Experiences of public awareness campaigns for marines protected areas and recommendations for most effective approaches

Matt Slater

ANEMONES, CORALS & RELATIVES



Citizen Sciences

attestally

Protected Area Network Across the Channel Ecosystem

Experiences of public awareness campaigns for marines protected areas and recommendations for most effective approaches.





Prepared on behalf of / Etabli par



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Experiences of public awareness campaigns for marine

protected areas and recommendations for most effective

approaches.

Expériences de sensibilisation du publique sur les aires marines protégées et recommandations pour des approches efficaces

ABSTRACT

RÉSUMÉ

Marine Protected Areas are a vital tool in marine biodiversity conservation but by their very nature they can be difficult for the public to understand and creating support is difficult without quality engagement and education of the public.

The PANACHE project enabled partner organisations on both sides of the Channel to share their experiences in this field, and to deliver public awareness work, the effectiveness of which was analysed through this project. This report discusses the findings of the project, analyses the feedback, and makes recommendations on best practice in this field.

This project came at a key time for marine conservation in the UK. The Government were in the process of a public consultation on the designation of the first tranche of national Marine Protected Areas (MPAs) known as Marine Conservation Zones(MCZs). Public support was massively helped by the PANACHE project and the result has been the successful designation of 37 MCZs in the UK. There is also now a significant level of public support for a second tranche of MCZs that has been supported by PANACHE work programme 4.1. In addition this work has also generated necessary supporting evidence in terms of survey data collected through the Panache events and survey days WP4.2 and 4.3.

Four Wildlife Trusts on the English Coast and two organisations on the French Coast delivered a total of 119 public awareness events throughout the duration of the PANACHE project, which engaged with approximately 13,000 people. Additionally networks of citizen science volunteers have added to the effects of the PANACHE programme and a groundswell of public support for marine conservation and the need for Marine Protected Areas is now in full swing.

KEYWORDS: Public Awareness, Marine Protected Areas, engagement, inclusion, methods, volunteers, citizen science, inspiration, Les Aires marines protégées sont un outil essentiel à la conservation de la biodiversité marine, mais leur nature même en fait un concept difficilement compréhensible du grand public. Or obtenir le soutien du public est difficile sans d'abord obtenir son engagement et le former.

Le projet PANACHE a permis aux organisations partenaires des deux côtés de la Manche de partager leurs expériences dans ce domaine et d'organiser des travaux de sensibilisation du public dont l'efficacité a été analysée par le biais de ce projet. Ce rapport analyse les résultats et les retours du projet, puis établit des recommandations de meilleures pratiques dans ce domaine.

Ce projet s'est déroulé à point nommé pour la conservation marine au Royaume-Uni. Le Gouvernement était sur le point d'organiser une consultation publique sur la désignation de la première tranche d'Aires marines protégées (AMP) nationales, connues sous le nom de Zones de conservation marine (MCZ). Le projet PANACHE a permis d'obtenir un soutien massif de la part du public pour ainsi aboutir à la désignation de 37 MCZ Royaume-Uni. Le public soutient aussi au massivement en ce moment-même la désignation de la seconde tranche de MCZ grâce au programme de travail 4.1 de PANACHE. Ces travaux ont également généré les preuves tangibles requises en termes de données d'étude recueillies au cours des événements PANACHE et des journées d'étude pour les WP4.2 et 4.3.

Quatre Wildlife Trusts (Associations britanniques de protection de la nature) des côtes anglaises et deux organisations des côtes françaises ont organisé un total de 119 événements de sensibilisation du public sur toute la durée du projet PANACHE, qui ont permis de rassembler environ 13 000 personnes. De plus, le programme PANACHE a également eu pour effet la formation de nouveaux réseaux de volontaires en sciences participatives qui a abouti à une vague de soutien public pour la conservation marine et la nécessité des Aires marines protégées.

MOTS-CLÉS : liste de mots-clés, en français, séparés par des virgules



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I. Why engage with the public on the issue of Marine Protected Areas?



Figure 1 - Looking beneath the surface Photo by Nina Constable.

In Europe we are in a situation where the governments of France and England are establishing Marine Protected Areas both under European requirements and national legislation. Without community support for such marine protection it is unlikely that these areas will be designated in the first place, and successful management also requires stakeholder support and co-operation.

Much work has been carried out that highlights peoples affinity with the sea but when it comes to asking people what they think about protecting areas of the sea and underwater landscapes people don't have a clear understanding about why this is important. A nationally representative survey of 3003 people was carried out in 2008 by experts in social science, commissioned by the UK statutory agency Natural England. (Rose 2012) To quote from the summary of this report;

"Less than 1% of the population can name a topographic or living element of a real undersea landscape. The undersea landscape is not something that people have thought about and there is effectively no awareness of it as a place.

44% of the population think the undersea is utterly, generally or mostly barren in 'their' region, only 10% expect it to have a 'rich mix of undersea landscapes including plants, animals and features special to this region' and just a fifth - 22% - think of their seas as containing 'distinctive landscapes' which may be 'unique to our region'. These tendencies create a powerful barrier to communicating about undersea landscapes, and mention of 'issues' such as over-fishing, pollution or the need for MPA's compounds this by invoking a sense of despair or fear of criticism (the word 'environment' for example engendered an expectation that they were going to be told to stop doing something, and 'over fishing' signals for many that fishermen are about to be criticised, which is something respondents wanted to avoid).

These findings strongly suggest that attempts to drive and build broad public support for MPA's or marine conservation using information about 'issues' or MPAs will be ineffective and sometimes counter - productive and that for most people an **indirect experiential approach** is required. The first step is to raise awareness of the undersea landscape in this way and not to proffer 'solutions' or highlight 'problems'."

The public are not easily engaged with a complex subject like MPAs. As this report suggests we need to find appealing and engaging ways to get people to appreciate their local marine environment before they are likely to want to support Marine Protected Areas, which in the public eye can be controversial and seen to be expensive. This was further supported by a 2012 report for Ulster Wildlife by Kerri Whiteside which surveyed 300 people and showed that the best way to counter the public's lack of appreciation for the marine environment is through school engagement and engagement with the public through outdoor and outreach activities. Many community engagement initiatives have been set up in tropical countries to establish locally supported marine protected areas that are very much community led (Hang Thi Minh Tran et al 2012).

