

Support Measure Proposal

05.02.202405.02.2024

Title	Bio-Diversity Programme
Executing Agency	Ministry of Climate
Partner State Support Measure Code (if any)	n/a
Support Measure Type	Programme

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1. Basic information

Title	Bio-Diversity Programme
Support Measure Type	ProgrammeProgramme
Objective	Protecting the environment and the climateProtecting the environment and the climate
Thematic Area	Nature conservation and biodiversityNature conservation and biodiversity
Planned Duration [months]	52
Requested Swiss contribution (CHF)	6 930 000
Requested co-financing rate of Switzerland [%]	85%

Name of the Executing Agency	Ministry of Climate
Type of entity	National administrationNational administration
If type of entity is "other", describe the type briefly	-
Name of contact person	Kairi Toiger
Position	Senior Officer, Financial Department, Ministry of Climate
Correspondence address	Suur-Ameerika 1, 10122 Tallinn, Eesti
E-Mail	Kairi.Toiger@kliimaministeerium.ee
Webpage and social media (if any)	https://kliimaministeerium.ee/ https://www.facebook.com/kliimaministeerium https://twitter.com/MOEestonia https://www.youtube.com/channel/UCfeXgaJw0LCpLx7-X169F6w https://www.youtube.com/channel/UCfeXgaJw0LCpLx7-X169F6w
Phone	+372 6262 931
Mobile	

Has the Executing Agency previously received funding from the Swiss Contribution?

Yes ☒ No ☐

Abbreviations:

EELIS – Estonian Nature Information System

KAUR – Estonian Environment Agency

KeA – Environmental Board of Estonia

KeMIT – Information Technology Centre of the Ministry of the Environment

KESE – Environmental Monitoring Information System

MoC – Ministry of Climate

NCU – National Coordination Unit

2. Strategic Support Measure description

2.1 Lead

The **goal** of the Programme is the creation of preconditions for the improvement of conservation status of threatened habitats and species through decision making that relies on high-quality data, e. g.:

- Implementation of innovative monitoring solutions.
- Ensuring operative data transition between different databases.
- Making environmental data more accessible for public.
- Setting up and validating digital toolset for the governance.
- Evaluation of management effectiveness planning of protected areas, revision of site-based conservation objectives and measures for protected species and habitats and additional compilation of site-based management plans.
- The evaluation and additional compilation of national action plans for species and habitats and the revision of protected categories of species (category I, category II and category III).

The intervention will build on the results of various past and ongoing initiatives, like applied research projects on nature conservation in relation to climate change and on existing state monitoring and planning systems for protected areas.

2.2 Context and relevance

Current Situation

Estonia's land area is 45,339 km², which is slightly larger than Switzerland and the sea area is 36,622 km². 60% of Estonia is covered with forest and mires and 20.5% of the land is under nature protection. Also, 18.7% of the sea is protected. With a unique location, Estonian nature is very diverse, and it is especially important for migratory birds, who stay here to rest and nest.

During the migration period, millions of birds pass through Estonia, and it is the bottleneck for most of the Arctic waterbirds.

Although in a significant share of Estonia nature values are protected, the status of biodiversity in Estonia is far from being without concern. Of the 15,000 species assessed during 2017-2021 for the update of the Red List in Estonia, only half are in status “Least Concern“, which means that the other half of the species are „Near Threatened“, „Vulnerable“, „Endangered“, „Critically Endangered“ or „Extinct in the Region“. Unfortunately, the population sizes of mammals, birds, fish, amphibians and reptiles have seen an alarming average drop of 68% since 1970 in the whole world. According to the EU Habitats Directive reporting (2019) 57% of the habitats and 56% of the species in Estonia are in favourable status, which is better than in most of the EU member states (in EU, only 14.7% of the habitats and 27.5% of the species are in favourable status). But 44% of the species and 43% of the habitats are in unfavourable (inadequate or bad) conservation status in Estonia.

We must continue to preserve and improve the status of the species and habitats. To do so, we have created a network of protected areas and system to assess the status of the species and habitats. However, it is not enough and Estonia must contribute to global target to protect at least 30% of land and sea area. At the moment, there are six national parks, 234 nature conservation areas, 148 landscape conservation areas, 312 limited-conservation areas and 1,847 species' protection sites in Estonia (November 2022) ([Looduskaitse statistika | Keskkonnaportaal](#)). Approximately 70% of the protected area in Estonia is managed according to management plans. However, all protected areas still do not have an appropriate management plan or existing management plans are based on out-of-date data. Only 52% category I (i.e. rare and at risk of disappearance) species, 12% of category II species (i.e. species in danger of disappearance if the existing factors continue operating) and 2% of category III species (i.e. species whose population is endangered by the deterioration or damaging of habitats and has been reduced to a point where they are believed to move into the endangered category if the causal factors continue operating) have a national action plan. Relevant and updated site-based management plans and national action plans with specific targets are necessary to assess the efficiency of the implemented measures. A systematic understanding is needed to understand which of the applied conservation measures are fit for purpose and what needs to be changed. Most management plans lack the level of detail.

The compilation of management plans has been a time-consuming process and needs to be revised. To achieve and maintain the good status of protected areas in Estonia, it is crucial to continue the successful interventions and replicate them in areas where the status of habitats and the functioning of ecosystems is still not good. To do so, an appropriate framework in Estonia, including a methodology and an action plan for its implementation, for the assessment of effectiveness of biodiversity conservation measures needs to be established. An effective framework will allow Estonia to understand the main factors hindering the protection of biodiversity and design better targeted conservation and restoration measures. Also, surveys, inventories and monitoring must be carried out to observe how the conditions change over time. There are more than 50 different types of biodiversity monitoring schemes implemented every year and mostly it is carried out by humans. Also, the status and abundance of game species, including large carnivores is monitored. The volume of the monitoring depends on the available budget and also on the available specialists and developed methodologies. Often, monitoring can be carried out in a specific period (e.g. spring, summer, vegetation period, nesting period, etc.) and limited number of specialists are not capable to cover the necessary area in one year. For decades, same methodologies have been used in monitoring, but technology is evolving at a tremendous rate and sometimes more specific data is needed (e.g. DNA data to assess whether the population is strong and genetically diverse and how it changes over time).

New solutions and technology should be used more in biodiversity monitoring as this can be helpful in the absence of specialists and with the help of technology larger areas could be covered during the short suitable period for monitoring. Also, thanks to the new technology additional valuable information can be collected, which is necessary in decision making (e.g. the size of a specific species' habitat etc). There are already 3D bird radars, bird sound recognition applications, artificial intelligence (AI), affordable cameras, remote monitoring solutions, etc., which could be adjusted and tested in the biodiversity monitoring. We have already tested some solutions on a smaller scale like AI in the monitoring of the game species, drones, sensors, acoustic and telemetry transmitters. Potential of the technology is not sufficiently recognized and as new methods are costly to test on a large scale and long time period, good solutions are often discarded (e.g eDNA). It is necessary to implement old and new methods at the same time in a short period in order to allow smooth transition and providing enough time for the new solution to justify itself. Also, one reason for using the same methodologies for decades, is the reason of uninterrupted data series that new methodologies could affect. Implementing old and new at the same time is necessary to understand whether and how much the results differ and this gives the opportunity to continue uninterrupted data series.

Nature related data is inserted and processed mainly in two systems in Estonia: Estonian Nature Information System (EELIS) and Environmental Monitoring Information System (KESE). Both systems need to be improved to make them more user-friendly and easier to use, both for public servants and ordinary citizens. Those systems are not prepared for today's and future needs. The current system does not provide sufficient information to assess whether the conservation actions are adequate to sustain resilient ecosystems and halt biodiversity loss. The present system does not take into account socio-economic impacts. Also, some of the important data is maintained in third-party systems (e.g PlutoF Biodiversity Platform) and ignoring this data in decision making would be a mistake. It is necessary to create connections which would enable data transfer between systems. Authorities lack the tools and sufficient competences to analyse the effectiveness of conservation measures and conduct a multi-purpose interpretation of large datasets in an interdisciplinary manner. Decisions made using the monitoring results depend on the volume and quality of the data. Among other things, it is necessary to speed up the data flow. For example, information of the protected species must be transformed from one system into another manually (from KESE to EELIS), which is time-consuming and there is always a risk that important data is not taken into account in the planning process or while issuing permits. Also, the analytical capacity should be improved, which can be done by improving information systems and creating automatic solutions that can quickly analyse great amount of data in a few moves. This will ensure the quality, transparency and reliability of the data.

Nature information must be public, easy to understand and attractive. According to the survey carried out in Estonia in 2020, 21% of Estonians think that environmental data is not accessible and according to the survey carried out in 2022, interest in the environmental issues has decreased compared to 2020. Information systems as important resources were rarely mentioned. It is also necessary to promote citizen science. Citizen science can be defined as the non-professional involvement of volunteers in the scientific process, commonly in data collection, but also in other phases such as quality assurance, data analysis and interpretation, problem definition and the dissemination of results. Citizen science can play an important role by filling data gaps where conventional data sources may not be sufficient, providing complementary temporal and spatial data that supports official monitoring systems. However, and despite its value and potential, it is still underused. Besides collecting additional data, promoting citizen science gives the opportunity to raise environmental awareness, which is one of the keys in the implementation of the Green Deal and moving towards a sustainable economy. We have already developed the Nature Observation application, but at the moment it is not possible to

submit observations via the website. Also, where possible, the volunteers should be integrated into the monitoring schemes.

Strategies

The Support Measure contributes directly to the implementation of the Estonian Environmental Development Plan until 2030 (draft)

According to the draft plan the goal of nature conservation is that the status of native species, ecosystems and landscapes has improved - Estonia is nature positive.

The targets to achieve the goal are:

1. We preserve and improve native species and habitats and biodiversity rich key landscape features such as small water bodies and other wetlands, coastal and the condition of coastal areas, semi-natural grasslands and primary and old-growth forests, including forest key habitats.
2. We ensure a timely and relevant overview of the status of wildlife for decision making in the field of nature conservation, among other things, we use innovative monitoring and inventory solutions and applied research more than before and update and supplement databases and web applications.
3. We will improve the system for evaluating the effectiveness of protection measures to ensure the operational renewal and improvement of current measures.

The proposed Support Measure contributes directly to the targets 2 and 3, which are also the basis for achieving the first target.

The Support Measure has a clear connection with Estonian Environmental Strategy for 2030 and with requirements and obligations stated in EU directives, regulation and strategies and international conventions:

- EU Biodiversity Strategy for 2030;
- EU Nature Restoration Regulation (draft);
- Sustainable Development Goals and Development Plan. Especially to following goals:
 1. 3. Good Health and Well-being;
 2. 6. Clean Water and Sanitation;
 3. 7. Affordable and Clean Energy;
 4. 12. Responsible Consumption and Production;
 5. 13. Climate Action;
 6. 14. Life Below Water;
 7. 15. Life on Land.
- Convention on Biological Diversity and its Global Biodiversity Framework;
- CITES convention;
- Ramsar convention;
- Bern Convention;
- Bonn convention, including AEWA and Eurobats agreements;
- HELCOM;
- United Nations Framework Convention on Climate Change and the Paris agreement.

Complementarity/synergies with funding programmes of other donors

- Technical Support Instrument financed by the European Commission. An ongoing project with the objective to develop the relevant assessment methodology for Estonia. This methodology will be implemented under the Swiss Contribution.

- European Structural Funds 2014-2020. The methodology of the National Assessment and Mapping of Ecosystems and Ecosystem Services was developed. We will continue to improve it and it will be taken into account in the planning and assessment process. Also, development of the Estonian Nature Information System was partly financed from Structural Funds.
- European Structural Funds 2021-2027. Development of the Artificial Intelligence for the monitoring of game species is financed under this programme. It is an ongoing project.
- State budget. National monitoring is financed from the state budget. Swiss Contribution does not replace it but enhances and helps to further develop existing methodologies and solutions. Also, it helps to speed up and expand the development of IT systems, which are being developed at the moment.
- Environmental Investment Fund. Some of the assessments of the protected areas and monitoring of the species are financed from the national fund. Also, the Nature Observation Application was financed from the Fund, which is used to involve volunteers in the biodiversity monitoring.
- Cohesion Fund 2021 – 2027. Restoration of habitats to increase preparedness for adaptation to climate change. Species and habitats action plans and protected areas management plans prepared by Swiss contribution will be used to select the restoration sites at the end of this financial period and in the following period.

