

Protokoll fört vid enskild föredragning

Social- och miljöavdelningen
Miljöbyrån, S4

Beslutande	Föredragande	Justerat
Vicelanråd Camilla Gunell	Naturvårdsintendent Maija Häggblom	Omedelbart

Ärende/Dnr/Exp.	Beslut
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Nr 46

Fortsatt kartering av marina förekomster

ÅLR 2019/3548

78 S4

Bakgrund

Under ett första, nyligen avslutat projekt med systematisk kartering av undervattensmiljöer under åren 2016-2018 erhöles viktig information och underlag för fortsatt arbete med de marina förekomsterna av Natura 2000-habitat. Projektet genererade även annan information, bland annat i form av ny forskning och förbättrade verktyg för modellering av förekomster av habitat och arter i den åländska undervattensmiljön. Projektet var helfinansierat av den Europeiska havs- och fiskerifonden (EHFF) och landskapets operativa program. Under projektet blev delar av de åländska marina områdena undersökta medan stora områden återstår att kartlägga. Inom det projektet undersöktes inte heller områden inom de befintliga naturreservaten och Natura 2000-områden även om behov av information om de marina förekomsterna finns även vad gäller dem. Ett nytt samarbetsprojekt har därför initierats mellan Ålands landskapsregering och Åbo Akademi, med syfte att förbättra förvaltningen av de marina livsmiljöer inom de åländska havsvatten samt i slutänden inrätta marina skyddsområden i nödvändig omfattning.

Beslut

Landskapsregeringen beslutar att ingå ett avtal med Åbo Akademi utifrån den till avtalet bifogade projektplanen, enlighet med **bilaga 1 S419E22**.

Motivering

Projektet med fortsatt kartering av havsområden bidrar till nödvändig information om undervattensförekomsterna i de åländska havsområdena hjälper därmed Åland att uppfylla flera olika krav som har ålagts av EU i fråga om bland annat naturskydd, havsplanering och uppnåendet av god status i de marina områdena. Pengar har beviljats från EHFF (främst för del 1) och The Baltic Sea Conservation Foundation (Baltcf) (främst med inriktning på del 2) för genomförande av projektet. Bägge delarna bidrar till flera olika målsättningar. Inrättande av nya skyddsområden är ett villkor, framför allt för finansieringen från Baltcf, samtidigt som det finns krav från EU-kommissionen att inrätta Natura 2000-områden för flera marina habitat och marina arter. För att definiera och fastställa Åbo

Akademis och landskapsregeringens rättigheter och skyldigheter i sammanhanget behövs ett avtal. Eftersom projektet består av två delar varav den ena ska bidra med kunskap och underlag samt generera nya skyddsområden samtidigt som den andra delen bidrar med information för vattenvården och marina strategin. Detta beslut berör främst del 2 som handlar om marina skyddsområden och övriga behov av information vad gäller känsliga marina förekomster och hanteringen av dem även vad gäller användningen av marina resurser.

Behovet att genomföra ett sådant projekt är brådskande eftersom det vetenskapliga underlaget är avgörande för utseende av områden av gemenskapsintresse och i förlängningen för att kunna slutföra Natura 2000-programmet.

AVTAL OM FORSKNINGSSAMARBETE

1. Parter och Information om Projektet

Projektets namn: ***Inventering av Ålands havsområden för att förbättra förvaltningen av marina miljöer (del 2)***

Projektets längd:

Projektet inleds 1.4.2019 och avslutas 28.2.2030.

Parterna:

Detta avtal har uppgjorts av och ingås emellan forskningsparterna.

1) Ålands landskapsregering

Miljöbyrån

Projektledare: Naturvårdsintendent Maija Häggblom

Adress: PB 1060, 22111 Mariehamn

Tfn:018-25458

E-post: maija.haggblom@regeringen.ax

(“LR”)

Och

2) Åbo Akademi

Domkyrkotorget 3

FI-20500 Åbo/Turku

FO-nummer: 0246312-1

(“Akademin”)

Miljö- och marinbiologi, Biovetenskaper

Projektledare: Sonja Salovius-Laurén

Kontaktperson: Sonja Salovius-Laurén

Adress: Artillerig 6, FI-20520, Åbo Finland

E-post: sonja.salovius@abo.fi

Tel: +358 2 215 3450

Mobil: +358 40 742 6672

2. Föremål och syfte för avtalet

Föremålet för detta avtal är det ovannämnda forskningsprojektet (“Projektet”). Forskningsplanen finns som Bilaga 1 i detta avtal.

Syftet med detta avtal är att fastställa villkoren för samarbetet inom projektet. Detta avtal koordineras av Ålands Landsskapsregering, men all planering av projektet sker i samarbete med Akademin

Enligt bifogade ”Declaration of support from the competent authority” (bilaga 2) förbinder sig LR att inrätta marina skyddsområden (Marine Protected Areas, MPAs) i Åländska havsområden på minst 30 km² på basis av forskningsresultat. Under projekttiden 1.5.2019-30.4.2023 ska 15 km² få skyddsstatus och resten inom två år efter att projektet tagit slut. LR förbinder sig också via ”Financial commitment” (bilaga 2) till att avsätta 200 000 € under projekttiden och senast inom 2 år efter att projektet tagit slut, för att lösa in havsområden för att kunna införliva dem i skyddsområdesnätverket. Detta är relaterat till

kravet från Baltic Sea Conservation Foundation gentemot Akademin, som bidrar med match funding för projektet. LR förbinder sig att ytterligare inrätta 35 km² MPA före 31.2.2030 i enighet med kraven från Baltic Sea Conservation Foundation gentemot Akademin. Om kraven inte uppfylls ansvarar LR för det beloppet som Baltic Sea Conservation Foundation eventuellt återkräver av Akademin.

3. Finansiering

Vardera parten bidrar med egen finansiering enligt forskningsplanen (bilaga 1).

Villkoren i detta avtal härstammar från kraven från Baltic Sea Conservation Foundation (Balt cf), som finansierar ett omfattande projekt med namnet "Marine inventories to support ecosystem-based management and the expansion of the MPA network in Åland Islands". Finansieringen av Balt cf är 230 000 € för att kunna göra heltäckande inventeringar kring de Åländska kustvattnen och kommer att nyttjas för intensiva fältinventeringar, olika typer av databehandling och för kommunikation med intressenter och slutanvändare. Det av Balt cf finansierade projektet görs också i nära samarbete mellan ÅA och LR.

4. Ägande- och nyttjanderätt av resultat

Allt material som bearbetas och samlas in kommer att användas för att producera information som skall stöda förvaltningen av den Åländska havsmiljön och är således tillgängligt för alla Parter. Äganderätten till källmaterialet ändras inte med detta avtal. De i Projektet producerade Resultaten hör till den Parten eller de Parterna som har åstadkommit eller bearbetat dem. Om Parterna har åstadkommit Resultaten eller en del av dem tillsammans, skall Parterna avtala om vidare användning och överlåtelsevillkor.