For these reasons the PANACHE project partners decided to seek to provide engaging and stimulating interactive activities for the public that will get them thinking about their local marine wildlife and habitats building on successful work carried out by the Wildlife Trusts and by the French PANACHE partners. The above report (Rose, 2012) highlights something that those working in the marine education sector already know which is that the majority of people are not yet at the point where we believe we have something worth fighting for when it comes to protecting the seas. Public awareness raising is not about lecturing people about serious issues but opening people's eyes to what is beneath the surface of the sea, and fostering an appreciation and fascination with all aspects of the sea. Once people gain that appreciation and understanding, they can begin to work with us to want to protect their seas.

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II. Identifying key audiences to engage with.

The organisations involved in this work package were, from the UK; Cornwall Wildlife Trust, Hampshire and Isle of Wight Wildlife Trust, Kent Wildlife Trust, Dorset Wildlife Trust. And from France; Nausicaa, Porte de Dunkerque, Biolit, and Fish Watch Forum.

Identifying key audiences was the first main topic discussed at the start of the PANACHE project in March 2013 at the meeting of Panache partners at Plymouth.

There are many different types of people from different sectors of society and deciding which of these groups to target can be a difficult task.

It was agreed that we need to engage with key people from our communities that are likely to act as 'information multipliers', who will help to disseminate and share the information we provide them on MPAs to friends and families. Work carried out by Cornwall Wildlife Trust through the 'Your Shore' Project highlights the benefit of finding key motivated individuals who will passionately promote the need for marine conservation and management, and when provided support are capable of becoming leaders of highly useful Local Marine Groups. (Ref Your Shore final report 2012).



Figure 2. - Disseminating information via 'info-multipliers' (volunteers, citizen scientists etc.) Matt Slater

Another effective method of engagement is to work with school children. As long as you focus on state funded schools you are reaching a cross section of society and interacting with demographic groups that can be hard to reach by other means. The work of Hampshire Wildlife Trust's 'Making Waves' project and the Cornwall Wildlife Trust's 'Your Shore' project highlights the benefit of this approach. Staff at Nausicaa, a public aquarium and education centre in Boulogne, France, have trialled bringing together key stakeholders to hold interactive information days where people discuss the issues around MPAs and how they might affect them. These events are designed to help to create information multipliers that will disseminate information on MPAs to a wider audience.

As each partner has a slightly different geological area and an established local knowledge on what works well at their site the approach of this working group was to allow each one to decide on what people / sector they will target for this project. Cornwall Wildlife Trust decided to continue with the approach tried and tested in the Your Shore project to continue to engage with well motivated local people and to also attempt to target local hard to reach people using informal methods (see discussion in section 1.2). Each of the project partners involved delivered engaging public events aimed at effectively raising the awareness of their target audience to Marine Protected Areas and the marine environment generally.

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III. How best to engage?

There are many examples around the world of similar awareness raising initiatives that aim to increase public awareness of marine environments and the need for marine protection.

Some activities for engagement are more effective with a certain demographic of people. There are many different types of activity that can be used but most of the activities used by the PANACHE partners during this project fell into 5 main categories:

- Formal organised events advertised well beforehand.
- Taking part in other peoples larger events 'Piggybacking'.
- Informal unplanned events.
- Visitor centre / public aquarium.
- Citizen science activities.



Figure 3. Rockpooling at the Helford Estuary Cornwall, Photo Matt Slater

3.1. Formal events

A good example of a formal event is an organised marine event typical of those run by many different organisations in the UK (including the Wildlife Trusts). These can take a wide range of forms but are characterised by being planned in advance, advertised through printed media (via a press release), social media and websites and take place at a set time with few other natural draws for the event. Some examples of types of event are;

- Ray egg case hunts,
- Rockpool rambles,
- Coastal guided walks,
- Arts and craft activities,
- Snorkelling,
- Boat trips,
- Evening talks from guest speakers.

To be successful all have to be attractive to the public. In the UK the public have a real fascination with rockpooling and with finding or seeing wildlife so we are lucky that we usually get good numbers of people attending these types of event in the UK. This may not always be the case in France. The titles of the event and the posters / promotion have to be attractive and enticing to encourage attendance and participation. The use of scientific terms and acronyms such as MPAs should be avoided so as not to scare off or alienate people (see Appendix-Helpful hints) and any information on local Marine Protected Areas should be included subtly into the content of the event.

This type of event is useful in that it engages with well motivated people who are interested enough to attend such an event and possibly therefore the most useful in terms of local information multipliers, people who will champion the cause and will tell their friends and families what they learned about MPAs. What this type of event doesn't do is reach those who are not easily engaged with, who may have less positive attitudes to marine awareness. People who work in the fishing industry for example have very busy and irregular working patterns and may not be so well represented in the audiences of such an activity.



Figure 4. Audresselles-Plage du Noirda, Nausicaa

3.2. Piggybacking' larger events

Another way to engage with a wider audience is to join in with other larger organised events. This 'Piggy backing' has been successfully used by several of the PANACHE partners in the past. For example, Cornwall Wildlife Trust's marine team regularly attends the annual Fowey Regatta week celebrations which draw thousands of visitors to the Fowey estuary for a week each August. This large event is primarily focused on sailing but enables the Trust to run marine events within the Regatta programme and to reach a large and diverse audience. Taking part in fish festivals, music festivals and boat shows are all ways to get to talk to a different mix of people and each one has to be carefully considered but can be of great use in getting our message to a wider audience.



Figure 5. PANACHE event at Royal Fowey Regatta. Photo Niki Clear

3.3. Informal approach

Unscheduled (informal) public engagement is something that is less tried and tested but is known to work in busy spaces such as a busy beach or town centre. This again results in contact with people who may not normally come to pre-organised events. A good example of this is the St Agnes Beach Rangers project in Cornwall, supported by Cornwall Wildlife Trust where a volunteer head ranger coordinates a team of volunteer rangers who set up a 'shore laboratory' on the beach during busy summer days. A table and gazebo are set up and basic equipment such as plastic fish tanks, battery powered aerators, shallow plastic trays and lots of spare buckets are all that is needed. A good digital camera and small microscopes are also useful. From this base informal rockpooling sessions, strandline surveys and birdwatching can be carried out and hardy rockpool specimens can be brought



Figure 6. Shorelab in action. Photo Jes Hirons

back to the 'lab'. Volunteers expect to spend their time answering the questions of curious families and by giving out information on the local marine life they are raising awareness of, as well as information on the need for better marine protection and MPA's. This type of informal activity is carried out whenever the volunteers can do it during busy sunny days with good low tides. The 'shore lab' generates a lot of attention and is a very efficient way to engage with large numbers of people. Setting up a shore lab is something that also works well at the end of an organised formal event such as a rockpool ramble, if a location with plenty of passing members of public is chosen. It must be recognised that with informal engagement and 'piggybacking' you can spend time talking to people who are from outside your area (such as tourists) and who are therefore less likely to help generate local support for MPAs. However, their engagement should still be valued in terms of larger scale awareness raising.



