

Deep Network Inspiring Practices

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1. Introduction

The Deep Network is an international collaboration between marine researchers, educators, and activists. Over 40 participants from more than 10 countries currently make up the Deep Network Membership. Our aim is to create a shift from engaging in/non-formal learners to participating in pro-climate action. The Network's joint purpose is to understand our adult leaner's needs and interests and formulate learning objectives based on this: Learners achieve best when their learning is reinforced and supported by being relevant to their lives, work, and interests. By building an interdisciplinary network of adult educators, ocean scientists, activists, and members within the ocean tourism branch, we examine learning objectives from multiple perspectives, providing a space for cross-sectional exchange of information for exactly this purpose.

This E-book is a collection of *Inspiring Practices* of educational material that inform the adult learner and promote sustained interest in marine science and conservation. The purpose is to highlight existing, effective initiatives and share tips and information for what should be considered when planning a project that aims to address adult learners in engaging and changing their behaviours and relationships with the ocean. Eight existing initiatives are highlighted, and each has been reviewed by an external review board that consisted of three reviewers: a scientist, an adult educator, and an adult learner. Bringing three reviewers from different professional backgrounds into the room together provides an opportunity to recognize different strengths and possible shortcomings that can only be addressed when regarded out of the bubble, from different vantage points and expertise.

In the next sections we will introduce each initiative with a summary and some information based on a form that was filled out by each contact person of the Initiative and brief comments from the reviewers. Then we will show some results and discuss some of the necessary inputs that play a role in making a project successful. Finally, we will compile a section of recommendations, that we have collected over our collaborative Deep Network Hub meetings and the Inspiring Practices review process. These recommendations could help you design sustainable and effective projects, focusing on fostering behavioural change and sustained interest in marine conservation.



2. Inspiring Practices

An inspiring practice involves intentionally cultivating habits, mindsets, and connections that spark passion, creativity, and positive impact, both for individuals and organizations. It serves as a model or example for others, inspiring replication, or adaptation to drive further progress and impact. The following projects that we have compiled showcase a broad array of diverse types of initiatives, at various stages, and different funding availabilities. However, the connecting link is that each project attempts to involve adult learners in some way with Ocean Literacy and each project inspires a different approach to do so, leaving us with an array of options and learning points.

ECO_CARE: An Exchange Program on Empathy, Compassion, and Care in Water Governance, from the Perspective of Integral Ecology.



Project Description:

ECO_CARE is a collaborative project between the UiT - Faculty of Law, Universidade Federal do Estado do Rio de Janeiro (UNIRIO), the Chiquitano indigenous people from Mato Grasso in Brazil. These partners work together to address the community organization's needs concerning water, water literacy and sustainability. The Chiquitano people help us decolonise with knowledge about indigenous law and storytelling, and students contribute to research planning and implementation.

Interdisciplinary Collaboration:

Law, indigenous knowledge, design thinking, marine sciences, education, planetary health.



Evidencing of active participation:

video documentaries, workshops, press releases on our website, living labs, seminaries, students-led initiatives.

Implementation of trainings, lectures, case studies, practical exercises, etc. in the initiative:

Part of the project is to establish a three-month study program for master's and PhD students in law from both Norway and Brazil. Students will be introduced to and take part in critical legal research and community-based research. The goal is to both internationalize the law education programmes in Norway and Brazil and give members of different communities a voice in the academic arena.

Efforts for inclusion:

More than 130 publications, 34 videos, more than 15 satellite projects, 5 indigenous villages and their schools involved in the projects.

Efforts for accessibility:

1. Involvement of academic staff, students, and indigenous scholars

2. more than 10 exchanges of students and staff; 2 major journeys to report back the cocreated project results to the communities

Project Funding:

HKDIR: Direktoratet for høyere utdanning og kompetanse (Norway)

Reviewer Comments:

Positive feedback with high remarks regarding how transparent and well documented project plans and results are. All the resources are on the web page in multiple languages and points of cross pollination across different groups, as well as published documents in open access journals, videos, response from indigenous individuals etc.

The reviewers were asked to give an **overall** score on IMPACT, ACCESSIBILITY, and DISSEMINATION on a scale of 1-5 (5 being the highest score). Following are the scores of this project:

- IMPACT: 5
- ACCESSIBLITY: 5
- DISSEMINATION: 5

Project contact person and website:

Margherita Paola Poto

https://en.uit.no/project/ecocare



Fins into the water ocean literacy into practice

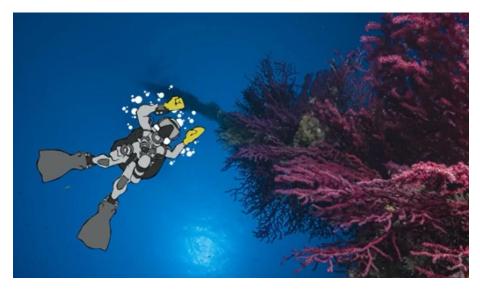


Image: screenshot taken from https://youtu.be/MUR7AxTHXf4?si=2odaTPU0luqIWVF4

Project Description:

This initiative was born from decades of experience in the diving sector and has been developed collaboratively with representatives of the industry. Employing a bottom-up approach, drawing from rich ecological knowledge of local individuals in Sardinia, all actively participated in crafting a manual tailored to be easily comprehensible for non-expert audiences. This manual has been used as a baseline for subsequent restoration interventions and projects.