Parterna har rätt att nyttja eller förfoga över Resultaten i annan forskning och i undervisning samt i forskningsverksamhet som finansieras av en utomstående med iakttagande av sekretessbestämmelsen och erforderade lov. Nyttjanderätten innefattar även rätten att vidareutveckla Resultaten, om inte annat avtalats.

5. Ansvar

5.1 Parterna skall genomföra Projektet i enlighet med den bifogade Forskningsplanen, med iakttagande av god forsknings sed samt med användandet av professionell personal. Parterna ska överlämna Resultaten så felfria som möjligt.

5.2 En Part är ansvarig för direkta skador som denne åsamkar andra Parter. Avtalsparten är dock ej ansvarig för indirekt skada eller förlust, så som:

- 1) förlust till följd av minskning eller bortfall av produktion eller omsättning,
- 2) annan förlust till följd av att Resultatet inte kan utnyttjas på det sätt som avses,
- 3) utebliven vinst till följd av att avtal med tredje man har fallit bort eller inte har blivit riktigt uppfyllt,
- 4) förlust till följd av skada på annan egendom än Resultatet, eller
- 5) annan liknande svårförutsebar förlust

som denne har åsamkat andra Parter i samband med projektet.

5.3 En Part är inte ansvarig för skada som annan Part har åsamkat tredje part. Parterna är inte ansvariga för del eller dröjsmål åsamkade av andra Parter. Parterna är inte ansvariga för egna fel eller dröjsmål som beror på force majeure. Alla händelser som förhindrar eller gör utförandet av Projektet oskäligt svårt inom den fastställda tiden skall anses som force majeure. Sådana händelser innefattar, men begränsar sig inte till, krig, uppror, naturkatastrof, energistopp, brand, strejk, blockad, material restriktioner pålagd av statsbudgeten eller annan lika speciell och ovanlig anledning utom Partens kontroll.

5.4. Maxgränsen för en Parts ansvar gentemot den andra Parten beträffande samtliga krav skall uppgå till 50 000 euro. Denna gräns gäller ej ansvar för eventuella återkrav från Baltic Sea Conservation Foundation.

5.4 De undantag och begränsningar av ansvar som stipuleras ovan skall inte tillämpas på skada eller förlust orsakad uppsåtligt eller på grund av grov vårdslöshet.

6. Avtalets omfattning och giltighet

6.1 Detta Avtal träder i kraft efter alla Parterns undertecknande, men tillämpas även retroaktivt fr.o.m. Projektets inledningsdatum. Avtalet är i kraft tills alla Parterns skyldigheter under detta Avtal har uppfyllts.

6.2 Om en Part materiellt bryter mot bestämmelserna i detta Avtal och inte rättar till detta inom trettio (30) dagar från det skriftliga meddelandet om det, är den andra Parten berättigad till att avsluta detta Avtal. Rättigheterna som den försumliga Parten har erhållit från andra Parten i enlighet med detta Avtal skall upphöra på dagen för upphörandet. Den försumliga Parten skall återlämna alla Resultat till den andra Parten. De rättigheter som de andra Parterna har erhållit av den försumliga Parten skall förbli i kraft trots avtalets upphörande för den försumliga Partens del.

6.3 Om en Part är uppenbart insolvent, begär eller är begärd i konkurs eller likvidation eller något annat arrangemang till kreditgivarens förmån, är de andra Parterna berättigade till att gemensamt avsluta detta Avtal för denne parts del med omedelbar verkan. Bestämmelserna i avsnitt 8.2 gällande den försumliga Partens nyttjanderätt skall tillämpas även på sådan insolvent Part.

8. Övriga avtalsvillkor

8.1 Rättelser eller ändringar till detta Avtal skall göras skriftligt. De träder i kraft efter att Parternas auktoriserade representanter har skriftligen bekräftat ändringarna.

8.3 Om någon bestämmelse i detta Avtal inte går att verkställa så förblir den resterande delen av Avtalet i kraft. Parterna skall dock till en skälig grad anstränga sig att ersätta den icke-verkställbara bestämmelsen med en sådan gällande bestämmelse som återspeglar Parternas avsikter vid tiden för detta Avtals undertecknande.

8.4. Detta Avtal regleras och tolkas av Finlands lag. Alla dispyter, kontroverser eller krav gällande detta Avtal, inklusive giltighet, upphörande eller brytandet av Avtalet, som inte kan uppgöras i godo inom sextio (60) dagar från att Parterna har erhållit ett skriftligt meddelande om dispyten, skall avgöras slutgiltigt genom rättegångsbehandling i Ålands tingsrätt.

8.5 Ingen Part är tillåten att överlåta detta Avtal, hela eller delar av det, till tredje part utan de andra Parternas samtycke.

8.6. Om det förekommer motsägelser eller konflikter mellan detta Avtal eller dess bilagor så skall följande hierarki tillämpas:

1. Detta Avtal
2. Declaration of support from the competent authority
3. Forskningsplanen i Bilaga 1

11. Bilagor till Avtalet

Följande bilagor utgör en väsentlig del av Avtalet.

1. Forskningsplanen (inkl. kostnader, finansieringsplan)
2. Declaration of support from the competent authority

Detta Avtal har uppgjorts i 2 likalydande exemplar, 1 exemplar för varje part.

ÅLANDS LANDSKAPSREGERING/MILJÖBYRÅN

Datum och plats:

Mariehamn, . . .2019

Namn: Camilla Gunell

Position: Vicelantråd

Namn: Maija Häggblom

Position: Naturvårdsintendent

ÅBO AKADEMI

Datum och plats:

Åbo, . . .2019

Namn: Mikko Hupa

Position: Rektor

Namn: Sonja Salovius-Laurén

Position: Projektledare

Applicant Information

Date of application	28.11.2018	Project code	044M17
Project title	Marine inventories to support ecosystem-based management and the expansion of the MPA network in Åland Islands		
Applicant Organisation, address and legal representative	Åbo Akademi University (ÅAU) Domkyrkotorget 3 20500 Turku, FINLAND Legal representative: Niklas Sandler, Vice Rector		
Legal status	Non-profit, higher education and research		
Project region	Northern Baltic Sea		
Project start and end dates	1.3.2019 – 31.12.2022		
Total project budget	funding requested	own funding	other funding
796 000 €	230 000 €	103 000 €	463 000
Project manager: name, e-mail, phone	Senior researcher Sonja Salovius-Laurén, PhD sonja.salovius@abo.fi +358 40 742 6672	Involved partners, as co-funders or co-beneficiaries	Government of Åland (GÅ) Partner and co-funder

Project Summary

The marine nature in the unique archipelago around Åland Islands, northern Baltic Sea, remains largely unmapped. The nature conservation authorities in Åland have a strong interest to protect the underwater marine nature, but lack the resources to increase knowledge on the distribution of marine habitats and key species. The project goal is to map the marine nature to enable future ecosystem-based management and to designate new MPAs. To achieve the goal, systematic mapping of the marine areas is needed, to get reliable information on the distribution and the state of important species and habitats, a prerequisite for comprehensive management actions.