Figure 7. Shorelab jellies, Photo Matt Slater

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3.4. Visitor centre / public aquarium

Another method of engagement is by targeting the visitors at tourist attractions or at marine visitor centres. In the case of Nausicaa, a large public aquarium in Boulougne Sur Mer, France, which has approximately 600,000 visitors per year this is a very effective method (622,720 in 2011). It is possible that the type of people who will pay to visit to a large tourist attraction may not be the priority audience for messages on MPAs –they may already be sympathetic to marine conservation concepts, but overall it is an effective method of working and certainly generates the highest numbers of people engaged. Within the UK, Dorset Wildlife Trust has two visitor centres, one at Kimmeridge and one at Chesil beach, which allows engagement with 20-25 thousand people per year for Kimmeridge and 70 thousand at Chesil.



Figure 6. Engagement is easy if you have access to a large lobster. Photo Claire Hoddinott



Figure 6. Info day at Nausicaa.

3.5. Citizen Science initiatives

Citizen science involves members of the public in collection or analysis of data. The White Paper on Citizen Science for Europe 2014 describes it in the following way.

In Citizen Science, a broad network of people collaborate. Participants provide experimental data and facilities for researchers, raise new questions and co-create a new scientific culture. While they add value, volunteers acquire new learning and skills and gain a deeper understanding of the scientific work in appealing ways. As a result of this open, networked and transdisciplinary scenario, science-society-policy interactions are improved; leading in turn to a more democratic research based on evidence and informed decision-making.

Citizen science takes many different forms. Increasingly use of modern mobile phone technology is allowing large scale citizen science projects to take place that generate significant amounts of data and engages with large numbers of people. The success of these initiatives is discussed in Roy et al 2012. Although effective for some objectives this type of 'hands off' citizen science, where the public are expected to self motivate to use an app or website is not seen to be the best option from the point of view of the PANACHE partners to directly engage people with the issue of MPAs. Whilst these techniques have huge potential for monitoring the distribution of shore species and encouraging people out into the field, it was felt that the more traditional form of citizen science as a practical activity led by qualified staff in the field was more appropriate, particularly by the UK Wildlife Trust partners. Reports from PANACHE WP 4.2 and 4.3 discuss this in more detail. The reason it features in this report is because it has been recognised that setting up and delivering citizen science projects are a great way of engaging with the public and thus raising public awareness, as well as collecting survey data. These citizen science volunteers benefit from spending quality time with trainers who not only equip them with useful skills and knowledge but expose them to a way of thinking about marine protection and conservation. These people are also valuable as information multipliers who will share what they have learned with their friends, families and communities. The WP4.2 and 4.3 Shoresearch



Figure 7. Biolit Survey, Audresselles-Plage du Noirda, Nausicaa

and Seasearch programmes are both good examples of methods of utilising well motivated members of the public and training them to help with survey work. Indirectly these people become advocates of the project and will promote MPAs to many more people, often by becoming involved in local marine groups.

Online Citizen Science programmes have to be very carefully designed in order to be effective and they need to be very simple to use and navigate around. PANACHE partners Biolit and Fishwatch Forum are both doing a great job of developing online systems for citizen science but both are looking at specific areas of research whereas the issue of MPAs is a large and complex one that is not easy to be included in this type of tool as it risks over complication and cutting engagement.

Nausicaá created communication tools to invite the public to take part in citizen science programmes (video focus, exit planning, itinerant exhibition, blog animation).

3.6. Development of Local Marine Conservation Groups

An exceptionally cost effect method of carrying out marine public awareness is to harness the enthusiasm of local volunteers to do your work for you. Expert time is far better spent training information multipliers i.e. volunteers who once given the confidence to provide simple but engaging experiences will over time result in a far wider reach in terms of raising awareness. In Cornwall the 'Your Shore' Network of local marine conservation groups that has been developing over the last few years with the support of Cornwall Wildlife Trust marine team is a great example of how a network maximises the reach of public engagement work to a whole community. Within Cornwall's five Voluntary Marine Conservation Areas CWT staff have carried out dedicated community engagement work for five years that has also resulted in the establishment of new local marine conservation groups in other areas, who are independent but closely supported by Cornwall Wildlife Trust. The work of these groups – providing public engagement events and carrying out citizen science research is a great example of best practice in cost effect and quality marine engagement. Ref. Your Shore Project 2013 newsletter. http://www.cornwallwildlifetrust.org.uk/livingseas/yourshore

The PANACHE project enabled the Cornish network of marine conservation groups to develop further during 2013 and 2014, and 3 new marine groups have formed in Cornwall. This gives a total of eight local marine groups within the county. Since 2010 the work of this network has reached over 21,000 people and there are 240 active volunteers promoting marine conservation including Marine Protected Areas in Cornwall. Through PANACHE funding two annual conferences for the Your Shore Network have been held, one at Hotel Victoria Newquay in 2013 and one at the Eden Project in 2014.



Figure 8. Your Shore Network Conference 2014 Photo Martin Mitchell

3.7. Use of social media and online campaigns

In this increasingly connected age more and more conservation organisations are turning to social media and web resources to promote conservation campaigns and raise awareness. The Royal Society of Wildlife Trusts are currently running the Friends of Marine Conservation Zones campaign which aims to raise the profile of marine conservation and encourage the public to get involved in the public consultations for MCZs and demand better marine protection. The awareness raising events run through the PANACHE programme naturally fitted with this online resource and campaign. Together they worked well but it is likely that without engaging public events and resultant press coverage there would have been far more limited reach of this campaign. Online petitions are increasingly prevalent on social media sites but with an issue as complex as appreciating marine habitats and understanding why they need better protection a simple petition is not the best way to win people over - you are looking for more than a quick click and forget about it! The stricter government guidelines in the MCZ consultation for the second tranche mean that group online petitions will not be allowed. The alternative is to use highly motivated people who are prepared to take significant time and effort to be involved in the consultation and respond individually. These people are best found by continuing with our citizen science and public engagement events as this is how we can engage those people with sufficient passion and enthusiasm as well as knowledge to help out with this important work.



