BIGDATA 4RIVERS
Interreg Europe

Improving the European Rivers Water Quality through Smart Water Management Policies

Action Plan

cim alto minho
AIMRD Asociación Ibérica de Municipios Ribereños del Duero / Associação Ibérica de Municípios Ribeirinhos do Douro
RDFA REGIONAL DEVELOPMENT FUND OF ATTICA
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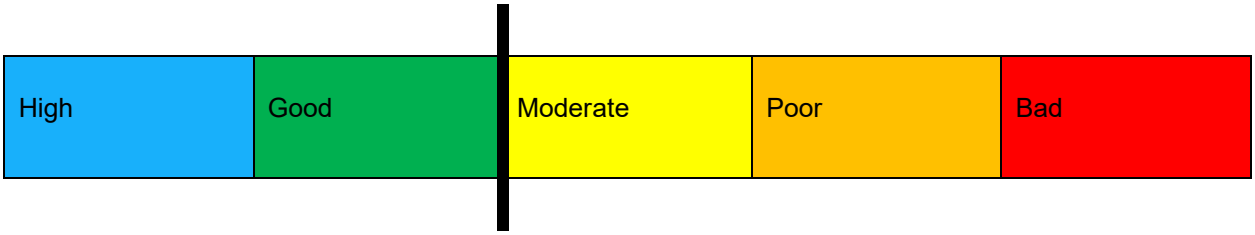
1. EXECUTIVE SUMMARY

1.1. Introduction

Based on environmental indicators, only 10% of rivers and lakes in Östergötland reach the goal of good status or better (high status). The main reasons for not achieving good status were eutrophication, toxic substances, and physical impacts (hydro morphological activities). Eutrophication is a problem in 1 of 10 rivers and 1 of 3 lakes and the entire coastal area of the region.

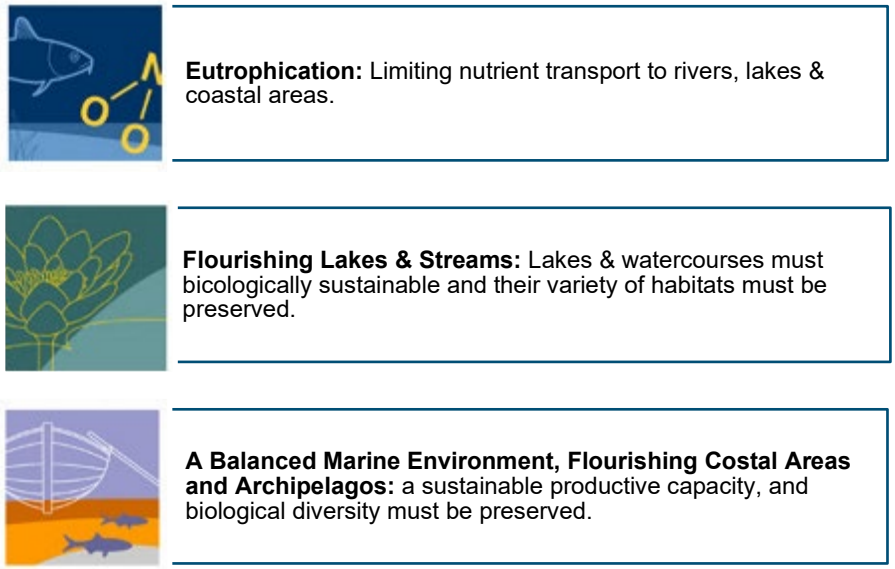
Figure 1 | Status of water bodies



1.2. The Policy Instrument

The sixteen environmental objectives of Sweden include 5 objectives related to water quality, supply, and biodiversity. At a regional level, CAB is responsible for the development of the national objectives and adaptation to the specific conditions of the region. Three of these objectives (see figure 1) were selected for focus in BIGDATA4RIVERS as their targets have not been reached and new approaches are needed.