Interdisciplinary Collaboration:

This initiative was conceived to engage both the diving professionals and the general audience into this outreach initiative. The expertise used for this project development were in the field of earth sciences, biological and ecological sciences and into the Blue Economy sector including the multidecadal expertise on diving professionals and SCUBA trainers.

Evidencing of active participation:

Social media algorithms are normally used by the enterprise to assess the posts visualization.

Implementation of trainings, lectures, case studies, practical exercises, etc. in the initiative:

The manual has been distributed during a session of a Blue School project and a critical reading session was developed around the reading of this resource.



Efforts for inclusion:

The effort for inclusion put into this project involved recognizing the expertise of professionals engaged in resource development. It provided an opportunity to appreciate the long-term commitment of local professionals and to collaborate by sharing knowledge and field experience.

Efforts for accessibility:

The manual has been shared in a digital version and is currently stored in the Aquadocs repository. The English version has been endorsed as a UN Decade resource and the Italian version has been also printed to be distributed as hardcopies to all the interested stakeholders.

Project Funding:

Spanish National Agency

Reviewer Comments:

Positive remarks regarding the project preforming and carrying out the necessary requirements for this type of project. A clearer online presence (website) may have been beneficial in being able to determine overall impact of this project.

The reviewers were asked to give an **overall** score on IMPACT, ACCESSIBILITY, and DISSEMINATION on a scale of 1-5 (5 being the highest score). Following are the scores of this project:

- IMPACT: 3
- ACCESSIBLITY: 2
- DISSEMINATION: 3

Project contact and website:

Martina Gaglioti

https://www.researchgate.net/publication/373597899_FINS_INTO_THE_WATER_OCEA N_LITERACY_INTO_PRACTICE-

<u>The Bloop diver travel a journey between geology and marine ecology in the Tav</u> <u>olara-Punta_Coda_Cavallo_MPA</u>

https://youtu.be/MUR7AxTHXf4?si=2odaTPU0luqIWVF4



Guardians of the Blue



Project Description:

Guardians of the Blue works on 3 main topics. Mitigating the impacts of the lionfish invasion: it is an invasive species that is currently decimating native species and transforming local marine ecosystems. Guardians of the Blue set out to hunt lionfish daily, and sell them to their customers, coastal fisheries, and restaurants around Byblos. This is an opportunity to educate the local community on invasive species and the state of the native ecosystem. Additionally, Lionfish jewellery is created with the fins and the tails of the lionfish, to raise further awareness on the topic. The second project is underwater cleanups: clean ups are organized around the coast of Byblos and in the UNESCO World Heritage harbour of Byblos. To date, 3,6 tonnes of waste have been removed from the sea floor, with the help of more than 20 diving volunteers and the local fishermen community. These cleanups provide an opportunity to educate divers and the local community on marine waste and its impacts. The third project is developing ocean literacy in Lebanon: for now, information is mostly disseminated through the Instagram account @guardiansoftheblue and at the diving club. Images and videos of different marine species that are encountered during the dives as well as ocean facts are typically shared. And finally, Guardians of the Blue have also translated the Mediterranean Sea Literacy brochure of EMSEA (European Marine Science Educators Association) in Arabic, which will be one of the first ocean literacy publications in Arabic!

Interdisciplinary Collaboration:

Scuba diving, marine biology, lionfish hunting/preparation, jewellery-making, graphic design, photography/video.

Evidencing of active participation:



Before underwater cleanups, a call for volunteer divers was posted, which led to 3 divers coming to help. When a post about "sharks in Lebanon" was posted during a social media campaign, 2 people reached out about their own experience with sharks in Lebanon, which led them to be interviewed by a local newspaper.

Since Guardians of the Blue started posting marine species from their dives on Instagram, more Lebanese divers have been doing the same and raising awareness to their own communities!

Implementation of trainings, lectures, case studies, practical exercises, etc. in the initiative:

We train scuba divers on safety measures and best practices for underwater cleanups. The training is designed hand in hand with Xiphias Diving, and incorporates notions about local marine life, marine pollution, and marine protection. We also train divers on how to hunt lionfish.

Efforts for inclusion:

At the moment, no specific actions.

Efforts for accessibility:

Our social media posts are available in Arabic and English. We try to use as little scientific jargon as possible and make our explanations relatable and easy to follow.

