive and a negative aspect to this in some communities).

If it hasn't already been done, this is an opportunity to review the other council strategies, plans and policies for consistency with any climate action plans (however entitled). It's also an opportunity to review these strategies for currency (for example with information that may have been generated during the environmental scan).

### Tip for infusing climate change into the LTP

#### Direction setting and strategic stocktake

2. Update the council's stocktake of plans and strategies to ensure these reflect both the council's current knowledge about the impacts of climate change and any changing priorities.

## DECISION-MAKING PROCESSES

There are few significance and engagement policies that have direct criteria relating to climate change (for example, the impact a particular decision or action might have on emissions of greenhouse gases). Many significance and engagement policies contain criteria that require judgements about the degree of impact on the social, economic, environmental and cultural well-being of the community.

The point is to review your significance and engagement policies. While the content of these is a policy decision for your council, once adopted adhering to the contents becomes a matter of law.

Climate change might feature elsewhere in the decision-making process. Climate change considerations might feature in your council's assessment of whether particular options are reasonably practicable (be sure to document what you considered and why options were ruled in or out). Likewise, the *section 77* assessment of the advantages and disadvantages of the reasonably practicable options of a proposal should factor in some consideration of the impacts on the climate and the degree to which proposals support or work against mitigation or adaptation measures.

### Tips for infusing climate change into the LTP

#### Decision-making processes

3. Check your significance and engagement policies to determine whether they have criteria relating to climate change, be they direct or indirect.
4. Ensure that impacts of climate change feature in the generation and s77 analysis of options.

## QUALITY ASSURANCE

SOLGM's guide, *Living Through the LTP*, provides advice on providing quality assurance for an LTP process and documentation.

An LTP that has little or no discussion of climate change and its impacts on the community is unlikely to pass the so-called 'stand back' test of quality assurance i.e. it's unlikely to tell a credible story about the community's future and the role the council plays in it.

Climate change is an area where the 'armchair experts' are likely to manifest themselves. Few local authorities will have the expertise to produce climate forecasts 'in-house'. Considerable aspects of your climate change related scenarios will therefore need external advice. It may be advisable to subject an early version of your assumptions and analysis of impacts to an external peer review.

### Tip for infusing climate change into the LTP

#### Quality assurance

5. Empower those undertaking quality assurance to rigorously challenge the treatment of climate change assumptions and disclosures.

## AUDIT

The Auditor-General's views on climate change and the 2021 LTP can be summed up thus:

*"For the 2021-31 LTPs, we consider that there is a need for a comprehensive discussion of resilience and climate change issues with the community. This discussion needs to include financial and non-financial effects."*<sup>6</sup>

<sup>6</sup> Office of the Auditor-General (2019), *Matters Arising From Our Audits of the 2018-28 Long-Term Plans*, page 45.

Audit providers have been advised that climate change assumptions need to be reasonable and supportable. It is implicit in that advice that plans that assume away climate change meet neither of these tests. Auditors are likely to look for climate-change related contents in:

- forecasting assumptions
- the financial strategy and infrastructure strategy (part of the most likely scenario)
- activity information – particularly levels of service and the associated performance measures and
- the consultation document.

The Office of the Auditor-General has also advised audit providers that:

*“where councils do not have such assumptions or they assume that a changing climate will not have an impact on their city, district or region then they will need to provide clear and credible evidence to support this. If the council cannot provide this evidence, or the evidence is not compelling, it is likely the assumption is not reasonable.”*

## FORECASTING ASSUMPTIONS AND RISK ANALYSIS

This is the content area that most readily springs to mind as a ‘must have’ for climate change. An LTP missing assumptions about the effects of climate change and the impacts of these effects on council activities and the community may face a credibility gap.

Your assumptions around climate change should meet the same tests or criteria as other assumptions. Using the tests set out in *Dollars and Sense* this means your climate change assumptions must be:

- *realistic*
- *evidence based* – that is to say that there should be some robust backing for the assumptions you make whether it be the Ministry for the Environment, NIWA etc
- *internally consistent with other assumptions* and
- *applied consistently across the organisation* – except where there is sufficient reason not to and the difference in treatment is recorded and explained in a robust way. Expect any differences to be probed during the audit process and by the armchair experts.

