Guidance to accompany Climate Partnerships - Adaptation Toolkit

Final draft

V3

16/02/2024

Prepared for:

Forest of Dean District Council

www.jbaconsulting.com

Document Status

Issue date	16/02/2024
Issued to	Marcus Perrin
Revision	V3
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Abbreviations

CAT	Climate Adaptation Toolkit
LP	Local Partnerships
UKCIP	UK Climate Impacts Programme

Definitions

Adaptation: The process of adjustment to actual or expected climate and its effects.

Adaptive capacity: The ability of systems, institutions, humans and other organisms to adjust to potential damage, to take advantage of opportunities or to respond to consequences.

Climate risks: The potential for adverse consequences for human or ecological systems from climate change.

Hazards: The potential occurrence of a natural or human-induced physical event or trend that may cause loss of life, injury, or other health impacts, as well as damage and loss to property, infrastructure, livelihoods, service provision, ecosystems and environmental resources.

Mitigation: A human intervention to reduce emissions or enhance the sinks of greenhouse gases.

Resilience: The ability to absorb and recover from a shock or harm.

1 Introduction

1.1 Purpose and structure of this document

This document is designed to help Forest of Dean District Parish Councillors effectively utilise the Climate Adaptation Toolkit (CAT) designed by Local Partnerships (LP) and UK Climate Impacts Programme (UKCIP). The document is structured to align with the CAT and should be used in tandem with both the CAT and the Climate Risk Summaries both for the district and for the towns.

1.2 The Climate Adaptation Toolkit and this guidance

The Climate Adaptation Toolkit is a guide designed by LP and the UKCIP to help local authorities navigate the impacts of current and future climate changes. The toolkit can also be used by other local organisations, whether just starting out, or wanting to boost existing climate adaptation efforts.

The process outlined in the toolkit aims to:

- Improve awareness and enable prioritisation of local climate change measures.
- Make a case for adaptation, including assessing vulnerability.
- Provide accessible resources for creating a climate risk register tailored to the user's organisation.
- Develop a practical climate adaptation strategy.
- Integrate climate adaptation into daily decision-making, risk management, and council policies.

Following the work JBA Consulting has undertaken to outline local climate risks and impacts, primarily through the creation of Climate Risk Summaries, this guidance document will help to support Parish Councils through the CAT process.

This document will help Parish Councils to make the most of the CAT, explore potential solutions to the climate impacts that pose the most immediate risks, and identify and prioritise a range of adaptation actions and projects as part of a delivery programme.

This guidance should be considered in parallel with the Climate Risk Summary that covers the Forest of Dean District. Four additional Climate Risk Summaries have been produced which cover the towns of Cinderford, Coleford, Lydney and Newent. If your Parish is in relatively close proximity to one of the four towns listed, it may be beneficial to draw on the Climate Risk Summary for that town as well as the district wide Climate Risk Summary.

We recommend the use of this guidance alongside the CAT from page 28 onwards. Beginning with 3.5 'What are the high-priority risks that need an adaptation response?'. You can click on the below to go to each section of the guidance.

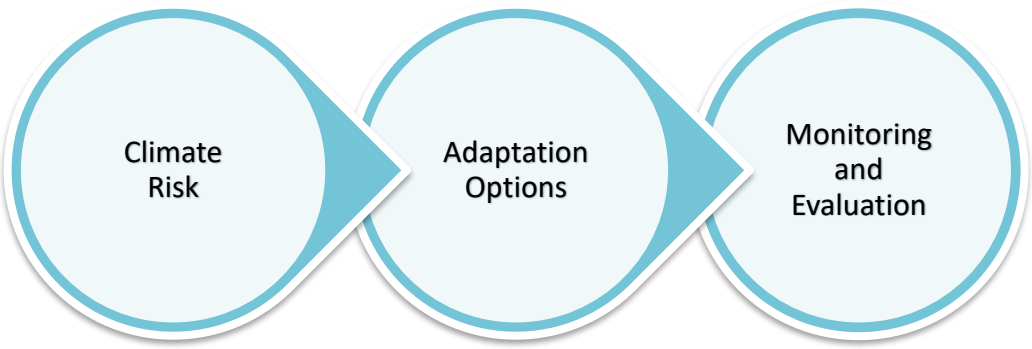


Figure 1-1. Navigation Buttons.