First Swiss Contribution

With the help of First Swiss Contribution, the capability of environmental (water, air and radiation) monitoring was increased, but specifically monitoring and protection of the biodiversity was not supported.

Social Inclusion and Climate change mitigation and adaptation

Structure of the management plans will be improved, and new topics will be covered. Topics that have not been covered or have been covered insufficiently in existing management plans are how to mitigate the impact of climate change on species and habitats, what the social impacts of protected areas are, how protected areas are integrated in the overall green infrastructure, how to manage forest habitats in buffer zones, how cumulative impacts on habitats and species need to be analysed.

Also, Citizen Science will be improved and volunteers will be involved in the biodiversity monitoring. Where possible, this will be integrated into the monitoring schemes and necessary solutions will be developed. Developed systems will be helpful in preparation and implementation of different nature observation campaigns that would increase citizen awareness about species and nature conservation issues. With that, we will create better conditions for social inclusion and initiatives.

New technical solutions will help to speed up the transition towards green energy and climate neutrality. Nature conservation restrictions and the lack of knowledge about species and habitats are often the reasons behind the pace of developments.

Developed IT systems and solutions help to make environmental data easier to access, use and understand for the citizen. It is necessary to make data more visible and attractive, which helps to increase interest in data and environmental awareness and improve behaviour and decision making of the public.

Stakeholders

Stakeholders of the measure are basically all citizens, who will benefit from the preservation and improvement of the status of species and habitats. Ecosystems provide different services

from clean air to meditation opportunities. Quality and condition of ecosystems affect the quality of people. Also, developed systems and solutions will bring nature conservation and citizens closer together. Citizens will be involved in nature observation campaigns and wildlife monitoring. Developed systems will be used in order to make participation easier and more convenient, which hopefully will increase the number of volunteers.

It is necessary to collaborate with environmental experts and scientists. Support Measure will increase the knowledge about the biodiversity and support science and innovation. Also, it gives the opportunity for the scientists to test and implement new methods and ideas in wildlife monitoring. Some of the ideas (e.g. eDNA) have been proposed by the scientists. Their role is also to validate and evaluate the suitability of the new solutions. It is also necessary to create collaboration between scientists of the natural sciences and IT experts, who must find solutions how to use new technologies for biodiversity monitoring.

As it is necessary to speed up the transition towards green energy and climate neutrality, wind-farm developers are the important stakeholders. Nature conservation restrictions and the lack of knowledge about species and habitats are often the reasons behind the pace of developments. In the design of the wind farms, it is often mandatory to carry out time consuming surveys and the number of specialists is also limited, which affects the development. Thanks to support measure, necessary studies could be carried out over a shorter period.

New tools and solutions are necessary for the public authorities, who are responsible for the biodiversity protection, monitoring and decision making. Better knowledge is needed to make science-based decisions to prevent damage to biodiversity and at the same time contribute to economic activity, including the development of clean energy.

The information acquired from the project will help local municipalities in their general planning process. The decisions made in spatial planning will take more nature protection needs into account. The developers and business organisations can refer to the data and when assessing the effect of their activities on habitats and species.

The stakeholder consultations was carried out on 5th of June 2023 to elaborate the support measure proposal for the second loop.

2.3 Impact hypothesis / Objectives

The **goal** of the Programme is to create the precondition for the improvement of conservation status of threatened habitats and species through decision making that relies on high-quality data.

Being part of Europe, our environmental decisions and developments affect the ecosystems and species populations more widely. Preserving and improving the quality of the ecosystem services helps to strengthen the socio-economic situation in different fields providing income and jobs, but also decreasing the negative impact of human activity and climate change. As Estonia is small and the planned actions of this intervention cover the whole country, it will affect more or less all people.

Better technological tools and hence the overviews of protected sites make understanding the need for habitat and species protection more understandable for the public and accurately described protection measures give the possibility for other institutions to take the initiative and participate in protection activities.

High-quality data helps to increase the developments, including the developments of wind farms, which will ensure the necessary energy and security for citizens. Also, developments of

wind farms would decrease the pressure for forest cutting and wood burning. This has positive effect on habitats and green network. Taking into account that most of the car industries are planning to stop the production of cars with an internal combustion engine by 2030, the need for electricity will increase significantly in the next decades. This is one example of the potential positive impact of the measure, but the main objective is to preserve and restore the natural values through decisions based on high-quality data.

If the protection measures are planned using up-to-date data and a reliable assessment procedure is carried out, it is easier to explain the need of the measures to the government, ministries and other policy makers, also developers and local people. For example, in Estonia there is some political resistance to restoring river habitats and people do not understand the necessity of restoring peatlands.

To achieve the goal of the Programme the existing planning and assessment methodologies and information systems should be improved. It is important to improve the connection of planning and assessment with the national monitoring schemes and information systems. With the help of Swiss support, the existing systems and solutions will be taken to the next level.

Planned intervention logic is presented in Annex 1 and in log-frame (4.3).

In summary, if comprehensive and high-quality information, including in sufficient volume is available, **then** preconditions for improvement of the conservation status of species and habitats are created, **because** planning and decision making is more justified, relevant information is taken into account and assessing the effectiveness of the actions is based on more reliable, qualitative and accurate information.

2.4 Intervention Strategy

The **Programme Operator** is the Ministry of Climate (MoC). The task of the Ministry of Climate is to create conditions that guarantee a species-rich natural environment and a clean-living environment for the people of Estonia today and for future generations and that ensures the sustainable use of natural resources. MoC coordinates the Support Measure Programme preparation and implementation and is responsible for Programme design and monitoring, also for communication activities at the programme level.

The Programme goal will be achieved by implementing two Programme components that are linked by a common theme - biodiversity. Programme Components will be implemented by state authorities under the jurisdiction of the MoC ([Administrative area | Ministry of Climate \(kliimaministeerium.ee\)](http://Administrative%20area%20Ministry%20of%20Climate%20kliimaministeerium.ee)).

Programme Component 1 “Development of innovative monitoring technologies/solutions and improvement of Environmental databases and systems”

For Programme Component 1 the Programme Component Operator- is **Estonian Environment Agency** (*Keskkonnaagentuur* or abbreviated *KAUR*). KAUR is a state authority administered by the Ministry of Climate. KAUR is responsible for the fulfilment of the national environmental monitoring programme, the preparation of national and international reports in the field of environment, evaluating environmental status, ensuring vital services, including weather forecasts, and the maintenance and renewal of monitoring stations and equipment. The tasks of the KAUR in the field of biodiversity are to collect, process and publish information about nature and nature protection in Estonia, fulfil the national and international reporting obligations and maintain nature protection databases. The information on nature and nature protection collected in databases are the foundation of the preservation of objects under protection, species and their habitats.

The KAUR will be responsible for delivering outputs connected to development of new technologies and innovative monitoring solutions and improvement of databases and systems.

As a partner organisation the **Information Technology Centre of the Ministry of the Environment** (KeMIT) will be involved, since KEMIT is responsible for IT tools and services for the employees in the administrative area of the Ministry of Climate and environmental e-services for the public.

Programme Component 2 “Implementation of a systematic assessment of the social and conservation outcomes of protected areas”

For Programme Component 2 the Programme Component Operator is **Environmental Board of Estonia** (*Keskkonnaamet* or abbreviated *KeA*). KeA is a government agency which operates within the area of the Ministry of Climate. The main task of KeA is to implement state policies on environmental use, nature conservation and radiation safety and to monitor the fulfilment of the laws and norms established for the protection of the natural environment. KeA provides services related to nature conservation, for example: planning of activities related to the organisation of nature conservation, management of permits for activities related to nature conservation restrictions, organisation of nature conservation work, organising surveys of biodiversity values and assessing the effectiveness of nature conservation.

The KeA will be responsible for delivering outputs connected to the enhancing the process of the effective conservation management planning. As the conservation objectives and measures are revised and they are more specific and goal-oriented, it is easier to plan conservation activities. The support measure helps to set site-specific, clear, precise and quantifiable conservation objectives, underpinned by scientifically reliable favourable reference values.

To fulfil their main tasks KeA uses the data provided by the KAUR. Also KAUR receives the input into KAUR databases from KeA. Thus, **two Programme Components are closely related to each other.**

For example, the use of the output of Programme Component 1 that is up-to-date data and new technological tools that help carrying out assessments of conservation effectiveness and conservation measures, make conservation management planning in Estonia more effective and less time-consuming and can be used by KeA to update conservation management plans of protected areas and action plans for species and habitats.

2.5 Beneficiaries

Direct beneficiaries

Direct beneficiaries of the Support Measure are **KAUR** and **KeA** who are responsible for the implementation of the monitoring schemes, organization of the protection of protected areas and assessment of the efficiency of protection measures. Also KEMIT as responsible for IT tools and services and development of the databases and systems.

Indirect beneficiaries

Indirect beneficiaries are **the State Forest Management Centre** who carry out protection activities on state land according to conservation management plans and also **local municipalities** who use the data of habitats and species and also the information provided by conservation management plans in their overall planning of green infrastructure.

As the beneficiaries are public authorities, they work for the public. Decisions and developments affect the whole population. It also has a cross-border effect as Estonian protected areas are part of the EU Natura 2000 network and only a few species live only in Estonia. So, measures implemented in Estonia affect the populations which are part of much wider populations. Most Estonians (1.3 M people) benefit more or less directly from this Measure and more or less indirectly the whole Europe benefits from it.

2.6 Programme Component Characteristics and regional focus

Is the benefit of the Project national or regional?

National ☒ Regional ☐

If regional, indicate the benefiting NUTS-2 region(s):

2.7 Overview Swiss Support Measure Partners

Is/are a/several Swiss Support Measure Partner(s) foreseen to be involved in and contributing to the implementation of the Support Measure? Yes ☐ No ☒

Institutional partnership is not planned, however, the Environmental Board will organise two study trips to Switzerland (they have contacted the Swiss National Park): five days for six specialists each, the emphasis of one or the study trips is habitat protection and the emphasis of the other study trip is species protection. The aim of the trips is to learn about conservation management planning/strategies, habitat and species data collection, using GIS). Also Environment Agency will have one study trip to Switzerland in late stage of the programme to share the experiences and present the results. Some of the planned public procurements exceed international threshold and Swiss organizations can participate in the process and make their offer.

Name of the partner organisation

If collaboration foreseen in Programme Component, indicate name of Component

Partnership status Choose an element.

Type of organisation Choose an element.

Type of support or partnership Choose an element.

Name of contact person

Position

Correspondence address

Webpage and social media (if any)

E-Mail	
Phone	Mobile
Has the partner organisation been previously involved in the Swiss Contribution	
Yes <input type="checkbox"/> No <input type="checkbox"/>	

2.8 Sustainability

Sustainability in terms of financial viability:

National budget is reserved for implementing routine monitoring schemes and maintaining the information systems. Developed methods should be cost-efficient and development of IT systems should decrease the human workload. Improvement of the decision making will have a positive effect as well as the decisions will be more science-based and take into account possible negative consequences to the ecosystems. Preserving the condition is cheaper than restoring them. After the project, thanks to the monitoring programme, we are able to maintain and further develop the methods and systems.

The main result for the KeA is that the protection effectiveness of protected areas will be assessed and the process of preparing conservation management plans and national action plans for species and habitats is more effective. KeA will be able to carry on conservation management planning using the national budget. The Support Measure will help the KeA to review its current conservation management planning practices in order to match them with contemporary needs.

Sustainability in terms of capacity building:

One of the challenges for the KeA is the lack of experts in Estonia who can carry out inventories and gather the data of habitats and species. In order to carry out inventories of habitats and species it is necessary to raise the level of expertise among conservation management planning and conservation management specialists in the KeA. The competence of the specialists can be improved by organising seminars and study trips in the frames of Programme. It is also possible to use foreign experts (e.g. Swiss experts).

Another challenge is the opposition to conservation measures and activities among the representatives of local people and developers. So, it is necessary to involve stakeholders in the conservation planning process and find the solutions that are acceptable to the people living in or near the site. Involving stakeholders to conservation management planning can be time-consuming, so it is necessary to analyse how it should be carried out effectively and plan it regarding the specifics of the area.