Figure 2 | Regional objectives related to water bodies



Based on Environmental objectives Sweden (2020) https://www.sverigesmiljomal.se/miljomalen/

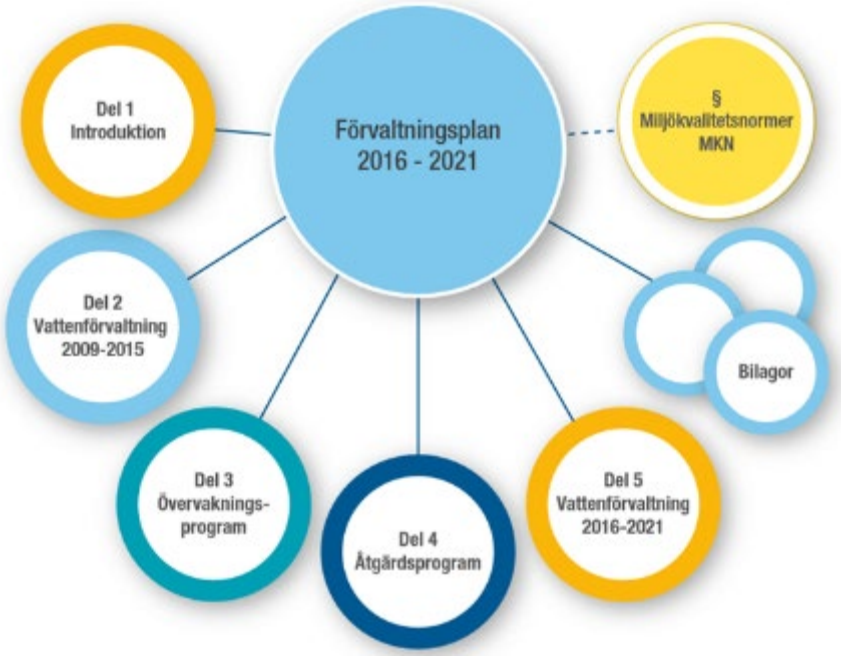
There are also strong connections between the environmental objectives and the environmental quality standards; if Sweden does not reach EQS for water bodies we cannot reach the environmental objectives and vice versa.

The Regional Environmental Objectives of Östergötland have not been reached yet and new approaches and actions are needed. This policy instrument is in close coherence with the River Basin Management

Plans (RBMPs) and the accompanying Programmes of Measures (PoM). The policy instrument recognizes that actions need to be taken to reach ecologically sustainable rivers, lakes and coastal waters since the characterization shows that only 10% of the lakes and rivers in our region presently achieves good ecological status. The main challenges are related to eutrophication, toxic substances, and physical impact activities like hydropower plant dams.

The RBMP of each water district is decided by the water authorities with the object to describe how to manage the problems in the aquatic environments. A management plan is divided in five parts. The first part is a short introduction of networks and cooperation levels, there is also a brief summary of the programme of measures. In the second part the results of the analysis work are presented as well as preparation of EQS and cooperation during the previous cycle. How the monitoring was performed and which data the status of water bodies was based on is presented in part three. The programme of measures is presented in part four where authorities are designated as responsible for certain measures. In part five focus lies in which challenges and special issues to consider during the next cycle.

Figure 3 | Disposition of the RBMP of Southern Baltic Sea water district for the period 2016-2021



In the latest PoM for the period 2016-2021, CAB was responsible for achieving twelve of the measures in the RBMP for the South Bothnian Bay water district. While other authorities such as national agencies and municipalities are appointed responsible for other measures (Water Authorities, 2016). In the program the measures designated to CAB were:

- the County Administrative Board shall expand and prioritize their monitoring of environmentally hazardous activities and water activities in accordance with chapter 9 and 11 of the environmental code. Supervision should consider catchment area and focus on activities that contribute to EQS not being complied with or risk not being complied with;
- CAB shall perform inspections to identify opportunities and needs to set requirements for hydropower plants and dams to fulfil environmental considerations so that compliance of EQS is reached;
- through inspections or guidance, CAB shall ensure that operators that affect the aquatic environment (by operation or measures in the environment) perform self-monitoring and have necessary control programmes to enable assessment of the impact in status of water bodies;
- prioritise the work with long term protection of drinking water;