Project Funding:

Currently, this project does not receive any external funding.

Reviewer Comments:

This is an impressive project with a massive undertaking, comprehensive approach and strong network. Open transparency with quantifiable values about how much trash is cleaned up and how many lionfish are caught. And all this done with no external funding!

The reviewers were asked to give an **overall** score on IMPACT, ACCESSIBILITY, and DISSEMINATION on a scale of 1-5 (5 being the highest score). Following are the scores of this project:

- IMPACT: 5
- ACCESSIBLITY: 4
- DISSEMINATION: 5

Project contact and website:

Laura Khatib

https://weareguardiansoftheblue.org/



KOGIA



Project Description:

Kogia is a nonprofit ocean conservation organization. The primary project is a digital library of high-quality photos and videos of marine wildlife and scenery. This library is freely accessible for to scientists, educators, conservationists, and activists who are working to protect the oceans. Aside from the library, KOGIA produces films and run impact campaigns aimed at shifting attitudes and policy, while also helping people connect to the beauty and importance of the oceans.

Interdisciplinary Collaboration:

Predominantly film makers and photographers.

Evidencing of active participation:

We launched our beta library with a limited amount of footage in the spring of 2023 and since then we have shared footage with over 100 library members based out of over 40 countries. This has made it clear to us that there is a demand for free high-quality media within the nature conservation community and has encouraged us to develop our official library, which is launched in April 2024.

Implementation of trainings, lectures, case studies, practical exercises, etc. in the initiative:

Not at present

Efforts for inclusion:

Our organization was founded by two mixed-race individuals who have lived and travelled across the globe and to whom inclusivity is the only viable way to operate. Our team of 9 includes 7 nationalities. We are also working to decolonize nature storytelling through a fellowship program which we will launch later this year. Our aim is to support



and amplify the voices of emerging conservation storytellers around the world, to tell stories from their own communities and ecosystems.

Efforts for accessibility:

To access the library, members need to fill out an application form, and this can be done in any language. The application process is also designed to be as simple and straightforward as possible.

Project Funding:

The Patchwork Collective

Reviewer Comments:

Great potential for this project, with great image-based website. Forging more of a connection with target audience, (scientists, conservationists, educators etc.) who could use these images to connect and teach them how the images could help them with their story telling could be useful.

The reviewers were asked to give an **overall** score on IMPACT, ACCESSIBILITY, and DISSEMINATION on a scale of 1-5 (5 being the highest score). Following are the scores of this project:

- IMPACT: 3
- ACCESSIBLITY: 4
- DISSEMINATION: 2

Project contact and website:

Nessim Stevenson

www.kogia.org





s-ink: Accurate and Accessible Science Graphics Collection

Project Description:

Whether they are used in presentations, for teaching, in museums, or on webpages, geoscience graphics must either be painstakingly produced and are often expensive, or often lack scientific accuracy or visual accessibility. s-ink.org offers an online graphics collection to make scientifically accurate and universally readable geoscience graphics openly accessible and shareable to all. This includes still images (i.e. ocean circulation, www.sink.org/north-east-atlantic-ocean-circulation) as well as animations (i.e. yearly sea surface temperature, www.s-ink.org/sea-surface-temperature-2023) or the evolution of oceanic gateways, (i.e. www.s-ink.org/cenozoic-paleogeographyanimation) that provide knowledge and understanding in an easy and accessible way. These and other graphic resources further support the important work of teachers and other science communicators.

Interdisciplinary Collaboration:

S-ink is currently mainly focussed on the geosciences (including all its subfields) and graphic design. Since content on s-ink.org is openly reviewed by the science community and everyone else, it becomes almost all-disciplinary.

Evidencing of active participation:

User/usage statistics on our webpage including the origin of their access.

Implementation of trainings, lectures, case studies, practical exercises, etc. in the initiative:

Various masterclasses are given on how to create accurate and accessible science figures (in-person and online).

Efforts for inclusion:

- All content is free



- All content is annotated with ALT text and visually accessible (i.e., colour-vision deficiency friendly)

- Comments on graphics and submissions of graphics is enabled for everyone

Efforts for accessibility:

- Only visually accessible (i.e., colour-vision deficiency friendly) content is shared

- An effort is made to provide a web platform that is easy to use and to search for content

- Web page design is done following the Web Content Accessibility Guidelines (WCAG)

Project Funding:

Currently The Geologists' Association and iEarth (The Center for Integrated Earth Science Education)

Reviewer Comments:

This project has the potential for a significant impact by laying the groundwork for changing or developing a different narrative about how science is shared. It gives a good attempt at providing resources about how to make a good figure. One way to get some feedback about how useful s-ink is, would be to interview s-ink users (directly, or have them fill out a short questionnaire).