2.9 Overview tentative budget

Please see 4.6.

2.10 Other strategic issues

N/A

3. Support Measure readiness

3.1 Context

Is the Support Measure proposal a continuation of a Project or Programme supported under the Swiss Contribution (I)? Yes ☐ No ☒

Was the Support Measure proposal declined during a funding-application process by other donors (e.g. EU, Norway/EEA)? Yes ☐ No ☒

If it was declined, explain why.

3.2 Preparation process and documents

Feasibility study None necessary / Not applicableNone necessary / Not applicable

Baseline study, assessment or analysis None necessary / Not applicableNone necessary / Not applicable

Neither a feasibility study nor a baseline study is necessary.

Estimated number of tender dossiers to be prepared	# of dossier not yet prepared	4
	# of dossier provisionally prepared	0
	# of dossier completely prepared	0

Permit(s)/Authorisations required and pending? Yes ☐ No ☒

If permit(s)/authorisation(s) required, specify (e.g. building, environmental, purchase of land etc.) and note when the corresponding permit(s)/authorisation(s) are expected.

Are legislative changes necessary to implement the Support Measure? Yes ☐ No ☒

If legislative changes are necessary, explain and note when the corresponding change is expected to have been made.

Are other (political) decisions necessary to implement the Support Measure? Yes ☐ No ☒

If other (political) decisions are necessary, explain and note when the corresponding

decisions are expected to have been taken.

Implementation of the Programme can start immediately after the signing of the Support Measure Agreement.

3.3 Application for funds from Support Measure Preparation Fund

Is support from the Support Measure Preparation Fund requested? Yes ☒ No ☐

Support Measure Preparation Fund was requested by the MoC to cover Programme Operator's costs connected to the preparation of the second-stage Support Measure Proposal. The Preparation Fund was used for Programme Operator's staff costs assigned to preparation of the second-stage Support Measure Proposal. Also, for stakeholders consultation, signing ceremony and study trip to Switzerland.

4. Operational Support Measure description

4.1 Applying organisation (Executing Agency)

4.1.1 Financial and personnel information (only to be completed for non-state institutions)

Date of establishment	N/A	Tax number (if applicable)	N/A
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Number of employees	N/A
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Financial Turnover for each of the 3 previous years [in Choose.]	N/A
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Ministry of Climate is a governmental authority which performs the functions provided by law and the functions assigned by the Government of the Republic pursuant to law.

4.1.2 Organisation structures of Executing Agency and Support Measure

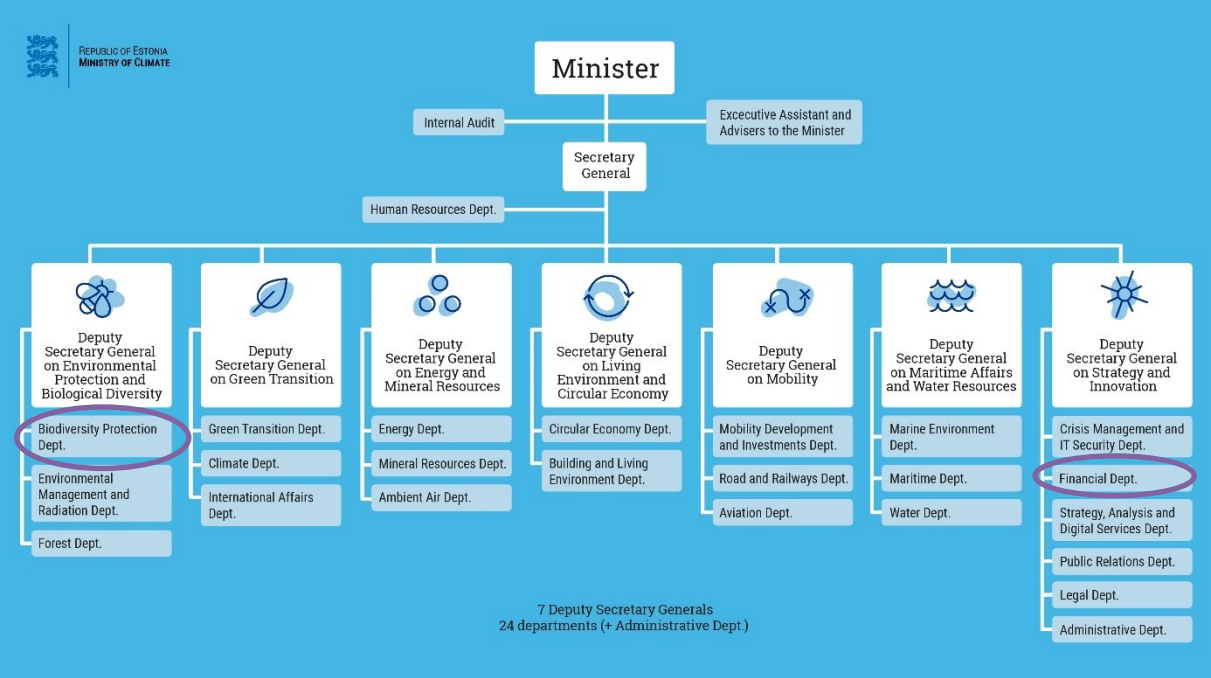
The **Programme Operator** is the Ministry of Climate (MoC), that was formed on the basis of the Ministry of the Environment on 01.07.2023. By this reorganisation the area of responsibility of the Ministry of the Environment was significantly extended: transport, energy, housing and construction, maritime economy were transferred from the Ministry of Economic Affairs and Communications to the formed Ministry of Climate. The main aim of this reorganisation is to implement the green reform more effectively. The structure and responsibilities of the MoC are assigned by the statute of the ministry (<https://www.riigiteataja.ee/akt/108072023005>).

The **management structure** of the MoC is presented on the scheme bellow (scheme 1). Ministry is directed by the Minister. The Secretary General of a ministry directs the work of the structural units of the ministry, co-ordinates the activities of state authorities within the area of government of the ministry and manages the operations of the ministry. There are seven Deputy Secretary Generals and 24 departments in the MoC. The main departments that are directly involved into implementation of the Support Measure are Financial Department and Biodiversity Protection Department (they are marked with coloured rings on the scheme). The main tasks of the Financial Department are to coordinate and organise the budgeting and financial management of the ministry and the area of government, including monitoring and analysing

budget implementation, organising financial reporting, organising the development and use of support programmes and measures financed by external funds and monitoring their use. The main tasks of the Biodiversity Protection Department are to design and organise the implementation of nature protection policy, including soil protection policy.

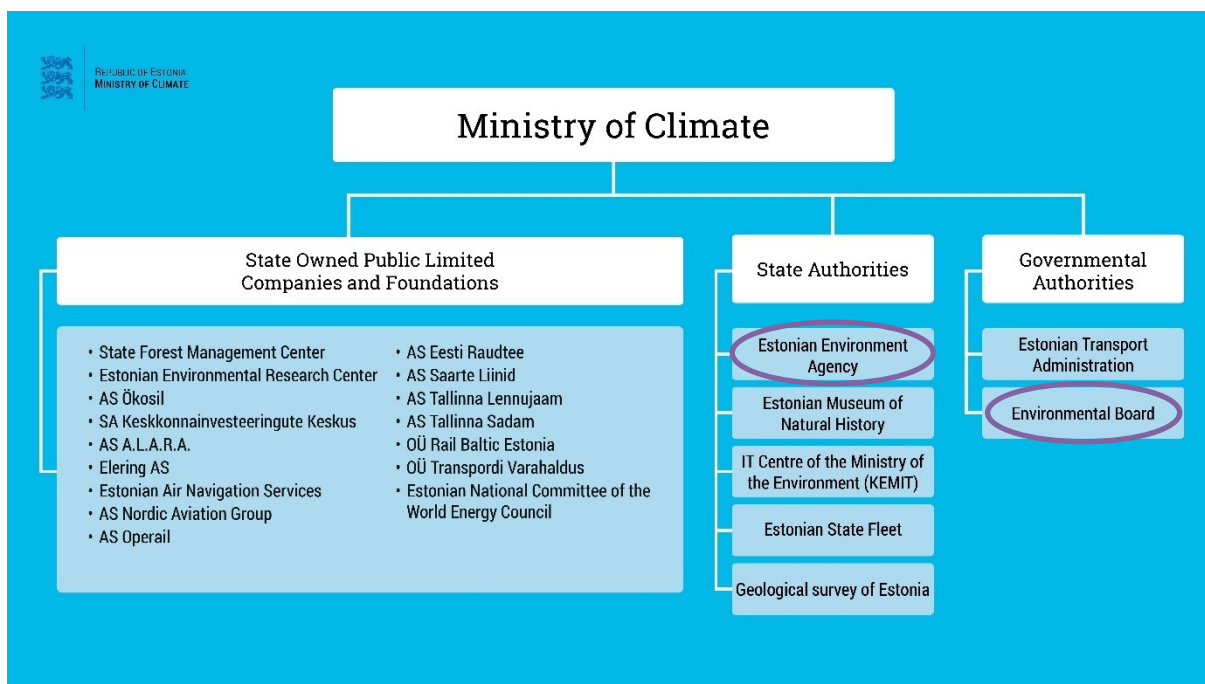
Other departments (for example Public Relations Department, Legal Department etc) of the MoC will be involved upon need based on the procedures of the MoC. The tasks of the departments are fixed internally in the statutes of the departments.

Scheme 1: management structure of the MoC



The **jurisdictional structure** of the MoC is presented on the scheme 2. Both **Programme Component Operators** are within the area of government of the ministry and financed from state budget. Estonian Environmental Agency is the state authority and Environmental Board is governmental authority (they are marked with coloured rings on the scheme). The management structure of Programme Component Operators is presented in 6.2 and 9.2.

Scheme 2: jurisdictional structure of the MoC



4.1.3 Support Measure management team

Will external management personnel be hired to implement the Support Measure? Yes ☐ No ☒

What personnel capacity will be dedicated for the management of the Support Measure implementation (in full-time equivalents FTE)?

Internal resources	External resources
0,3 FTE	

Programme will be managed by the Programme Operator (MoC). 0,3 FTE of the internal resources will be dedicated for this task: 0,15 FTE in Financial Department and 0,15 FTE in Biodiversity Protection Department. The Financial Department acts as the main managing unit within the Programme Operator. Financial Department will have the coordinating role and will be the main contact point at the Programme level. Biodiversity Protection Department is responsible for the Programme's thematic area. The tasks of the employees and officials of the MoC are regulated with job descriptions and other relevant documents. The Programme Operator will guide and monitor the implementation of the Programme Components. Annual activities are defined in the annual work plan of the ministry. During year work plan is regularly monitored. Each Programme Component Operator will nominate the Programme Component manager, who will coordinate the implementation of the concrete component. The management team at the Programme Component level is described in 6.3 and 9.3.

There will be **Task Force** for ongoing monitoring, that will meet at least two times per year and will consist of Programme Operator, Programme Component Operators, National Coordination Unit and Partner (KEMIT).

As prescribed by the Regulations there will be the **Steering Committee** established by the National Coordination Unit, that will be composed at least from the NCU, SCO, Programme Operator and Programme Component Operator. The Steering Committee will supervise the progress of implementation and make suggestions for improvements and approve modifications to the Support Measure. The Steering Committee will meet at least once per year.

The Programme Operator will also participate at **Annual Meetings** of the Cooperation Programme.

The function mentioned in Regulations Article 6.8 p.3 will be implemented by the State Shared Service Centre. In accordance with the Regulations Article 3.4.2. no Intermediate Bodies shall be set up for the implementation of the Support Measure. State Shared Service Centre, which acts as the competence centre for the implementation of structural and other funds in Estonia, carries out the tasks in accordance with Article 6.8 p.3 of the Regulations for the implementation of the Support Measure. The activities that are carried out in accordance with Article 6.8 p.3 by the State Shared Service Centre are financed from the Support Measure. The fulfilment of the functions of the National Coordination Unit, which is located in the same organization and is financed from the Technical Assistance Fund, is completely separated from these activities.

The implementation scheme of the Programme is attached in Annex 7.

