



Step Three

Identify and
Prioritise
Actions

How Do You Develop a Climate Risk Register?

With the information gathered from Step 1, Step 2 and Workshop 1, you can now begin to build your climate adaptation plan. This begins with the creation of a risk register. The Risk Register is the basis upon which you will build much of your action planning, decision-making and monitoring with regard to the climate risks facing your organisation. Ultimately, defining and beginning to address these risks is the core driver for creating your adaptation plan.

The risk register describes what the main climate risks are for your organisation. It is also an important step in building a cohesive picture of your future and how your current vulnerabilities may be worsened over time.

There are two steps to developing the risk register:

1. Developing your risk statements based on the workshop information,
2. Using these to complete the risk register template.

For the purposes of this guidance, the scoring methodology for scoring risk will be likelihood x impact. However, if the methodology used in your organisation is different, you may choose to use it instead.

What is a climate risk register?

It is a risk management tool, which can be used to improve the resilience of an organisation by making a database of its climate-related risks. These risks provide the basis upon which you can identify actions required to adapt operational capability, thereby making your organisation more resilient. This should identify:

- Existing vulnerabilities to weather related hazards, and the degree to which they are a threat
- The impact of current policies in addressing these risks

- How risks are likely to change over time, the timescale for action, and what actions need to be taken to address each risk.

The idea is to provide a sense of direction and purpose for your climate planning. You need priorities for action, and to know where you are most in need of a response. Developing a plan for your limited resources based on an agreed series of issues can be very powerful, and don't forget, this is something you will come back to and refine over time.

Climate Hazard	Risk / Opportunity	Service Area	Inherent Likelihood	Inherent Impact	Total Inherent Risk Score	Timing of Risk & Impact			Current Controls (includes policies, plans and procedures)	Urgency Category (Within 5 Yrs)	Relevant External Actors
						≤ 5yrs	5-10yrs	≥ 10yrs			
Increased Temperature / Low Rainfall	(IT3) Increasing frequency of high temperatures and urban heat island effect impacting on vulnerable people requiring Council response	<ul style="list-style-type: none"> • Emergency Planning • Environmental Health • Health & Safety • Environment 	4	4	16	✓	✓	✓		More Action	Public Health Agency WHSCT
	(IT4) Extreme heat exacerbating air quality problems leading to public health issues	<ul style="list-style-type: none"> • Environmental Health • Emergency Planning • Environment • Health & Communities 	4	4	16	✓	✓	✓		More Action	Public Health Agency WHSCT
	(IT5) Changes in growing season, increased risk of pests/invasive species	<ul style="list-style-type: none"> • Environment • Capital Development • Health & Safety • Human Resources • Emergency Planning • Green Infrastructure & GI Plan 	4	3	12	✓	✓	✓		More Action	DAERA NIFRS
	(IT6) Increasingly frequent spells of hot weather leading to greater use of public amenity and outdoor leisure facilities, impacting on green infrastructure and heritage	<ul style="list-style-type: none"> • Green Infrastructure • Heritage & Regeneration • Environmental Health • Waste Management • Environment 	4	2	8	✓	✓	✓		Research Priority	HED

Figure 1: DCSDC Risk Register

How do you develop a climate risk register?

Step 1: Risk Statements

Using the various pieces of information about events, impacts and consequences gathered from Workshop 1, you now group what you have learned into a series of risk statements. This means that you look at each event listed as part of Workshop 1 and create a short statement which encompasses the risk for council (see the box below). These risk statements are then what is scored against in the risk register. Taken together, these risk statements tell the story of how your organisation is at risk from climate change.

Risk Statements in 3 Steps

1. Each statement will be grouped under one of four headings according to its relevant climate hazard from Workshop 1:

- Flooding
- Heatwaves/Increased temperatures and Low Rainfall
- Storms
- Intense Cold

Note: Gradual changes like sea-level rise and increased growing season can be integrated into Flooding and Heatwaves/Increased temperatures respectively.

2. A risk statement consists of three component parts:

Hazard (1), Impact (2) and Consequence (3)

So from the information gathered on a heat event listed in Workshop 1, you may condense the information down to look like the following:

Increased frequency and intensity of heat (1) leading to **increased staff discomfort (2)** resulting in **increased mechanical cooling costs (3)** for the authority.

