Interreg
North Sea Region
C5a
European Regional Development Fund

EUROPEAN UNION

C5a communication plan for region –
Climate change adaptation in river Klarälven, Värmland.

This communication plan is a living document and will be open for adjustments during the whole project period. The communication plan of your region should be kept in line with the communication strategy for C5a. The idea is that this document will be a support in your communication efforts.

1. Background and current situation

Describe the background and current situation of your region/Case study?

The river Klarälven flows through Norway and Sweden and has a catchment area totaling 11,847.6 km². The river flows through several small towns in Värmland County and has 15 hydropower plants. The Klarälven delta surrounds Karlstad and ends up in Sweden's largest lake Vänern. The flow varies during the year but has historically peaked in the spring due to the melting snow. Climate change, weather conditions, hydropower and measures in the river area affect the flow and the area around the river. Today, the flow and river area are affected by local measures and lack an integrated and comprehensive perspective. The County Administrative Board in Värmland has underlined the need for a comprehensive perspective when different stakeholders are discussing and planning measures with an effect on the river basin, flow and hydropower regulation.

2. Overall objective of region/Case study

What do you want to accomplish? What is the purpose? What role does communication have? Quantitative and/or qualitative goals. The communication objective should be kept in line with the overall objectives in the transnational project.

Overall objective: The goal is to use an integrated and comprehensive perspective when regulating river Klarälven and within stakeholders' business in the river basin area. This means considering a changing climate and different social interests such as; production of hydropower, flood risk, landslides, erosion, cultural heritage and biodiversity.

Detailed objectives:

1: Get stakeholders to contribute knowledge to the case study and the development of climate scenarios to further develop and use a flow model for River Klarälven.

2: Get stakeholders to use an integrated and comprehensive perspective and climate scenarios when planning actions in the river basin of River Klarälven.

3: Get stakeholders to disseminate the results of the case study and how one can work with an overall perspective in practice, when planning actions within a river basin.

3. Stakeholders and stakeholder objectives

Identify your stakeholders. Who are the stakeholders/target groups in your region regarding your in C5a?

What do you want to achieve with your communication and with your stakeholders? Determine the objective for each stakeholder by asking what you want each stakeholder to:

- ***know,** (What is important that they know? Is something happening? Do you want them to know where to find something? Do you want them to know the value of something?)*
- ***feel** (What is the feeling you want the stakeholder to have? Pride? Joy? interest?)*
- ***do** (do you want them to tell about something, come to a place, use something?)*

Also think about the need of your stakeholder. If you know their needs, it will be easier to reach them because you know they have interest in your communication (activities).

Stakeholder	Knowledge (know)	Attitude (Feel)	Behavior (do)
Closely manage			
Hydropower producer, Fortum **Swedish Transport Administration** **Karlstad Municipality** • Flood coordinator • Spatial planning • Environmental coordinator • Technology and Property Management **Municipalities along river Klarälven** • Flood coordinator • Spatial planning	Information about the case study. What we want help with in the case study. The benefits of the case study modelling and how it can be used.	Interest and responsibility	Participate in the case study Use the modelling and overall perspective.

• Environmental coordinator			
Värmland County Administrative Board	Information about the case study. What we want help with in the case study. The benefits of the case study modelling and how it can be used.	Interest and responsibility	Share knowledge Participate in the case study Use the modelling and overall perspective. Disseminate the result.
Region Värmland	Information about the case study. Information about the result.	Interest	Participate in the case study and see how their interests are affected.
Energiforsk (research and knowledge institute in energy research)	Information about the case study. That we would like to cooperate with them and their project.	Interest and solidarity	Share knowledge Cooperation between their project and ours, use the same network channels.
Federation of Swedish Farmers	Information about the case study. Information about the result.	Interest	Participate in the case study and share their perspective.
Keep satisfied			
Swedish Geotechnical Institute **Umeå University** **Karlstad University** **Swedish Meteorological and Hydrological Institute** **Swedish Agency for Marine and Water Management**	Information about the case study. What we want help with in the case study.	Interest	Share their expert knowledge. Disseminate the result.

