European Heritage Awards / Europa Nostra Awards (2025)
1174-Citizens' Engagement & Awareness-raising 4. Citizens' Engagement & Awareness-raising

XoYNGKOj

Baltic Sea 3D Wrecksite Ontology

Entry details

General information

Main country of application	Finland

In case there are other official partners involved in the project, please list the country(ies) they come from

> Please consider whether this application is in a right category?
> Our attached annual report is in Finnish only. AS it's fairly large document - 20 pages - we will translate it in English on request only.

Brief description of the project

> The Maritime Archaeological Society of Finland (MAS.Fi) has succesfullly created the world's largest collection (almost 200) of 3D models representing shipwrecks. MAS.Fi has also acquired initial radiocarbon datings thereto. MAS.Fi has published all their survey data, analyzes and results etc. of their work in the society's research data portal to be freeely used in all non-commercial applications. The society is a UNESCO acredited NGO for the protection of underwater cultural heritage and the Baltic Sea 3D Shipwreck Ontology is being expanded to other Baltic states as UNESCO NGO project. This is very impressive, considerig that MAS.Fi is 100% volunteer organisation.

Start date of the project	2019-04-01
Completion date of the project/initiative	ongoing
Website(s) of the project/nominee	https://www-mas-fi.translate.goog/?_x_tr_sl=auto&_x_tr_tl=en&_x_tr_hl=fi&_x_tr_pto=wapp
Facebook page of the project, if any	https://www.facebook.com/meriarkeologia/
Instagram page of the project, if any	https://www.instagram.com/meriarkeologia/
Any other relevant social media	https://sketchfab.com/mas-fi/models

Does the site or heritage in question have national/regional/local cultural heritage designation or protection status in its country?	Yes

If yes, please specify:

> All shipwrecks older than 100 years within a sovereign state's territorial waters are protected by international Sea Law, which is propably the most ratified international law. In addition the Finnish law sanctionsa any breaches of the full protection of all underwater cultural heritage more than 100 years old.

Is the site or heritage in question included on the UNESCO World Heritage List, either as a single World Heritage Site or as part of one larger site?	No
If relevant, is the site/heritage accessible to the public?	Yes

If relevant, is the site/heritage accessible to people with disabilities?

> The core of the 3D Shipwreck Ontology initiative is the creation of a "digital twins" of the wrecksites, which are publicly accessible in the Internet also for people with disabilities

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Contact details

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Entrant's position	Chairman of the society
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Organisation of the owner	Maritime Archaeological Society of Finland
Name of the project leader	Markku Luoto
Project leader's position	Chairman of the society
Organisation of the project leader	Maritime Archaeological Society of Finland
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Other relevant participants

> Mr. Hannu Rokka - Maritime Archaeological Society of Finland - Commissioner of the society

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Concise summary

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> The Baltic Sea 3D Wrecksite Ontology -initiative established by the Maritime Archaeological Society of Finland (MAS.Fi) has already produced the worlds largest collection (almost 200) of photogrammetric 3D models and radiocarbon datings representing the historic shipwrecks of the Baltic Sea - thereby preserving the factual history of European trade routes from the early middleages to present.
> MAS.Fi has exemplarily adhered to the Open Science and Open Data principles by publishing all their survey data, laboratory analyzes and the results of their work in the society's research data portal to be freeely used in non-commercial applications. They have also publiced all the 3D wrecksite models in an open and easy to use service for the general public - including the rights to print them out with 3D printers or to modify them accordingly to create something new (as long as it's "shared alike").
>
> Within the last five years, MAS.Fi has become Finland's leading institution for maritime archaeological training, research, preservation and public engagement.
> Currently the society is the only entity in Finland organizing field schools in underwater archaeology. MAS.Fi volunteers conduct more than 80-90% of the annual underwater field work (well over 500FTE) in Finland. The same applies to the annual contribution of maritime archaeological data - like 3D models and radiocarbon datings. The society's volunteers also produce the vast majority of all surveillance information from the protected wrecksites to the authorities like the Finnish Heritage Agency.
> MAS.Fi has established the Porkkala Wreck Park with 11 furbished divetrails and is creating a dozen more at Saaristomeri Wreck Park initiated 2024. The society held its first exhibition at Nötö gallery during this year's sailing season, it being the largest exhibition in Finland this year focusing solely on underwater archaeology. It received very favorable reviews - also from our Minister of Culture mr. Anders Adlercreutz.
> MAS.fi representatives are always found presenting their cause at all related industry and public events, enabling visitors to experience a virtual dive into the wrecksites. The society also holds monthly, open for all, hybrid events at Suomenlinna to present its newest findings.
>
> MAS.Fi is a UNESCO acredited NGO for the protection of underwater cultural heritage. The society's 3D Shipwreck Ontology -initiative is also being adopted by the UNESCO as a NGO project to other Baltic countries as well.
>
> All this is very impressive, considerig that MAS.Fi is a 100% volunteer organisation of about 200 members with no employed personnell.