The objectives of the project are to gather existing data in a functioning database, to get new data via field inventories and to produce distribution maps of species and habitats to support management. Further, through a site-selection analysis, objective information on most suitable sites for new MPAs will be gained. To carry out the analysis and the subsequent MPA designation process successfully, communication and the involvement of stakeholders are central activities within the project.

Expected results are 1500-3000 ha of new MPAs and full cover maps of marine habitats and key species to support management at different levels. Based on project results, we may provide guidelines on concrete management actions, e.g. limitations of boat speed in sensitive areas and fishing restrictions during spawning time.

Authorities at Åland Islands are active project partners, ensuring a frequent dialogue with the local managers, the involvement of stakeholder groups, and concrete conservation actions.

Present your organisation and references that show your expertise and competences for the proposed project application

Åbo Akademi University (ÅAU) offers both undergraduate and graduate studies and research opportunities to 6000 students. ÅAU has an acknowledged position in research areas of Biosciences, including Environmental and Marine Sciences. The unit has an active field station, Husö biological station (since 1959) at Åland Islands that provides facilities for marine ecological studies, laboratory analysis and field sampling. Regional environmental monitoring and projects linking science and management are carried out at Husö through an official co-operation with the Government of Åland (GÅ).

ÅAU is involved in the Finnish Inventory Program for the Underwater Marine Environment VELMU (2004 onwards). Unfortunately, the VELMU program has not covered the autonomous Åland Islands. However, the main part of the UW information that currently exists from the area is gathered by Husö/ÅAU and ÅAU has already initiated marine inventories in Åland in 2017-2018 with funding from EHFF.

Statistical modeling of marine spatial data has been an increasing field of research at ÅAU and advanced education in spatial modeling, marine conservation and maritime spatial planning has been organized (2013-2018). Further, ÅAU has coordinated an international NordForsk Nordic Network for Marine Inventories and Modeling, involving more than 100 experts working with marine mapping and modeling in the Baltic Sea. Being aware of suitable methods and best practises for conducting both labour intensive fieldwork and distribution modelling, ÅAU is a suitable lead partner for this project.

The project is planned, co-financed and done in close collaboration with the GÅ, ensuring the necessary link to authorities making management decisions.

Consistency with Foundation priorities

The project contributes directly to the foundation priorities 1, 3, 4, 5 and 7. By mapping their distribution, this project helps to secure and improve rare habitats and protected marine species through targeted management actions and to support biodiversity (priority 3). This cannot be done without reliable information on where these habitats and species occur. The MPAs established during the project will also improve the ecological stability of the marine areas (funding priority 1) by providing possibilities to reduce human impacts. A key outcome of the project is the establishment of new MPAs through an objective, data-based MARXAN site-selection analysis, directly supporting the foundation priority 4. As the area is an archipelago with thousands of small islands, the protected areas will also include terrestrial parts, e.g. important areas for seals and seabirds (supporting funding priority 5). Data produced in the project is necessary for ecosystem-based management decisions in the area and therefore supports the maintenance and development of important habitats via maritime spatial planning (funding priority 7), by steering harmful human activities away from valuable nature areas. Indirectly the project contributes to priority 2 (reducing nutrients) through knowledge based planning, where e.g. careful site-selection of fish farming can take place. By increased information on the occurrence of suitable spawning areas for fish and of valuable fish trails (ditches, small streams), actions to improve the reproduction success of fish will be suggested (e.g. enlarge pipes below roads to enhance fish migration, suggest guidelines for small scale dredging) contributing also to priority 6.

Geographic scope, problem description

Åland Islands is an autonomous region in Finland situated remotely between Turku and Stockholm in the northern part of the Baltic Sea. Mariehamn is the capital with 12 000 inhabitants. In all, Åland islands are sparsely inhabited, (less than 30 000 inhabitants) and is build up by 6 700 islands of varying size (total of 1 527 km²) and a large diverse coastal sea area (~ 7 600 km², see map in chapter on experience and scientific knowledge). Åland is a very popular tourist destination during the summer as the islands provide a beautiful, quiet,

clean and rich nature and vast archipelago areas suitable for bathing, leisure boating and fishing.

Although the sea area around Åland potentially hosts high marine nature values, it remains largely unmapped (~ 3400 km² of completely unmapped areas and many additional areas where mainly the Natura 2000 habitats sandbanks and reefs have been mapped).

Furthermore, the currently existing MPA network (~370 km² marine areas protected) has been designated based on poor data on the underwater nature. Despite the strong interest in the GÅ to improve the protection of the marine nature, it has been hindered by the lack of data and maps on the occurrence of key habitats and species. A very small division (2 people) in the GÅ deals with all nature protection issues, including also the terrestrial areas. Thus, there is no possibility for them to carry out marine mapping due to lack of staff, knowhow and equipment.

Currently, the northern and western parts of Åland are affected by little direct human-induced disturbances, and only few inhabitants live in the area. Especially Åland's northern part is one of the most pristine coastal areas in the entire Baltic Sea. However, activities such as fish- and wind farming and tourism are expanding rapidly and new ferry routes are under construction around Åland. Shipping stands for about 40% of the economy, with several international carriers owned and operated from Åland, further being a potential threat to the marine environment (e.g. by accidents, oil spills and coastal erosion). In order to proactively manage the marine areas in an ecologically sustainable way, as requested by various EU Recommendations and Directives (HD, MSP, ICZM, MSFD, WFD), and to establish new MPAs (claimed for by the EU commission), information on the distribution of important marine habitats and species is urgently needed. In this project, this information is obtained through systematic underwater inventory work and spatial modelling. By gathering and analysing objective field data and involving stakeholders at different stages, it is fully possible to reach ecosystem-based management and new knowledge based MPAs around Åland Islands.

Beneficiaries and strategic context

Spatial information on the distribution of underwater habitats and key-species can be considered as baseline information that is essential for ecosystem-based marine management. If we do not know where important habitats or biodiversity hotspots are, we cannot protect them, or use the sea areas in a sustainable way. Therefore we can state, that the whole society that uses the many ecosystem services of the sea, will ultimately gain from the project.

As a whole, the project supports wider Nature Conservation Strategies both at national and European level. The project's support for the implementation of the Habitats Directive (HD) in the area is undisputable. As the project maps marine habitats listed in Annex I of the HD and includes them to the site-selection analysis with conservation targets set in the Directive (20% of habitats protected, 60% for priority habitats), the protection of these habitats in the area will improve substantially. The project results are also exactly what maritime spatial planning needs: spatial information on the occurrence of valuable nature areas.

Furthermore, the MARXAN analysis, that includes data both on human pressures and on nature values aims to fulfill the conservation targets with minimum cost, i.e. tries to minimize the need to protect areas used by other sectors. Therefore, the results of the analysis can be utilized directly in maritime spatial planning.