Figure 9. Royal Society of Wildlife Trusts 'Friends of Marine Conservation Zones' campaign website.

IV. How to engage most effectively?

It was agreed by all partners in the PANACHE project that it is important to tailor the information provided to those present very carefully. You have to make sure you have peoples attention before you provide them with serious or complex information. It is important that the persons providing this kind of engagement are experienced in public speaking and 'infotainment'. Marine environmental education is an art form that is often underappreciated. Education experts from public aquaria and with wildlife charities are a good source of advice as are the team at the Marine Biological association of Great Britain. It is well known that a hands on interactive experience is far more engaging and attractive than a formal lecture environment. This is why using practical activities such as rockpooling, arts and crafts, crabbing, snorkelling (etc.) as a basis for our engagement activities is so successful as people of all ages enjoy getting hands on!

Engagement should be inspiring. It is far more effective to deliver a small amount of information in an exciting format than to deliver a lot of information in a dry format that loses the attention of the audience. A small piece of information well provided will encourage a listener to find out more for themselves.

Each partner of the PANACHE project was able to consider all these factors and devise their own programmes of engagement.

The question was asked what do you need to tell people about MPAS and it was decided that we need to foster local appreciation of importance of maintaining good levels of Biodiversity, and appreciation that there are many factors involved in marine management and that management is essential. A simple question – have you learned more about MPAs from your experiences today would be the best way to gauge this.

4.1. How effective is the engagement?

Accurately determining the effect of public awareness work is a complex subject. It is difficult to analyse a behaviour shift without a high degree of data collection. For the purposes of this work package a more limited approach was adopted by the group as detailed analysis of social science data was not within the funding scope of the project, and is not something that can cheaply be replicated in future.

V. Method

The solution that was devised is summarised below:

5.1. Joint technique for surveying public satisfaction and learning at WP4.1 raising public awareness events and activities.

Following consultation with Lauren Humphries of the National Marine Aquarium, and Marine Biological Association, Blue Sound Project (see appendix for notes) and discussion with other social scientists at the PANACHE meeting March 2013 it was decided by all project partners of WP4.1 that the most effective method of ascertaining the level of effectiveness of public awareness events would be to ask people one simple question and get them to vote by placing a small pebble in a bucket. To collect this data a simple row of containers – buckets or plastic plant pots are needed. They are labelled 1 to 10 and people are asked to vote using a small pebble to say how likely they would be to recommend a similar event to friends or family. This technique is referred to as the Bucket Question.

Social scientist Leah Mathias-Collins of LMC Environment Ltd working on the Making Waves project for Hampshire and Isle of Wight Wildlife trust recommended that we asked the following standard question. How likely is it that you would recommend this type of event to friends and family – and asked to give a score from 1 to 10.





Figure 10. Bucket score system – 10 point Photo Matt Slater and 5 point photo Julie Hatcher

The data generated is useful as it is based on a social theory that people will only recommend an event to friends and family if they truly enjoyed it and valued the event. This is called the Net Promotor Score and it allows us to see how well the event and information provided is received by people. The data generated is easily analysed and it was agreed in our meeting that this would be carried out by all project partners who are organising events to raise public awareness of MPAs.

A paper questionnaire was also devised so that where possible some more detailed information could be collected from participants – this questionnaire also contained the bucket question as well as finding out how much people learned about marine conservation and MPAs. Gathering data using a paper questionnaire at public events is very labour intensive and is also quite intrusive so although this information is valued the majority of participants will only be asked to use the bucket question.

At the mid term meeting of the PANACHE project (Nausicaa November 2013) this method of analysis was reviewed and it was decided to continue gathering data in this way for the remainder of the project.

5.2. Questionnaire design for public events

As well as using the bucket question Joint technique (see above) where it was practical a written questionnaire was filled in by participants of public events. The questionnaire was devised following the WP4.1 meeting at Plymouth in March 2013. The aim of the questionnaire is to find out how effective the event has been at engaging and educating the participants about marine protected areas. Here is an example of the questionnaire used:

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Event Details	72									
Name of event	2									
venue										
Date	38									
Please score on	a scale of I	(not a lot)) to 5 (a lot	t)						
l visit the beach	a lot						2	3	4	5
l have been to e	vents similar	to this in	the past			1	2	3	4	5
I enjoyed the ac	enjoyed the activities on offer today						2	3	4	5
Have you learne	d something	g at today'	s event?			No	8			Ye
Please rate how increased as a re	much your sult of toda	knowledg y's event	e about ma	arine lif	fe has	1	2	3	4	5
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5.3. Questionnaire design for citizen scientists and volunteers

A second Questionnaire was devised to the PANACHE project partners to use to gauge the level of engagement of Citizen science volunteers and general awareness raising volunteers. This was used at the end of each season of PANACHE events and was used to analyse the experiences of Shoresearch volunteers(WP 4.1), Seasearch Volunteers (WP4.2) and general volunteers(WP4.1).

gauge yo frank. Yo	ur opinion ur comme	is on the e ents and su	vents, to i uggestions	find out w are very i	hat you ha	to us.	and en	joyed.	Please I	be hone	st and
What	: motivate	s you to ta	ake part?								
For e skills,	xample: made a di	Feel good, ifference, a	, enjoy yo achieved s	urself, met omething	new peo	ple, feel ph	ysically	fit, join	ed in, le	earned r	new
How mai	ny other P	ANACHE	activities	(surveys,	outreach	events etc)	have ye	ou take	n part i	in over t	the past
6 months	? (Please o	circle)		10000			-	Ť	-	0.040	
0	1	2	3	4	5	6	7	1	В	9	10
YES/NO ²	teering as	part of the	e Shore Se	earch team	ı, do you f	eel that yo	u have	learned	l somet	hing nev	w?
YES/NO ² Please sc	ore on a s	part of the cale of 1 (not a lot)	earch tean to 5 (a lot	n, do you f	eel that yo	u have	learned	l somet	hing nev	w?
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Please sc Visit the Please ra increased Please ra sea has ir What are What PA marine c	ore on a s beach a k te how mu l as a resu te how mu creased a e you learn	part of the scale of 1 (ot uch your k lt of your uch your k is a result ning / have	not a lot) mowledge participati mowledge of your pa you learn you learn	to 5 (a lot about ma on with P/ about pro urticipation ned so far?	n, do you f	eel that yo as eas in the NACHE	u have	2 2 2	3 3 3	4 4 4 ublic abo	w? 5 5