Keep informed			
Swedish Energy Agency **Svenska kraftnät** (authority responsible for the electricity system in Sweden) **Swedenergy** **Värmland-Dalsland's hydropower federation**	Depending on the outcome: If the electricity generation is affected by climate change, they need to know about it. Information about the case study and the result.	Interest	Share their knowledge if it is not available within the County Administrative Board. Take part in and disseminate the results as an example of how you can work with the issue. Reflect on how their business is affected by climate change.
Swedish Water Authority North Sea Basin	Information about the case study and the result.	Interest	Share their knowledge if it is not available within the County Administrative Board. Take part in and disseminate the results as an example of how you can work with the issue.
River group (Klarälven)	Information about the case study and the result.	Interest and that the result and modelling is useful.	Use in planning for a possibly crisis. Take part in and disseminate the results as an example of how you can work with the issue.
C5a partners	Information about the case study and the result.	Interest	Take part in and disseminate the results as an example of how

			you can work with the issue.
Monitor			
The Swedish Civil Contingencies Agency (MSB)	Information about the case study and the result.	Interest	Take part in and disseminate the results as an example of how you can work with the issue in a region/county.
National Board of Housing, Building and Planning **Swedish National Heritage Board** **Swedish Forest Agency** **Swedish Board of Agriculture** **Swedish Maritime Administration**	Information about the case study and the result.	Understanding	Keep the overall perspective in mind in the supervision and guidance.
National network for climate adaptation coordinators (county boards)	Information about the case study and the result.	Interest	Disseminate the results of the case study as a good example to municipalities and county boards. Use the overall perspective when working with climate change adaptation.
Land owners **Residents along river Klarälven** **Lake Vänern cooperation**	Information about the case study and the result.	Interest	Take part in and disseminate the results.

3.1 Stakeholder matrix

Your stakeholders that you have mentioned above have different interests in and also varying influence in your region/case study. This stakeholder matrix below helps you to sort them by their influence and interest. It also helps you to see where you should put in the most communication effort. Place the stakeholders, previously identified, into the matrix.

Closely manage:
Stakeholders in this quadrant have high interest in the region/case study/C5a and can greatly influence the work in a positive or negative way. Possible communication strategy is to provide ongoing communication, engage and consult regularly, e.g. weekly or monthly meetings.

Keep satisfied:
Stakeholders in this quadrant have low interest in the region/case study/C5a but can greatly influence the workin a positive or negative way. Possible communication strategy is to communicate on items which may affect them, such as meetings, letters, emails.

Keep informed:
Stakeholders in this quadrant have high interest but low influence on the region/case study/C5a. Possible communication strategy is to provide update on the case study/C5a, such as newsletters, emails, and less-regular meetings.

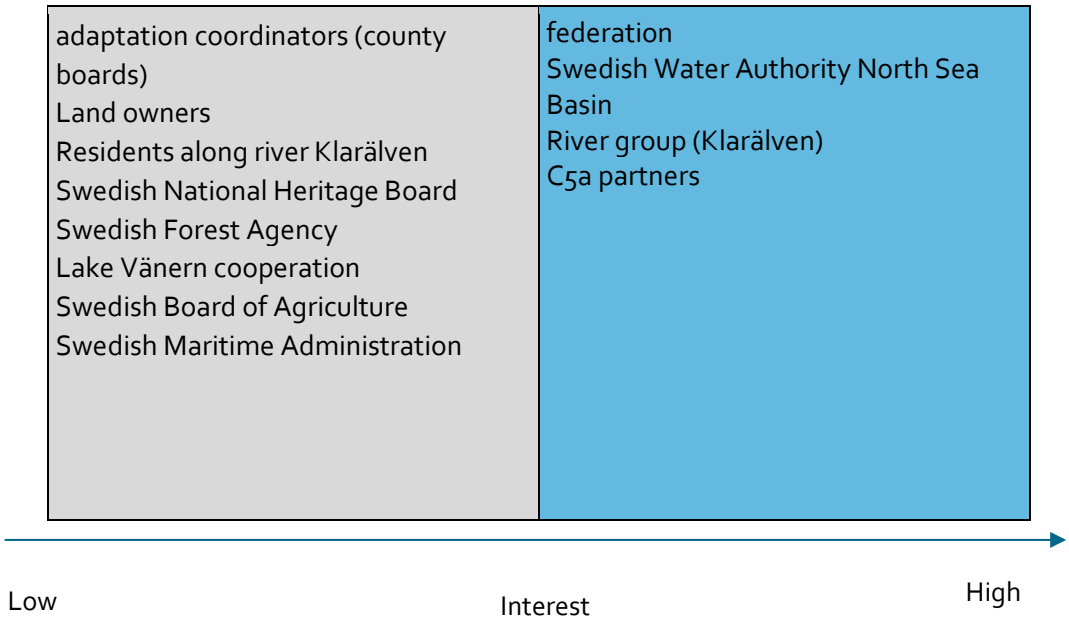
Monitor:
Stakeholders in this quadrant have low interest and low influence on the region/case study/C5a. Possible communication strategy is to provide information if requested, such as newsletter or email if requested.