3. You must give each risk a risk code e.g. for a flooding risk, F1

Figure 2: Explanation of How to Develop a Risk Statement: Amended from Climate Ireland¹

The idea behind these risk statements, as opposed to just listing flooding, or heatwaves in isolation, is that climatic drivers are given context in terms of the impacts and consequences for the organisation/area. This idea of addressing climate change in relation to vulnerability is crucial to set the precedent moving forward, for this plan and new iterations.

Some of these will read back directly to the information gathered during Workshop 1, others may have some repetition and therefore be amalgamated from several different events. You want to capture all the information, but make your risk register as user-friendly and approachable as possible.

Remember to look at the Derry City and Strabane District Council Risk Register to get a sense of what it looks like. Although there are some changes to the statements and template, it will give you an idea of what you're working towards.

Risk Headings

Once you have written your risk statements for each of the climate hazards, you may find it useful to develop headings which provide a summary of the impacts for each hazard. See the DCSDC example below:

DCSDC Key Risk Headings	
1.	(IT) Risk to health, well-being, productivity, assets and eco systems from increased temperatures
2.	(IPF) Risk to Council personnel, communities, infrastructure, eco systems and Council assets, services and operations from increased precipitation and flooding (sea-level rise included here)
3.	(IS) Risk of storm damage to infrastructure and Council assets, services and operations and risk to Council personnel
4.	(IC) Risk of intense cold periods affecting infrastructure, communities and Council assets, services and operations.

Figure 3: Derry City and Strabane District Council Risk Headings

DCSDC also included the following statement in the Corporate Risk Register; a move attributed a great deal of success by Programme Manager Cathy Burns:

(CRR) Council fails to take effective action to address the causes and impacts of Climate Change, and respond to the Climate Emergency Declaration.

Step 2: Complete the Risk Register

Decide how to prioritise risks

Now that your draft risk statements are developed, it is time to complete the template. This will be your first draft of the risk register which you can then bring back to the group for discussion in Workshop 2. Remember, it doesn't have to be perfect at this stage. There will be 2 more workshops to run it by your working group.

As we discussed at the beginning, you may find it most useful to follow the risk framework already used in your organisation in order to integrate climate planning as much as possible. In NI this tends to be a likelihood x impact system and this is therefore the method we will use here.

Completing the NI Adapts Risk Register

The NI Adapts Risk Register suggests you make 8 assessments for each risk statement (continue reading for more information on each point):

1. State the relevant internal departments
2. Assess the level of risk posed (inherent risk)
3. State any relevant ongoing policy or procedures in your organisation
4. Assess to what extent that ongoing work reduces the risk score (residual risk)
5. Assess the timescale in which this action needs addressed
6. Assess the future change in the level of the risk (increase, no change, decrease)
7. State any relevant external organisations important to addressing the risk
8. Link to Action Plan.

NI Adapts Risk Register

Note: Please download the link to the Risk Register Template from the NI Adapts Website before reading this section so you can follow along with how the information looks in practice.

For each risk statement, complete the following information in the columns listed:

1. Relevant Internal Departments

Simply list the departments for which the risk falls within their remit. This will be important in agreeing the action plan.

Note: Don't forget departments such as Marketing or Human Resources, for example. Look at the DCSDC risk register to see who they included.

2. Inherent Risk

The inherent risk score will tell you how high a priority each risk statement is for your organisation:

Impact x Likelihood = Risk Score

The **Impact** (the level of damage caused by a climatic event or trend) ranges from very low to high.

The **Likelihood** is the probability of how often these risks will occur moving forward, and these range from very low to high.

You should have gathered feedback in Workshop 1 as to whether colleagues considered the different events as low/medium/high risk. You can use this and the UK climate projections as a guide.

Note: It might be good practice to score uncertainties high rather than low, using the precautionary approach.