Are CVs attached to this documentation?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
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Are terms of reference for the management functions to be established attached to this documentation?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
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4.1.4 Programme and project management experience

The ministry has a comprehensive experience on use, management and monitoring of grants allocated by the European Union or other donors, as pursuant to the act of Government of the Republic, the minister monitors the accurate and purposeful implementation of the budget and the purposeful use of funds, aid and grants in the area of government of the ministry. Ministry coordinates and organises the development and use of support programmes and measures financed by external funds (European Regional Development Fund, Cohesion Fund, Just Transition Fund, Recovery and Resilience Facility, European Economic Area and Norwegian Financial Mechanisms, Swiss-Estonian Cooperation Programme) and monitors their use. Also, ministry is involved as project leader or partner into implementation of concrete projects.

As described in the previous sections the Ministry of Climate was formed on the basis of Ministry of the Environment (MoE). MoE was the intermediate body for the programme “**Enhancing public environmental monitoring capacities**” supported by the previous Swiss Contribution in amount of 8 426 189,90 CHF. The objective of the programme was to enhance public environmental monitoring capacities for the whole country in order to reduce environmental pollution, to increase the quality of environmental information and living standards and to promote sustainable economic development. As clean water resources, high ambient air quality and radiation safety are of vital importance for humans and ecosystems, the programme was focused on development of surveillance capacities in these sectors. The biodiversity monitoring was not covered by previous contribution.

Ministry of Climate acts as lead partner in several LIFE Integrated Projects:

- “**Comprehensive management of forest and farming landscapes to improve the conservation status of Natura 2000 habitats and species**” (LIFE18 IPE/EE/000007, ForEst&FarmLand, 3 FTE). Implementation period 01.01.2020 - 31.12.2029. Total eligible budget is 19 561 784 EUR, from which EU contribution is 11 611 434 EUR. The main objective of the project is to implement the most critical part of the Estonian Prioritised Actions Framework (PAF) for Natura 2000 related to forests and agricultural land. The aims are 1) to improve the conservation status of forest and farmland habitats

and species to achieve results that benefit whole ecosystems; 2) to improve conservation practices and collaboration between administrative authorities; and 3) to raise awareness and capacity of main stakeholders and general public, including the use of innovative conservation tools and solutions.

- **“Development of an integrated water management and its modern tools in Estonia - strategic choices for future”** (LIFE17IPE/EE/000007, CleanEST). Implementation period 01.01.2019 - 31.12.2028). Total budget is 16 666 000 EUR. The main objective of the project is to implement the most critical part of the East Estonian water management plan. The project's main fields of activity are reducing harmfulness of residual pollution, identifying and restoring the goods of ecosystems, developing solutions to reduce the pressure from agriculture on the environment, identification of the need for reclamation of the local management systems, liquidation of migration barriers to improve the ecological status of the rivers, increasing environmental awareness. There are 4,8 FTE from MoC involved in this project.
- **“Implementation of national climate change adaptation activities in Estonia”** (LIFE21-IPC-EE-LIFE-SIP AdaptEst/101069566). Implementation period 01.01.2023 – 31.03.2032. Total eligible budget is 18 859 312 EUR, from which EU contribution is 11 294 017 EUR. Climate Change Adaptation Development Plan until 2030 sets eight subgoals based on the priority sectors of the economic and administrative structure in the Republic of Estonia (independently and partially combined) from which the implementation of five is supported by the project: (1) health and rescue capacity, (2) land use and planning, (3) natural environment, (4) bioeconomy, (5) society, awareness and cooperation.
- **“Pursuing Estonian national climate ambition through smart and resilient renovation”** (LIFE20 IPC/EE/000010). Implementation period 01.11.2021 – 31.12.2028. Total eligible budget is 16 226 711 EUR, from which EU contribution is 9 500 000 EUR. The long-term objective of the project is to increase the ambition, and pave the way for reducing CO₂ emissions, of Estonia's existing building stock by up to 100% (~4.5 million tCO₂/yr) by 2050. In the short-term, the project aims to pursue the 2030 goal of reducing the CO₂ emissions by 32% (~1.4 million tCO₂/yr). Achieving the objectives will help to mitigate the effect that energy performance of buildings has on climate change.

4.2 Detailed intervention strategy and activities

4.2.1 Detailed description of activities and intervention strategy

One of the objectives of the programme is to enhance wildlife monitoring through the testing and implementation of new solutions and technologies. New technology will be integrated into monitoring schemes. For example, 3D bird radars will be used in bird monitoring, which will increase the accuracy of the data and also, it will increase the efficiency and operativeness. There are few programmes that support testing new solutions and tools in wildlife monitoring and this is one of the reason that this field is not developing as fast as it could. It is especially important to implement new and old methods at the same time in order to calibrate the results, so the longtime series of data sets will be continued. Also, eDNA, laser binoculars and other suitable tools and solutions will be tested and integrated into monitoring schemes.

Environment Agency is developing AI for the monitoring of game species. According to the existing method, data of the game species is collected in winter and the presence of snow cover is important. Due to the climate change, Estonian winters are smoother and there are fewer days with snow cover, especially in areas that are close to the sea. Developing and using AI is one alternative for the existing method. That also requires great amount of tracking cameras. Development of the AI and purchasing of the tracking cameras is financed from other

funds, but additional personnel is necessary in order to speed up the training and using of the AI and implement new Random Encounter Model in game species monitoring. At the moment there are around 100 cameras in use, but by 2024 there will be 700. There are 7 times more work in installing cameras and managing data. After the new system is in place and AI is smart enough to sort empty pictures and recognize different species, this extra person is no longer required.

As the main objective of the Swiss Support is to improve decision making through qualitative data, it is important to improve IT systems and databases that would decrease human work, help to analyse great amount of data and make it easier to understand. Data is often scattered in different systems and quality of data varies. It is necessary to bring the data together, develop analytical tools and make it more attractive, visible, and understandable. Also, it is also necessary to improve citizen science. Citizen science can play an important role by filling data gaps where conventional data sources may not be sufficient, providing complementary temporal and spatial data that supports official monitoring systems. Besides collecting additional data, promoting citizen science gives the opportunity to raise environmental awareness.

The second component of the programme is related to enhancing the protection of natural values in protected areas and endangered species. So far, the effectiveness of protection measures has been evaluated in few protected areas, so it is not clear which protection measures are the most effective for protecting species and habitats. Therefore, an evaluation of effectiveness of protected areas is carried out, and based on these results, it is necessary to update area-based conservation management plans. Management plans must also take into account those aspects that have not been paid attention to, e.g. how to contribute to the survival of species and habitats in changing climate conditions. Also, how to integrate conservation management plans (the state's responsibility) into the green networks specified in general plans of municipalities. Improving the effectiveness of the green network is also important for achieving the conservation objectives of the protected area by providing green corridors for the spread of species between the areas. In order to evaluate the effectiveness, it is necessary to carry out additional inventories, otherwise it is not possible to have adequate up-to-date information about the status of species and habitats in protected areas. In order to ensure the uniform quality of the inventories, the inventory methodologies will be updated, and inventory guidelines will be prepared for those habitat groups where they are still missing.

Area based conservation objectives are not enough to achieve the favorable status of species and habitats. For this purpose, nationwide objectives will be set, including favorable reference values for each species and habitat, and measures on how to achieve the objectives. For this purpose, national action plans for habitat and species will be prepared for those habitat groups and protected species, where this has not yet been done. In addition to determining the threatness of species according to the Red List, species are divided into different protection categories, which are subject to different rules. For example, 100% of the localities of species of protection category I must be protected, at least 50% of localities of species of protection category II, and at least 10% of localities of species of protection category III. The current distribution needs to be reassessed because, for various reasons, the status of some species has improved in the meantime and that of other species has deteriorated. Designation of updated protection categories will help to protect more effectively those species that need it most.

The inventories made by the Environmental Board are inserted into the database managed by the Environmental Agency, the results of the inventory are the basis for national monitoring, while additional information about the natural values of protected areas can be obtained based on the monitoring results. Creating an automatic transfer between the Estonian nature information system (data on protected areas, protected species, inventories) and the monitoring database enables the use of relevant information, so that there is no need to use different databases. Manual workload will be reduced. The information needed to manage the protected areas will be relevant, and easy to use for both state authorities and the wider public. The

protection of natural values is more effective, is based on data that is comprehensible to all, and ensures the improvement of the status of species and habitats. Greater involvement of interest groups and voluntary monitoring will help to improve the understanding of the need to protect nature more broadly. These are the basic conditions for the general improvement of the state of nature, which in turn helps to contribute to the fulfillment of the goals and the targets of Global Biodiversity Framework.

4.2.2 Detailed description of selection process for Programme Components

Not relevant, as all components have been selected.

4.2.3 Communication activities

Programme's launching and closing event is organized by the Ministry of Climate. We are planning to involve media, stakeholders and competent authorities on both events for the purpose of increasing awareness of Programme and also environmental awareness.

We are planning to send joint press releases and social media posts once a year during the implementation period. Throughout the period, the public will be informed about the progress of the programme through various activities by Programme Component Operators. Also, we are monitoring media (articles, press releases etc) through "Station" (Estonian media monitoring programme).

There will be communication activities (articles, social medias posts, television and/or radio) at the Programme Components level (Annex 1, 3.1):

Environmental Agency

- We will use our social media channels (Facebook and Instagram) to post news of the results of the project (at least 20). Our Facebook page has approximately 10 000 followers;
- Social media boosts: we will boost important and attractive posts (2) and with that, our posts will reach at least 200 000 social media users;
- We will publish at least 4 blog posts, which will be shared in the list of journalists. With that, we can reach biggest Estonian newspapers (Postimees, Delfi, Päevaleht, Maaleht etc), both paper and web, which are covering most of the population in Estonia;
- 8 articles of the new solutions and technologies in the wildlife monitoring (AI, 3D radars, etc), target group wider public;
- 2 events where new solutions and technologies will be demonstrated, target group up to 150 persons, experts in the field and data users (scientists, hunters, windfarm developers, etc). This will also enhance networking and collaboration among different stakeholders;
- Citizen science campaigns (20) to involve volunteers in wildlife monitoring. During the campaigns we aim to reach up to 1000 people;
- 2 bigger events for volunteers to present the results of the campaigns, recognize volunteers, enhance networking and collaboration for the future. This helps to strengthen the network and also this helps to bring the results of the project to more people through dedicated people. Target group up to 150 persons, volunteers, wildlife enthusiasts and specialists, active community members and environmental specialists of the local counties;
- Television, we will propose our topics at least to 2 national broadcasts and shows like Terevisioon (80 000 viewers) and Osoon (160 000 – 180 000 viewers);

- At least 8 appearances/interviews on radio shows (e.g. Vikerraadio, Ökoskoop etc). Vikerraadio is the most listened radio (120 000 listeners/day and during a week they can reach up to 228 000 people);
- In the final stage of the project, we plan to make a presentation in Switzerland to introduce the results of the project to interested target groups (wildlife experts and specialists, scientists, officials, financiers of the programme, etc) who could benefit from our experience and who could replicate the results.