High

Influence of stakeholder

Low

Keep satisfied Swedish Geotechnical Institute Umeå University Karlstad University Swedish Meteorological and Hydrological Institute Swedish Agency for Marine and Water Management	**Closely manage** Fortum (hydropower owner) Swedish Transport Administration Karlstad Municipality Municipalities along river Klarälven Värmland County Administrative Board Region Värmland Energiforsk (research and knowledge institute in energy research) Federation of Swedish Farmers
Monitor The Swedish Civil Contingencies Agency (MSB) National Board of Housing, Building and Planning National network for climate	**Keep informed** Swedish Energy Agency Svenska kraftnät (authority responsible for the electricity system in Sweden) Swedenergy Värmland-Dalsland's hydropower


adaptation coordinators (county boards)
Land owners
Residents along river Klarälven
Swedish National Heritage Board
Swedish Forest Agency
Lake Vänern cooperation
Swedish Board of Agriculture
Swedish Maritime Administration
federation
Swedish Water Authority North Sea Basin
River group (Klarälven)
C5a partners
Low
Interest
High

4. Overall message

The message tells the basis aspects about your case study/C5a. By making a message, you 'translate' what is going on to the message you want to send. By asking some questions you can create a message. You can then tell your message in the steps 1-5.

1. *Why are we doing this? What is the background? What is the problem we want to solve with the pilot?*
   Today….
   Lack of…
   Need of…

   - River Klarälven has 15 hydroelectric power stations and a large dam that regulates the flow in the river.
   - Environmental conditions for the hydroelectric power owner in the river will be re-examined starting in 2026.
   - The rivers' flow varies throughout the year and is affected by weather, regulation, measures in the river area and has historically peaked in the spring due to snow melting.
   - Climate change will affect the flow and there is a need for climate scenarios / weather years that can be used for issues related to the river.
   - Today, effects of measures in the river area are rarely assessed from a integrated and comprehensive perspective that considers multiple risk factors, interests and wider geographical areas.

2. *What is the main thing/ that we want to share? Here you compose your main message. This main message should can be read in the steps of 1-5, but should also be able to stand by itself and in very few words explain.*

   In Värmland County Administrative Board's case study in the project C5a, we are investigating the impacts of climate change on the river, Klarälven, and whether there is a need for a different regulation strategy. We want to highlight how measures in the river basin can benefit from that overall perspective.

3. *What will the pilot lead to? Who will benefit?*
   Greater benefit….
   Development…

   - Greater knowledge of the climate change impact on the rivers' flow, regulation and area.
   - The case study will allow municipalities and residents along the river to identify and plan according to which measures are of the greatest benefit across sectors, such as: production of hydroelectric power, flood risk, landslide, erosion, cultural heritage and biodiversity.

4. *What are we doing?*

We are…

- Creating conditions for a regulation of River Klarälven that considers a changing climate and different social interests across sectors and geographical areas such as; production of hydroelectric power, flood risk, landslides, erosion, cultural heritage and biodiversity.
- Examining how the river will behave in different weather years.
- Investigating how the flow and regulation impacts social interests, sectors and geographical areas.
- Considering factors such as rainfall in the river basin, water flows, temperature (vegetation periods, rain or snow, ground frost and runoff, higher evaporation).
- Contributing to increased knowledge and highlighting how the flow and regulation impacts social interests, sectors and geographical areas.