The reviewers were asked to give an **overall** score on IMPACT, ACCESSIBILITY, and DISSEMINATION on a scale of 1-5 (5 being the highest score). Following are the scores of this project:

- IMPACT: 4
- ACCESSIBLITY: 3
- DISSEMINATION: 2

Project contact and website:

Fabio Crameri

https://s-ink.org



Save The Waves App



Project Description:

The Save The Waves App empowers coastal users to monitor coastlines and report issues that they encounter. Adult learners are able to put in to practice the knowledge that they are developing around the ocean and coastal threats, such as trash, erosion, access, water pollution, and many more. The App is also a platform to teach individuals about these issues and how to identify them, and the role that individuals can play in tackling them, through our App training sessions. Climate change is intrinsically linked to most of these coastal issues, so by reporting these threats on the App individuals are empowered to be stewards of their coast in a simple yet impactful way.

Interdisciplinary Collaboration:

This initiative bridges fields of expertise that interact with the coastal ocean. From marine and freshwater biology to coastal oceanography and morphology, coasts and watersheds are very dynamic environments that require an interdisciplinary approach. Moreover, our work focuses heavily on the local communities that rely on these environments, which requires an additional set of skills to understand the social, cultural, and economic dynamics that drive the issues we are working on.

Evidencing of active participation:

Save the Waves App has worked on social media giveaways in the past which include a specific hashtag to be able to identify the direct link from the social post to the participating App report. It has worked with some success, although it seems to undercount the number of participants as not everyone remembers to use the hashtag. Over 700 issue-reports from more than 40 countries has helped catalyse over 20 direct actions to reduce the issue reported (the plans are to ramp up the process to make this number larger). Additionally, in the past 3 years there has been a consistent user growth path, gaining at more than 1500 new Save the Wave App downloads every year. Since the project is an app, it is easy to measure its reach and, to some extent, its impact.



Implementation of trainings, lectures, case studies, practical exercises, etc. in the initiative:

There are regular trainings that are designed to address the audience, aiming to explain the importance of protecting coastal ecosystems and all the benefits that are derived from them, then describing some of the main issues that are faced (relevant to the audience), and then explaining how to participate and use the App as a monitoring tool, and how their reports are used to solve the issue. These are most effective in person, followed by a mapping exercise where people can use the App, but can be done over Zoom as well.

Efforts for inclusion:

The App has been translated into 4 languages: English, Spanish, Portuguese and French. These cover most of our partners, especially in Latin America and Europe, but are not an exhaustive list of languages from all of our partners. The app is also available for iOS and Android, allowing people with any type of smartphone to use this tool, considering smartphone usage in different geographies.

Efforts for accessibility:

The reporting process is kept simple and easy to follow so that it is not burdensome and does not require technical knowledge of the issues to be able to participate.

Project Funding:

Schmidt Marine Technology Partners

Reviewer Comments:

This project has a clear target group and has strong coalition building with partners already in the field. This coalition building between partners is a valuable learning initiative. Transparency in their commitment to open data and many resources, campaign/news updates, financial reports, are all available and well documented.

The reviewers were asked to give an **overall** score on IMPACT, ACCESSIBILITY, and DISSEMINATION on a scale of 1-5 (5 being the highest score). Following are the scores of this project:

- IMPACT: 5
- ACCESSIBLITY: 3
- DISSEMINATION: 5

Project contact and website:

Diego Sancho

www.savethewaves.org/app



The Poetry of Science

The Poetry of Science

Project Description:

By translating complex scientific research into poetry, "The Poetry of Science" likely covers a wide range of subjects, potentially including the ocean's role in climate regulation, the effects of climate change on marine ecosystems, and the importance of oceans in the global climate system. The project's focus on making science enjoyable, fascinating, and occasionally odd, coupled with the aim of igniting curiosity and inspiring further exploration, provides a unique platform for adult learners to engage with the science of the ocean and its connection to climate change.

Interdisciplinary Collaboration:

The initiative described as blending poetry with science is inherently interdisciplinary, uniting diverse fields of expertise to create a novel approach to education and communication. The different fields of expertise brought together in this initiative include: science, education, science communication, arts, and the humanities.

Evidencing of active participation:

Understanding the success of 'The Poetry of Science' comes from a variety of metrics and personal interactions that highlight its impact and reach. The blog itself gets over 100,000 views a year, indicating a strong and sustained interest from a global audience. This level of engagement suggests that the fusion of poetry and science resonates with many people, offering them a unique and accessible way to explore scientific concepts. Additionally, the podcast associated with the blog has achieved over 150,000 downloads. This significant number of downloads reflects a dedicated listenership that values the content, further underscoring the project's success in making science engaging and accessible through the medium of poetry.