Objectives and work undertaken

Aims and objectives of the project/initiative

> MAS.Fi as an organisation exists to advance the training, reasearch, protection and public "ownership" and involvement regarding of our shared underwater cultural heritage. The society's mission arises from the understanding that the sea connects European cultures more than it divides. This being especially true to Finland, which again has become almost an island.
>
> Researching and presenting only the wrecks from Finland's territorial waters is not enough as almost every one of them has a wider story to tell due to their ports of call or origin being all around Europe. Hence we need more information - even rudimentary - from the shipwrecks around the Baltic Sea, which forms a singular traffic area even today. Without it the view to our cultural and commercial import/export history will be biased, as the Russian trade routes dominated the Gulf of Finland - our primary source of shipwrecks.
>
> The program (considerably longer than any project) aims to bring out this information of what went down, where and when to serve as much public interest as the various research questions or protection issues arising from the uniqueness/commodity of the wrecksite. Natural products of this work is the increased awareness of the north European historic trade routes and traders, as well as the cultural exchange and common involvement in the "commercial European Union" - centuries before the political one was founded.

Any historical and technical research undertaken for the project/initiative

> MAS.Fi has carefully studied all existing wrecksite information from the Finnish Heritage Agency's (FHA) "kyppi.fi" and other public sources like "hylyt.net" on which the society's research expeditions are based on. The MAS.Fi quarterly reports to FHA about the updated information like more precise locations or observations on the wrecksites.
>
> Over the five years MAS.Fi has developed an underwater drilling method to extract dating samples for dendrochronology, which was previously thought impossible (Aiofe Daly on IJNA). The society's volunteer photogrammetrists have also developed new techniques for very poor visibility surveys.

Activities carried out and stages of implementation of the project/initiative

> Seven years of annual field work camps and several research expeditions resulting almost 200 througly surveyed wrecksites with digital twins cerated and preliminarily dated. Thousands of FTE field and IT work days contributed.

Challenges or problems encountered and solutions found to overcome them

> In the beginning some authorities and professionals didn't believe in volunteers possibly reaching such operational productivity and quality, but with our proof of work the attitude has totally changed to "how did we manage before MAS?".

Results and impact

Summary of the main results achieved and knowledge that has been gained. List the ways that the project/initiative contributes to the preservation and/or enhancement of the historical, cultural, environmental, educational and/or social values of the heritage in question. Mention the project's impact on conservation policy and practice, if any.

> The Baltic Sea 3d Shipwreck Ontology is the society's baseline program, around which all other MAS.Fi activities concentrate. The ontology program itself has produced the world's largest collection of radiocarbon dated and photogrammetrically 3D-modelled wrecksites for researchers to study and for the public to immerse in via AR/VR. Several scholars have already used MAS.Fi collected material and analyzes in their research, but we expect it to be even more value for the young academics when choosing their area of interest and research question. Needles to say, the

creation of the "digital twins" of the shipwrecks is probably a most important single action to protect the historical knowledge of the wrecks, as they decay over time and will soon become extinct due to the warming of the seas. The 3D-models have also been widely used in education, not only in cultural sciences, but also in the tarining of media and engineer students.

The Porkkala and Saaristomeri Wreck Parks have signiffincantly reduced the "diverware" impact on the most fragile wrecksites by guiding the diving activities towards the more resilient wrecksites. On the other hand, the parks have increased the appreciation and understanding of underwater archaeology among the recreational divers, as the 3D-models and information signs have improved their understanding of the divesite and thus positively contributed to their dive experience. This is especially true among novice and tourist divers.

The MAS:Fi exhibition at Nötö Gallery last summer had a signifficant engagement with the local population, tourists and summer residents, which nowadays constitute the majority of archipelago's population. Everyone we talked to during our expeditions had visited the exhibition - includein our minister of education and culture mr. Anders Cedercreutz. The 2025 MAS.Fi exhibition will be in Suomenlinna, which is the number one tourist attraction in Finland - thus we expect even more visitors.

Aspects of the project that can be considered innovative within its area or field.

We believe one of the signifficant innovations related to all our accomplishments is the motivation and democratic organization of volunteers. The volunteer aspect and their preferences of execution are carefully implemented in everything the society does, so that the "return of the volunteer" is our primary goal. Without volunteers nothing much would happen in the Finnish underwater archaology, as the academic researchers and FHA officials do not have the time nor the skills the volunteers have developed. This might sound like we would sacrife efficiency or scientific goals for recreation, but infact MAS.Fi is famous for achieving much more in every aspect than e.g. professional institutions or commercial operators. This is due to the sheer amount of divers, which is 10 to 20 fold when compared to other institutions.