The Environmental Board

- The overall communication and management costs for Programme Component 2 include newspaper and social media articles (e.g. more than 36,000 print circulation of the national newspaper, more than 12,000 Facebook users) and compilation of the webpage. Examples of management plans and action plans are translated into English.
- When assessing the management effectiveness (Activity 1) of larger areas where different stakeholders are involved, meetings are organised to introduce the results of the assessment and get the input from stakeholders. There is a need to publish newspaper advertisements in local and/or national newspapers, introduce the topic on the webpage. When organising meetings with stakeholders it may be necessary to rent rooms and organise coffee breaks. During hybrid meetings it is necessary to rent extra technical equipment for audio and video solutions. The results of management effectiveness assessment will be introduced to the public: a digital report/summary will be published in Estonian and English. The report has to be digitally designed.
- In the process of preparing of site-based management plans (Activity 2) interest groups are involved. The project will produce a total of 64 management plans. All of them are introduced to the public on the website (www.keskkonnaamet.ee), newspaper advertisements are published in local or national newspapers, meetings are organised (in-person meetings, hybrid meetings using MS Teams), letters are sent to stakeholders. When organising meetings with stakeholders it is necessary to rent rooms and organise coffee breaks. During hybrid meetings it may be necessary to rent extra technical equipment for audio and video solutions.
- In the process of preparing habitat action plans (Activity 2) interest groups are involved. The project will produce at least three habitat plans. They are introduced to the public on the website (www.keskkonnaamet.ee), newspaper advertisements are published in national newspapers, meetings are organised (in-person meetings, using MS Teams), letters are sent to stakeholders. During hybrid meetings it may be necessary to rent extra technical equipment for audio and video solutions. When organising meetings with stakeholders it is necessary to rent rooms and organise coffee breaks.
- In the process of proposing the changes in protection categories of species and preparing action plans for protected species (Activity 3) interest groups (mostly universities and experts) are involved. The project will produce 60 action plans. When preparing the action plans <http://www.keskkonnaamet.ee/> meetings with experts/universities are organised (in-person meetings, hybrid meetings using MS Teams). When organising meetings it is necessary to rent rooms and organise coffee breaks. During hybrid meetings it may be necessary to rent extra technical equipment for audio and video solution.
- Communication with local authorities (79 local municipalities): one seminar per year (conservation management and green infrastructure) is organised. The costs include advertisements, room rent, coffee breaks, renting equipment for audio and video solutions.

4.2.4 Detailed implementation schedule

Please see annex 6.

4.3 Logframe

Hierarchy of objectives Strategy of Intervention	Key Indicators (incl. target values and baseline)	Sources & Means of Verifi- cation	Assumptions & Risks (External Factors)
Impact	Impact Indicators	Impact: Sources and Means of Verification	
Improved conservation status of threatened habitats and species	Proportion of habitat types and species with an improved status, 30% by 2030. The baseline is the 2019 assessment of the Habitats Directive Article 17 report. A 30% improvement should be achieved compared to the results of this report (therefore baseline is 0).	National reports and data-bases	Depends on other measures implemented in Estonia.
Outcomes (Support Measure objectives /purpose)	Outcome Indicators	Outcome: Sources and Means of Verification	Outcome Assumptions & Risks
1. The efficiency and reliability of biodiversity monitoring has improved 2. The effectiveness of management planning of protected areas as well as protected species and habitats has improved	1. Data collected as part of the biodiversity monitoring programme reaches the databases within one year through automated process Baseline: no automated process, most of the data reaches databases within more than one year 2. New guidelines for drawing up management plans of protected areas have been implemented Baseline: The previous guidelines are outdated (2012, updated 2018)	1. Estonian Nature Information system; National Biodiversity Monitoring Programme 2. Support Measure Completion Report with examples of guidelines, management and action plans	<ul style="list-style-type: none"> Insufficient financing of national biodiversity monitoring programme and biodiversity protection in the future due the national security and changes in priorities and that can affect the sustainability of the support measure Institutional reforms Changes in legislation
Outputs: Support Measure deliverables/results per outcome	Output Indicators	Output: Sources and Means of Verification	Output Assumptions & Risks

1.1. Existing IT systems (databases and portals) and their connectivity is improved	At least 4 additional connections or tools for the exchange of data between the IT systems have been established Baseline: 0 for additional connections and tools (overall, IT systems has already many other existing connections and tools)	Support Measure Completion describing the connectivity of IT systems	Risks: <ul style="list-style-type: none"> • Price of the services and equipment will increase • IT developments take longer than planned • The number of potential service providers (including experts) is limited that impacts public procurements and public procurements may fail • The quality of services is low • Being unable to hire the personnel for the programme
1.2. New technologies and novel solutions for biodiversity monitoring are mapped, developed, tested and implemented	At least 5 new developed and piloted solutions (Random Encounter Method, Artificial Intelligence, 3D bird radar, eDNA and, other new technical solutions that will be worked out in first stage of the project Baseline: 0	National Biodiversity Monitoring Programme	
2.1. Site-based and national conservation objectives and measures for protected species and habitats are revised	<ul style="list-style-type: none"> • The effectiveness of the management of at least 300 protected objects (different types of protected areas) is assessed Baseline: 0 (using new methodology)	<ul style="list-style-type: none"> • Support Measure Completion with examples of guidelines, management and action plans 	
2.2. The conservation management plans of protected areas, action plans for species and habitats are revised and updated	<ul style="list-style-type: none"> • 5 action plans for habitats; 64 conservation management plans for protected areas using a new format, 5 action plans for habitats and 24% of all the protected species in Estonia have action plans Baselines: 2 action plans for habitats; 0 conservation management plans for protected areas (using the new format) <ul style="list-style-type: none"> • 16% of all the protected species in Estonia have action plans. The protection categories of all the protected species' groups (not separate species) are evaluated 	<ul style="list-style-type: none"> • Final report of management effectiveness assessment • Management plans and habitats action plans are compiled and are publicly available through the database • The draft regulation for the change of protection categories of species is prepared. 	

	<p>Baseline: 0</p> <ul style="list-style-type: none"> • Draft document to change the regulations of protection categories is prepared <p>Baseline: 0</p> <ul style="list-style-type: none"> • The toolset for conservation management effectiveness assessment is set up and in use in the Environmental Board <p>Baseline: 0</p>		
3.Competence of the specialists as well as public awareness and engagement is improved	<ul style="list-style-type: none"> • At least 21 trainings/seminars • At least 8 study trips • A network of volunteers is created • At least 20 campaigns to involve volunteers in wildlife monitoring • 2 bigger events for volunteers • 2 bigger events for stakeholders • At least 8 articles of the new solutions in wildlife monitoring • At least 8 appearances in radio shows • At least 2 appearances in TV shows • 1 presentation in Switzerland to introduce the results of the project • CC_CI_1 Number of people benefiting from training to improve institutional and professional capacity 	<ul style="list-style-type: none"> • Annual Support Measure Reports • Registration lists • In crosscutting indicator the disaggregation of training participants only by gender, but not along disadvantaged and non-disadvantaged groups will be made 	

4.4 Swiss Support Measure Partner(s)

Institutional partnership is not planned, however, the Environmental Board will organise two study trips to Switzerland (they have contacted the Swiss National Park): five days for six specialists each, the emphasis of one of the study trips is habitat protection and the emphasis of the other study trip is species protection. The aim of the trips is to learn about conservation management planning/strategies, habitat and species data collection, using GIS). Also Environment Agency will have one study trip to Switzerland in late stage of the programme to share the experiences and present the results. Some of the planned public procurements exceed international threshold and Swiss organizations can participate in the process and make their offer.

4.5 Stakeholder consultations

Stakeholder consultation took place on the 5th of June 2023. The invitation was sent to about 150 persons and institutions: to all local authorities, universities, organisations involved into monitoring or biodiversity protection (please see *invitation letter* in annex 10). There were 32 participants (please see *registration list* in annex 10). After the event there was an opportunity for written feedback (please see *afterword and event materials* in annex 10).

At the beginning of the event the objectives and expected results of the programme were introduced and an overview on the development trends in nature conservation was given. Afterwards each programme component operator introduced main actions to the participants and two different workshops were organized where participants had the chance to point out problems, propose new ideas and actions.

Ideas and actions that were described in the proposal and introduced to the stakeholders, were all supported. Those were: 3D bird radar, development and training of the AI, including implementing the Random Encounter Model more widely in game species monitoring, testing new solutions and technology in wild life monitoring (eDNA, remote monitoring solutions, automation, laser binoculars, drones with thermos cameras, telemetry surveys), promoting citizen science and also development of the IT systems.

Stakeholders agreed that data should be easier to collect, more accessible and more understandable. The interface of different systems was considered necessary which would make data queries easier and faster. Data up-to-dateness was considered important, especially in decision-making. Stakeholders pointed out that entering data into databases should be simplified, including creating solutions for mass-data. If possible, some of the IT systems should be as mobile applications. Testing the capabilities of eDNA was strongly emphasized.

The project activities proposed by the Environmental Board, were also supported. The representatives of local municipalities said that they would like to participate more in the process of compiling management plans. They pointed out that updating species data and management plans is crucial in general planning processes and decision making. It is necessary to know which areas are suitable for development and planning the use of mineral resources. The Environmental Board will organise joint seminars for local municipalities in order to discuss how conservation management and principles of green infrastructure work together.

The representatives of universities said that they are ready to carry out necessary inventories, give expert opinions and put together methodologies for habitats inventories. They agreed that protection categories of species need to be updated as well. Expert opinions about species give input to action plans and help decision making and law enforcement.

It was pointed out that updated site-based management plans and action plans that describe objectives, pressures, risks and measures are necessary for environmental impact assessment.

In summary, the proposed ideas and activities were supported, no one objected neither concept nor content of Programme.

4.6 Tentative Budget

4.6.1 Detailed tentative budget

The budget is attached in Annex 4. Budget is split between three main parts:

1. Management costs:

- This part includes costs only for **Programme** Management (costs done at the Programme level). Costs connected to the management and implementation (including involvement of partners) of the Programme Components are included into the budget of components.
- This part includes also the costs of State Shared Service Centre for the fulfilment of the function in accordance with Regulations Article 6.8 p.3 In accordance with the Regulations Article 3.4.2. no Intermediate Bodies shall be set up for the implementation of the Support Measure. State Shared Service Centre, which acts as the competence centre for the implementation of structural and other funds in Estonia, carries out the tasks in accordance with Article 6.8 p.3 of the Regulations for the implementation of the Support Measure. The activities that are carried out in accordance with Article 6.8 p.3 by the State Shared Service Centre are financed from the Support Measure. The fulfilment of the functions of the National Coordination Unit, which is located in the same organization and is financed from the Technical Assistance Fund, is completely separated from these activities.

2. Programme Component 1 “Development of innovative monitoring technologies/solutions and improvement of Environmental databases and systems”

3. Programme Component 2 “Implementation of a systematic assessment of the social and conservation outcomes of protected areas”

4.6.2 Tentative Disbursement Plan

Reimbursement Period	1	2	3	4	5	6	7	8	9
Estimated reim- bursement of Swiss Contribu- tion in CHF	926 117,50	926 117,50	843 284,71	843 284,71	854 997,31	854 997,31	836 038,88	836 038,88	9 122,84

4.7 Risk Analysis and Risk Management

Risk	Impact [1 – 5]	Likeli- hood [1 – 5]	Risk level	Mitigation measure(s)
Institutional reforms	1	3	Low	Internal institutional reform is ongoing in the Environmental Board, but it has low impact on support measure, because the project activities can be adjusted to the new structure of the institution.
Changes in legislation	3	3	Low-Medium	Necessary adjustments in the programme will be made following the legislative changes
Price of the services and equipment will increase	3	3	Low-Medium Low-Medium	To mitigate the risk, we have taken this into account in the preparation of the budget and we have added necessary buffer. In case buffer will be not needed we will make a proposal to transfer it to another budget line.
IT developments take longer than planned	3	4	Medium-High Medium-High	We are already developing procurement documents to save time and start as soon as agreement is signed.
The number of potential service providers (including experts) is limited that impacts public procurements and public procurements may fail	3	3	Low-Medium Low-Medium	To mitigate the risks, we have involved stakeholder in the preparation of this programme and we will actively spread the information of the public procurements and as the number of potential service providers is limited in Estonia, we will use international public procurements if necessary and mandatory according to the law.
The quality of services is low	3	3	Low-Medium Low-Medium	When ordering services it is necessary to plan well ahead and provide the quality criteria that need to be followed. The services have to be described in detail in contracts, if work does not confirm to the contract, a chance to improve the work is given. It is necessary to check the quality services offered regularly.

Risk	Impact [1 – 5]	Likeli- hood [1 – 5]	Risk level	Mitigation measure(s)
Institutional reforms	1	3	Low	Internal institutional reform is on-going in the Environmental Board, but it has low impact on support measure, because the project activities can be adjusted to the new structure of the institution.
Changes in legislation	3	3	Low-Medium	Necessary adjustments in the programme will be made following the legislative changes

Being unable to hire the personnel for the programme	4	2	Low-Medium Low-Medium	It is necessary to provide the salaries that motivate, also, services can be chosen instead.
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Overall Risk Level Support Measure	Medium-lowMedium-low
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Comments on the overall risk level (if any)	In general we think the risk is low, but there are some risk mentioned above that evaluated as low-medium.
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4.8 Monitoring and Steering

In accordance with Regulations the Support Measure **Steering Committee** will be established to supervise the progress of implementation of the Programme and make suggestions for improvements, to approve in accordance with Regulations any modifications based on the proposal by the Programme Operator.

