

# Own Your SECAP



## Energy Monitoring Platform: *Monitoring Climate Change Adaptation*

### Instructions for Use

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## Introduction

In recent years, municipalities have been actively developing Sustainable Energy and Climate Action Plans (SECAP) or Climate Plans, which also include a section on climate change adaptation. Usually, this section provides information on the current situation and the sectors most threatened by climate risks. SECAP also includes the measures that the municipality has identified to increase the resilience and adaptation capacities of the municipality.

Within the OwnYourSECAP<sup>1</sup> project, Ekodoma has extended the Energy Monitoring Platform (more about the platform: [www.energoplanosana.lv](http://www.energoplanosana.lv) and why we made it: <https://energoplanosana.lv/en/par-platformu/>) with a new module – Monitoring Climate Change Adaptation (hereafter - Climate Module) to enable municipalities to start and implement monitoring of climate indicators and adaptation actions.

This module is a convenient and easy to use tool where any municipality can start to keep track of data not only on adaptation measures, to monitor their effectiveness, but also to understand which sectors are priorities, which are the municipality's vulnerabilities, e.g., coastal erosion or economic losses in agriculture due to prolonged drought and heat, etc.

The Climate Module monitors sectors, risks, indicators and actions. Each sector is affected by a risk and often the same risks can affect several sectors. Vulnerability indicators, on the other hand, are selected to measure whether the actions implemented by the municipality increase its climate resilience. The indicators are used to monitor and quantify the impact of a risk on a sector. The purpose of the actions is to reduce vulnerability to risks and to prevent and mitigate the impacts of risks, as reflected in the indicator values.

This document provides general guidelines and main steps how to use Climate Module.

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<sup>1</sup> To learn more about the project, see: [www.ownyoursecap.eu](http://www.ownyoursecap.eu)

# 1. Creating a monitoring review

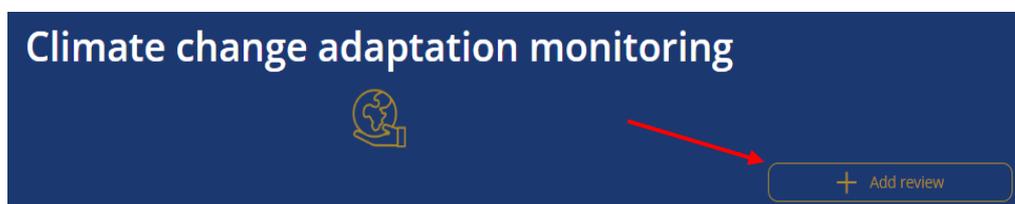
## 1.1. Creating a monitoring review for the first time

Access to the Climate Module is granted usually to the energy or environmental manager and/or the person who has been granted the access to do the monitoring review. Ideally, the review should be produced by an environmental or civil protection officer, one of whose responsibilities is to address climate change adaptation issues in the municipality.

If your municipality does not already have an account on the Energy Monitoring Platform, please email [platforma@ekodoma.lv](mailto:platforma@ekodoma.lv) with a request for your municipality to create an account and access to this module.

The monitoring reporting period is one calendar year.

To create the first review, click "Add review" and enter the required basic data for the monitoring review.



When creating a new review, the following basic data must be entered (see also the graph afterwards):

- Review title / number
- Difficulty level

You can choose from three levels of difficulty: beginner, advanced or expert. The choice of monitoring complexity level determines the number of risks and sectors for which you will enter data in the monitoring review. If you choose the beginner level, there will be two risks to select, for the experienced municipality there will be four and for the expert municipality there will be six types of risks and sectors to choose.

- Monitoring year

You have the choice of preparing the monitoring review for the current year, the previous year or the following year.

- Person responsible for monitoring

Specify the person responsible for preparing the monitoring review.