Naturally there are a number of technical innovations varying form sampling techniques to mooring structures but none of special signifficance.

Measures to ensure the sustainability/future viability of the project (in terms of future plans and funding).

MAS.Fi has been carrying out this program for three decades, but with the introduction of low cost photogrammetry and external fundin acting as a catalyst, the society has been able to upscale its activities and results 10 fold i.e. from 1-2 sites pro year to about 20 sites pro year. Our most critical resource are the volunteer divers, of which the society has about 50-60 active ones every year. About 200 members are paying membership fees and making small contributions annually. Thus, the society could sustain its activities like the Baltic Sea 3D Shipwreck Ontology completely without external funding, but that would hinder many volunteers from participating due to higher participation costs. The lack of funding would also limit research areas much closer to the main cities the volunteers are natives of. Also the use of dating laboratories would be severly hindered without funding.

Environmental sustainability of the project and contribution to climate action (in terms of results, techniques, materials employed, methodologies etc.), if relevant.

MAS.Fi activities do not disturb the environment, as we typically float away from islands - especially if there's life on them. Our dive support vessels move slowly at hull speed, so they don't harm seals etc. We remove plastic and other debris from the bottom, as well as old, disused research equipment. MAS.Fi also participates in beach clean-up operations and report sightings of rare or endangered aquatic biotopes. MAS.Fi is a memboer of marine biodiversity inventory programme VELMU, led by the Finnish Environmental Administration.
We minimize our carbon footprint by connecting research vessels to shore-side electricity and shutting down combustion engines whenever possible. We avoid all disposability in our operations. We recycle many objects for reuse in our equipment. We coordinate carpooling for our events. Food supply is handled centrally from primary production

raw materials instead of convenience foods, which contributes to reducing waste and the carbon footprint of food processing.

Dissemination of the project’s results and knowledge gained and any outreach or educational activities.

MAS.Fi actively participates in scientific seminars of maritime archaeology giving out presentations and posters. Hosting IKUWA7 was of course a one time event, but we plan to host ISBSA and other similar events in the coming years.
Of the annually recurring events, most important ones are the National Science Days, FHA's excavation days and Helsinki Boat Show's Wreck-seminar. Our monthly hybrid presentations are well received and our newest form of dissemination - the sailing season long exhibition - is becoming ever more important, especially in 2025 when it will be in Suomenlinna, which is the most popular tourist attraction in Finland.
Every year MAS.Fi gives out two basic courses in maritime archaeology and one advanced course. This winter we are preparing a school field trip material for elementary and middleschools.

Participation in the initiative (number of participants/audience/users per year and/or, in the case of websites and digital platforms, information regarding visitor numbers and online interaction).

Since the beginning of the intiative, more than 100 individual volunteers have contributed into the society's field work. Annually it amounts to about 400 person days on the field. Our web pages get about 15.000 to 20.000 individual visits per year. Our facebook-page has about 650 followers anf our Instagram account 350. Our monthly hybrid presentations have about 50 attendants. The size of the audience we reach annyally at various maritime seminars, fairs and other events is hard to estimate, but it must be thousands - if not over 10.000. Interviews and articles about MAS.Fi in mainstream media reach hundreds of thousands if not millions. In 2018 when the opening of the Porkkala Wreck Park was the day's number one news, it was estimated by YLE taht we reached over 2 milloin people in two days. We acquire 15-20 new members every year, but we also loose about 5-10 old members.

Involvement of youth, community, non-traditional audiences and/or people with disabilities.

Youth is involved vai school field trips to the events MAS.Fi is presenting at. Last year MAS.Fi stand was the most popular stand with more than 5000 students visiting it at HEUREKA science center's field school day. As a scientific society, MAS.Fi participates the national science days and the "night of science" every year. Our presentations and stands have always been among the most popular at the House of Science where the Finnish Learned Societies gather. Vision is a mandatory sense for the participation in our activities for safety reasons but other than blind, we've had many disabled people participating and even diving in our activities. The def are actually superior in underwater communication.

Contribution to intercultural dialogue and to the protection of cultural diversity.

MAS.Fi was the primary and responsible organizer of IKUWA7 the worlds largest scientific conference in maritime archaeology, often called the "olympics of the underwater arhaeology", as it's organized every 4th year. The conference had participants around the world and consequently MAS.Fi became a UNESCO acredited NGO. The co-operation within UNESCO activities constitutes a major part of our intercultural dialogue. The Baltic Sea 3D Shipwreck Inventory is being recruited into UNESCO NGO programs as we speak and MAS.Fi will be leading its activities.

WIthin its own events and research expeditions MAS.Fi has always had people of foreign origin and from various sexual and cultural minorities. This is very natural to diving, as when under water, there are no language barriers the hand signals being international. One can't distinguish sex, color or any other human attributes either, as one is clad in thick dry-suits and lots of cumbersome equipment.