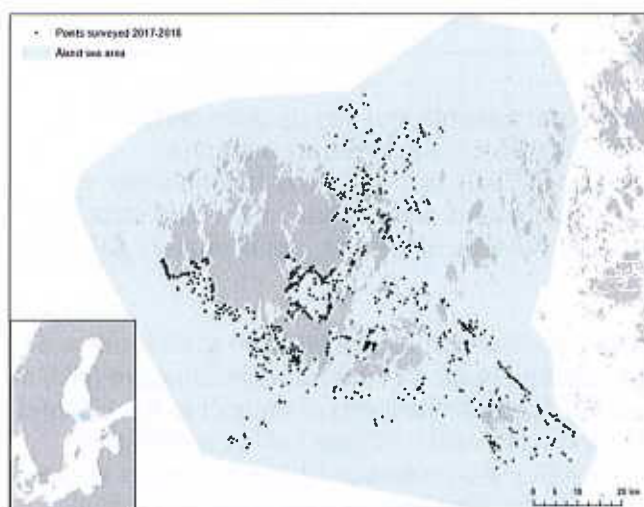
Also the implementation and the monitoring programs related to the Marine Strategy Framework Directive (MSFD) and the Water Framework Directive (WFD), both aiming at a good status of the sea areas, will benefit from the project, as valuable information on the general state of the sea and e.g. on the spatial distribution of indicator species will be obtained.

The results of the project can also be used in regional Baltic-wide contexts, e.g. in HELCOM work (e.g. status assessments, evaluations of Baltic Sea MPA networks etc.).

When looking at the benefits for the society in Åland, the most direct benefits will be to the MPA designation process. Instead of selecting future protection sites on only a site-by-site basis, the site-selection analysis carried out during the project will provide the most efficient solutions to complement the current network of protected areas. Furthermore, by providing alternative scenarios (with different benefits and costs) MARXAN also allows a participatory process, where the views of the different stakeholders and sectors using the sea (e.g. fishing, fish-farming, shipping, tourism) can and will be taken into account. A process, where people using the sea as a resource can take part and understand the basis for the protection, will likely result in a more functional network, than a process where the basis and the criteria for protection are not clear. The society will also gain from knowledge on where important nursery habitats for fish and fish trails are. As these important habitats have been identified, actions to improve their status can be made to enhance the fish production in Åland Islands.

Experience and scientific knowledge about the topic

Systematic underwater marine inventories were started in Åland in 2017 and 2018 (800 video points and 80 dive transects) in a project financed by the European Maritime and Fisheries Fund. The project activities were concentrated to southern and eastern Åland, and the emphasis was on mapping the Natura 2000 habitats sandbanks and reefs (see map). In the project, also a lot of old data gathered at Husö biological station were converted to a suitable format to serve this systematic large-scale mapping and modelling work. Some old data from external work done by consultants may still be missing/not presently available. Despite this initial mapping effort, large sea areas of Åland remain unmapped, especially the north/north-western part, as well as the easternmost archipelago area. In addition, in some relative remote areas (e.g. south-eastern part), the coverage of data is low.



While mapping the marine areas of autonomous Åland has only recently started, extensive mapping of the marine environment has been carried out during the VELMU program in "mainland" Finland (>160 000 survey points gathered 2004-2017). ÅAU has been involved in the VELMU program, and participating in developing mapping methodology and sampling strategies, in designing data storage and in using gathered data for producing useful products for management. The lessons learnt from VELMU ensure that mapping is done in a cost-effective way, yet providing useful results. ÅAU has also lead the modelling and map production work in VELMU and has, together with Geological Survey of Finland, produced national models on the occurrence of some important marine habitats. These models can also be utilized in planning the fieldwork in Åland Islands. The leadership in the Nordic Network for Marine Inventories and Modelling, has ensured that the used methods, (both fieldwork and data processing) are up to date also in the international context.

Although mapping itself is not considered scientific research, e.g. the development of various mapping methods (remote-sensing, acoustic methods) have been a subject to many scientific studies. During the past decade, also the statistical methodology to produce full-cover probability maps of species distribution from point data on species occurrences and environmental data (= Species Distribution Modelling) has taken large steps forward, with new statistical methods, and new tools to apply to the methods. Species distribution models are today used in conservation decisions and management worldwide, which is also the intention in our project. The aim is to use the produced maps as an input to a site-selection analysis, using MARXAN. MARXAN is currently the most frequently used conservation planning software in different parts of the world (Web of Science search using "MARXAN" resulted in 265 hits). In principle, MARXAN is a tool that helps decision makers to find the best solutions related to conservation planning, by providing solutions that meet the conservation objectives (e.g. 10% of the marine area protected, or 20% of key habitats protected) at a minimal cost. The programme was originally designed for zoning the Great Barrier Reef in Australia.

Project goal and objectives

The project goal is to map the marine under water nature around Åland Islands to enable ecosystem-based management and the designation of new MPAs.

The objectives (5 in total) are:

- 1) a database and a functioning platform to present the data on the marine environment (e.g. a map service),
- 2) new data on the marine environment from the areas where data does not exist or is too scarce,
- 3) maps describing the distribution of important habitats, and species,
- 4) the final designation of some marine protected areas (MPAs) and suggestions for new large MPAs, that together with the existing MPAs form a coherent network of MPAs, and
- 5) effective communication to raise awareness about the marine environment and on the designation process.

The long-term effects of the project are that the MPA network of Åland Islands will increase substantially. The selection of sites through a participatory process will increase the success of the final designation of MPAs. Further, long-term benefits of an increased MPA network include securing threatened habitats (and species), spawning grounds for fish and marine biodiversity. By considering marine nature values in maritime spatial planning, harmful activities can be steered away from the most valuable marine areas.

The methodological approaches to achieve the objectives and the goal include:

- 1) A database used / developed within the project, which will be discussed with the national authorities responsible for data in the VELMU program, to ensure the coherence between the data gathered in Åland and in the mainland Finland. It is also unlikely that the project will develop an own map service, but instead, the maps will be presented in already existing map services in the GÅ and/or in the National Sea Data Portal (Meritietoportaali).
- 2) Field inventories (four field seasons) to obtain new data on the distribution of the underwater habitats and species.
- 3) Production of species and habitat maps through spatial and statistical modelling (e.g. marine Natura 2000 habitats, mussel beds, bladder wrack, red algae, eelgrass meadows, Chara-meadows).
- 4) A site-selection analysis made using MARXAN. Data on the marine environment and collated data on human activities will be gathered, to produce a suggestion for the expansion of the current MPA network (also considering e.g. the Baltic-wide MPA work by HELCOM). Methods to engage the stakeholders in the process take place through e-mails,

questionnaires and workshops. How the designation process of new MPAs takes place at Åland Islands is described in more detail under the Activities-section.

5) Communication with the general public in Åland to raise awareness of the project. This will be done through a project website, through press releases (to reach local newspapers, radio) and social media (Twitter, Facebook, Instagram). Communication to stakeholders, planners and managers will also be done via e-mails, workshops and seminars.