1.3 Climate Risk

1.3.1 Why your experience is important

As local Parish Councillors, your experience and insight around the potential impacts of climate risk for your local area is critical in helping to determine the need for future adaptation. As voices for local communities, Councillors have a responsibility to help prepare people and places for climate change. This process should capture your communities' views and experience to design and shape appropriate and proportionate adaptive action.

1.3.2 District wide Climate Risk Summary

The climate change impacts that present risks to your local area or organisation are covered both in the district wide Climate Risk Summary (2023s1289 Climate Risk Summary - Forest of Dean District - S3-P01) and depending on the location of your Parish, could be covered by one of the four Climate Risk Summaries produced for Cinderford, Coleford, Lydney and Newent respectively.

After reading the relevant Climate Risk Summaries, you may find it useful to consider the risk categories detailed within the CAT (see the CAT, pg. 26.). These categories are summarised in brief below.

- External risk (infrastructure, economic, legal, political, market),
- Financial risk (budgetary, fraud, insurance, capital investment, liability),
- Activity risk (policy, operational, informational, reputational, transferability, technological, project, innovation),
- Human resource risk (personnel, health, and safety).

1.3.3 Local knowledge

Local knowledge helps bridge the gap around local vulnerabilities. Understanding local vulnerability to certain risks will help form useful adaptation plans. Here are some exercises recommended within the CAT to better understand local vulnerability:

- Continue to investigate your vulnerability to the climate change impacts of which there is uncertainty (sea level rise holding the greatest uncertainty).
- Conduct further research on vulnerabilities within your Council or in collaboration with external consultants.
- Consider non-climate risks that your Council faces (e.g. financial, legal, and reputational risks).
- Quantify the likely costs of your identified climate risks (including costs of inaction, such as the cost of an unmitigated flood or heatwave event).

1.3.4 Parish Council experience

A useful first step is to understand previous weather-related risks to form a local picture of potential climate risks. This exercise should also be informed by the district-wide Climate

Risk Summary produced for the Forest of Dean, and if applicable, the nearest town-specific climate risk summary.

Parish Councillors could use the table below, adapted from the CAT, to record the weather-related risks associated with your service areas, and where these risks occur across your locality.

Table 1-1. How the Parish Council is experiencing to climate impacts

The weather event detail	Location of incidents	The date of incidents	Source of the information
e.g. heatwave	*e.g. melting road surface*	*e.g. 8th August 2020*	*e.g. highways maintenance*

2 Adaptation Options

Once you've identified and understood the potential climate risks and impacts in your local area, the next step is to explore adaptation options, before creating a delivery plan for implementing these adaptations.

2.1 Types of Adaptation Strategy

The CAT recommends multiple proactive, strategic, and reactive adaptation strategy types that could be used for local planning.

Proactive adaptation strategies are anticipatory and takes place before the impacts of climate change are observed. Reactive adaptation strategies respond to external events and shocks, and are generally more costly than proactive adaptation. Strategic adaptation strategies are focused primarily on planning and research, they focus on improving understanding, awareness and responsiveness to climate hazards.

We would recommend developing one type of each approach. For example, a risk-based approach following local climate science (e.g. a service such as https://uk-cri.org/) might be proactive, this could be supplemented by a reactive monitoring approach.

Locally specific plans, such as Local Resilience Plans, could facilitate strategic planning (contingency plans), further benefitting local adaptation. Additionally, amending existing, or producing new, Neighbourhood Development Plans (NDPs) to address and consider climate change adaptation is an important adaptation action and one that Parish Councils can take on and own.

Table 2-1 - Adaptation strategy types

Proactive	Reactive	Strategic
- Risk-based policy and appraisal - Delay and buy time - Monitoring - Information supply - Diversification - Insurance	- Impact monitoring - Awareness raising - Defend and manage - Change of use - Retreat	- Research - Contingency planning - Safety/buffering measures

2.1.1 How to Identify Adaptation Options

The CAT outlines two main strands of planned adaptation, Building Adaptive Capacity (BAC) and Delivering Adaptation Actions (DAA).