Beyond these quantitative metrics, the qualitative feedback I receive is equally telling. Comments on the blog and podcast episodes often express appreciation for the way complex scientific ideas are made understandable and how the poetry sparks curiosity and a deeper emotional connection to science. Emails from listeners and readers frequently convey personal stories of how The Poetry of Science has changed their perception of science or inspired them to learn more.



Implementation of trainings, lectures, case studies, practical exercises, etc. in the initiative:

Multiple invitations to give talks/lectures from a range of institutions, including schools, universities, and scientific organisations, indicating a broad recognition of the value this interdisciplinary approach brings to science communication and education. Each talk and collaboration offers an opportunity to share the project's mission with new audiences and to demonstrate how poetry and science can come together to foster a greater understanding of the world around us.

Efforts for inclusion:

A variety of scientific subjects that appeal to a diverse audience are explored, extending the reach of science through the universal medium of poetry. The Poetry of Science actively engages with different communities via social media, public speaking engagements, and collaborative projects to ensure a wide range of voices and perspectives are heard and valued. Through these efforts, I have aimed to create an inviting space for everyone to engage with and learn from science in a new and enriching way, demonstrating my commitment to bridging the gap between the scientific community and the public through the power of poetry.

Efforts for accessibility:

Both visual and audio options are available for the poems.

Project Funding:

None.

Reviewer Comments:

This project successfully provides a platform for adult learners to engage with science and includes people in conversation. The website is minimalist and clear with an effective use of images. Podcasts read out the poem, which is good for accessibility.

The reviewers were asked to give an **overall** score on IMPACT, ACCESSIBILITY, and DISSEMINATION on a scale of 1-5 (5 being the highest score). Following are the scores of this project:

- IMPACT: 3
- ACCESSIBLITY: 4
- DISSEMINATION: 4

Project contact and website:

Sam Illingworth

https://thepoetryofscience.scienceblog.com/



Marine Conservation Society - Youth Ocean Network



Project Description:

The Youth Ocean Network (YON) meet up virtually once a month to learn about marine conservation, contribute to the work of our organisation, and meet other young people with similar interests. The age range of the YON is 13 to 25 years old, which results in young people from a variety of backgrounds, experiences, stages in life and interests coming together. One group is 13 to 17 years, the other 18 to 25, but all come together regularly. The YON has grown from a group who gather virtually to learn about marine conservation, careers, & opportunities, to a family of proactive, collaborative young leaders who are truly involved in every area of our work. Members of the YON have written for our magazines, website & socials, got involved in our (and started their own!) campaigns, led events, created their own videos, run workshops, and been invited to conference representing the Marine Conservation Society. As of March 2024, the YON has:

- 169 members across England, N Ireland, Scotland & Wales
- 45 are 13 to 17, 124 are 18 to 25 years old.
- had over 35 virtual calls
- met & worked with 20+ of the organisations staff
- welcome external guest speakers
- is discussing a youth panel & young trustee with our board

Marine conservation topics discussed and worked on together via both virtual and inperson activities include communications & campaigns, volunteering, citizen science, wellbeing, eco-anxiety, marine policy & advocacy, chemical pollution, the Good Fish Guide, aquaculture, Beachwatch (a beach cleaning project), marine wildlife & more. All these topics involve inclusive discussion and the opportunity to learn how our behaviour is affecting both the climate and our blue planet.



Interdisciplinary Collaboration:

The Marine Conservation Society is also dedicated to Equity, Diversity & Inclusion, with a working group gathering regularly to ensure that EDI work is moving forward. YON has worked closely with the Social Science team, as well as HR, Learning & Community Engagement, and wider management to ensure the Youth Ocean Network (and young people in general) are embedded in every element of our work. Different fields of expertise are regularly put together in the "zoom" room - for example one of the Good Fish Guide managers collaborating with the Youth Ocean Network on their work.

Evidencing of active participation:

Many members of the Youth Ocean Network have joined after seeing and online post. Feedback and thoughts are constantly gathered through close networking and open lines of communication between members within the Youth Ocean Network. In the past two years the network has grown from zero to over 160 members, which is continuously growing month on the month. While having as many people as possible is always welcome, the focus is still quality over quantity. Through the YON Network, members get to know each other and continue to collaborate closely outside of the YON. YON members are being invited to conferences to run workshops on young people in marine conservation today (representing the MCS- Marine Conservation Society) and are working together to plan art projects and in-person events across the UK for 2024/25.

The impact the YON have had internally across the organisation has also been substantial. Staff feedback, surveys & experiences with the YON are consistently positive. The YON has helped the Marine Conservation embed young people into their work.

Implementation of trainings, lectures, case studies, practical exercises, etc. in the initiative:

Monthly zoom calls always have an educational element and usually a "guest" speaker who then runs a workshop. Over 18's in the YON area regularly invited to other MCS training opportunities e.g., our Beachwatch virtual training. Practical activities are included in all in person events.