Activities

Objectives/Activities	Outputs, what is the direct effect of you activity	Impact/Outcomes, how the objectives contribute to your goal, and how your activities contribute to their objective	Indicator, how will you measure success
1. Data management	Available data in the right format	Database with information on the marine environment is a basis for ecosystem-based management	Functional database and map service used by stakeholders
1.1. Develop and maintain database	Database used in activities 2, 3 and 4	Coherent and functioning database (compatible to Finnish national database)	Database for the project, in use by local managers and the national VELMU program
1.2. Gather existing information and plan future mapping efforts	Present mapping status, information on data gaps	Prevents mapping in previously studied areas, helps localizing gaps in knowledge and planning new fieldwork	Existing and available data in a database, sampling plan (for 4 years)
1.3. Insert new information regularly	Expanding database	Recent data available during the project for the production of up-to-date distribution maps	Amount of new data in database and/or map service
2. Mapping/Field inventories	New data to database, needed for objective 1, 3 and 4	The collection of new data is a key activity and forms the basis for ecosystem-based marine conservation actions	Amount of new data
2.1. Dive transects	Detailed species-level information on marine nature	Helps identifying marine biodiversity and e.g. red-listed species	Number of dive-transects
2.2. Drop-video points	General habitat-level information on marine nature	Provides information on habitat-level, useful for e.g. identifying Natura 2000 habitats	Number of drop-video points
2.3. Other potential sampling methods	To be agreed on with the Government of Åland	Side scan sonar may be used e.g. in identifying shallow sills at the openings of lagoons or in measuring size of sandbanks. Mapping of fry helps to pinpoint important spawning sites	Amount of additional UW data

3. Modelling and map production	Results of new mapping data presented as maps	Maps to be used in management related to HD, WFD, MSFD, MSP and the development of MPAs	Maps used in management
3.1. Species distribution modeling and map production	Full-cover maps on species- and habitat distributions	Identifies distributions of important species and habitats through statistical modeling of environmental parameters and data from the field	Number of distribution maps in a map service
3.2. Involvement of planners and managers	Useful map products for planners and managers	The production of information tailored for management, calls for interaction with planners and managers at different levels and sectors	Number of managers and planners involved
4. Marxan analysis and MPAs	Suggestion for suitable areas for expanding the MPA network	The MARXAN analysis will provide objective data-based suggestions for expanding the MPA network	The expansion of the MPA network. Results of analysis used in MPA and MSP process
4.1. Collation of human-activities data	The identification of areas in use by different sectors	Information and data layers on human activities is important for the MARXAN analysis	Number of human-activity data layers
4.2. The actual analysis	The identification of most suitable areas for new MPAs (a map)	The analysis, and steps taken before and after (4.3.) to suggest suitable areas for MPAs	Analysis result that can be supported by different sectors
4.3. Stakeholder involvement in the site-selection process	Questionnaire and/or a workshop on conservation criteria before the actual analysis (4.2.). Workshop discussing alternative protection scenarios after preliminary analysis	The input of stakeholders is very important to make a successful conservation plan, where the views of different stakeholders are taken into account	Number of participants involved in the process
4.4. Designation of new MPAs	Expanded MPA network in Åland Islands	The designation of new MPAs (the final goal of the project)	Size/number of new MPAs

5. Administration and communication	Project practicalities and involvement of stakeholders	Administration of the project and the project results (excluding the designation process of MPAs, see 4.4.)	Information tailored for management and outreach
5.1. Administration and reporting	Smooth running of the project	As project funding is received from different sources, administrating the project is to be done carefully accordingly to specific instructions (GÅ, Balt cf, EHFF and ÅAU)	Requested reporting to financiers
5.2. Communication	Communication between project partners and to stakeholders, media work	The interaction between project partners, stakeholders and the media is important throughout the project to ensure openness and to obtain the goals of the project	Number of project meetings, number of media contacts, produced maps in use in the management processes

A more detailed description of the activities in the project:

1. Data management

The management of data is the starting point of the project, and the basis for other project activities. The collation of existing data is important to ensure that the new field activities are focused to previously unmapped areas. Although some of the old data is already gathered to a common database in an earlier project, there is still work to be done. The data will be collated to a format that is compatible with the data from the mainland Finland (VELMU programme), to allow their use as a whole, when needed.

A rough mapping plan will be made for the whole project in the beginning (e.g. which areas will be mapped) and this will be agreed upon among the project partners. In addition, a more specific mapping plan will be produced yearly, before each field season, based on existing rough models on habitat distribution and on environmental data (e.g. depth and exposure). As the fieldwork advances, new data is inserted to the database. As the fieldworkers (who often also feed data into the database) may change during the course of the project, attention must be paid that inserting the data into the database is done according to the same procedure every year, to ensure the quality of the data.

2. Mapping/Field inventories

New data is collected in field inventories, which is one of the core elements of the project. Species-specific data is gathered using dive-transects, while more general data on habitats is gained through video surveys. To ensure the continuity and high quality of the data (as little as possible human-induced variation in the data), the project aims to have one experienced person responsible for fieldwork throughout the project. The person will ensure that the fieldwork is carried out using the same procedures throughout the project and that e.g. the video recordings are interpreted in the same way every year. A field crew of three people will be doing the fieldwork, with mainly Husö biological station as a base. A crew of three has been found suitable for inventories, regarding also the boat available for the inventories (5.6 m boat with 90 hp engine). Even more importantly, to guarantee the safety of the fieldworkers, three people are a minimum, as diving may be challenging and requires two divers in the sea at the same time.

Different sonar techniques (side scan + aquatic habitat echo sounder) will also be tested to better define e.g. the sizes and boundaries of different habitats. The verification of potential spawning areas may need additional methods such as, beach seine or traps.

3. Modelling and map production

To gain species and habitat maps from field data, the data needs to be processed and analysed. This is done using spatial analyses in Geographical Information Systems (GIS) and / or through statistical methods, where probable distributions of species are predicted using point data on species (= mapping data) and environmental data. We already have many layers on environmental variables available from previous projects and from the VELMU programme (e.g. depth exposure, secchi depth) that can be used in the predictions. To ensure high quality of the models and maps produced, we aim to employ an experienced modeller with high competence in GIS and experience of the marine environment. The planners and managers are involved in map production to obtain the most useful products for them. Often, the managers do not want many detailed, species- or habitat-specific maps, but instead they prefer more general maps derived from the specific maps, e.g. maps showing areas of high nature values. In order to secure the usable results, a dialogue with planners and management authorities will be continuous during the whole project via regular meetings.

4. MARXAN analysis and MPA designation

The site-selection analysis using MARXAN forms another core-element of the project. Already prior to the actual analysis (2019-2020), the person that will carry out the analysis will study the program functionality and requirements and perhaps take part in a suitable course, if found necessary. In addition, the collation of relevant human-activities data will be initialized prior to the analysis. Some layers may need to be produced or modified to suite the analysis.