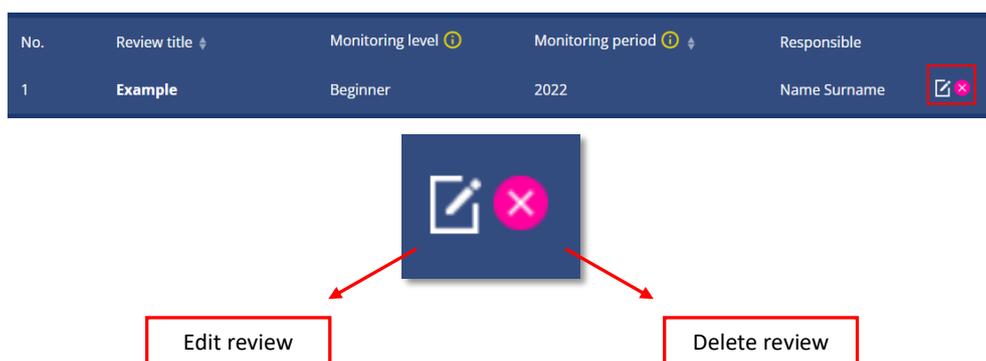
- Risks

Select the climate change risks that are most important and relevant for your municipality. Only these selected risks will be available for further reporting. The platform has pre-defined the most important risks from which you can choose:

- extremely high temperatures
- extreme cold;
- extreme precipitation;
- flooding and sea level rise;
- drought;
- storms;
- forest fires;
- others.



Once the basic information of the review is entered, click "Save" and the review will be saved, opening a list view of all monitoring reviews created by your municipality. You have the possibility to edit or delete the reviews you have created.



Clicking on the "Edit" button will open the overview information where you can edit the name, difficulty level, year, responsible person and selected risks.

Clicking on the right "Delete" button will open an additional box to warn you that the review will be deleted. Clicking "Delete" again will permanently delete the review.

## 1.2. Creating a second monitoring review - importing data

When creating the monitoring review for the second time onwards, you can import the review data from previous years. To do this, click "Add review" and in the next step select the year whose data you want to import into the new monitoring review and click "Import review".



Next, you need to enter the name of the review, the year, and the person responsible for the new review. If you need to change the monitoring complexity level for the new review, you can do this by editing the review you created (click on the "Edit" button).

No.	Review title	Monitoring level	Monitoring period	Responsible
1	Example	Beginner	2022	Name Surname
2	Review 2	Beginner	2023	Name Surname 

**Important! Please note that if you change the monitoring difficulty level of a particular review to a lower level, e.g. from advanced to beginner, some of the imported data will be lost!**

To help you understand what data needs to be entered in many places in the review, an explanatory description is given next to the required parameter, which appears when the mouse cursor is hovered over the  icon.

## 2. Filling in the review

Once a new review has been created, click on the line of the newly created review:

No.	Review title	Monitoring level	Monitoring period	Responsible
1	Example	Beginner	2022	Name Surname
2	Review 2	Beginner	2023	Name Surname 

The monitoring review consists of 5 sections: 1) the sectors affected by climate adaptation monitoring, 2) the risks corresponding to each sector, 3) the vulnerability indicators (numerical estimates) corresponding to each risk, 4) the parameters of the mitigation actions and 5) a summary of the review.



## 2.1. Step 1: Identifying the sectors affected

In this step, you will select the sectors that are currently most affected by climate change in your municipality and include them in the Climate Adaptation Monitoring Review. You can select the sectors from the list below:

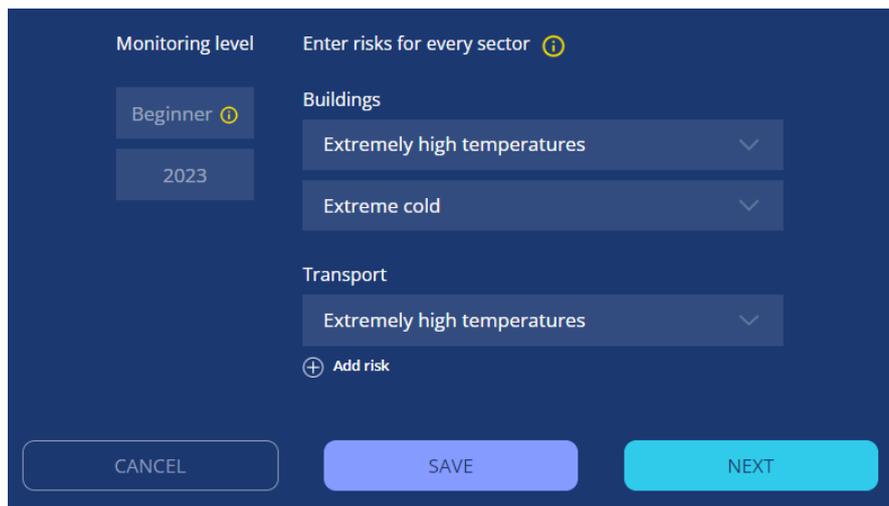
- Buildings
- Transport
- Energy
- Water
- Waste
- Land-use planning
- Agriculture and forestry
- Environment and biodiversity
- Health
- Civil protection and emergencies
- Tourism
- Others.