Efforts for inclusion:

As with all our work, we want to reach as wide an audience as possible. We all have the right to experience & learn about our ocean.

Efforts include:

- reaching out to charities who work with underrepresented groups to welcome new YON members



- inviting youth charity members along to our events e.g. young carers
- where needed, event resources & posters have been bilingual (e.g., Wales)
- individual conversations have been had before joining to ensure all additional requirements are catered for before joining at virtual call
- regular communication with inland community groups, universities, charities etc to grow the inland members of the YON

Efforts for accessibility:

- physical accessibility requirements to in-person events entirely thought of/discussed with those who need them
- any virtual accessibility requirements discussed on joining the network
- consider appearance of any posters/resources

Project Funding:

It is core funded by the Marine Conservation Society and has had contributions in the past from the Heritage Lottery Fund.

Reviewer Comments:

This is a project has a great impact in that it is targeting young people and shows a notable example of the importance of including young people into the conversation and how communication lines differ depending on the target group.

The reviewers were asked to give an **overall** score on IMPACT, ACCESSIBILITY, and DISSEMINATION on a scale of 1-5 (5 being the highest score). Following are the scores of this project:

- IMPACT: 4
- ACCESSIBLITY: 5
- DISSEMINATION: 4

Project contact and website:

Katie Macfarlane

https://www.mcsuk.org/what-you-can-do/fun-learning/young-people/youth-oceannetwork/

https://www.linkedin.com/posts/marine-conservation-society_iwillweek-activity-7133032041591263233-Vu8N/?utm_source=share&utm_medium=member_desktop



3. Initiative Considerations

In this section we outline different considerations that can be considered when planning an ocean conservation project. We use examples from our Inspiring Practices, and results from the Deep Network Hub meetings.

Target Groups

Determining the target groups are key to determining how the information should be disseminated. Addressing the adult learner is important, however, this can be very broad and determining exactly what type of adult learner you plan to address is just as important to consider for the effectiveness of the project.

The <u>Youth Ocean Network</u> gives a good example about how the means of communication will differ: Younger people are more likely to find out information through social media, whereas older adults less so.

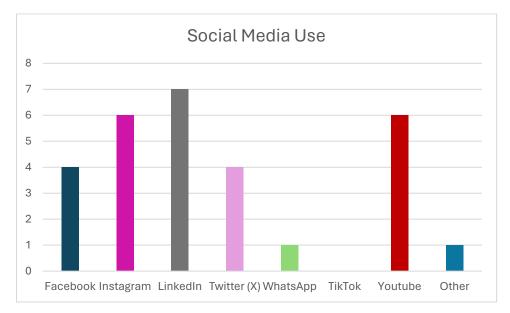
Based on discussion in the Deep Network Hub meetings, Deep Network Members summarized the unique needs for distinct types of target groups shown in Table.

	How might adults access learning?	What could be a barrier?	What could we do to support?
Late teens/ young adults	Social media, videos, reels, simulations	Traditional learning is boring, complicated concepts that take too long to understand, information overload.	make learning accessible and fun; support: interactive learning, flexibility, self- directed learning, positive learning environment, relevance to their interests and lives
Adults/families	Social media, guided tours, online courses, lifelong learning initiatives, documentaries	difficulties to understand, lack of time, lack of motivation, work overload, family obligations, lack of motivation	Guided training; Come to them, do not expect them to come to you! Scientifically accurate, visually accessible, resources, make knowledge simple.
Older adults	Mainstream media; reading article on magazines and newspapers	Misinformation; Limited access to high quality learning material; access to internet, literacy, lack of resources, different abilities	Provide more educational opportunities for older adults; use role models in 4" ads in social media; development projects, outreach events in local communities

Table 1. Adapted from Hub Meeting 1, Activity 1 Group discussion results. For the full text see meeting summaries on <u>https://www.deepnetwork.eu/meetings</u>



The inspiring practices highlighted in this E-book all stated that they target audiences of "All age groups" with the exception of Youth Ocean Network targeting "Young Adults." The geographical range of the projects are also mostly "international" with two initiatives focused on "country." Figure 1. Depicts what type of social media is used in the highlighted initiatives:



However your initiative decides to approach social media, what we have detailed in this section shows that it is worth taking time to build a strategic approach, especially if you are targeting a broad demographic.

Tip: Spend a morning with a diverse group of project stakeholders, splitting your target group them by age, interests, goals, and challenges, and research which media would be most effective.

Project Monitoring and Measuring Behavioural change in adult learners:

Monitoring a project helps catch problems early on and keeps things on schedule, making it easier to adapt when issues arise and ensure everything runs smoothly until the end. It also gives a clear picture of how things are progressing and how adult learners are responding to the initiative outputs. Some aspects that were monitored in the highlighted initiatives include:

- Downloads: source, countries, rates
- Actions and volunteer counts
- Membership growth
- Partnerships
- Website and social media engagement (comments, shares, likes)
- Feedback surveys
- Yearly reports



Assessing behavioural change can only really be achieved through monitoring throughout the project and an essential part of project planning is to determine how and what to monitor from the onset of a project.