There will be **Task Force** for ongoing monitoring of the Programme and Programme Components. The Task Force will propose any modifications to the Steering Committee.

The resources for Steering Committee and Task Force meetings are foreseen in the Programme Budget.

4.9 Other operational issues

N/A

5. Annexes

#	Annex
1	Intervention logic
2	Overview of Implementation locations
3	Programme Characteristics
4	Budget
5	Procurement Plan
6	Implementation schedule
7	Implementation scheme
8	Detailed Information to Programme Component 1
8-1	Environment Agency actions and personnel
9	Detailed Information to Programme Component 2
10	Stakeholder consultation
11	Feedback on the recommendations

Annex 2: Overview of Implementation locations

General (Programme Management)

Location name	Address
Ministry of the Climate (<i>Kliimaministeerium</i>)	Suur-Ameerika 1, Tallinn

Programme Component 1 “Development of innovative monitoring technologies/solutions and improvement of Environmental databases and systems”

Location name	Address
Estonian Environment Agency (<i>Keskkonnaagentuur</i>)	Mustamäe tee 33, Tallinn

Programme Component 2 “Implementation of a systematic assessment of the social and conservation outcomes of protected areas”

Location name	Address
Environmental Board of Estonia (<i>Keskkonnaamet</i>)	Roheline 64, Pärnu

Annex [8] Detailed Information to Programme Component

Basic Programme Component Information

Title	Development of innovative monitoring technologies/solutions and improvement of Environmental databases and systems
Planned Duration [months]	48
Requested Swiss contribution (CHF)	2 883 589,89
Requested co-financing rate of Switzerland [%]	85%

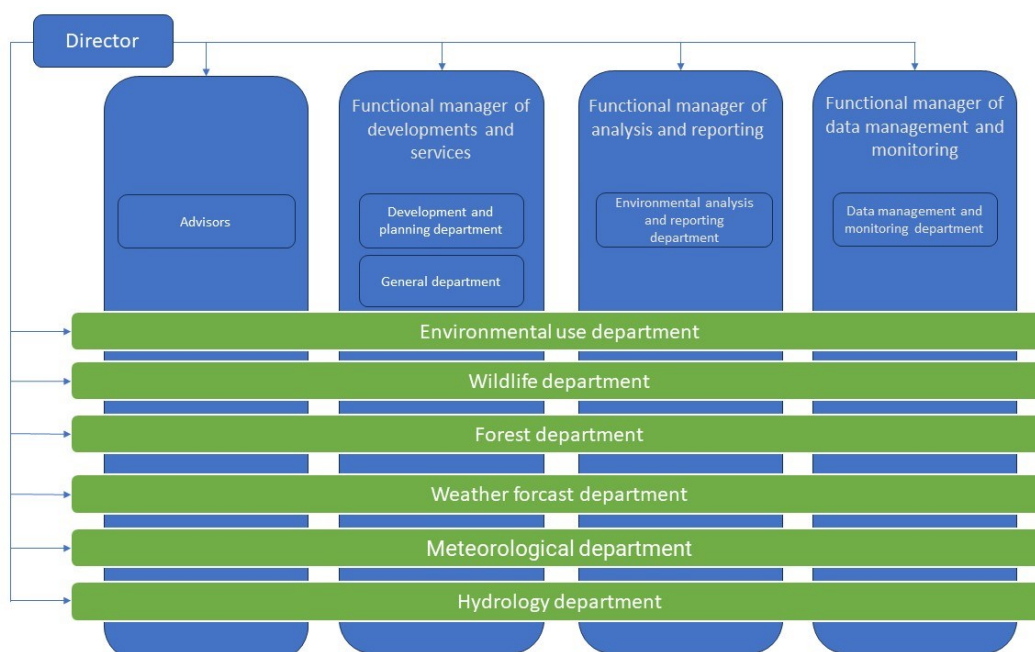
6. Programme Component Operator

6.1 Basic Information

Name of Programme Component Operator	Environment Agency		
Type of entity	National administrationNational administration		
If type of organization is "other", describe the type briefly			
Name of contact person	Mr Lauri Klein		
Position	Wildlife monitoring coordinator		
Correspondence address:	Mustamäe tee 33, Tallinn, Estonia		
E-Mail	Lauri.Klein@envir.ee kaur@envir.ee		
Webpage and social media (if any)	https://keskkonnaagentuur.ee/en https://www.facebook.com/Keskkonnaagentuur		
Date of establishment	01.06.2013	Tax number (if applicable)	EE101646790
Number of employees	208 (31.10.2023)		
Financial Turnover for each of the 3 previous years [in EUREUR]	2020 – 12 075 890; 2021 – 11 873 025; 2022 – 12 0111 311.		
Has the Programme Component Operator previously received funding from the Swiss Contribution?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		

6.2 Programme Component Operator Management

Since 1st of April 2022, matrix management is implemented in the Environmental Agency. There are three functional managers who are responsible for different functions and services. As seen in the chart, there are six main departments reporting to the director and functional managers. Wildlife department will be the main department responsible for the management and implementation of the Swiss-Estonian cooperation programme.



6.3 Programme Component Management

Will external management personnel be hired to implement the Programme Component? Yes ☒ No ☐

What personnel capacity will be dedicated for the management of the Programme Component implementation (in full-time equivalents FTE)?	Internal resources	External resources
	1,0	4,0 FTE

It is necessary to use external resources to implement the actions planned with the Swiss-Estonian cooperation programme. All those people will be working in the Wildlife department.

Project manager (full-time, period 2024-2027) (*hereinafter the term “project” refers to the term “Programme Component”*) – responsible for the project team management and the implementation of the actions, preparation of the public procurements, documentation and budget, organizing study trips, communication and translation of the documents, etc. Potential project manager is already involved in the preparation of the application.

Chief specialist (monitoring specialist, full-time, period 2024-2027) – additional employee, who will be responsible for the development, testing and implementation of new monitoring methodologies, including contribution to the preparation of the acquisition of mobile 3D bird radar and responsible for the implementation and integration of the equipment into the national monitoring methodologies. In cooperation with scientists and technical experts, map possible novel methodologies, solutions (eDNA) and equipment (night observation equipment, transmitters, remote sensing solutions, etc.) to be used in the wildlife and ecosystem monitoring. Arrange testing of mapped novel monitoring methodologies, equipment, and solutions. Also, monitoring specialist will be responsible for the involvement of volunteers and organization of the campaigns.

Specialist (monitoring assistant, full-time, period 2024-2027) – additional employee, who will help to implement the new REM (Random Encounter Model) methodology, contributes to the collection of data through track cameras, data management and training of the artificial intelligence (AI) to be created.

Chief specialist (IT specialist in the Environmental Agency, part-time, internal specialist, workload 0.5, period 2024-2027) – contributes to the compilation of the initial IT tasks: advises the IT developer, tests and introduces the results. A person with the same work load (0.5) will start working in the IT Centre of the Ministry of the Climate in the period 2024-2027. He/she will be responsible for the business analyses, organizing IT related public procurements and he/she will be the main contact person for developers. Also, he/she will be responsible for the quality of the services.

Specialist (data specialist, full-time, period 2024-2027) – organizes the entry and updating of data in Estonian Nature Information System (EELIS) collected within the framework of inventories ordered by the Environmental Board. Also contributes to the development of IT systems.

It is more cost-effective to hire a person than outsource the service. It also ensures operational efficiency, better control of the work and sustainability of the results as it helps to preserve the institutional memory.

At the moment terms of reference for the functions is not yet established, but main tasks and actions have been described in the annex.

Are CVs attached to this documentation?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
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Are terms of reference for the management functions to be established attached to this documentation?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
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6.4 Programme and Project Management Experience

In the last 5 years, Environment Agency has implemented 9 environmental projects (15 additional FTE-s) and monitoring programmes (2019-2023). Most programmes are implemented on regular bases and are still ongoing. For example, implementing the national wildlife and landscape monitoring programme, developing the prototype of AI (game species), developing the nature observation mobile application.

Wildlife and landscape monitoring programme is mostly financed from national budget. In the past years, the yearly budget has been 455 000 euros (without VAT, personnel costs excluded), which is used to outsource services (e.g monitoring of eagles, amphibians, flying squirrels, bats, seals, forest birds, etc.) from wildlife experts. Every year there are around 50 monitoring works. Mostly public procurement is used or simpler procurements which is accordance with the law and internal procedures of the Agency. Monitoring team consists of 12 persons and their salary is covered from the state budget.

KAUR is the leading partner of the ELME project. The main objective of the project is mapping and assessment of Estonian ecosystems and related ecosystem services. Besides, new methodologies and technologies were tested in wildlife monitoring, including Random Encounter Methodology (REM), drones and acoustic sensors. Project activities started in 2016 and it will be finished in the end of 2023. Total cost of the project is 1,65 million euros and it is financed from the EU Cohesion Fund. Co-financing comes from the state budget and National Environmental Programme. Employees responsible for managing the project and implementing the activities are still working in the Agency.

Also, an AI prototype was developed in 2020-2021 (duration 15 months), which was financed from European Regional Development Fund. Total cost of the development was 95 400 euros. The aim of the project was to develop an AI prototype that could recognize species from the tracking camera photos. In the first stage, AI had to recognize pictures with animal and without animal and remove pictures where no animal was recognized. The prototype had to learn two

species (roe deer and marten), but it was able to learn other species too (accuracy depended on the quality and number of training photos). Public procurement was used to find the best developer. Employees responsible for the preparation of the public procurement documents and development of the AI, are still working in the Agency.

7. Programme Component Description

7.1 Short Summary

Goal of this Programme Component is to develop and implement new monitoring methods, technical solutions and approaches in wildlife monitoring to improve the quality and volume of the data. Also, cost-efficiency is also taken into account.

Wildlife monitoring has been done for decades using the same methodologies. On the one hand, it is important to use same methodologies so the data would be comparable and long time series would not be interrupted, but on the other hand, with the development of technology, it could be possible to do the same work more efficiently, faster and with higher quality. Taken into account the costs, including salary and travel costs necessary to conduct field works and at the same time, the limited number of specialists, new solutions are essential. But it takes time to test new methods, solutions and approaches and compare the data that was collected with old methodologies. It is also important to validate new solutions and data.

With the use of modern technological solutions, we hope to achieve a new and higher level in wildlife monitoring. This will also improve the quality of the environmental decisions as smarter decisions can be made based on higher quality and more data.

7.2 Activities and Expected Results

Development and implementation of the new methods, technology and approaches (Annex 1, 1.2.1). This includes acquisition of mobile 3D bird radar and also other new technologies for wildlife biodiversity monitoring – the aim is to map and test new technologies and solutions in wildlife monitoring to increase the quality and reliability of data. More specifically, the ambition is to create remote sensing solutions for mapping the spread of forest losses and reeds, automatic renewal of the maps of ecosystem services completed in previous projects, acquiring modern technology and testing them in wildlife monitoring (new night observation equipment for monitoring e.g. Western Capercaillie (*Tetrao urogallus*) and Great Snipe (*Gallinago media*), drones with thermosensors, binoculars measuring height and distance for bird monitoring, etc.). Technologies and solutions must be mapped in cooperation with the experts in the field, which is why the list of activities is left open.

Output: 1 mobile 3D bird radar acquired and at least 3 new methodologies/solutions have been tested and integrated into wildlife monitoring programme. Result: These new methodologies/solutions can supplement or replace existing ones. Data volume and quality improved.

Wider deployment of Random Encounter Methodology (REM) and training of Artificial Intelligence (AI) (Annex 1, 1.2.1) – The Environment Agency has tested the REM method to collect data in a small area using track cameras and created a prototype of AI that can identify different animal species from track camera photos and assess their abundance. The prototype will be further developed, and 700 track cameras have been procured (financed from the European Union Cohesion Fund), allowing them to be installed all over Estonia. Over the next years, the number of track cameras and photos they take, will increase at least by 7 times, which means

more workload to install and maintain them and to work through the photos cameras automatically take. It is temporarily necessary to hire a person to introduce a new methodology and train AI, which would allow replacing the old methodology with a new one.