Another important task prior to the analysis is to identify the aims of the MPA network selection process, i.e. what features (habitats and species) need to be protected and to what extent (e.g. 20% of eelgrass meadows should be protected). These aims and targets will be identified in a workshop involving all relevant stakeholders. The workshop will also discuss the different human activities at sea that need to be accounted for in the analysis.

The actual analysis will be carried out in 2021, when there is a sufficient amount of new information on the distribution of marine habitats and key species. The different solutions provided by MARXAN will again be opened for discussion at a workshop for stakeholders. The best solutions will be presented and suggested as the most suitable sites for future MPAs.

For the designation of MPAs and for implementation of management plans, sufficient background information is required on the different areas. The minimum requirement for protection is that Natura 2000 habitats and/or species needing specific protection measures are found in the area. Therefore, data on the presence of threatened species and habitats and species of the Habitats Directive are essential to implement protection. In addition to underwater nature values, the respective stock populations of breeding birds, their breeding sites and migratory birds are taken into account when preparing the management plans. Particular attention is paid to breeding sites for the species listed in the Birds Directive, as well as to threatened and rare birds.

Areas designated as MPAs will have protection measures corresponding to the protection objectives. The choice of protective instruments depends, among other things, on what measures are needed in each area. The intention is that the areas to be protected are protected both as Natura 2000 areas and as Nature conservation areas under the Nature Conservation Act of Åland (ÅFS 1998:82). Some habitats, e.g. lagoons, reefs and sandbanks, are prioritized when designing protection areas. The Nature Conservation Act of Åland contains provisions for the protection of certain habitats and compensation for land- and sea owners. The protection of important nature values in marine areas rests also largely on the Water Act for Åland.

Management activities / protection measures that could be implemented within the MPAs include e.g. forbidding anchoring or restricted landing on the islands. Other possible management measures include e.g. speed limits for the boats or ships, or bans for fishing

and/or hunting. The protected area status is also of special importance when new activities are planned, e.g. new buildings, new fish farms or wind production units. During the designation process, the protection measures and the monetary compensation are discussed with the landowners, if the GÅ does not own the area. An agreement is signed with the landowners, and a protection decision is sent for hearing to the municipalities in which the areas are located. After a few weeks the decision will be confirmed by the GÅ, and comes into force after another month. During that month, the inhabitants in Åland have a possibility to submit their opinions about the decision, but due to an intense dialogue with the local people before all agreements and decisions are made, it is rare that anyone appeals against.

If the identified target area hosts species/habitats included in the annexes of the Habitats Directive, the GÅ notifies the area to the Ministry of Environment in Finland, which further suggests the inclusion of the area to the Åland Natura 2000 program to the European Commission. As the area is accepted to the Natura 2000 network by the EC, a decision about the SAC or SPA -status of the area is made by the GÅ afterwards.

During the past years, more than 200 000 euro /year has been spent by the GÅ on agreements for designating protected areas, both marine and terrestrial. During the nearest years coming, the focus is on the protection of marine areas. Beyond that, efforts are directed towards monitoring for receiving sufficient information before starting the designation progress.

5. Administration and communication

The project manager will have the main responsibility of the financial administration of the project. As the project is funded by different sources, this is a challenging task, but the project manager has previous experience in managing various projects. The reporting along the project is done according to co-financers requests, containing both progress in activities and financial reports. A comprehensive final report will be produced at the end of the project in 2022.

The communication of the project will be done through a project website, through press releases to reach local newspapers, radio and TV, as well as through social media (Twitter, Facebook, Instagram). The project website will be updated regularly and the social media will be used especially during the summer when the fieldwork is in progress, but also when the MARXAN analysis is ongoing. Effective and active communication is of special importance, as the active involvement of the society in the MPA designation process is one of the key elements of the project. Communication to stakeholders, planners and managers will also be done via e-mails, workshops and seminars.

As a whole, the project will solve many currently critical issues in the management of the marine areas around Åland Islands. The small Nature Protection Department at GÅ is unable to cope with the huge task of mapping the vast marine areas and to carry out ecosystem-based marine management. Without all the information that this project produces, the new MPAs will be selected on a site-by-site basis, in many areas without the necessary information on important species and habitats. Therefore, without this project, the success of the MPA network in protecting the underwater marine nature is severely compromised.

Time plan

Objectives/ Activities	Year 1				Year 2				Year 3				Year 4			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
1. Data management																
1.1. Develop and maintain database																
1.2. Old data, mapping plan																
1.3. New data, continuous																
2. Field mapping																
2.1. Dive transect																
2.2. Drop video																
2.3. Other sampling																
3. Modelling & map production																
3.1. SDM and map prod																
3.2. Involving planners and managers																
4. Marxan																
4.1. Collation of human activity data																
4.2. The actual analysis																
4.3. Stakeholder involvement																
4.4. Designat of new MPAs																
5. Adm and communicat																
5.1. Administr and reporting																
5.2. Communicat																

Risk analysis:

The time plan is quite clear, but the lack of competent staff may slow down the efficiency of field sampling (i.e. less amount of new data). In addition, extreme weather conditions may restrict the field sampling, as the area to be mapped is challenging (strong winds, few boat lanes and many underwater rocks). To avoid these possible concerns, we aim at a careful selection procedure when hiring the field workers. Due to our extensive contact network, we believe in finding motivated seasonal workers (marine biologists) from Finland and/or Sweden, who know the field methods and the marine species and habitats in the area. Further, there is a risk of boat engine or other equipment failure. Fortunately, there are some extra video cameras at Husö biological station as well as dive equipment and boats, which can be borrowed. On short notice, boats can also be hired from Åland Islands. The statistical treatment of data, e.g. species- and habitat modelling, requires qualified experts to achieve the best reliable results. As ÅAU has arranged advanced education for this specific area of statistics, we therefore know a number of persons who are qualified for this task.

The communication to stakeholder during the MARXAN work may be demanding as

stakeholders can have different opinions on marine conservation issues. This will be cared for by an open dialogue at all stages, where the common goal is a healthy and productive sea area, managed in a sustainable way (see following section describing the involvement of stakeholders).

Time plan:

The project starts in 2019 and there will be four field seasons (June-September 2019-2022). The map production is initiated already in late 2019, but the final maps included in MARXAN are prepared in 2021. The MARXAN analysis is carried out in 2021-2022, with the aim of feeding into the MPA process in Åland. During the last field season, detailed surveys of areas identified as most suitable for conservation by the MARXAN analysis, will be carried out to verify the values of these areas. Other map products are developed depending on the needs of the planning/managing authorities. The project ends in December 2022 when all data have been analysed, disseminated and reported.