Building Adaptive Capacity (BAC) involves developing the institutional capacity to respond effectively to climate change. An example BAC would be, raising awareness through education and training initiatives.

In comparison, Delivering Adaptation Actions (DAA) involves taking practical actions and delivering projects to make your organisation more climate resilient. For example, reducing vulnerability to climate risks through natural flood management, or exploiting opportunities such as new technology.

We recommend that as a best course of action a range of feasible, fundable projects across the two strands of adaptation options are selected.

Some examples are provided below:

- Gathering, using, and sharing information to inform decision-making (BAC).
- Developing personnel to work in partnership and learn from other areas (BAC).
- Tree planting programme in urban areas (DAA).
- A green heating or refurbishment project for council-owned buildings (DAA).

The UK Adaptation Inventory[1] compiled as part of the OpenCLIM project features multiple adaptation options, some of which could be pursued at a local government scale in partnership with GCC/FoDCC. To write a shortlist of options, councils could also learn from other nearby councils, sharing lessons and approaches.

2.2 Evaluating Your Adaptation Options

Once you have a shortlist of adaptation projects, you need to evaluate them. We recommend a collaborative effort. First, Councils should decide on criteria, such as the list below (condensed version of that in the toolkit):

1. **Effectiveness**: Will it work? How?
2. **Efficiency**: Do benefits outweigh costs?
3. **Equity**: Avoid harm to other areas or vulnerable groups.
4. **Flexibility**: Can it adapt and be implemented incrementally?
5. **Sustainability**: Align with sustainability goals and be self-sustainable.
6. **Practicality**: Can it be implemented on time?
7. **Legitimacy**: Is it socially, ethically, and politically acceptable?
8. **Urgency**: How quickly can it be implemented?
9. **Costs**: Consider social and environmental costs.
10. **Robustness**: Can it handle various climate scenarios?
11. **Synergies/Coherence**: Does it align with other strategic objectives?

Secondly, each option in the shortlist should be assessed against the above, this can be either quantitatively, qualitatively, or both. Councils can then weigh options they feel reflect important strategic goals. This process would benefit from being recorded and we have provided an adapted version below for this process (**Table 2-2. Delivery Plan)**.

1 Jenkins et al. (2022) UK Adaptation Inventory (version 1).
Available at: https://www.nismod.ac.uk/openclim/adaptation_inventory.

It is worth highlighting that:

- For some options, there will be an obvious case for adaptation.
- For others, costs will be disproportionate to the risks.
- For others, there will be limited downsides (quick-wins).
- And for others, a delicate balance will be required for delivery.

The New Zealand National Institute for Weather and Atmospheric Research (NIWA) have developed a priority matrix for quickly assessing adaptation project priority (see Figure 2-1 below).

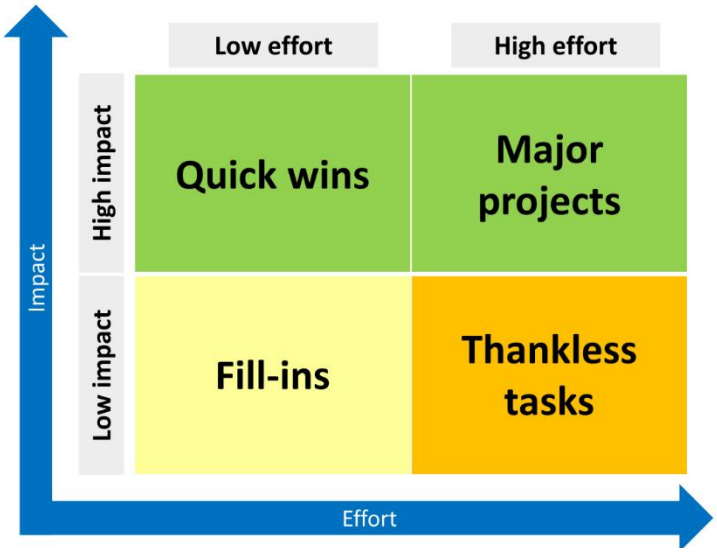


Figure 2-1 - NIWA Adaptation Project priority matrix

However, as the CAT outlines, an important principle of this process is that **proactive adaptation is generally more effective and less costly than reactive adaptation.**

A final consideration is “windows of opportunity” for implementing adaptation. For example, using mainstream activities to facilitate climate responses. This could include amending local plans, working with ongoing developments, and recognising where infrastructure is up for renewal.