Output: AI trained, REM fully developed and tested. Result: The REM methodology has been applied all over Estonia. Alternative method for monitoring of the game species developed and time-consuming photo-analysis automated with usage of AI.

Environmental DNA (eDNA) testing (Annex 1, 1.2.1) in wildlife biodiversity monitoring – use of eDNA in biodiversity monitoring is a rapidly developing field, but its potential has not yet been tested in Estonian national biodiversity monitoring. Potential species or species groups will be mapped, pilot areas will be selected and eDNA usability will be tested for biodiversity monitoring.

Output: usability potential of eDNA is evaluated, method is tested and where appropriate it is integrated into wildlife monitoring methodologies. Result: Data volume and quality is improved, cost-efficiency is increased.

Promoting citizen science and creating network of volunteers (Annex 1, 1.1.2 and 3.1) – use of citizen science and involvement of volunteers in environmental monitoring is an increasingly important topic around the world. It creates new opportunities to engage people, collect more data and improve the quality of data, promote cooperation between different parties, involve civil society organisations in policymaking, prevent and solve problems as well as increase environmental awareness in society. Among other things, it helps to pay greater attention to emerging environmental problems, prevent loopholes both in legislation and monitoring data as well as improve data collection process.

Output: a network of volunteers is created. At least 20 campaigns (some campaigns will be repeated every year) have been organised in 4 years: 2 bigger events for volunteers. Voluntary monitoring is integrated into wildlife monitoring methodologies. Result: involvement of volunteers in wildlife monitoring is improved and data volume is increased.

Development of IT systems (Annex 1, 1.1.1)– Environmental data is kept in different systems in Estonia and often those systems are not linked to each other which means that data must be transferred manually from one system to another. Also, there is a risk, that relevant and updated information is not used in decision making and analysis. In order to facilitate fieldwork, it is necessary to create a fieldwork tool that allows the field-workers to enter the monitoring and inventory data directly to the system already in the field. This would reduce the workload of officials and ensure a faster data delivery into system. It is also necessary to create a management efficiency assessment tool for the Environmental Board into EELIS. It should help officials assess the efficiency of the management of protected areas.

Output: the necessary connections and tools for the exchange of data between the IT systems have been established; management efficiency tool in EELIS has been created; fieldwork tool has been created. Results: time-consuming manual human work is decreased, data transfer between different IT systems is improved and quality of the automated analysis is increased. Thanks to this, quality of the environmental decisions is improved.

The activities are described in more detail in the annex of the application.

7.3 Beneficiaries

Environment Agency is the main beneficiary, who will benefit directly from this Programme Component. In addition, 0,5 position, is planned for the IT Centre of the Ministry of the Environment.

According to the law, it is mandatory to organize public procurements in order to outsource services and equipment. Indirectly universities (eDNA) and enterprises that provided specific equipment (e.g. 3D bird radar) or service (IT developments) benefit from this programme.

After creating better tools (IT systems, AI) and using more efficient equipment in wildlife monitoring that allows to collect more and improve the quality of the data, different private and public organizations benefit from this programme – Environment Board, Ministry of the Climate, companies that do environmental impact assessments, universities and scientists using wildlife data, etc.

Is the benefit of the Programme Component a national or regional benefit?

National ☒ Regional ☐

If regional, indicate the benefiting NUTS-2 regions.

7.4 Sustainability

After the end of the Swiss-Estonian cooperation programme, Environment Agency will maintain the results and finance the activities necessary to maintain the developed IT systems and implementing new monitoring methods. Aim of the programme is to develop more efficient systems and methods (e.g REM and AI), that would replace the old ones. Thanks to the development of the IT systems, less human work is necessary and saved budget can be used to maintain the systems. Capacity will be increased as the object of the programme is to reduce human work, use new technical solutions and use more automatic solutions that would increase the quality and volume of the data, make data transfers into the systems more efficient and increase the quality of the analyses. Environment Agency will continue with that also after the programme, but thanks to this cooperation, wildlife monitoring will be taken on to next level. Improved quality of the data improves also the decisions made by policy makers.

7.5 Budget

Detailed budget is included in the Annex 4.

7.6 Risk Analysis and Risk Management

Main risks for the Environment Agency are:

1. Price of the services and equipment will increase (risk level: low medium). To mitigate the risk, we have taken this into account in the preparation of the budget and we have added necessary buffer. In case buffer will be not needed we will make a proposal to transfer it to another budget line.
2. IT developments take longer than planned (risk level: medium high). We are already developing procurement documents to save time and start as soon as agreement is signed.
3. The number of potential service providers is limited that impacts public procurements and public procurements may fail (risk level: low medium). To mitigate the risks, we

have involved stakeholder in the preparation of this programme and we will actively spread the information of the public procurements and as the number of potential service providers is limited in Estonia, we will use international public procurements if necessary and mandatory according to the law.

4. The quality of services is low (risk level: low medium). When ordering services, it is necessary to plan well ahead and provide the quality criteria that need to be followed. The services have to be described in detail in contracts, if work does not confirm to the contract, a chance to improve the work is given. It is necessary to check the quality services offered regularly.

8. Annexes

#	Annex
8-1	Annex 8-1 Environment Agency actions and personnel

Annex [9] Detailed Information to Programme Component

Basic Programme Component Information

Title	Implementation of a systematic assessment of the social and conservation outcomes of protected areas
Planned Duration [months]	48
Requested Swiss contribution (CHF)	3 843 456,11
Requested co-financing rate of Switzerland [%]	85%

9. Programme Component Operator

9.1 Basic Information

Name of Programme Component Operator	The Environmental Board
Type of entity	National administrationNational administration
If type of organization is "other", describe the type briefly	Government Agency

Name of contact person	Ms Riina Kotter	
Position	Leading specialist	
Correspondence address:	Roheline 64, 80010 Pärnu, Estonia	
E-Mail	Riina.Kotter@keskkonnaamet.ee info@keskkonnaamet.ee	
Webpage and social media (if any)	www.keskkonnaamet.ee ; www.keskkonnaamet.ee/en www.facebook.com/keskkonnaamet	
Date of establishment	1 January 2021	Tax number (if applicable): EE101281142
	Merging the former Environmental Board and the Environmental Inspectorate	Commercial register code: 70008658
Number of employees:	584.05	
Financial Turnover for each of the 3 previous years [in EUREUR]	State budget: 2021 20,657,606 2022 20,979,697 2023 23,052,343	
Has the Programme Component Operator previously received funding from the Swiss Contribution?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	

9.2 Programme Component Operator Management

The Environmental Board is a government agency which operates within the area of the Ministry of Climate.

The Environmental Board's task is to implement state policies on environmental use, nature conservation and radiation safety and to monitor the fulfilment of the laws and norms established for the protection of the natural environment. It is also involved in the development and updating of legal acts and other official documents regulating the environmental field.

The areas the Environmental Board operates in are wide-ranging: from issuing fishing and waste management permits to placing natural assets under protection, and from publishing environmental fees to offering environmental education programmes. In total, the Environmental Board offers 65 public services. The clients include individuals, companies and local authorities, and it provides a lot of public services for the benefit of the state and society in the broadest sense.

The Environmental Board is represented all over Estonia, with 31 offices around the country.

The Swiss Support Measure programme will be managed by the conservation management planning department.

DIRECTOR GENERAL			
MANAGEMENT	ENVIRONMENTAL USE	WILDLIFE	SURVEILLANCE
Administrative Department	Climate and Radiation Department	Conservation Management Department	Surveillance Department
Service Department	Circular Economy Department	Conservation Management Planning Department	Environmental Compensation Department
Personnel Department	Water Department	Natural-Resource Use Department	Investigation Department
Public Relations Department		Forest Department	Legal Department
Strategy and Analysis Department		Environmental Education Department	
Internal Control			
Adviser			

9.3 Programme Component Management

Will external management personnel be hired to implement the Programme Component? Yes ☒ No ☐

What personnel capacity will be dedicated for the management of the Programme Component implementation (in full-time equivalents FTE)?

Internal resources	External resources
	15 FTEs

The General Programme Manager (0.5 FTEs, 2024–2028) will be responsible for the general coordination of the project in the Environmental Board. He/She will coordinate the activities in general, be responsible for the use of the budget and procurements, organise the communication, seminars and study trips. She will also supervise and manage the personnel hired for the programme component activities.

Activity 1: Conservation Management Effectiveness Assessment

Management Effectiveness Assessment Coordinator (1 FTE July 2024 – 2028) will coordinate the management effectiveness assessment, supervise the assessors, be responsible for the use of methodology, analysing and summarising the assessment.

Management Effectiveness Assessment Experts (2 FTEs, 2025–2028) – carry out the assessment, possible splitting (e.g. part-time assessors).

Data Analyst (0.4 FTEs, Dec 2024 – 2028) – initially coordinates the preparation and evaluation of the assessment tool, later summarises the results and makes proposals for further development of the tool if necessary, analyses the results of assessments, helps to get the necessary data.

Activity 2: Conservation Management Planning

Programme Coordinators (1.25 FTEs, 2024–2028, will be split) – responsible for the coordination of Activity 2 regionally: methodologies of habitat inventories, instructions for preparing management plans, checking the quality of prepared plans etc.

Habitat Action Plan Expert (1 FTE, Sept 2024 – 2028) – prepares national habitat action plans, plans habitat inventories, if necessary plans the preparation of basic expertise for drawing up plans, involves stakeholders, analyses the integration of habitat plans in other Estonian strategic documents.

Conservation Management Planning Experts (3 FTEs, 2024–2028) – prepare site-specific management plans, help coordinate the preparation of habitat inventory methodologies, plan site-specific inventories of habitats and species, plan the preparation of the basic expertise required for the preparation of the management plan, involve interest groups and stakeholders in drawing up plans.

Data Analyst (0.3 FTEs, Dec 2024 – 2028) – with a background in statistics and mathematics, provides input to habitat protection necessities by organising and analysing habitat data.

Data Specialist (0.5 FTEs, Dec 2024 – 202) – helps organise habitat inventory methodologies, manages data entry and verification.

Activity 3: Species Protection

Programme Coordinator (0.25 FTEs, Dec 2024 – 2028) – responsible for the coordination of Activity 3, supervise the preparation of action plans.

Species Action Plan Experts (2 FTEs, 2024–2028) – preparation of action plans, organising inventories and studies required for this purpose.

Protection Categories Expert (1 FTE, July 2024 – 2028) – coordinating inventories and expert assessments in order to propose changes to protection categories, preparing proposals for changes to protection categories to the ministry.

Data Analyst (0.3 FTEs, Dec 2025 – 2028) – with a background in statistics and mathematics, provides input to species protection necessities by organising and analysing species data.

Data Specialist (0.5 FTEs, Dec 2024; 2025–2028) – is engaged in updating the data of protected species on the basis of inventories commissioned under the project.

Why prefer FTEs to services?

- In Estonia, there are not enough competent bidders outside the Environmental Board to carry out planned activities (e.g. drawing up plans);
- these are specific activities that are easier to coordinate and guide in a coherent manner;
- when coordinating the activities in the Environmental Board, we can ensure that the expertise will remain within the Environmental Board;

- the outsourced service is more expensive;
- in the case of outsourced services, the quality of the work performed is uneven and the work needs to be improved later;
- when ordering the service, the Environmental Board itself also has a heavy workload (preparation of initial tasks, preliminary work, acceptance of work, introduction of corrections, approval procedure).

Are CVs attached to this documentation? Yes ☐ No ☒

Are terms of reference for the management functions to be established attached to this documentation? Yes ☐ No ☒

9.4 Programme and Project Management Experience

The Environmental Board is a partner in 25 ongoing similar international projects at the moment. The total budget of the projects is about 23 million euros. In recent years the amount of ongoing projects has been approximately the same.

Restoring Semi-Natural Habitats 2023–2029

The aim of the project is to restore wet semi-natural habitats (boreal Baltic coastal meadows, Northern boreal alluvial meadows, alkaline fens/wet meadows, molinia meadows on calcareous, peaty or clayey-silt-laden soils (*Molinion caeruleae*), hydrophilous tall herb fringe communities of plains and of the montane to alpine levels) in order to adapt to the changes of climate.