Watch for instances where national data might not be reasonable for your local area. Some of the leading edges of the effects of climate change are manifesting themselves in more frequent and more serious adverse weather events, higher risks of coastal erosion in particular areas, and some localised raising of water tables (for example, think South Dunedin). Often councils are already engaging with the community on some or all of these aspects and will have taken steps to fill this information gap. Where this hasn’t been done you need to disclose your reasons for relying on the national data and treat as an assumption with a high level of uncertainty.

At *corporate level* the climate change assumptions are likely to fall into two general headings:

- the expected direct impact of climate change in the local area – for example; levels of sea-level rise, rainfall levels, flood frequency and severity of adverse weather events, and temperature changes
- the impacts on communities from the expected effects of climate change – these include the broader impacts on the social, environmental, economic and cultural wellbeing of the local community (and how these might impact differentially across the community). For example, some councils may need to consider managed retreat in coastal or flood plain



areas, some types of land-use may no longer be viable, some types of tourism may be lost due to snow and ice loss etc.

But each activity manager will need to identify the impacts on climate change on their own activities, especially, but not exclusively those activities relating to infrastructure networks. These assumptions should be reviewed centrally to ensure comprehensiveness and consistency of approach across the council, and peer reviewed (for example by an external subject matter expert). This is likely to include some or all of the following

- impacts on three waters - capacity issues e.g. stopbank breaches and overflowing; water security; water quality; sewage overflows
- impacts on transport – damage/disruptions due to flooding, erosion, slips etc; the impacts of more frequent/severe weather events on planned modal shifts (e.g. switching between walking/cycling and passenger transport)
- impacts on biodiversity and pest management – changes in the type and distribution of pest species
- impacts on coastal infrastructure and property – inundation and rise in water tables; increased risk of erosion, increased salination, insurance risks
- impacts on other infrastructure – changes in demand for different types of community infrastructure, growth of vegetation leading to greater frequency for mowing, pest control, marking of sportsgrounds etc.

### Tips for infusing climate change into the LTP

#### Forecasting assumptions and risk analysis

6. Work with others to commission local forecasts of the impacts of climate change.
7. Your forecasting assumption must reflect the direct impacts of climate change but will also need to make an assessment of the wider impacts on the community. Weaving these into a single scenario will help the reader understand and engage with these.
8. Provide corporate level assumptions to activity managers to assess the impacts on their activities. Review centrally and invite appropriate peer review.

## FINANCIAL AND INFRASTRUCTURE STRATEGIES

These are another key area where climate change issues will feature in the LTP.

*Dollars and Sense*, SOLGM's guide to the financial and infrastructure strategies, advises local authorities to look beyond the list of statutorily required contents of each strategy and ensure that these tell a comprehensive overall story of the financial and infrastructure challenges and how these will be managed.

### Financial strategy

The impacts of climate change may well trigger one or both of the two mandatory disclosures in *section 101A(3)(a)* through:

- possible changes in population and land-use e.g. shifts in the types of agricultural activity that is sustainable in the district, the restriction of development in growth areas sees growth move elsewhere in the community. Remember that the *Act* requires disclosure of both the capital and operating costs

- impacts on the provision of network infrastructure, flood protection and flood control works that are necessary to maintain existing levels of service. Other parts of this guidance identify examples of such impact e.g. finding new water services, desalination etc. While the statute only requires the identification of capital costs, a strategy that doesn't also include the operating costs is unlikely to meet the purpose of a financial strategy (for example increasing insurance costs or increased maintenance on reticulated networks).

The third 'limb' of *section 101A(3)(a)* requires disclosure of "other significant factors affecting the local authority's ability to maintain existing levels of service and to meet additional demands for service". Some factors that are both climate-change related and potentially significant might include some or all of the following:

- changes in income due to changes in the level or composition of economic activity in the district
- changes in the capital and operating cost of providing infrastructure and services not listed in *section 101A(3)(a)*
- climate change related impacts on CCOs and other revenue from third party sources (there may be both positive and negative impacts here). Assumptions around third-party revenues will be tested.