5. *How are we doing?*
We are doing this by…

- Collecting data from various stakeholders in Sweden which gives us knowledge and information to use in the case study.
- Developing different weather years for River Klarälven's water flow and regulation, together with a working group of key stakeholders.
- Using the results of model runs for River Klarälven, showing the rivers' behaviour during different weather years. Together with a working group of key stakeholders, we will discuss the impact on different areas of interest with using an overall perspective.

5. Evaluation

How should the result be followed up? Is it possible to measure the effects? The evaluation is based on the specified objectives.

1: Get stakeholders to contribute knowledge to the case study and the development of climate scenarios to further develop and use a flow model for River Klarälven.

Evaluation: Number of stakeholders who contribute with their knowledge and data/material/information collected during the case study.

2: Get stakeholders to use an integrated and comprehensive perspective and climate scenarios when planning actions in the river basin of River Klarälven.

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Evaluation: Number of stakeholders participating in the case study. More detailed follow-up of effects is done through evaluation of the case study via for example a survey.

3: Get stakeholders to disseminate the results of the case study and how one can work with an overall perspective in practice, when planning actions within a river basin.

Evaluation: Number of stakeholders disseminating the results. More detailed follow-up of effects is done through evaluation of the case study via for example a survey.

6. Activity plan – Communication, objectives, messages and activities per target group

In this step, the communication plan is set up in a chart. This gives an overview of objectives, messages and activities per target group. What should we do? Which activities are best suited to reach the objective and messages we have chosen? Example: Seminar or brochure? Meeting or web text? Who should do what? When should it be done? What status does the activity have? For example: Not started, ongoing, completed.

Stakeholder	Communication objective	Message	Activity/Channel	Time	Responsible	Status
Värmland County Administrative Board Staff from different departments (e.g. cultural heritage, risk and safety, biodiversity)	1	Information about our case study in C5a. Invitation to share their networks, knowledge and expertise within different areas.	Internal meeting at VCAB	2019-10-15	Karin de Beer	Done
Energiforsk (research and knowledge institute in energy research)	1	Information about our case study in C5a. Invitation to share their networks, knowledge and expertise within different areas.	Contact through email	2019-10	Veronica Tikka	Done Ongoing contact throughout case study Energiforsk has a similar project and a relevant research program.
Värmland County Administrative Board Staff from environmental protection	1	Information about our case study in C5a. Invitation to share their perspective on working with issues concerning River Klarälven.	Speed meeting for potential future collaboration.	2019-11	Karin de Beer	Done
All stakeholders in Sweden	1,2,3	Information about our case study in C5a.	Newsletter throughout the case study period	2019-11-	Elin Ljunggren	Ongoing

Swedish Meteorological and Hydrological Institute	1,2	Information about our case study in C5a. Invitation to share their networks, knowledge and expertise within different areas. Discussing model runs for weather years.	Contact through email	2019-11	Veronica Tikka	Done Ongoing contact throughout case study
Fortum (hydropower owner)	1	Information about our case study in C5a. Invitation to share their perspective on working with issues concerning River Klarälven. Invitation to meet in person.	Contact through email	2019-11	Elin Ljunggren	Done Ongoing contact throughout case study
Umeå University	1	Information about our case study in C5a. Invitation to share their networks, knowledge and expertise within river regulation.	Contact through email	2019-11	Elin Ljunggren	Done Ongoing contact throughout case study
Swedish Meteorological and Hydrological Institute	1,2	Discussing potential model runs for weather years in Klarälven.	Skype meeting	2019-11-27	Veronica Tikka	Done Ongoing contact throughout case study
Fortum (hydropower owner)	1,2	Discuss Fortum's role in the case study. Collecting expert knowledge	Meeting	2020-01	Elin Ljunggren	Planned
Fortum (hydropower owner) **Swedish Transport Administration** **Karlstad Municipality**	1,2	Invitation to participate in the work group for the case study	Email	2020-01	Elin Ljunggren Karin de Beer	Planned

Municipalities along river Klarälven **Värmland County Administrative Board** **Region Värmland** **Energiforsk (research and knowledge institute in energy research)** **Federation of Swedish Farmers**						
Case study work group	1,2	Developing weather years scenarios for Klarälven to use when ordering model runs.	Workshop (backcasting)	2020-02		Planned
Case study work group	1,2	Discuss results of modelling and	Workshop	2020-05		Planned

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