The project partners are the Ministry of Climate, the State Forest Management Centre and the Estonian Seminatural Community Conservation Association. It is an ongoing project and the member team is part of the organisation.

The project is funded by EU Cohesion Policy Funding. The project period is 2022–2029, the total amount of the project is 5 million euros, EU funding is 4.25 million euros.

Restoring the Baltic coastal habitat networks 2018–2025

CoastNet LIFE (LIFE17 NAT/FI/000544) aims to improve the conservation status of Natura 2000 sites along the Baltic coastal zone. To achieve this, it carries out restoration work on four types of habitat: boreal Baltic islets and small, open habitats, mosaics of herb-rich, broad-leaved forests and semi-natural habitats, sun-lit habitats, as well as large coastal meadows and new forests on previously uncolonised land. The project's work helps to increase the populations of numerous species by giving them new areas to colonise. It also helps to combat the effects of habitat fragmentation and isolation, as well as boosting the populations' resilience to climate change. Several species covered by the Birds Directive will benefit from improvements to their nesting habitats and those on their migration routes.

In Estonia restoration is carried out on 41 project sites, e.g. in Lahemaa National Park, Kolga Bay and Aegna Landscape Protection Area, Paljassaare Limited-Conservation Area.

It is a joint Finnish-Estonian project, the partners in Estonia are the Environmental Board, Tallinn Urban Environment and Public Works Department. The lead partner is Metsähallitus from Finland.

The total budget of the project is 8.7 million euros, Estonian budget is 1.1 million euros. It is an ongoing project and the member team is part of the organisation.

Restoration of Estonian alvar grasslands 2014–2019

The LIFE to alvars (LIFE13 NAT/EE/000082) project's main objective was to restore the most valuable, but currently overgrown, alvar grassland areas on 2,500 ha of land and to create the right conditions for local farmers to manage these areas after the restoration. In order to achieve this aim, the project planned to introduce effective large-scale restoration methods and to create the necessary infrastructure for continuous management of the restored sites. The project also aimed to directly involve private land owners and to raise awareness among the local community and the general public of the value of alvar areas and of the importance of managing them effectively.

The LIFE to alvars project achieved all its objectives and improved the conservation status of Estonian alvar grasslands at all the project sites. Specifically, the project restored, in total, 2 501.5 ha of alvar grasslands. This included restoration work on 1,000 ha of private land, with the involvement of approximately 600 private landowners.

The project won a Natura 2000 award in the socio-economic category in 2018.

The total budget of the project was 3.7 million euros. The Environmental Board was the lead partner of the project, other partners were Tartu University, Estonian University of Life Sciences and the Estonian Seminatural Community Conservation Association. Some people from the member team still work in the organisation.

<https://webgate.ec.europa.eu/life/publicWebsite/project/LIFE13-NAT-EE-000082/restoration-of-estonian-alvar-grasslands>

10. Programme Component Description

10.1 Short Summary

One goal of the programme is to evaluate the effectiveness of the management of the protected areas with the new methodology created under Technical Support Instrument financed by the European Commission. Also, site-based inventories are carried out and site-based conservation objectives and measures for protected species and habitats are revised. The conservation management plans of protected areas, action plans for species and habitats and protected categories of species (category I, category II and category III) are revised and updated. The contents of management plans and action plans are revised and this helps prioritising what protection measures are most effective. The effectiveness of management of protected areas as well as protected species and habitats is improved because of national and site-based conservation objectives are better targeted and measures fully correspond to conservation objectives.

10.2 Activities and Expected Results

Activity 1: Conservation Management Effectiveness Assessment

- The operational guidance for the implementation of the TSI project action plan for carrying out the evaluation;
- development of the Management Effectiveness Assessment Tool (in cooperation with the Environmental Agency) (Annex 1, 2.1.1);

- additional training for the implementation of the Management Effectiveness Assessment Methodology for the assessors and the staff of the Environmental Board (Annex 1, 3.1);
- application of the methodology – the main assessors are from the project. The assessment is carried out for **approximately 300 natural objects** (Annex 1, 2.1.2) (There are 6 national parks, 241 nature conservation areas, 150 landscape protection areas, 308 conservation areas and 2018 species' protection sites in Estonia). The assessment provides input for the preparation of management plans and proposes what kind of additional expertise and fundamental research is necessary for the preparation of management plans;
- analysis of the results, compilation of a summary (digital report in Estonian and English) and its introduction to the public (Annex 1, 2.1.1).

Activity 2: Conservation Management Planning

- Preparation and updating of inventory methodologies for habitats (habitat types listed in Annex I of the Habitats Directive protected in Estonia). Inventory methodologies are prepared for lakes, springs, outcrops and caves. For all other habitats, the guidelines will be reviewed and, if necessary, updated. The completed and updated guides will be posted on the ministry's website under the Natura 2000 network materials. The result is that there is an up-to-date guide for the inventory of all habitats (Annex 1, 2.1.3);
- organisation of training for the experts and specialists working in the Environmental Board carrying out inventories following the methodology and guidelines (e.g. a total of two training sessions per year) (Annex 1, 3.1);
- ordering habitat inventories and, if necessary, expert assessments for the preparation of habitat action plans (e.g. rivers and streams, lakes, springs, outcrops and caves) (Annex 1, 2.1.3);
- updating the data in the database (in cooperation with the Environmental Agency);
- preparation of habitat action plans (**at least three action plans**), stakeholder involvement, introducing to the public (e.g. an action plan for rivers and streams, an action plan for lakes and springs, an action plan for outcrops and caves);
- ordering inventories and expert assessments of habitats and protected species for the preparation of management plans (Annex 1, 2.1.3);
- integrating climate change issues into management plans. Discussions, seminars, training sessions (one training day per year) are organised. The guidance materials on how climate-related issues can be reflected in the management plans is compiled (Annex 1, 3.1);
- linking the issues of the Green Network to the preparation of management plans. Co-operation with local authorities, discussions on how local authorities can integrate management plans into general planning (one seminar per year with local authorities, i.e. four seminars). The guidelines for the preparation of management plans are supplemented by a guideline on how to integrate the green network into the management plan, a digital leaflet for local authorities (available on the website) is compiled (Annex 1, 3.1);
- preparation of site-based management plans, involvement of interest groups, publication of plans. **The project will produce a total of 64 management plans.**

Activity 3: Species Protection

- Ordering inventories, basic research and expert assessments for the preparation of species action plans (Annex 1, 2.1.3). The need is determined when preparing the compilation of the action plan;
- on the basis of inventories, the data is organised and updated (cooperation with the Environmental Agency), the species data is updated before/at the time of preparation of the action plan;

- preparation and coordination of species protection action plans, stakeholder involvement, cooperation with research institutions. **60 action plans for protected species will be completed** within the framework of the project;
- organising trainings/seminars to the specialist of the Environmental Board in order to explain the principles of the protection of species and discuss what the fundamental principles of discretionary decision making are (one training/seminar per year) (Annex 1, 3.1);
- inventories, studies and expert assessments of species' groups in order to find out what changes in protection categories are necessary (Annex 1, 2.1.4);
- preparation of proposals for amendment of protection categories to the ministry (Annex 1, 2.1.4).

Study trips to Switzerland (Annex 1, 3.1)

- Organising two study trips to Switzerland (e.g. Swiss National Park): five days for six specialists each, the emphasis of one or the study trips is habitat protection and the emphasis of the other study trip is species protection. The aim of the trips is to learn about conservation management planning/strategies, habitat and species data collection, using GIS).

Cooperation with other countries (Annex 1, 3.1)

- Organising a study trip to Czech national parks in order to get experiences from their project activities of Swiss Support Measure, to study what the principles of habitat and species protection are in the Czech Republic;
- Possibility of organising similar trainings to Czech specialists in Estonia.

National Procurement (according to Estonian legislation)

- The Environmental Board organises two national (Estonian) public procurements with open announcements per year (7 calls per project period, one in May and one in October, no longer tendered in the second half of 2027) which commission methodologies for habitat inventories; species inventories and surveys;
- one national (Estonian) public procurement with an open announcement per year for the preparation of species conservation action plans (four procurements in total);
- separate ongoing procurements as small purchases.

Procurements are organised on the basis of the Estonian Public Procurement Act and the procedure for conducting procurements of the Environmental Board.

10.3 Beneficiaries

The direct beneficiary of the component is the Environmental Board who is responsible for the organization of the protection of protected areas and assessment of the efficiency of protection measures.

Indirect beneficiaries are:

- the Environmental Agency who can update the data of habitats and species in their database as the result of the inventories that are carried out;
- the State Forest Management Centre who carries out protection activities on state land according to conservation management plans and action plans of habitats and species;
- local municipalities use the data of habitats and species and also the information provided by conservation management plans in their overall planning of green infrastructure;
- the whole population of Estonia - as the beneficiaries are public authorities, they work for the public, the aim of the component is to make conservation management more

effective at the national level in order to make better environmental decisions in the future.

Is the benefit of the Programme Component a national or regional benefit?

National ☒ Regional ☐

If regional, indicate the benefiting NUTS-2 regions.

10.4 Sustainability

The main result for the Environmental Board is that the protection effectiveness of protected areas will be assessed. The assessment will provide information how the current management planning practices can be made more effective and where the main drawbacks are. Hence, the process of preparing conservation management plans and national action plans for species and habitats will be more effective. The Environmental Board will be able to carry on conservation management planning using the national budget. The Support Measure will help the Environmental Board to review its current conservation management planning practices in order to match them with contemporary needs.

The expertise will remain within the Environmental Board, as the compilation of management plans and action plans will be part of our overall work. As the positions are open for all the specialists who have the required education and skills, specialists from the Environmental Board can also apply for these positions. The Environmental Board will then hire new specialists to fulfill their positions. As the project ends, the former specialists from the Environmental Board will remain within the Environmental Board. As the work requires special knowledge, the probability that other people who are hired to work in the project will apply for the positions in the Environmental Board or other institutions who deal with similar topics is very high. Estonia will have several skilled environmental experts. All the seminars and trainings are organised for larger audiences, other specialists from the Environmental Board will participate.

One of the challenges for the Environmental Board is the lack of experts in Estonia who can carry out inventories and gather the data of habitats and species. In order to carry out inventories of habitats and species it is necessary to raise the level of expertise among conservation management planning and conservation management specialists in the Environmental Board. The competence of the specialists can be improved by organising seminars and study trips in the frames of Programme.

Another challenge is the opposition to conservation measures and activities among the representatives of local people and developers. So, it is necessary to involve stakeholders in the conservation planning process and find the solutions that are acceptable to the people living in or near the site. Involving stakeholders to conservation management planning can be time-consuming, so it is necessary to analyse how it should be carried out effectively and plan it regarding the specifics of the area.

In the process of management planning, the Environmental Board proposes changes in the protection rules of sites in order to improve the protection measures. Also, the proposal to change the protection categories of species will be prepared, updating the protection categories of species helps to choose better protection measures.

10.5 Budget

Detailed budget is included in the Annex 4.

10.6 Risk Analysis and Risk Management

The main risks for the Environmental Board are:

- Institutional reforms (risk level: low). Internal institutional reform is ongoing in the Environmental Board, however, the project activities can be adjusted to the new structure of the institution;
- changes in legislation (risk level: low-medium). Necessary adjustments in the programme will be made following the legislative changes.
- the lack of competent experts to carry out inventories and give expert opinions (risk level: low medium). Accordingly, public procurements may fail. To mitigate the risk it is necessary to plan the procurements well in order to provide possibilities for a wide range of experts. The period of the programme is long enough to carry out new procurements and change initial plans, the planning of procurements needs to be started right at the beginning of the programme;
- being unable to hire the personnel for the programme (risk level: medium low). It is necessary to provide the salaries that motivate, also, services can be chosen instead.
- the quality of services is low (risk level: medium low). When ordering services it is necessary to plan well ahead and provide the criteria that need to be followed. The services have to be described in detail in contracts, if work does not conform to the contract, a chance to improve the work is given. It is necessary to check the quality services offered regularly.
- the price of the services increases (risk level: medium high). The budget can be over-viewed, a buffer against it is planned.

#	Annex
	N/A