- strengthen the work with protected areas and shorten the time to establish new water conservation areas
- perform inspections of water conservation areas
- advice municipalities in how to establish and inspect water conservation areas
- develop plans for water supply management
- control of permits for water extraction through supervision
- the County Administrative Board shall have action plans for each catchment area which should be updated annually for implementation and follow-up purposes. Focus of these action plans must be to ensure that environmental quality standards are complied with and focus on water bodies where measures are needed;
- in collaboration with the Swedish Board of Agriculture the County Administrative Board shall prioritize and develop advisory activities to prevent loss of both nutrients and plant protection products to waterbodies where risk of not complying with EQS is impending;
- the County Administrative Board shall develop their supervisory guidance to ensure municipalities can set requirements necessary to reduce loss of both nutrients and plant protection products to waterbodies where risk of not complying with EQS is impending. This measure is to be implemented in collaboration with the Swedish Board of Agriculture;
- the County Administrative Board shall develop their guidance of municipalities in matter of supervising and revision of individual sewers;
- to ensure that EQS in water are followed in general- and detailed planning in exploitation the County Administrative Board shall guide municipalities. Especially focusing on:
- that the detailed plan describes how the EQS for water are fulfilled;
- Prioritizing of measures in municipal level;
- That information from Water Information Systems of Sweden (VISS) has been considered;
- continue prioritizing grant applications for supervision of contaminated areas that are affecting water bodies where enhancing or preventive measures are needed to comply with EQS;
- the County Administrative Board shall ensure that limestone treatment of acidified lakes and rivers continues as stated in the national guidelines and plans. If necessary, also relocate or broaden selected areas for limestone treatment;
- within the scope of their supervising function, CAB shall control and follow up that the Swedish Transport Administration perform necessary measures in the public road and railway network necessary to comply with the EQS.

The Key strengths that should be stressed are:

- the river basin management plans are updated in intervals of six years as the knowledge about what affects our water bodies are in constant change. There are new environmental issues discovered requiring new approaches which can be met by adaptation and revision of the RBMP in set intervals;
- before issuing the RBMP there are consultations with national agencies, municipalities, water agencies and other affected parties in the basin district. There are open meetings where the public can participate, which facilitates the inclusion of all parties concerned with the status of water bodies in their region. This is a strength as all levels of stakeholders can get involved in the management of water quality in their region.
- The program of measures under the RBMP ensures the distribution of responsibility and

provides a limitation of time for implementation, within three years, of the acceptance of the program. It is also clearly stating that authorities are responsible for compliance with the EQS.

Regarding the key weaknesses the points to stress out are:

- in Sweden the great amount of water bodies poses a challenge as status classification, monitoring and establishing EQS as well as the need of measures needs to be assessed and then performed for each waterbody require a great administrative effort;
- the organization of water management in Sweden has been criticized for its structure, where actors in the field find it difficult to understand. This confusion seems to be based in that there are difficulties in distinguishing which authority is responsible for the different tasks and what the difference is between the authorities. Absence and delays in delivering national guidance documents for the county administrative boards in status assessments has caused issues in the work with the river basin management;
- in terms of resources for performing the tasks in water management such as the river basin management plan and program of measures there can be mismatches. The funding for water management within the water authorities and the county administrative boards has not increased since 2012. In performing measures, a great responsibility lies in the county administrative boards and municipalities to apply for national grants to fund measures. Discrepancies are also present in the funding for monitoring, resulting in difficulties in classification of status as there simply were no data to draw conclusions from.

New approaches and instruments are thus needed to increase the level of action and a larger acceptance for taking actions in the region. One way to try to achieve this is through:

- develop sustainable local action plans where knowledge from the project, suitable for the selected area, will be implemented. Knowledge and experience of how to cope with the problem and visualize how local action plans can be successfully implemented will improve our management and actions included in the policy instrument.

To be able to develop local action plans and to make them accepted we also need to:

- involve more stakeholders and improve the communication between them;
- improve the efficiency of the environmental monitoring.