Your organisation will likely already have a Risk Matrix like the following, which you should use in order to integrate easily with other policies and plans:

Impact	5 High	Property destroyed or not safe for use/Fatality or multiple injuries; Financial loss >£500,000; Failure of key objectives; National media coverage;	Medium 5	High 10	Critical 15	Critical 20	Critical 25
	4 Medium - High	Serious damage to property/ Serious injury; Financial loss £100,000 to £500,000; Failure of key service; NI Media coverage	Low 4	Medium 8	High 12	Critical 16	Critical 20
	3 Medium	Moderate damage requiring repair/ Injury requiring medical treatment; Financial loss £10,000 to £100,000; Medium impact on achievement of objectives; Significant localised press coverage	Low 3	Medium 6	Medium 9	High 12	Critical 15
	2 Low - Medium	Minor damage/injury; Financial loss £1,000 to £10,000; Minor impact on achievement of objectives; Some Localised press coverage	Very Low 2	Low 4	Medium 6	Medium 8	High 10
	1 Low	No damage/injury; Financial loss<=£1,000; No impact on achievement of objectives; Minimal damage to reputation	Very Low 1	Very Low 2	Low 3	Low 4	Medium 5
DERRY CITY & STRABANE DISTRICT COUNCIL			May occur only in exceptional circumstances	Might conceivably occur at some time	Could occur at some time	Will probably occur in most circumstances	Is expected to occur in most circumstances
RISK SCORING MATRIX			1 Low	2 Low – Medium	3 Medium	4 Medium – High	5 High

Level of Risk	
	Critical
	High
	Medium
	Low
	Very Low

Figure 4: Example DCSDC Risk Scoring Matrix?

3. Current Policy and Procedures

Use the information captured in Workshop 1, as well as during your scoping exercise in Step 1, to detail current policies or procedures in your organisation which reduce the likelihood and/or impact of each risk e.g. emergency plans, green infrastructure strategy, flexible working.

4. Residual Risk

Update likelihood and impact scores from Inherent Risk to account for any reduction due to current policies and procedures listed in point 3. This will give you a residual risk score which can be used over time to track the success of your interventions.

Note: policies and procedures may be in place, but truly consider the extent of their real-world impact when scoring residual risk, otherwise flaws may not be improved.

5. Short, Medium, or Long-Term Risk?

Consider the timescale in which this risk needs to be addressed in your action plan. Note: For some risks it could be all of them:

- Short (< 5 yr),
- Medium (5-10 yr)
- Long (> 10yr)

6. Projected Change in Risk Level (to 2050)

Based on the information gathered for Exercise 1b in Workshop 1, as well as the UK climate projections, assess the future change in the level of the risk to 2050:

- Increase
- Decrease
- No Change

For example:

- If it is a heat-related risk, then since the projections show an increase in hot days by 2050, the risk would be deemed to 'increase'.
- Conversely, cold events will still occur, but will become less frequent, so the risk could be deemed to 'decrease'. Others may show no change.

Note: Consider this section not only based on the climate trends, but also on the vulnerabilities arising from the geography of further planned development, or an aging population. Even if there is uncertainty around a certain climate impact itself, you might be able to say that an older population will mean a higher number of more vulnerable people regardless.

7. Relevant External Organisations

List any external organisations for which the risk falls within their remit; government departments, NGOs, community groups etc.

This will also form part of the action plan.

8. Link to Action Plan

This final section should be completed after you have developed a draft action plan. By completing this section, you are cross-referencing your actions with the risks. This is how to make sure that all of your priority risks are being addressed by your proposed actions.

You can then carry out a final scoring exercise to determine how you think the actions in your adaptation plan will change the risk score.

Now you have developed your risk statements and filled in the template, the first draft of your risk register is complete. Again, don't worry about perfection at this stage; the working group will scrutinise the risk register in Workshops 2 and 3, alongside the two other drafts you need to complete:

- Draft vision/objectives
- Draft action plan.

References

¹Excerpt adapted from <https://www.dccae.gov.ie/en-ie/climate-action/publications/Documents/14/LA%20Adaptation%20Guidelines.pdf>

²Derry City and Strabane District Council Climate Change Adaptation Plan (2020) - http://meetings.derrycityandstrabanedistrict.com/documents/s31062/Appendix%201%20DCSDC_Climate%20Change%20Adaptation%20Plan%202020-2025%20Final%20Draft.pdf