Transferability of the initiative to other contexts and its scalability potential.

AS said before, the Baltic Sea 3D Shipwreck Inventory is being recruited into UNESCO NGO programs as we speak and MAS.Fi will be leading its activities. MAS.fi has already had workshops about scaling the work Baltic wide, next one

being the 27th of this month. MAS.fi is, together with UNESCO NGO board, chairing a dedicated session to this matter in the next IKUWA8.

Any related work that still needs to be completed, if applicable.

There are so many wrecksites in the Baltic Sea, that it will take many decades - if not a century - to survey them all. Hence there's work to be carried out for several generations to whom we have now set an example: it can be done!

Interim or Final Evaluation Report

PDF	Finnish_Heritage_Agency_e... (131 KiB download)

European and international dimension

European significance of the project/initiative/nominee.

Maritime archaelogy in Finland is specifically about the history of intra-European trade and cultural exchange, as Finns lack the influence of naval history not having had one before 1917. Thus almost all wrecksites are of signifficance to our shared European cultural heritage. Whether it's about the ship's construction methods, origin of the wood used or the vessel itself -or- about its cargo and passangers naturally depends on the research questions and point of view. Nevertheless, the vast majority of shipwrecks MAS.Fi has surveyed are of foreign origin from elsewhere within Europe. MAS.Fi believes that even though seas are seen a divider on the maps, they are actually the "internet" of historic and ancient cultures, through which the cultural innovations and ideas spread and which ultimately fostered the idea of a wider political and trade union. E.g. the Hanseatic league was "proof of concept" for EU, as they mitigate many conflicts.

Costs of the project/initiative

Costs of the project (in euro), financial and management arrangements, funding partners and/or the type of funding.

MAS.fi annual turnover/expenditure is typically about 50.000€ of which about half is covered by external funding from private trusts or other external donators. The other half, society's own funding, is collected via participation and membership fees. On certain years MAS.Fi has also received small grants from the Finnish Heritage Agency. All funding is collected annually, as there are no permanent external funders. The first international funding was received this year from the Lloyd's Register Foundation (£10.000). Our previous funders can be found here: https://www.mas.fi/fi/tue-toimintaamme

Since the Baltic Sea 3D Shipwrek Ontology is the primary function of our society, it's difficult to separate it from the rest of our operations, as the field work associated costs constitute about 90% of our expenditure. The annual financial statement is typically very closely balanced i.e. trunover = expenditure as required by the Finnish law for societies.

Funding provided by the European Union or the EEA/Norway Grants (including programme, year and amount of the Grant), if any.

None

Additional information

How would winning the European Heritage Award / Europa Nostra Award benefit you, your project and/or your organisation?

> It would signifficantly help us to achieve our program goal in several ways of which the most important are:
> 1) International acknowledgement and credibility so that we wouldn't have to prove ourselves again and again in each Baltic state
> 2) Provide funding for yet another year of field work
> 3) Create visibility among potential Euroepan partners and facilitate contacts thereto

In case this submission is the winner of the Grand Prix, what will the monetary award be used for?

> To cover the equipment, rental and consumables costs of our 2025 field work season. Our biggest needs for external funding are the rental costs for research vessels, their fuel, dating laboratory services etc. All volunteers pay for their personal costs like food and lodging.

In case this submission is the winner of the Grand Prix, who will be the recipient of the monetary award?

> The Maritime Archaelogical Society of Finland for which mr. Juha Hakala is the treasurer of.

How did you find out about the European Heritage Awards / Europa Nostra Awards?	Other
Is this the first time that this entry has been submitted to the European Heritage Awards / Europa Nostra Awards?	Yes
On a scale of 1-10, how satisfied are you with this online submission form?	✓ 8

Do you have any comments on the application form or suggestions that you would like to share with us?

> On some questions it feels like the application form is generic for everyone - even if one chooses the category in the beginning. This however, is only my personal impression, *not* a fact

By submitting your data, photographs and other material to the European Heritage Awards / Europa Nostra Awards you agree to the processing and sharing of your data in accordance with Europa Nostra's	Privacy Policy	. Please check the box to indicate you agree with the Privacy Policy.	✓

Log in to european-heritage.awardsplatform.com to see complete entry attachments.



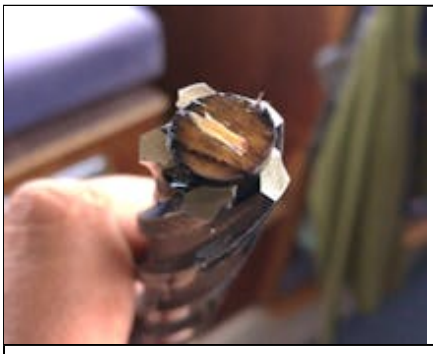
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