1.3. Methodology

We will use our Action for Type 2 results, a change in the management of the policy instrument and improved governance. This will also establish new ways of cooperation between the different levels in water management in Sweden. Improving monitoring programs and the list of hazardous substances will greatly improve the chances of reaching sub indicators of each goal related to water. Local action plans could also pose a more detailed description of possible measures for municipalities and other water organizations or stakeholders, increasing the possibility of achieving the environmental objectives related to water management.

In order to develop our policy instrument and make our local action plans more accurate and concrete we will:

- use new methods of evaluating to improve local water management;
- use new methods for monitoring to develop sensor techniques and more extensively monitor pollutants

- use new methods for data management to streamline management, sort and transform large amount of data and make them more readily available to the different levels of water management entities.

A major problem in water management is financing of monitoring of water bodies for status determination. Monitoring requires analysis of water, sediment and biota samples in labs that are expensive while the national budget allocated for monitoring water for all regions has remained at the same level during the last decade despite the increased need for monitoring data. During 2019-2022 an increase in available financial means for regional monitoring have been introduced, however, the situation following 2022 is currently unknown. An increased amount of financial means has enabled increased number of waterbodies to be investigated and in more detail than previously.

Data generated from increased monitoring also must be utilized by entities both within and outside the County administrative boards. This poses the need for improved management of data which has been identified at CAB Östergötland. Spreading data generated by CAB to municipalities is a major field where improvement is necessary. This process has been initiated but still needs further development.

1.4. Vision and Goals

Currently many of the water bodies in our region do not meet the environmental standards. Our old methods are not working, thus with this project we aim to test new approaches and instruments to achieve our vision of a toxin free environment and thriving lakes and rivers. Our largest hindrance is the lack of information, local involvement, action, and follow up. Thus, our vision for this project is the development and implementation of new methods and approaches to monitor toxic substances in our policy instrument, and new instruments to increase the level of local engagement and a greater acceptance for taking actions in the region. One way to try to achieve this is through the development of sustainable local action plans where knowledge from the project, suitable for the selected area, will be implemented. Our goal for this project is to carry out one project Action which will incorporate best practices on new methos for monitoring emerging hazardous substances. This action will improve our policy instrument by contributing to Type 2, change in the management of the policy instrument. Our policy instrument is Regional Environmental Objectives. Specifically, Toxin free environment & Thriving lakes and rivers. The project undertaken in our Action will provide new information about sources of pollutants and allow us to better monitor and map polluted areas. The new knowledge and methods developed in the Action will be incorporated into our management of our policy instrument and improve our ability to meet our environmental goals and fulfil our policy instrument missions. As a managing authority, we will influence the way the policy instrument is managed by incorporating the new monitoring methodologies inspired by our partner good practices into our policy instrument. Additionally, important emerging substances identified in the Action will be added to our monitoring plan within the Water Framework Directive.

1.5. Lessons learned

In our original application, we expected use water management projects as our Actions to improve our policy instrument. Our plan was to develop sustainable local action plans where knowledge from the project, suitable for the selected area, would be implemented, and to improve the efficiency of the environmental monitoring. However, after hearing all of the best practices in the interregional learning process (from other partner regions in Europe), and comparing methods and results related to our work with the Water framework directive, we have decided that the most important way to improve our policy instrument is through changes in the management of the policy instrument via new monitoring methods. Specifically, by carrying out an Action to monitor emerging hazardous substances and to develop the policy instrument to include monitoring these new substances. Thus, our original proposed performance

indicator, the number of local action plans based on new guidelines for the drainage area, is no longer relevant. Instead, our performance indicator is the number new methods of monitoring emerging substances we develop within the policy instrument and monitoring program.

There were two main good practices that we learned from and will incorporate into our Action, “Advanced Monitoring of Asopos River Basin Program” from PP2, RDFA and “NOR-WATER Emerging pollutants in the waters of Galicia - Northern Portugal: new tools for risk management of emerging pollutants” from PP5,LP, CIMAM.