As with other aspects of the council's operations, a core part of the financial strategy lies in the assessment of council's ability to provide and maintain existing levels of service and to meet additional demands for services within those limits. Climate change will be a significant constraint and should feature in this disclosure.

### **Infrastructure strategy**

It would be a rare infrastructure strategy that contained no assumption or disclosure that relates to climate change. Impacts of climate change are expected to manifest themselves within the thirty-year life of the infrastructure strategy. In some cases, impacts are manifesting now, or councils are making financial or policy provision for the impacts now (in which case there could be disclosed elsewhere in the LTP).

*Section 101B(3)* sets out the high-level drivers or issues that an infrastructure strategy needs to address:

- (a) renewal or replacement of existing assets
- (b) respond to growth or decline in the demand for services reliant on those assets
- (c) allow for planned increases or decreases in levels of service provided through those assets
- (d) maintain or improve public health and environmental outcomes or mitigate adverse effects on them
- (e) provide for the resilience of infrastructure assets by identifying and managing risks relating to natural hazards and by making appropriate financial provision for those risks.

Climate change most obviously raises resilience questions, but resist the temptation to view it solely as a resilience issue. Indeed, managing the impacts of climate change (for example, those identified in Figure One) might legitimately have some impact on any or all of these drivers.

### **Most likely scenario**

SOLGM guidance (most notably *Dollars and Sense*) emphasises that an infrastructure strategy needs a single most likely scenario (*Dollars and Sense* refers to this as the corporate level view of trends and issues), with consequences for each group of assets being presented as the logical flow-on consequences.

Earlier in the guide we suggested that local authorities should develop a single coherent scenario on climate change and its impacts. The core elements of this should be woven into the corporate level view disclosed in the infrastructure strategy.

The impacts of climate change are likely to have some influence on the other statutory elements of the most likely scenario, namely:

- the life cycles of significant infrastructure assets – e.g. shallow salty ground water damages buried pipes and the foundations of roads and buildings
- growth or decline in demand
- increases or decreases in levels of service – especially, but not exclusively for those assets associated with flood protection or stormwater disposal.

### **Significant capital expenditure decisions**

Given the long-life cycle of many significant infrastructure assets, climate change is likely to have an impact on their ability to deliver services to the community. Councils need to take account of expected long-term future changes when assets are built, and in making decisions about renewals (why renew assets in an area that is forecast to be underwater in future years).

For example, increased rainfall may have an impact on the ability of flood protection (depending on the design standard) to meet the expected level of service, and/or some communities may demand new flood protection infrastructure to be installed.

Disclosure of a significant decision requires a description of the decision, the approximate timeframes, principal options with the approximate scale of costs. These decisions will generally pre-empt the actual impacts of climate change.

### **Resilience**

Addressing the resilience of infrastructure requires councils to determine:

- a) the likelihood of a natural hazard event occurring, where it is likely to occur, and in what time frame (this includes natural hazard events that result from the gradual effects of climate change, such as coastal erosion from sea-level rise)
- b) the exposure of its infrastructure assets to natural hazard events – in particular, the age, condition, and location of its critical infrastructure assets and
- c) the consequent vulnerability of those assets to damage from natural hazard events
- d) the likely financial impacts and the capacity of the council to manage the impacts.

### **Tips for infusing climate change into the LTP**

#### **Finance and infrastructure strategies**

9. Climate change is a key element of financial and infrastructure strategies both through its impacts on network infrastructure. But do not underestimate the impacts on other services and on the wider community.
10. Climate change has impacts on most, if not all, infrastructure issues. Avoid treating as 'only' resilience issue.

## FORECAST FINANCIAL STATEMENTS

The Ministry for the Environment consulted on a set of proposals to require climate change financial disclosures in general purpose financial reports. The Ministry was to report to Government in the second half of 2020 and seek further decisions on the development of regulations.<sup>7</sup> As of the time of writing (July 2020) it seems unlikely that regulations could be developed and promulgated on a timeframe that would allow sufficient time to implement in a document due for adoption by 1 July 2021.