Wou	ld you or	have you i	involved o	others with the	volunteer pr	ogram	ne?			
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Deing nig	niy likely,	o being no	scacally		-					
0		2	3	4	5 6		7	8	9	10
Do you h	nave any c	other com	ments?							
Do you h	nave any c	other com	ments?							
Do you h Please cir Gender	nave any o	other com	ments? priate info	ormation				Female	6	
Do you h Please cir Gender Age	nave any c	ost appro	priate info	ormation Male 16-24	25-4	0	4	Female		>60
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Please cir Gender Age Education Please ca Postcode Would yo below)	n I take ye ou like to	ost appro < 1 GC our postco receive de	priate info 6 SE ode so sec etails abo	ormation Male 16-24 'A' Level e where have y ut membership	25-4 Undergra ou travelled f	0 duate from? ife Trus	4 Post t? (pro	Female 11-59 graduate vide email	Yes	>60

VI. Results

6.1. Summary of public awareness events run through panache Work Programme 4.1 during the PANACHE Project.

Highly successful public events were held across the PANACHE area on both sides of the English Channel, led by project partners; Cornwall Wildlife Trust, Port de Dunkerque, Kent Wildlife Trust, Hampshire and Isle of Wight, Dorset Wildlife Trust and Nausicaa, these events covering all types mentioned in this report successfully engaged with 12,870 people during the two years of the project. Thanks to wide reaching social media and press campaigns the number of people engaged is likely to be far wider. This work came at a critical time for Marine Conservation in England with the designation of the first tranche of Marine Conservation Zones being granted at the end of 2013 and the public awareness raised and surveys carried out significantly contributed to this achievement.

In total through the 2 years of the PANACHE projects the above partners provided a total of 119 public awareness raising events that engaged with the public and educated them about Marine Protected areas, the need for a coherent network and the management of MPAS.A total of **12,870** people participated in these events.

As can been seen from the results of our public surveys the public responded very well to this engagement and are likely to act as supporters for Marine Conservation initiatives for many years to come.

In Cornwall the Network of local marine conservation groups will continue with this work to provide local marine protected areas with public support and a community voice and this example of best practice should be replicated in other areas of Europe.

6.2. Data Summary

During the 2 years of the PANACHE programme a total of **102** public events were held that reached **12,633** people.

- 2013 53 events reaching 6,841 participants.
- 2014 53 events reaching 5,792 people

	2013	2014		
Partner Organisation	Number of events	Number of participants	Number of events	Number of participants
Cornwall Wildlife Trust	19	1261	15	1354
Dorset	6	221	18	1495
Hampshire and Isle of Wight	8	1955	6	1120
Kent	6	290	5	542
Nausicaa	6	2630	1	600
Porte de Dunkerque	8	484	8	681
	53	6841	53	5792



						Estimated Number of		
						people		
	number					engaged/ed	Number of	total volunteer
PARTNER	of events	DATE	LOCATION	MPA relevant to	Description of event	ucated	volunteers	hours
CWT	1	02/02/2013	Newquay	all cornwall	VMCA conference 2013	79		
					Fowey rocky shore event			
CWT	1	09/03/2013	Fowey	Fowey rMCZ	leader training	9		27
CWT	1	15/03/2013	Falmouth	Fal and Helford SAC	Gyllyngvase Marine day	27		
					Mounts bay Marine day			
CWT	1	10/04/2013	Marazion	Mounts bay rMCZ	Marazion	50	6	
CWT	1	23/04/2013	Cawsand bay	Tamar SAC	Cawsands school day	70	4	10
CWT	1	27/04/2013	Lizard	Lizard SAC	Poltesco Rocky shore explore	27		
CWT	1	11/05/2013	Looe	Looe MCZ	Hannafore seaweed day	4		
CWT	1	12/05/2013	Prisk cove	Helford and fal SAC	Helford Seashore Art Day	5		
CWT	1	27/05/2013	Falmouth	Fal and Helford SAC	Greenbank shore explore	18	7	23
					World Ocean Day at Wild			
CWT	1	08/06/2013	Looe	Looe rMCZ	Futures	110	1	5
CWT	1	06/07/2013	Looe	Looe rMCZ	Crazy about Crabbing Looe	35	3	
					Loe beach sea shore explore			
CWT	1	26/07/2013	Loe Beach	Fal and Helford SAC	26th july 2013	45		
					Snorkel Safari Fal SAC 3rd Aug			
CWT	1	03/08/2013	maenporth	Fal and Helford SAC	2013	5		
CWT	1	20/08/2013	Fowey	Fowey rMCZ	Royal Fowey Regatta week	620		
					Marvellous manacles marine			
CWT	1	22/08/2013	Lizard	Manacles rMCZ	day	50	6	16
CWT	1	07/09/2013	St Mawes	Fal and Helford SAC	St Mawes Marine day	24	8	32
CWT	1	14/09/2013	Helford	Fal and Helford SAC	Snorkel Safari Durgan	18	6	24
					Panache Talk Newquay			
CWT	1	06/11/2013	Newquay	all cornwall	College	35		
CWT	1	16/12/2013	St Agnes	St Agnes VMCA	Marine Quiz night	30		
CWT	1	29/01/2014	Truro	Allet	Event leaders training	7	7	21
					Basic Rockpool Ramble			
CWT	1	02/02/2014	Spit Par beach	St Austell bay cSAC	Training	21	21	105
CWT	1	16/03/2014	maenporth	Fal and Helford SAC	Maenporth Marine Marvels	44	4	10
CWT	1	16/04/2014	Marazion	Mounts bay rMCZ	Marazion Marine Day	41	12	54
CWT	1	27/04/2014	Cawsand bay	Tamar SAC	Caswsands shore explore	35	9	32
					St Agnes Marine Discovery			
CWT	1	25/05/2014	St Agnes	St Agnes VMCA	day	400	0	
					Polzeath Marine discovery			
CWT	1	29/05/2014	Polzeath	Padstow and surrounds rMCZ	day	400	0	
CWT	1	15/06/2014	Penzance	Mounts bay rMCZ	Battery rocks 15th June 2014	3	10	30
CWT	1	12/07/2014	Penzance	Mounts bay rMCZ	Long rock Marine day	16	19	85.5
CWT	1	13/07/2014	Helford	Fal and Helford SAC	Crabs and Critters Helford	40	12	36
					Swanpool Rocky Shore			
CWT	1	17/08/2014	Falmouth	Fal and Helford SAC	Explore	16	15	30
CWT	1	19/08/2014	Fowey	Fowey rMCZ	Royal Fowey Regatta	200	14	84
CWT	1	29/08/2014	Par	St Austell bay cSAC	Par Marine day	27	10	45
CWT	1	20/09/2014	Durgan	Fal and Helford SAC	Snorkel safari_Durgan_20.9.14	17		
CWT	1	05/11/2014	Eden project	all cornwall	Your Shore Conference	87	87	630
	34					2615	261	1299.5