1. Advanced Monitoring of Asopos River Basin Program

We think the good practice “Advanced Monitoring of Asopos River Basin Program” presented by the Region of Attica and the University of Athens is a good example of the use of advanced analytical methodology developed by university researchers. The use of suspect analysis and non-target screening increases the detection possibilities for much larger number of contaminants and their transformation products than what it is possible by target analysis. This good practice is particularly interesting to us because it shows the extent of the problem in terms of the enormous number of contaminants that can be found in the environment. Since the toxicity of the majority of those compounds is unknown, we cannot be sure that the regulation on chemicals in our region is enough to ensure the protection of the environment. As shown in this good practice, the University of Athens is developing the methodology for toxicity assessment of many emerging compounds. This could lead to identification of currently unknown dangerous pollutants which could be useful to produce better policy in our region. We have learned from this practice about the importance of broader analysis and screening projects and methods, and the benefits of university collaboration for development of new methods.

2. “NOR-WATER Emerging pollutants in the waters of Galicia - Northern Portugal: new tools for risk management of emerging pollutants”

We consider the NOR-WATER best practice a good example of collaboration between universities and governmental organizations which should be promoted further in our region. NOR-Water is a good example of the use of advanced analytical methodology developed by researchers at local universities and how official water management governmental entities and academia can collaborate to detect emerging contaminants. The use of non-target screening increases the detection possibilities for much larger number of contaminants and their transformation products than what it is possible by target analysis. This good practice is particularly interesting because it shows the extent of the problem in terms of the enormous number of contaminants that can be found in the environment. Since the toxicity of majority of those compounds is unknown, we cannot be sure that the regulation on chemicals in our region is enough to ensure the protection of the environment. As it is showed in this good practice, the NOR-Water project is developing the methodology for toxicity assessment of those compounds. This could lead to identification of currently unknown dangerous pollutants which could be useful to produce better policy in our region. Monitoring in Sweden is performed at multiple levels where both national and regional monitoring is performed. Similarly, to the corporation between entities in the NOR-Water-project concerning emerging contaminants, Sweden has a national monitoring program devoted to Screening for emerging contaminants in multiple matrices (water, sediments, groundwater, and biota), see Environmental monitoring program area: coordination on environmental toxins - Swedish Environmental Protection Agency (swedishepa.se). At CAB the regional monitoring program has a yearly budget where participation in the national campaign concerning screening is made possible providing valuable information concerning emerging pollutants in the region. Though the monitoring program in general is not as broad spectrum as NOR-water, the results are used in evaluating if substances should be part of operative monitoring and included in the national contaminating substances list. Examples of performed screenings are PFAS-contaminants in rivers close to practice sites for firefighting, plant protection products in highly productive agricultural lands and broad screening of over 225 substances in recipient water (pharmaceuticals, pesticides, PFAS, hormones and industrial chemicals). Results of the screening

campaigning also drive the development and application of management procedures of problematic substances such as pharmaceutical treatment in wastewater, purification techniques in PFAS-contaminated sites and control programs in waste management sites.

These two practices combined have inspired the development of our Action. Our Action will incorporate these projects extensive analytical methods into both national and regional monitoring programs in Sweden. In addition to using the analytical methods described by the partners, feedback from the partners about strategies for university-governmental agency collaboration and implementation of national programs for monitoring emerging pollutants will help us to optimize the collaborations in or Action. Finally, methods for assessing the risks associated with the analyzed substances will allow us to make informed decisions about which substances pose the most risk and which monitoring methods are the most accurate and efficient. We will develop our policy instrument (our regional monitoring program) based on new methods and improvements discovered and prioritized in our Action and in collaborations with our partners. As our regional policy instrument objectives are the subset of the National Environmental Objectives that are prioritized and most problematic in each region, our Action can be carried out at a national level and still contribute to both the national and regional level policy instruments. During the Action we will sample extensively in our region, as well as nationally, collecting important data to prioritize at both the regional and national level. Specifically, our Action will contribute to improved management of our policy instrument by including the newly identified methods and substances from our national monitoring plan that are most problematic in our region, and the ecological status classification within the Water Framework Directive.