2.3 Developing your plan

To aid the development of your adaptation actions and projects, we have adapted the CAT climate risk register into a draft implementation plan for you to develop your own adaptation actions and projects (see Table 2-2 below).

When developing your delivery plan, we recommend the following the CAT considerations:

- Determine **key decision makers** needed for effective adaptation and consider inputs like information, expertise, costs, and time.

- Explore **collaboration with other councils** (and parish councils) facing similar challenges for potential cooperation and co-financing opportunities.
- Assess the **potential impact, both positive and negative, on vulnerable groups**, aiming to ensure they directly benefit from the adaptation plan.
- **Learn from other Councils** with similar experiences to enhance the impact of your adaptation plan.
- Utilise **existing strengths**, such as risk management expertise, in the planning process.

Table 2-2. Delivery Plan.

Risk identified	Service area impacted	Specific risk	Proposed risk treatment	Risk owner	Type of decision	Longevity of decision	Decision makers
e.g., Drainage	**Roads, Council buildings**	**Surface water flooding**	**Sustainable urban drainage systems**	**Highways, Local Authority**	**Nature-based solution, Technical**	**Long term**	**Highways, Local Authority, County Council**

Risk identified	Service area impacted	Specific risk	Proposed risk treatment	Risk owner	Type of decision	Longevity of decision	Decision makers

3 Monitoring and Evaluation

For each adaptation project, it is important that ongoing monitoring and evaluation is undertaken to understand effectiveness, assess accountability, improve future learning, and draw comparisons to other interventions.

3.1 Evaluation criteria

The CAT recommends employing evaluation criteria including:

- A baseline of existing conditions.
- Indicators to measure impact.
  - These aim to record evidence that a condition exists, or certain results have or have not been achieved. Results can be either quantitative or qualitative.
  - For example, an indicator for a local tree planting scheme could be tree survival rate.
- Metrics refer to a quantitative unit of measurement.
  - For example, a metric for a local tree planting scheme could be, percentage of planted trees that survive after one year.

We recommend following the general structure above to form simple metrics that can locally measure adaptation actions and projects.

It should be noted that evaluation should be proportionate to the scale of the adaptation project/action. Overly burdensome evaluation can disincentivise action and limit progress. For example, a small local tree planting scheme is not likely to need more than a couple of indicators, with a corresponding metric each. Evaluation could also be assisted by involving the local community to assist with data collection, through volunteering, for example.

3.2 A monitoring example

Ideally, a balance of qualitative (non-numeric) and quantitative (numeric) data is needed for successful local monitoring.

For example, urban tree planting could be monitored through the provision of shaded areas. This could be measurable by the increased number, % cover or successful establishment rate of planted trees. Tools such as Forest Research's i-Tree Eco could also be utilised to make effective resource management decisions and to monitor an area's trees and greenspaces.

This quantitative information could be enhanced with qualitative data, which can help to ground quantitative data and examine the reasons behind the numbers. For example, qualitative data could outline issues with pests, diseases, and threats, which can then be managed.

There may be monitoring opportunities within local authority tree safety programmes or through engaging with local groups. Citizen science projects such as https://www.observatree.org.uk/ may also offer an avenue for motivated volunteers to help monitor progress.