Key milestones include:

- 1) the finalization of actual field inventories (august 2022)
- 2) the production of species and habitat maps (ongoing throughout the project, most intense during 2021 and 2022 as most data is available),
- 3) the first smaller (1500-3000 ha) MPAs designated within the project (2020-2022) as valuable areas have been mapped (not selected via the MARXAN analysis)
- 4) MARXAN analysis (preparations starting in autumn 2019, actual analysis in 2021 and spring 2022)
- 5) the initiation of the process of designating new extensive MPAs (starts officially in autumn 2022 when project results are complete). The size of these are impossible to predict, as they are dependent on nature values found within the project (in discussions with the authorities at GÅ, we have talked about 5000-15000 ha).

Partnership

Please name the most important partners in the project and their role:

Partner Name and Organisation	Importance for the project	Active or passive role in the project (if active, please indicate to which objectives and activities they will contribute)
Government of Åland (GA) Conservation officer: Maija Häggblom	Responsible for marine protection issues and the MPA network process in Åland Islands	Active partner, contributes with own working time in the project (min 4 months). Contributes to 1.2., 4.3. and 4.4. Also finalises the designation of larger MPAs after the project has ended
Government of Åland (GA) Senior Biologist: Susanne Vävare	Responsible for marine and freshwater management and monitoring in Åland Islands, including obligations related to WFD and MSFD	Partner, contributes with own working time in the project (min 8 months). Contributes to 1.2., 2.3., 3.2., 4.1. and 5.2.

Stakeholders:

Important stakeholders of the project are the different sectors that use the sea areas as a direct source of livelihood, e.g. the fishermen and the fish-farming industry. In Åland, there are today about 250 registered fishermen, of which about 10% are considered professional (over 30% of income from fishing). There are only three trawling boats operating in more open sea areas but approximately 250 registered smaller fishing boats operating in the coastal area. Fishermen may be worried about spatial protection measures limiting their fishing areas, but on the other hand, they benefit from the protection of key nursery habitats for fish. There are about 25 fish-farming units in Åland, mainly owned by four companies. Fish-farmers could oppose new protected areas, as new protected areas may cause more restrictions and especially make the establishment of new farms more difficult. Both fishermen and fish-farmers have their own associations, which may be key opponents to marine protection. In addition, hunters, targeting seabirds and grey seals, are most likely interested in questions related to marine protection, and they may experience that protected areas limit their hunting grounds. Although hunting concentrates mostly above water in the archipelago, the land and the sea are in close connection with each other and thus the marine protected areas will most likely contain also terrestrial parts (e.g. bird nesting sites or resting areas for seals).

The industries operating at / by the sea are also important stakeholders, e.g. the shipping industry with its many effects on the marine environment, not only from shipping itself, but also from the maintenance of shipping lanes. Mariehamn is a major port for e.g. passenger-ships operating between Sweden and Finland, as well as Långnäs, where large passenger-ships stop at night. There are also many smaller ferries that operate between the islands, as "extensions" to the road system. These ferry companies are also relevant stakeholders of the project.

Leisure boating is very popular around Åland in the summer, with people especially from Finland and Sweden visiting the area with their own boats. Therefore, also leisure boating

associations and leisure boat harbours can be considered as important stakeholders. As the beautiful nature of the archipelago attracts the leisure boaters to the area, they generally have a positive outlook on nature conservation. In addition, the tourism industry will likely perceive nature conservation mostly as positive, as a healthy sea and diverse nature are attractive for tourists coming to Åland.

As Åland consists of many islands, infrastructure projects (e.g. roads, cables, pipelines, energy production) often concern also the marine areas. Therefore, the division dealing with infrastructure at the GÅ and its various subdivisions are potential stakeholders. There may be some conflict areas between infrastructure developments and conservation goals, but the infrastructure development will surely also gain from the project, as e.g. planned infrastructure projects should be integrated in the MARXAN analysis.

In Åland > 50% of the coastal seas are privately owned and therefore the people, who own water areas, are a large stakeholder group of the project. People often have their houses or cottages by the sea and they engage in different activities by/at the sea, e.g. household fishing in the nearby areas. Therefore, the inhabitants are generally interested in questions related to the underwater nature, e.g. how the sea areas are used and what potential restrictions there may be.

The local managers and planners (e.g. people involved in maritime spatial planning) are important and obvious stakeholders of the project and direct end-users of the results. The species and habitat maps (and potential other maps presenting biodiversity/nature values) will be developed in dialogue with planners and managers, to obtain the most useful products for the end-users. Also planning and management agencies from Finnish mainland (e.g. Finnish Environment Institute) will be kept informed about the project, e.g. through cooperation with the VELMU program (e.g. the project leader is a member of the VELMU project group), as well as the Ministry of the Environment, responsible for the designation of MPAs in the "mainland" Finland.

When the project starts in spring 2019, there will be a press release where we inform about the project objectives and goals to people in SW Finland and on Åland Islands. This is a first step to prepare the different stakeholder groups for the upcoming site selection analysis and MPA designation process, and at the same time explain the intense work behind receiving objective data to build this process.

The engagement of stakeholders is mainly done through workshops. One workshop is needed prior to the MARXAN analysis to define and discuss the things that need to be considered in the MARXAN analysis and included as spatial layers (e.g. conservation goals, different human activities and their extent, new development areas etc). This enables the engagement of stakeholders already early on in the process. The workshop needs careful planning, in order to fulfil its goals. A workshop may be followed by a questionnaire, if needed. Another workshop needs to be arranged after the MARXAN analysis has been "finalized" or rather, when the different solutions for new protected areas can be presented to the stakeholders.

The stakeholders are contacted through e-mails and potentially through newspaper announcements in the local newspapers. The engagement of local managers and planners will be done through common meetings and e-mails.

Communication

Communication to the public will mostly be carried out through a project website, and through social media. The project website will be updated regularly. Own Twitter, Facebook and Instagram accounts will be created for the project. Active tweets, Instagram and

Facebook updates will be published, especially during the field season, with attractive photos of the underwater marine nature. The local media will be approached through press releases. In general, the media in Åland is very interested in projects concerning the marine environment, as the sea is a very important element in everyday life for the people in Åland. One initial press release will be sent in spring 2019, describing the project (see previous section). At least three (3) more press releases will be sent out during the project. One appropriate point in time would be during the first field season to draw attention to mapping activities. Another suitable time for a press release is at an early stage of the MARXAN analysis to aid raising awareness of the process to local people and stakeholders. One press release will also be sent at the end of the project, when the final products can be presented.