Table 2.1. Cornwall Wildlife Trust PANACHE events Summary

						Estimated Number of	
						people	
	number					engaged/ed	Number of
PARTNER	of events	DATE	LOCATION	MPA relevant to	Description of event	ucated	volunteers
			Esplanade de				
			Berck sur mer		Worshop for general public	584	5
		13, 14, 20,	Rencontre Cerf	Natural marine parc Estuaires picards et	« discovery of the foreshore		5
Nausicaà	1	21/04/2013	Volant	de la mer d'Opale	and CapOeRa (ray egg cases)»		
					Workshop about seals and		
				Natural marine parc Estuaires picards et	video conference with	19	1
Nausicaà	1	29/05/2013	Nausicaa	de la mer d'Opale	children from Cherbourg		
					Worshop about the diversity		
				Natural marine parc Estuaires picards et	of algaes durind the World	860	9
Nausicaà	1	07/06/2013	Nausicaà JMO	de la mer d'Opale	Oceans Day		
					Worshop about the diversity		
				Natural marine parc Estuaires picards et	of algaes durind the World	392	2
Nausicaà	1	08/06/2013	Nausicaà	de la mer d'Opale	Oceans Day		
			Jardin public				
			de St Omer		Workshop about ray egg cases	417	2
Nausicaà	1	08/09/2013	Fête du Parc		in the foreshore (CapOeBa)		
	-	00/00/2020					
					Discovery of the diversity of	250	2
		07, 08, 09/	Nausicaà Fête	Natural marine parc Estuaires picards et	algaes from phytoplancton to	506	2
Nausicaà	1	10/2013	de la science	de la mer d'Opale	laminaria seaweed		
					Workshop for general public	600	1
			Guînes Fête du		« Discovery of the foreshore		-
Nausicaà	1	14/09/2014	parc		and CapOeRa »		
	7					3230	22

Table 2.2. Nausicaa PANACHE events Summary

PARTNER	number of events	DATE	LOCATION	MPA relevant to Description of event	Estimated Number of people engaged/ed ucated
KWT	1	29/07/2013	Leeds castle	Children's activities with a ma	25
KWT	1	30/07/2013	Leeds castle	Children's activities with a ma	25
KWT	1	31/07/2013	Leeds castle	Children's activities with a ma	25
KWT	1	01/08/2013	Leeds castle	Children's activities with a ma	25
KWT	1	02/08/2014	Reculver	Reculver Rock-pooling and marine art	140
KWT	1	09/08/2013	Romney Marsh	Marine art at Romney Marsh V	i 50
KWT	1	29/10/2014	Reculver	Alien Invaders at Reculver Visi	t 154
KWT	1	30/10/2014	Romney Marsh	Deep Sea Art Attack at Romney	60
KWT	1	04/08/2014	Reculver	Marvellous Marine Day at Recu	197
KWT	1	08/08/2014	Romney Marsh	Marvellous Marine Day at Rom	43
KWT	1	19/08/2014	Lower leas	Rocking Rockpooling at Lower	88
	11				832

Table 2.3. Kent Wildlife Trust PANACHE events Summary

PARTNER	number of events	DATE	LOCATION	MPA relevant to	Description of event	Estimated Number of people engaged/ed ucated	Number of volunteers
GPMD	1	18/06/2013	Dunkerque	Bancs des Flandres	Presentation about Natura 2000 and PANACHE project to stakholders from environnement and harbour tour, Matinales	49	
GPMD	1	19/09/2013	Dunkerque	Bancs des Flandres	Presentation about Natura 2000 and PANACHE project to stakholders from environnement and harbour tour, Matinales	54	
GPMD	1	25-26/05/2013	Dunkerque	Bancs des Flandres	Fêtes du nautisme, Stand with animation about MPAs	105	
GPMD	1	1-2/06/2013	Dunkerque	Bancs des Flandres	Stand with animation about MPAs, Escale à Dunkerque	176	
GPMD	1	14/09/2013	Dunkerque	Bancs des Flandres	Beachleaning with volunteers	60	
GPMD	1	28/05/2013	Dunkerque	Bancs des Flandres	Presentation and harbour tour	10	
GPMD	1	28/08/2013	Dunkerque	Bancs des Flandres	Presentation and harbour tour	16	
GPMD	1	12/07/2013	Dunkerque	Bancs des Flandres	Presentation and harbour tour Presentation and harbour tour	14	
GPMD	1	03/03/2014	Dunkerque	Bancs des Flandres	with students from an environnement school	17	
GPMD	1	22/03/2014	Dunkerque	Bancs des Flandres	Partnership between GPMD and volunteers organisation to "kit biodiversité marine" marine resources.	180	
GPMD	1	16/04/2014	Dunkerque	Bancs des Flandres	Animation with "kit biodiversité marine" natural resources - harbour tour with from primary school	15	
GPMD	1	17/04/2014	Dunkergue	Bancs des Flandres	Presentation about Natura 2000 and PANACHE project to stakeholders from environment and harbour tour	57	
GPMD	1	17-18/05/2014	Dunkergue	Bancs des Flandres	Stand with animation with "kit biodiversité marine" from Nausicaa about marine resources	142	
GPMD	1	01/06/2014	Dunkerque	Bancs des Flandres	Stand with animation with "kit biodiversité marine" from Nausicaa about tidal mark	44	
GPMD	1	4-6/07/2014	Dunkeraue	Bancs des Flandres	Stand to deliver informations about Natura 2000 and PANACHE project to stakeholders and harbour tour	120	
	1	5-6/07/2014	Dunkergue	Bancs des Elandros	Stand with animation with "kit biodiversité marine" from	106	
	16		Sumerque			1165	