1.6. List of actions

We will achieve one actions in Sweden based on the good practices described above.

1. We will achieve type 2 results through a change in managing and follow up of the indicators of the policy instrument, the regional environmental objectives. We will use new monitoring techniques and monitor new substances in the regional and national screening program in Sweden. As a managing authority, we will use the information gathered in the implementation of the policy instrument, regional environmental objectives, to update and expand the way the policy instrument is managed at the regional level. This will be done though incorporating the most important parameters and the most relevant new monitoring methodologies for the characterization of water inspired by our partner good practices in the policy instrument implementation and action plans. We will drive our regional portion of the new screening program in 2023 and follow up on results to include new substances and monitoring methods in our regional policy instrument.

   To support the action above, we will also submit an application to a national Swedish funding source for a collaborative project between a university and CAB. The project will focus on “Sustainable emerging pollutant management for a healthy aquatic environment” and will identify emerging pollutants and their sources based on chemical fingerprinting techniques and other analytical strategies presented in the good practices described above. This project will focus on methods for the implementation of our policy instrument and develop further techniques to improve management of the policy instrument in our region in future years.

These actions will improve our policy instrument by contributing to Type 2 changes in the management of the policy instrument. Our policy instrument is Regional Environmental Objectives. Specifically, Toxin free environment & Thriving lakes and rivers. In Sweden, there is a yearly regional monitoring program that includes a national campaign concerning screening emerging pollutants. Thus, our regional policy instrument objectives are the subset of the National Environmental Objectives that are prioritized and most problematic in each region. Our Action will contribute to both the national and regional level policy

instruments by identifying new emerging substances of concern. During the campaign we will sample extensively in our region, as well as nationally, collecting important data to prioritize at both the regional and national level. Specifically, our Action will contribute to improved management of our policy instrument by including the newly identified methods and substances from our national monitoring plan that are most problematic in our region, and the ecological status classification within the Water Framework Directive. The projects undertaken in our Action will provide new information about sources of pollutants, improved methods for monitoring and quantifying these substances, and allow us to better map polluted areas. These are critical steps for improvement actions, they allow us to put the right remediation methods in place in the right locations for optimal effectiveness. The new knowledge and methods developed in the Action will improve our ability to meet our environmental goals and fulfil our policy instrument missions. As a managing authority, we will use the information gathered both regionally and nationally to update the way the policy instrument is managed at the regional level by incorporating the most relevant new monitoring methodologies inspired by our partner good practices into our policy instrument. Additionally, important emerging substances identified in both Actions will be added to our monitoring plan within the Water Framework Directive

1.7. The monitoring process

Timeframe

The Action phase of the project begins in August of 2022 and ends in August of 2023.

Date	Activity
August - December 2022	Prepare list of recommendations for new substances for the national screening program for environmental toxins
December 2022	Submit recommendations to the national reference group meeting for screening of environmental toxins.
January- April 2023	Prepare application for project: Sustainable emerging pollutant management for a healthy aquatic environment
April - June 2023	Lead our regional section of the national screening program for environmental toxins based on our recommendations.
June-July 2023	Improve policy instrument management
July 2023	Stakeholder meeting and spreading and evaluation of project results
July 2023	Final Reporting

Monitoring and evaluation

We will follow up our and monitor our actions during the Action implementation phase from August 2022 to July 2023 according to the timetable above. We will submit suggestions for updates to the national screening program for environmental toxins in waterbodies at the national reference group meeting that occurs yearly in December 2022. For the project in collaboration with a university, we will ensure that we meet the submission deadline which is expected to be in the spring of 2023. The screening program is

undertaken nationally during the spring of 2023, and we will lead the portion of the program in our region based on our suggestions and participate in data collection for the program during this period. We will follow up on the results of the program in June and July by summarizing the findings and determining the most important substances for our region. We will then update our policy instrument so that our regional monitoring program includes the newly identified and prioritized substances. Finally, after the end of the project, we, together with the stakeholder group, will evaluate the project and its results to see what the next steps will be.