Project budget

Cost categories	Justification, working days or cost units	2019		2020		2021		2022		Total
		Month 3-6	Month 7-12	Month 13-18	Month 19-24	Month 25-30	Month 31-36	Month 37-42	Month 43-48	
Staff costs	person months	in €	in €	in €	in €	in €	in €	in €	in €	in €
Management	8	6 100	6 100	6 100	6 100	6 100	6 100	6 100	6 100	48 800
Project officers	50,5	31 900	31 100	37 100	31 100	37 100	31 100	37 100	28 500	265 000
Communication	4	5 100	0	5 100	0	5 100	0	5 100	0	20 400
Field workers	52	0	30 000	15 200	30 000	15 200	30 000	15 200	30 000	165 600
Administration	Flat rate 10%	4 300	6 700	6 400	6 700	6 400	6 700	6 400	6 500	50 100
Travel costs		1 000	1 000	1 000	1 000	1 000	1 000	2 000	2 000	10 000
External expertise			9 000		9 000		9 500		8 500	36 000
Expert contracts										
Event costs							500		500	1 000
Publication costs			1 000		1 000		1 000		1 000	4 000
Field equipment			8 000		8 000		8 000		7 000	31 000
Investment costs						100 000			100 000	200 000
ÅL commitment for direct conservation actions						100 000			100 000	200 000
Total €		48 400	83 900	70 900	83 900	170 900	84 400	71 900	181 600	795 900

New
column

Cost per activity	Staff	Man months	Travel	No of Trips	External	Invest	Total	<i>Estimated Balt cf contr</i>
Objective 1	77 100		1 000				78 100	
1.1.	25 700	4,5					25 700	
1.2.	28 500	5	500	2			29 000	
1.3.	22 900	4	500	2			23 400	
Objective 2	175 300				31000		206 300	90 000
2.1.	70 200	21			12 000		82 200	40 000
2.2.	70 200	21			12 000		82 200	40 000
2.3.	34 900	6			7 000		41 900	10 000
Objective 3	120 600		1 000				121 600	80 000
3.1	86 400	17					86 400	60 000
3.2.	34 200	6	1 000	4			35 200	20 000
Objective 4	101 300		4 000			200000	305 300	60 000
4.1.	15 600	3					15 600	10 000
4.2.	34 600	6					34 600	30 000
4.3.	28 500	5	2 000	4			30 500	20 000
4.4.	22 600	4	2 000	4		200 000	224 600	
Objective 5	75 600		4 000		5 000		84 600	
5.1.	53 000	8	2 000	8			55 000	
5.2.	22 600	4	2 000	8	5 000		29 600	
Total €	549 900	114,5	10 000	32	36 000	200 000	795 900	230 000

Investment costs of 200 000 (possibly up to 2.5 million € in a 10 year period) are earmarked by the GÅ for nature protection, and specifically for marine protected areas (see attached commitment letter). This sum will be used during the project as smaller highly valuable areas worth protecting have been found through field inventories. In the end of the project, as all results are gathered and we get a holistic view of most suitable areas for MPAs (through the MARXAN analysis), the political process prior to the final designation of larger MPAs is initiated. This process may take 1-2 years depending on realities such as sea ownership, as much of the water areas (>50%) are privately owned by citizens or by fishing associations in Finland and Åland Islands. To designate such large areas to become MPAs, much more funding will be provided by GÅ after the project has ended. The amount is still difficult to define as it is partly depending on the political situation and the future elections in Åland.

The column inserted to the right in the table above, describes where the co-financing of Balt cf is urgently needed (see more details in attached Financial forms). Almost half of the sum goes to the very important, but expensive, field inventories (90 000), which are the basis for the entire project. Other essential activities are related to data modelling and map production (80 000) and the site selection analysis (60 000).

Financing sources

Total funding needed for the Project:	796 000 €
Funding requested from Baltcf:	230 000 €
Own funding ÅAU	103 000 €
Other funding GÅ, EMFF (excluding Baltcf)	463 000 €

The own funding contribution of 103 000 € originates from salaries of the Head of Station 1 month/year, (total 27 000 €) for assisting with planning the field work, taking care of practicalities at Husö biological station (servicing boats and equipment) and for field work (action 2.3). The Project Manager offers 2 months/year (total 53 000 €) for project administration, including reporting, hiring and managing temporal field staff, and contributing to all project objectives where required, especially in communication activities. In addition, ÅAUs own contribution includes costs for research vessel, diving equipment, lab facilities for sorting and analyzing samples (in total 23 000 € / 4 years).

Other funding come from:

- European Maritime and Fisheries Fund (EMFF) via the GÅ (145 000 €). The Environmental Agency (EA) at GÅ has submitted the application to EMFF (the sum is earmarked for mapping UW habitats to improve marine management, and the application is a formality/no competing applications as they can only be submitted by the EA at GÅ). GÅ and ÅAU make a standard official agreement on this as the formal decision is signed by EMFF (within February 2019).
- Transfer of existing project money from ongoing mapping project "Mapping of Natura 2000 habitats around Åland Islands" 2017-2018 (50 000 € from EMFF). To extend existing contract between GÅ and ÅAU to be valid for this project, the contract has to be signed by Conservation Officer (i.e. project partner) at GÅ.
- Commitment by GÅ on earmarking 200 000 € for designation of marine protected areas during the project period (see attachment).
- Salaries of Nature Conservation Officer, 1 month/year (23 000 €), and Senior Biologist responsible for sea area management at GÅ, 2 months/year (45 000 €), in total 68 000 €.

In addition to this project, several smaller case studies will be made by Husö/ÅAU and GÅ with external funding during the next 4 years (not yet fully planned) to test best management practices. Aims are to map nursery grounds for fish, study impacts of small scale dredging on the underwater nature and to improve spawning success of fish by restoring fish trails. Results from these project will be utilized in this project and add to our project goals.

Sustainability

How will you ensure sustainability of the project after the funding, how will you evaluate success, is an internal or external evaluation foreseen?

The end products i.e. the database and the maps of the spatial distribution of species and habitats will be used by managers for purposes related to marine management and protection of the marine environment (requested by a number of EU directives). Although new inventories will be done in the future for specific activities such as fish farming and wind energy production as environmental assessments are required for such activities, results within this work function as a baseline describing the marine UW nature/environment (and the state of it) in 2020s. The results will thus be useful also in a longer perspective for marine monitoring.

The success of the project will be evaluated through the indicators of each objective. The

first indicator is a functional database and map service and how well it is in use by different stakeholders and managers. The second objective is assessed according to the amount of new data obtained through field inventories in the project. The success of the third objective is measured by the amount of produced maps of habitat- and species distributions in the map service. Further, the amount of managers and planners, who have taken part in planning the map products, shows the success of stakeholder engagement. The success of objective four is assessed as new MPAs have been designated during the project and as the final full large-scale MPA process has been initiated, based on MARXAN results. Prior to this, indicators of success include the number of human-activity data layers, results that can be supported by different sectors, and number of persons who are involved in the MARXAN analysis. The success of objective 5 is evaluated by completed reporting to financiers and by indicators of communication, which include number of project meetings, number of media (and social media) contacts and number of produced maps communicated to management. An internal evaluation of the project takes place as the GÅ is a partner and a direct user of the products produced in the project. The co-operation between the project manager and the VELMU project group in Finland mainland is active, and therefore the VELMU project group will function as an external evaluation panel of the systematic mapping activities in Åland Islands.

Signature

A handwritten signature in dark ink, appearing to be "N. Sandler".

Åbo/Turku 28.11.2018

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