Table 2.4. Porte de Dunkerque PANACHE events Summary

						Estimated
						Number of
	number					people
PARTNER	of events	DATE		MPA relevant to	Description of event	ucated
DWT	1	11/04/2013	Kimmeridge	Portland to Studiand cSAC	Bocknool ramble	27
DWT	1	25/05/2013	Kimmeridge	Portland to Studiand cSAC	Rockpool ramble	27
DWT	1	08/06/2013	Kimmeridge	Portland to Studiand cSAC	Bioblitz	70
DWT	1	09/08/2013	Kimmeridge	Portland to Studiand cSAC	Rockpool ramble	41
DWT	1	11/08/2013	Kimmeridge	Broadbench rMCZ	Rockpool ramble	38
DWT	1	24/08/2013	Kimmeridge	Broadbench rMCZ	Rockpool ramble	23
DWT	1	29.03.2014	Kimmeridge	Portland to Studiand Reefs SAC	Discover Seashore Wildlife	16
DWT	1	18.04.14	Kimmeridge	Portland to Studiand Reefs SAC	Ray egg case hunt	55
DWT	1	26.04.14	Swanage	Portland to Studland Reefs SAC	Seaweed identification worksh	30
DWT	1	02.05.14	Lyme Regis	Lyme Bay & Torbay SAC	Fossil Festival schools activities	55
DWT	1	03.05.14	Lyme Regis	Lyme Bay & Torbay SAC	Fossil Festival stand	150
DWT	1	04.05.14	Lyme Regis	Lyme Bay & Torbay SAC	Fossil Festival stand	150
			, Ferrybridge,			
DWT	1	29.05.14	Wyke Regis	Chesil Beach and The Fleet Lagoon EMS	Discover Seashore Wildlife	13
DWT	1	6.6.14	Poole Harbour	Poole Harbour SPA	marine wildlife boat trip	174
DWT	1	8.6.14	Studland	Studland Bay pMCZ	Display stand and activities	100
					Non-native/climate change	
DWT	1	14.6.14	Kimmeridge	Portland to Studland SAC	indicator species ID	9
			Poole Harbour			
DWT	1	20.6.14	and Poole Bay	Poole Harbour SPA & Poole Rocks MCZ	marine wildlife boat trip	174
			Poole Harbour			
DWT	1	05.07.14	and Poole Bay	Poole Harbour SPA & Poole Rocks MCZ	marine wildlife boat trip	164
DWT	1	30.07.14	Kimmeridge	Porland to Studland Reefs SAC	Rockpool Ramble	26
					Wild About Seahorses display	
DWT	1	2.8.14	Studland	Studland Bay pMCZ	stand	100
					Wild About Seahorses display	
DWT	1	3.8.14	Studland	Studland Bay pMCZ	stand	200
DWT	1	27.8.14	Kimmeridge	Portland to Studland Reefs SAC	Rockpool Ramble	46
			Baiter, Poole			
DWT	1	7.9.14	Harbour	Poole Harbour SPA	Seashore exploration and stand	20
			Hengistbury			
			Head,			
DWT	1	28.10.14	Bournemouth	Poole Rocks MCZ	Seashore exploration and stand	13
	24					1716

Table 2.5. Dorset Wildlife Trust PANACHE events Summary

						Estimated Number of
						people
	number					engaged/ed
PARTNER	of events	DATE	LOCATION	MPA relevant to	Description of event	ucated
			Portsmouth			
			(Blue Reef			
HIWWT	1	21/02/2013	Aquarium)		'Wild Waters' marine roadshow	150
			Portsmouth			
			(Blue Reef			
HIWWT	1	22/02/2013	Aquarium)		'Wild Waters' marine roadshow	250
			Southampton			
			(National			
			Oceanography			
HIWWT	1	23/02/2013	Centre)		Earth & Oceans Day marine roa	150
			Southampton			
			(Sea City			
HIWWT	1	03/04/2013	Museum)		MPA themed displays and activ	100
			Emsworth &			
			Chichester			
			Harbour			
			(Methodist			
			Church Hall			
			and Solar			
HIWWT	1	02/05/2013	Heritage Boat)		Discovery event - MPA themed	55
			Hampshire			
			(Lepe Country			
HIWWT	1	14/08/2013	Park)		Making Waves' event - MPA the	500
			Hampshire			
			(Lepe Country			
HIWWT	1	15/08/2013	Park)		Making Waves' event - MPA the	500
			Isle of Wight			
HIWWT	1	29/08/2013	(Fort Victoria)		Fort Victoria Foray' event - MP/	250
HIWWT	1	2014			Marine Discovery Day	160
HIWWT	1	2014			Marine Wonders	200
HIWWT	1	2014			Marine Wonders	500
HIWWT	1	2014			Rockpool Rummage	60
			Isle of Wight			
HIWWT	1	2014	(Fort Victoria)		Fort Victoria Foray' event - MP/	160
HIWWT	1	2014			Talk on marine issues	40
	14					3075

Table 2.6. Hampshire and Isle of Wight Wildlife Trust PANACHE events Summary

6.3. Press

The PANACHE project received significant press coverage during its two years. Each partner released stories to the media and additionally the partners were able to bring in the PANACHE project when talking about other local marine issues.



Fig 11. Coverage of PANACHE Shoresearch in Cornwall Life Magazine 2014



Fig 12. Coverage of a Beach Clean in Dunkerque newspaper.

6.4. Social media presence

Throughout the project a good level of coverage was achieved for the partners and their work through the PANACHE project using the platform of social media. Facebook and twitter were used as were online blogs and email circulars for volunteers and participants. In The UK many people have signed up as friends of Marine Conservation Zones and these people are kept up to date by local marine conservation officers and by newsletters produced by the Royal Society of Wildlife Trusts.

The Dorset Wildlife Trust Welly Zone project has a great e newsletter that goes out to all its members 4 times per year.

Cornwall Wildlife Trusts Shoresearch Cornwall blog which was updated after each survey and public event has had 7,969 page views to date.

Hampshire and Isle of Wight marine officer Abbi Scott used twitter to promote public awareness raising events through 2014. Online tube videos were used by many of the project partners to promote their work.



Fig 13. Social media coverage from UK Wildlife Trusts.

6.5. Public event questionnaire results

The Public event questionnaire that was devised at the March 2013 PANACHE workshop at Plymouth was used to question members of the public who participated in public events through the project at a range of locations. It was found that the practicalities of collecting this data made it difficult to obtain a large sample size as the questionnaires take time and organisations didn't always have enough staff or trained volunteers to ensure that these were filled out. At the end of the 2 summers of public events a total of 73 questionnaires were filled in. Although it was devised as a questionnaire to be used on both sides of the channel it was only used in the UK by Wildlife Trusts as equivalent events weren't held on the French coast.

Despite this relatively small sample size the survey gives us far more understanding about the quality of the engagement, the types of people engaged and the overall effectiveness of this awareness raising work.