1.8. Conclusions and recommendations

The BigDataForRivers Knowledge Transfer Seminars, Study Visits, and Good practices have helped us at CAB develop an Action to undertake during the project. The two good practices have inspired our actions are “Advanced Monitoring of Asopos River Basin Program” from PP2, RDFA and “NOR-WATER Emerging pollutants in the waters of Galicia - Northern Portugal: new tools for risk management of emerging pollutants” from PP5,LP, CIMAM.

The use of non-target screening increases the detection possibilities for much larger number of contaminants and their transformation products than what it is possible by target analysis. This method highlights the large number of contaminants that can be found in the environment, many of which have unknown toxicity. The good practices presented by both partners include methods to calculate toxicity, which could lead to identification of currently unknown pollutants, which is essential for improving policy in our region.

The Action we will take inspired by these good practices will improve our policy instrument by contributing new methods for monitoring within the policy instrument, affecting a Type 2 change to the management to the policy instrument. Our policy instrument is Regional Environmental Objectives. Specifically, Toxin free environment & Thriving lakes and rivers. In Sweden, there is a yearly regional monitoring program that includes a national campaign concerning screening emerging pollutants. Thus, our regional policy instrument objectives are the subset of the National Environmental Objectives that are prioritized and most problematic in each region. Our Action will contribute to both the national and regional level policy instruments by identifying new emerging substances of concern. During the campaign we will sample extensively in our region, as well as nationally, collecting important data to prioritize at both the regional and national level. Specifically, our Action will contribute to improved management of our policy instrument by including the newly identified methods and substances from our national monitoring plan that are most problematic in our region, and the ecological status classification within the Water Framework Directive. The new methods developed in the Action and the knowledge gained from the good practices from our partners will improve our ability to meet our environmental goals and fulfil our policy instrument missions. Additionally, results of the screening campaigning drive the development and application of management procedures of problematic substances. Previous examples of updates to the policy instrument based on screening results are pharmaceutical treatment in wastewater, purification techniques in PFAS-contaminated sites and control programs in waste management sites.

2. ACTION PLAN (MAIN PART)

2.1. General Information

Project	**BIGDATA 4RIVERS**
Partner organisation	CAB
Other partners / players involved (if relevant)	
Country	Sweden
NUTS2 region	Östra Mellansverige
Contact person	Sofia Bastviken
Email address	sofia.bastviken@lansstyrelsen.se
Phone number	

2.2. Policy Context

The Action Plan aims to impact:	☐	Investment for Growth and Jobs programme
	☐	European Territorial Cooperation programme
	☐	Other regional development policy instrument
Name of the policy instrument addressed:	Regional objectives of Östergötland	

2.3. Details of the actions envisaged

Action 1: Influence policy instrument by improving regional screening program for environmental toxins

a) ***The Background*** *(please describe the lessons learnt from the project that constitute the basis for the development of the present Action Plan)*

We have based our Action on lessons learned from the good practices “Advanced Monitoring of Asopos River Basin Program” from PP2, RDFA and “NOR-WATER Emerging pollutants in the waters of Galicia - Northern Portugal: new tools for risk management of emerging pollutants” from PP5,LP, CIMAM.

We will actively participate in our regional screening program and lead the section based on recommendations from our good practices. This program is one of the common subprograms of the Swedish National Environmental Monitoring program, led by the Swedish Environmental Protection Agency. The National Environmental Monitoring program provides the framework for our policy

instrument, Regional Environmental Objectives. Our policy instrument is based on the subset of the National objectives that are most problematic in our region. Thus, updates to the National program can directly influence and update our regional policy instrument. Both Good Practices have taught us that non-target screening allows for detect of more contaminants and their transformation products than what it is possible by target analysis. These practices also highlighted how many contaminants exist in the environment for which we do not yet know the toxicity. The good practices presented by both partners include methods to calculate toxicity, which could lead to identification of currently unknown pollutants, which is essential for improving policy in our region. We have learned from this practice about the importance of broader analysis and screening projects and methods. The results of our Action help drive the development and application of management procedures of problematic substances and can be used to change and improve the management of our policy instrument to include new prioritized methods and substances in our regional monitoring plan and the ecological status classification within the Water Framework Directive.