As mentioned above, if you choose, for example, the *Beginner* difficulty level, you will be able to choose two sectors. The higher the level of monitoring complexity, the more sectors you can select and include in the review. Select all the sectors you need and click "Next".

## 2.2. Step 2: Identifying the most significant risks

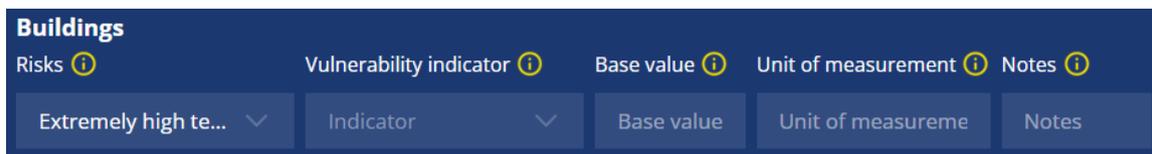
The next step is to match the sectors and risks selected above. Under each sector, select one of the pre-selected risks (only the risks you entered when creating the review will appear in the menu). Click on "Add risk" and an additional line will appear. The number of risks depends on the predefined monitoring complexity level, so if there is no "Add risk" button, the maximum number of risks at that level is entered. When all risks have been added, click "Next".

Note: At least one risk must be entered for each sector.



## 2.3. Step 3: Defining the vulnerability

The third step is the vulnerability assessment, where for each risk an indicator, a baseline value, a metric can be selected and inserted, and notes added if necessary.



You have the option to select the following vulnerability indicators:

- Average period of time (in hours) when public services (energy/water supply, public transport, civil protection/emergency services, etc.) are not provided.
- Number of days when public services are interrupted (energy/water supply, health/civil protection/emergency services, waste management).
- Direct annual economic losses in € (e.g., commercial/agricultural/industrial/tourism sector) due to extreme weather events.
- Area inaccessible in emergency situations (e.g., firefighters), %.
- Area of impermeable surfaces, %.
- Buildings constructed after 1999, %.
- Buildings constructed after 1979, %.
- Population living in mobile dwellings.
- Population aged 65 or over, %.
- Population aged 18 or over, %.
- Population spending more than 50% of income on rent, %.
- Percentage of population with chronic illness (12 separate diseases).
- Quality of drinking water.
- Number of available acute care hospital beds per 1000 inhabitants.
- Population with health insurance, %.

- Area covered by tree canopy.
- Number of buildings in floodplains.
- Population living in floodplains, %.
- Number of roads in flooded areas, km.
- Number of forest fires per year.
- Area affected by forest fires.
- Number of inhabitants affected by forest fires.
- Areas affected during drought periods, ha.
- Number of days per year with severe drought.
- Areas affected during dry spells, %.
- Rainfall, mm.
- Maximum temperature during hot spells, °C.
- Potential hours of work lost due to heat.
- Heat-related mortality.
- Percentage of households with air conditioning.
- Proportion of green space in urban areas, %.
- Lethality of extreme weather events.
- Population living in areas less than 1 m above sea level, %.
- Decrease in pavement surface temperature, %.
- Decrease in roof surface temperature, %.
- Reduction of facade surface temperature, %.
- Proportion of water bodies, %.
- Proportion of nature reserves and protected areas, %.
- Building density.
- Protected area size, %.
- Area restored, %.
- Sustainably managed areas, %.
- Status of water bodies.
- Availability of green spaces.
- Awareness of the population on climate change risks.
- Quality of climate data sources.
- Quality of consultation process on climate change.
- Other.

Qualitative and quantitative indicators can be measured using a system and units of your choice, e.g., citizens' awareness can be measured on a self-defined 10-point scale, the number of awareness-raising actions organised or by a verbal description, i.e., "satisfactory", "does not meet requirements", etc. It is preferable to describe the rating system in the notes.