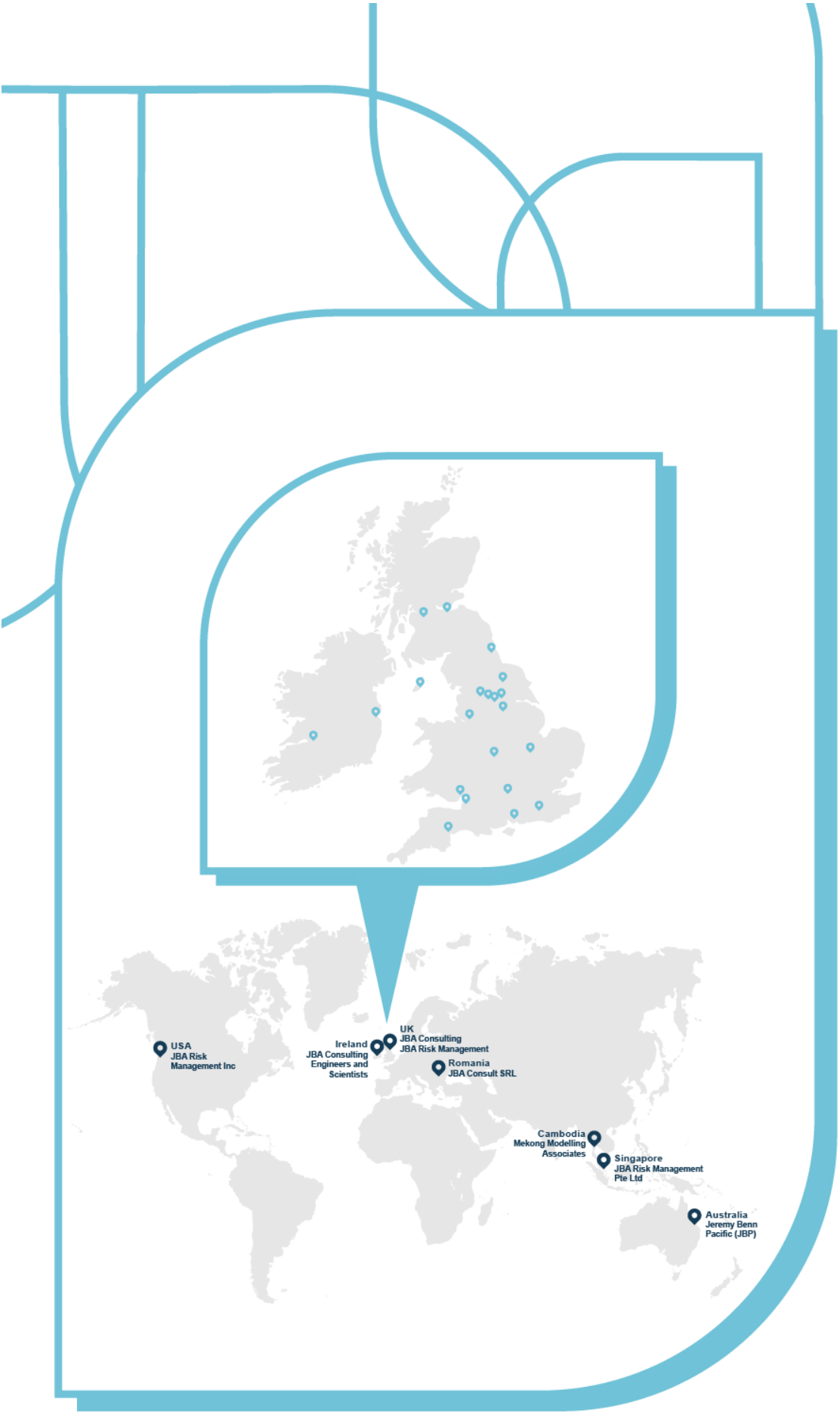
4 Conclusion

Whilst the challenge of uncertainty may seem daunting, it is worth remembering that communities and organisations deal with different types of uncertainty on a daily basis. There are also a wealth of resources available that will help reduce levels of uncertainty regarding decisions, actions and outcomes relating to adaptation that can be drawn on.

What we do know is that significant climate impacts in the UK are inevitable and, in some cases, already happening. Early, proactive action is therefore essential.

Effective guidance and information can play a role in effective, tangible decision-making for climate change adaptation. The task for Councillors is to use the resources available and recognise where adaptation options can offer the highest net benefit, taking account of the risks and uncertainties surrounding climate change.

Councillors should adopt a flexible decision-making approach, 'learning by doing, and adapting based on what's learned'. This might be as simple as keeping options open or being more responsive - addressing climate related impacts through 'quick-wins' and planning for immediate larger projects. At a minimum, completing Table 1-1 and Table 2-2 will allow for Councillors to understand the climate risks already impacting on their locality and to draw up a basic plan for managing these risks.



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