Tip: Build different monitoring methods and tools into your initiative. Think of two or three key things you want to change and use these as "indicators." Use these different methods - surveys, interviews, observations, tests, or performance indicators – before and then after engagement with your target group. What changed? Why is this important?

In hub meeting 2 and 3 these topics were discussed amongst Deep Network Members. A general outline was developed including:

- 1. Who and what organisations should be targeted to join the call to action to educate local communities? (e.g., non-profit organizations, local museums, universities, etc.)
- 2. How learners should be engaged—what method of learning?
- 3. What do they need to know?

(Adapted from the 2nd Hub meeting summary: <u>https://www.deepnetwork.eu/meetings</u> to see full text).

Following these steps, inherently invites space for interdisciplinary networking and collaboration. Once the who, how and what are set in place, to monitor behavioural change is to ask people how they feel and if they changed how they felt throughout the project. Depending on the scale and resources of a project this can be difficult, but the main consensus to accomplish this during the 3rd Deep Network Meeting were to hand out evaluations after a certain activity (events, workshops, games, lessons, etc.) and then send out re-evaluations again later to see if there are lasting effects.

Some additional criteria to consider when developing a project that can be considered best practice include:

- Documentation
- Effectiveness
- Efficiency
- Relevance
- Replicability/ adaptability
- Networking
- Sustainability
- Promotion/visibility

(This list is adapted from the "Best Practice Research" by Athens Lifelong Learning Institute, 2023).



Funding

Finding sufficient funding for projects can be difficult, especially when your planned initiative is interdisciplinary. Talk to funders, communicate with exploratory emails, and phone calls to make sure that your planned project objectives align with their funding priorities. Make sure you note all forthcoming deadlines, even if you currently have no intention of applying, so that your partnership can adapt and react flexibly.

Here we list some different methods that were used by the highlighted Inspiring Practices to search for funding:

- Open calls (circulated by host institutions)
- Look for grants or opportunities to pitch to new funders/foundations
- Word of mouth, pitching initiative to high-net-worth individuals
- Look for funds through newsletters such as the ECOP (Early Career Ocean Professionals) Programme newsletter, the Ocean Decade Network newsletter, LinkedIn, and on the websites of the main marine projects' funders
- Fundraising teams at established organizations

Funding organizations that currently fund the Inspiring Practices:

- ECO_CARE: HKDIR Direktoratet for høyere utdanning og kompetanse (Governmental)
- Fins in the Water: Spanish National Agency (Governmental)
- Guardians of the Blue: Currently none
- KOGIA: The Patchwork Collective (Private)
- S-ink: The Geologists' Association and iEarth (Governmental)
- Save the Waves App: Schmidt Marine Technology Partners (Private)
- The Poetry of Science: None
- Youth Ocean Network: Marine Conservation Society (Private)

The Deep Network is funded by Erasmus+, with calls for educational opportunities twice a year, and climate change education a long-standing priority of the funding. Remember that European level funding opportunities can provide you with a platform for transnational learning and exchange. You can find your national Erasmus+ agency here: https://erasmus-plus.ec.europa.eu/contacts/nationalagencies?facets_permanent%7Cfield_eac_topics=1964



Dissemination Score vs. Dedicated human resource for outreach



This figure shows that when there are dedicated resources for dissemination and market strategies, the dissemination effectiveness was scored higher (except for Guardians of the Blue).

It is not surprising that those projects that rated highest by the reviewers on overall dissemination impact were (with the one exception) the initiatives that also have more means to funding. This is why it is important both for those involved in these projects and when planning a project to include enough funding for marketing and outreach.

4. Recommendations

In this section we will list some recommendations from our external reviewers, and lessons learned through discussions during the Deep Network Hub meetings.

Interdisciplinary Collaboration

Interdisciplinary collaboration between scientists, educators, and NGOs offers numerous benefits that extend beyond the boundaries of each discipline. Scientists bring valuable expertise in data collection, analysis, and research methodologies, providing crucial insights into the state of the ocean and its ecosystems. Educators play a pivotal role in translating scientific findings into accessible knowledge, fostering public awareness, and promoting informed decision-making among diverse audiences, including students, policymakers, and the public. NGOs contribute grassroots perspectives, community engagement, and practical solutions to conservation challenges, bridging the gap between research and action on the ground. By working together, these disciplines complement each other's strengths, supporting novel, and holistic approaches to ocean conservation. Communicating and collaborating outside



of one's respective field, promotes mutual understanding, creativity, and problemsolving skills essential for addressing complex environmental issues effectively.