Selecting the "Other" indicator will open an additional box where you can manually enter any indicator you define. Then click "Next".

## 2.4. Step 4: Identifying actions

The fourth step is the selection of actions, where you can define mitigation and adaptation actions, including nature-based solutions.

The following information must be entered for each action:

- *Action name*: manually entered.
- *Main sector affected*: which sector the action targets.
- *Other related sectors*: here, other sectors can be selected, or none can be specified.
- *Related indicators*: one of the vulnerability indicators defined in *Step 3* should be selected.
- *Implementation deadline*: the implementation period of the action can be any year, not only the reference year, if the measure takes longer to implement.
- *Implementation status of the measure*: indicate whether the implementation of the measure has started, is in the process of being implemented, has already been implemented or has been cancelled or postponed.
- *Notes*, if necessary.

Additional actions can be added by clicking on the "Add action" button in the bottom left. Finally, click the "Next" button.

Enter the corresponding parameters for each action ⓘ

Action ⓘ	Sector ⓘ	Other related sectors ⓘ	Related indicators ⓘ	Implementation deadline ⓘ	Status	Notes
Action 1	Civil protection an... ▾	Sector ▾	Average length (in... ▾	2023	Started ▾	Notes
Action 2	Transport ▾	Sector ▾	Damaged tires of t... ▾	2024	Planned ▾	Notes
Action	Sector ▾	Sector ▾	Related indicators ▾	Year	Status ▾	Notes

⊕ Add action

CANCEL SAVE NEXT

## 2.5. Step 5: Summary

The summary generates two tables with the data from the previous steps:

- Table 1 summarises (user can enter and edit) the annual indicator values for the identified risks in the affected sectors, and shows the trend changes and related actions:

No.	Sector	Risk	Indicator	Value (2022)	Value (2023)	Base value	Unit of measurement	Decrease/increase	Related actions
1	Buildings	Extreme cold	% of areas non-accessible for emergency responses (e.g. firefighting services)			12	%		3  
2	Transport	Extremely high temperatures	Damaged tires of the vehicles			32	pcs		2  

- Table 2 summarises the actions identified, the sectors affected, the related indicators, the timeline for implementation, the status of implementation and notes:

No.	Action	Sector	Related indicators	Implementation deadline	Status	Other related sectors	Notes
1	Action 1	Civil protection and emergencies	Average length (in hours) of the public service interruptions (e.g. energy/water supply, public transport traffic, health/civil protection/emergency services)	2023	Started		
2	Action 2	Transport	Damaged tires of the vehicles	2024	Planned		

In Table 1, you can add historical values for a given indicator and change the base value and unit of measurement by clicking the edit button at the end of the row.

No.	Sector	Risk	Indicator	Value (2022)	Value (2023)	Base value	Unit of measurement	Decrease/increase	Related actions
1	Buildings	Extreme cold	% of areas non-accessible for emergency responses (e.g. firefighting services)			12	%		3 
2	Transport	Extremely high temperatures	Damaged tires of the vehicles			32	pcs		2 

No.	Sector	Risk	Indicator	Value (2022)	Value (2023)	Base value	Unit of measurement	Decrease/increase	Related actions
1	Buildings	Extreme cold	% of areas non-accessible for emergency responses (e.g. firefighting services)	<input type="text" value="20"/>	<input type="text" value="12"/>	12	%		3 
2	Transport	Extremely high temperatures	Damaged tires of the vehicles			32	pcs		2 

No.	Sector	Risk	Indicator	Value (2022)	Value (2023)	Base value	Unit of measurement	Decrease/increase	Related actions
1	Buildings	Extreme cold	% of areas non-accessible for emergency responses (e.g. firefighting services)	20	8	12	%	↓	3 
2	Transport	Extremely high temperatures	Damaged tires of the vehicles			32	pcs		2 

Once all the additional information has been collated in the summary section and the data verified, you can download the summary review in *pdf* format by clicking the "Download" button at the bottom of the page.



If you have any questions or suggestions or would like to try out other modules on the Energy Monitoring Platform (more about them here: <https://energoplanosana.lv/#moduli>), please contact us at [platforma@ekodoma.lv](mailto:platforma@ekodoma.lv). We will be happy to tell you more about them!

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Further sources of information:

<https://plano.lv/>

<https://energoplanosana.lv/>



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