## PERFORMANCE INFORMATION

The *Jigsaw Guide* takes a holistic definition of performance information that includes the following:

- community outcomes and other strategic objectives – in other words, how is your council intending to contribute to community well-being?
- rationale for service delivery and activity choice – how does an individual activity contribute to well-being?
- levels of service – what attributes of the particular activity does the user or beneficiary use or experience?
- performance measures – what are the means by which your council demonstrates that that levels of service are being met and
- performance targets – what's the expected level of performance against each performance measure?

Climate change should permeate through the performance management framework. Councils may have community outcomes or other strategic priorities that relate specifically to climate change, although it is more common that these are reflected in more generic statements around environmental sustainability. If climate change adaptation and mitigation are a significant priority for council, and are shifting investment patterns, your council should be looking to include some related levels of service, measures and targets in the LTP.

Some levels of service may need to change. For example, the capacity of a stormwater network might need increase to adapt to a higher frequency of severe rainfall events. Your community might expect to see council prioritising investments to support walking and cycling over investments supporting the movements of motor vehicles.

Your council will be making a judgement (or more likely a series of judgements) as to whether its approach to coastal encroachment, increased flood risks on flood plains etc will be to defend, to retreat or some combination of the two. A strategy that's primarily defensive might see some levels of service increase – such as the level of protection provided by your flood protection schemes. A strategy more oriented to retreat might be focused more on policy options such as amendments to the District Plan.

Other SOLGM guidance suggests that local authorities triage any reviews of their performance frameworks to focus only on those areas where there are gaps or other shortcomings with the framework. Your council's approach to climate change adaptation and mitigation may be one such area.

<sup>7</sup> The discussion document can be found at <https://www.mfe.govt.nz/publications/climate-change/climate-related-financial-disclosures-discussion-document>

Often these will relate to one or more of:

- a behaviour change
- a change to some level of protection or resilience
- an improvement in carrying capacity
- an enhancement to environmental quality.

### Tips for infusing climate change into the LTP

#### Performance information

11. Climate change is increasingly seen by many councils and their communities as a priority. Review your framework to ensure that it demonstrates the priority your council has assigned.

## SUPPLEMENTARY INFORMATION

Supplementary information, as it's been defined in the *Jigsaw* guidance, includes information about your council-controlled organisations and various smaller disclosures and policy summaries.

Many of the smaller CCOs won't play much of a role in supporting your council's climate change adaptation or mitigation efforts, and the climate change aspects of their operations probably won't feature much in your LTP.

Climate change might be a critical issue for the larger infrastructure or service delivering CCOs. A water services CCO, transport CCO or waste management CCO will have critical roles to play in adaptation, or have assets that may be at risk from the effects of climate change, or that might need to change a level of service to manage the impact of climate change. They are likely to have developed (or be developing) their own adaptation plans (your council may have even required them to under the 'thematic plan' clause of the *Local Government Act 2002*).<sup>8</sup>

This group of information also includes the two statements setting out any significant variations between the LTP and the assessment of water and sanitary services, and the LTP and the waste management and minimisation plan. Climate change adaptation should be acting as a spur to keep these documents as current as reasonably practicable (and if climate change isn't then recent developments in three waters should be encouraging keeping the assessment current).

The LTP must also include a summary of the significance and engagement policy. Climate change may well feature in those policies that have criteria relating to your council's strategic objectives, or contribution to community well-being, or sustainability.

<sup>8</sup> See section 64A of the *Local Government Act* (inserted by the *Local Government Act Amendment Act 2019*).







Professional excellence in local government

New Zealand Society of Local Government Managers (SOLGM)

8th Floor, Civic Assurance House  
114 Lambton Quay, Wellington

PO Box 10373  
The Terrace  
Wellington 6143

Phone 04 978 1280

[info@solgm.org.nz](mailto:info@solgm.org.nz) • [www.solgm.org.nz](http://www.solgm.org.nz)