In support of this Action, we submit an application for a research project in collaboration with a university. Both Good Practices have taught us good examples of collaboration between universities and governmental agencies. Input from the partners about strategies for university-governmental agency collaboration and implementation of national programs for monitoring emerging pollutants will help us to optimize the collaborations. As shown in these good practices, the University of Athens and the NOR-WATER project are developing the methodology for toxicity assessment of many emerging compounds. This could lead to identification of currently unknown dangerous pollutants which could be useful to produce better policy in our region. We have learned from this practice about the importance of broader analysis and screening projects and methods, and the benefits of university collaboration for development of new methods

b) ***Action*** *(please list and describe the actions to be implemented)*

a. ***Prepare a list of recommendations for new substances to monitor in the national screening program for environmental toxins***
Inspired by the results of the good practices of our partners, we will create a list of monitoring methods and emerging substances of concern that we will share at the annual meeting of the national reference group for environmental toxins. These will then be discussed and incorporated into the national screening program for 2023.

b. ***Prepare application for collaborative project: Sustainable emerging pollutant management for a healthy aquatic environment***
Inspired by the good practices of our partners, we will build and strengthen collaborations with university researchers in our region and apply to work on a project together. The project will focus on testing new analytical strategies (such as chemical fingerprinting techniques) to identify emerging pollutants and their sources based on strategies presented in the good practices described above.

c. ***Lead the regional section of the national screening program related to our recommendations***
Give advice and guidance to other regions. Carry out thorough sampling and monitoring in our region based on the national plan agreed upon at the annual meeting.

d. ***Improve policy instrument management***
Based on the regional results of the screening program we will summarize which methods worked best and which emerging substances are most problematic in our region and should be included in the regional monitoring program. We will thus improve the management of our policy instrument by including the newly identified methods and substances in our regional monitoring plan and the ecological status classification within the Water Framework Directive.

e. ***Stakeholder meetings***
We will share the results of the project, screening campaign report, and the improvements to the management and implementation of the policy instrument with stakeholders and the general public in meetings.

c) ***Players involved*** *(please indicate the organizations in the region who are involved in the development and implementation of the action and explain their role)*

a. ***CAB***
CAB will contribute suggestions to the reference group, lead the section based on our recommendations, and actively participate in the screening program by testing methods and collecting data

b. ***Swedish Environmental Protection Agency***
The Swedish EPA is the head of the reference group and leads the national screening program

c. ***Örebro University, Dr. Anna Kärrman***
ORU will contribute knowledge and expertise to application development and participate in the project, if funded.

d) ***Timeframe***

a. ***Development of collaboration: on-going***
b. ***Prepare list of recommendations for new substances for the national screening program for environmental toxins: August – December 2022***
c. ***Participate in the reference group meeting: December 2022***
d. ***Preparation of application for the university collaboration: January- April 2023***
e. ***Co-lead and carry out the national screening program data collection: April-June 2023***
f. ***Petition for updates to the national and regional monitoring programs: June 2023***

e) ***Costs*** *(if relevant)*

a. ***CAB staff costs for time developing the list of substances (2,000 euros)***
b. ***CAB staff costs for time writing the application and building the collaboration (6,000 euros)***
c. ***CAB staff costs for organizing the screening campaign and data collection for screening (6,000 euros)***
d. ***Cost for sample analyses (3,000 euros)***

f) ***Funding sources*** *(if relevant)*

a. ***Swedish Environmental Protection Agency***
b. ***The national monitoring budget for the common subprogram Screening***
c. ***Collaborative project funder: Swedish Research Council for Sustainable Development***

g) ***Impact expected***

a. ***Identification of emerging substances in Swedish waters***
b. ***Identification of polluted areas***
c. ***Validation and selection of most effective new monitoring and analytical methods***
d. ***Improved management of the policy instrument based on new monitoring methods and new substances of concern***
e. ***Change in the management of the policy instrument to include new monitoring methods and new substances of concern***

Date:
Signature:
Stamp of the organisation (if available):