Alignment with Established Programs

Aligning your project with established programs provides access to resources, credibility, and collaboration opportunities, streamlining implementation efforts and maximizing impact through collective action. It enhances visibility and offers a platform for policy influence and advocacy, and impactful approaches to develop the necessary science for a sustainable ocean future. For example, the <u>Ocean Decade</u>'s focus on inclusive and equitable approaches to ocean knowledge through its' <u>10 different</u> challenges make it a beneficial program to find collaborations and initiatives within ocean literacy that aim to reach diverse audiences and remove barriers to ocean access and engagement.

Accessibility

Luckily, attention to accessibility in ocean conservation projects is slowly but surely improving. Often it is an afterthought, and then difficult to implement at later stages of the project, and therefore, it is vital to ensure accessibility and inclusivity from the onset of the project planning to promote ocean literacy and stewardship. Access to marine environments allows people of all abilities to directly connect on an emotional level with the ocean, creating a deeper appreciation and commitment to conservation. By incorporating accessibility considerations into project design and implementation, barriers are removed, making these efforts more equitable and impactful for the entire community.

The Thalassophile Project Framework provides guidance and resources to help organizations and projects incorporate accessibility considerations into their design and implementation. See the <u>framework here</u>: <u>https://www.thalassophileproject.org/the-framework</u>



5. Reviewer Profiles

Scientific Reviewer: Alice Lefebvre

Dr Alice Lefebvre research focusses on the interaction between hydrodynamics (movement of water), geomorphology (shape of the Earth) and sediment dynamics (how particles are moving) with a particular interest on underwater dunes. Alice studied geology and oceanography at the University of Bordeaux (France) and Southampton (UK). In 2009, she graduated from a PhD in coastal oceanography at the National Oceanography Center, Southampton. Since then, she has been working at MARUM – Center for Marine Environmental Sciences, University of Bremen, Germany. Her primary interest is the complex interaction between hydrodynamics and large dune fields, in rivers, estuaries, tidal inlets and shallow continental shelves. She likes to be able to combine different methods to have varied perspectives. That is why, over the years, she has worked with field data, laboratory experiments and numerical modelling.

Dr Alice Lefebvre is also a mother of 3 children (currently all three in primary school). Through her position in the collective of Gender Equality Officers at MARUM, she promotes principles of Equity, Diversity, and Inclusion.

Adult Educator Reviewer: Martin Bloomfield

Martin has taught and worked in dyslexia and neurodiversity awareness for over twenty years, winning a Commendation for Equality, Diversity, and Inclusion from the British Council, sitting on a UK Parliamentary Advisory Board for neurodiversity, participating in the UK's Centre for Social Justice "dyslexia and the criminal justice system" roundtable, and more recently taking up a position as a Trustee for the Accessible Learning Foundation, launched in Westminster Palace. In March 2024 he was invited to speak at UNESCO, participating in a panel discussion on educational initiatives to help neurodivergent learners worldwide.

Heavily involved with European-funded projects such as The Dyslexia Compass (aligning international dyslexia measurements across Europe), The SEN Toolkit (providing free neurodiversity training for mainstream teachers) and Autism Spectrum Pathways (helping autistic jobseekers find stable and fulfilling employment), Martin runs the Dyslexia Bytes project, raising awareness of dyslexia from an intercultural perspective, and has created the Dyslexia Map, the world's most comprehensive map of dyslexia providers across the globe.

He is currently a Distinguished Fellow of the International Forum of Inclusion Practitioners; a member of DAE – Dyslexia in Adults across Europe; and a director of Nigeria's Amina Dyslexia Centre.

Martin is Editor-in-Chief of NeuroConverse, a neurodiversity-focused academic journal; delivers consultancy, lectureships, keynotes, teacher training, and awareness courses



on dyslexia and Special Educational Needs to schools, universities, government departments, and businesses across Europe; and lectures in Germany and France on applied ethics. He holds a PhD in ethics and diversity from the University of York. In his spare time, he is researching a book on intercultural perspectives on dyslexia.

Some useful links:

www.DyslexiaBytes.org www.YouTube.com/DyslexiaBytes www.NeuroConverse.net www.DyslexiaCompass.eu www.TheDyslexiaMap.com www.AccessibleLearningFoundation.org

Adult Learner Reviewer: Oskar Lund

Text:

6. Acknowledgments

We would like to thank and acknowledge all the Deep Network Members and participants that shared their experiences and knowledge during the Deep Network Hub meetings 1-3 in 2023. With an open and transparent conversation, we were able to touch on topics from so many different vantage points in a truly interdisciplinary fashion.

A big thank you to those who shared the Inspiring Practices, we are all thankful for your dedication to ocean conservation and the amazing work you do to increase ocean literacy. Thank you to the reviewers who took the time to discuss in detail and at length the details of each Inspiring Practice that was highlighted, and for the insights and recommendations.