6.5.1. Gender of participants.

This is roughly equal but with a slightly larger number of females - 54 % of the participants were female and 46% were male.



Fig 14. Gender of Participants in PANACHE public events.

6.5.2. Age of Participants

It is interesting to note that the largest sectors were 25-40 and 41-59. 16-24 was the most underrepresented age group and an area in which the Wildlife Trusts are keen to address through future projects (included in CWT strategy document 2014).



Fig 15. Ages of Participants in PANACHE public events

6.5.3. Education levels of participants

Analysis of this factor shows that the people that attend Wildlife Trust public events are not a true representation of the general public as there is an unusually high percentage of post graduate qualified participants. (Percentage of UK population with a post graduate level qualification is currently 11% in our survey it was 31%, three times the national average.



Fig 16. Education levels of Participants in PANACHE public events

6.5.4. How often do you visit the beach?

This question was asked as we felt that it would help us to gauge the type of people who attended and whether the engagement will be reaching those who already have a strong connection with the sea or those who don't usually think to visit the beach. It was found that the majority of people questioned do visit the beach a lot with 41% scoring it 5 out of five. It is interesting though that there are 15.5% of people who rated it 1, i.e. they don't visit the beach a lot. So these may be people who don't currently have an affinity with marine protected areas. Beaches don't necessarily appeal to all people so it is good to see that there is a spread of scores on this question.



Fig 17. How often those questioned visit the beach.

6.5.5. How well did it engage?

95% of those questioned said that they enjoyed the event 5 out of 5. The remaining 5% of people said they enjoyed the event 4 out of 5.

The bucket question asked a very similar question by asking how likely it is that you would recommend to family or friend. This data is used to calculate the Net Promoter Score. It was found that there was an extremely positive level of feedback at all the events not only those where the questionnaires were used but also at events where the bucket question was employed.

6.5.6. Bucket question results from public events

The bucket question method was used at a total of 28 events in 2013 and 22 events in 2014. The results showed that the majority of people were happy with the standard of the events and as a result were engaged and learned about MPA's. The highest percentage scores were for 9 and 10 out of 10 in both years but in 2014 there was a significant increase in scores of 9 from 21% to 30% Scores of 10 stayed the same going from 53.6% to 54%



Figure 18. Total bucket question scores at PANACHE events 2013



Net Promoter Score 2014 = **78**

Fig 19. Total bucket question scores at PANACHE events 2014

6.5.7. What are Net Promoter Scores?

Net Promoter Scores are used to analyse the effectiveness of a business or activity and they allow easy analysis of how satisfied a customer (or participant in this case) is with the activity by asking if you would be prepared to promote this to the public. Ref https://www.surveymonkey.com/mp/net-promoter-score/

To analyse the scores all scores between 1 and 6 are classed as detractors.

Those that score between 7 and 8 are passives.

Those that score 9 or 10 are promoters.

The overall score is generated by subtracting detractors from promoters and dividing by total sample number then multiplying by 100. The resulting Net promoter score can range from -100 to +100. The total data from all the bucket question scores was analysed and the resultant net promoter **score** was 60 – a very good result.

It is interesting to note that the Net Promoter Score increased slightly from 61 in 2013 to 78 in 2014, suggesting that the effectiveness of the events had increased.

6.5.8. How much did you learn?

The results of this can be divided between the two questions asked in the questionnaire;

6.5.9. How much has your knowledge of marine life increased as a result of the event?

There was a strong response suggesting that people felt they had learned a lot. Not all participants scored this 5 out of five. A Net Promoter Score was calculated at 31 – a positive result. The relatively large number of 3's may be due to the fact that many of the people attending were well educated people who already had a good knowledge and wanted their children to learn about local wildlife.



Fig 20. How has your knowledge of marine life increased as a result of todays event?

6.5.10. How much have you learned about protected areas in the sea?

There was a strong positive result for this section although there is more of a spread that with the previous question. It is much harder to get this kind of information over to the public

generally than it is to tell them interesting facts about marine life. The concept of Marine Protected Areas is far harder to explain in an engaging way and as a result it is not surprising that the spread of results is different to the last question. The Net Promoter Score for this question was calculated as 12.



Fig 21. How much have your learned about Marine Protected Areas?

6.5.11. How likely are you to get involved and become a volunteer?

This question showed a wide spread. Not surprisingly becoming a citizen scientist is not something for everyone but equally it is another way of finding out how engaging the event has been. Only if someone really enjoyed it would they be likely to say yes to giving up their free time as a volunteer. 35 % of the people surveyed said that they would be likely to get involved as a volunteer (5 out of 5). The Net Promoter Score® for this question was calculated as 17.



Fig 22. How likely are you to get involved and become a volunteer.

6.6. Summary of the results of the Public event questionnaires

Overall the results are very positive. Net promotor scores are good which suggest that we are doing the right thing and inspiring people. It is important to note that at many of our events it was difficult to physically interview a fair cross section of the participants and those who were more keen were naturally more likely to be interviewed and this may have skewed the accuracy of our findings and our demography results. The demographic analysis shows that despite efforts to reach people from all sectors of society PANACHE Wildlife Trust events are still mainly reaching the well-educated middle classes, with middle aged (aged 41- 59) people making up the largest sector. The age group most missed are 16-24 year olds and it would be worth looking at this more closely as engaging with this age group is critical for the future success of similar initiatives. The results of the questionnaires show that the quality of engagement is excellent. It would be interesting to compare this with the level of engagement achieved by public aquaria who see vast numbers of visitors each year but arguably achieve a lower quality of engagement experience. Assessing the level of influence of press, social media and web articles etc. is more difficult and this wasn't attempted in this project. Use of online survey websites such as survey monkey could be employed in future to attempt to asses changes in public awareness.

6.7. Shoresearch and Seasearch citizen-science feed-back

The PANACHE Project enabled partners to carry out surveys employing citizen science volunteers who were trained by PANACHE funded staff and then were engaged in carrying out surveys sub-tidally and inter-tidally the results of which are written up in the WP4.3 and WP4.2 reports.

Questionnaires were used to gauge volunteers satisfaction with the programme. Due to their nature these were used at the end of each year and the number of volunteers surveyed in this way varied between the partners involved.

Overall they showed that volunteers were very happy with the PANACHE survey work carried out in WP 4.3 and 4.2.

These surveys were only completed by British partners of the PANACHE project as no equivalent group-led citizen science was organised on the French side of the Channel. Reasons for this are difficult to tie down but the main reason is the lack of a culture of dedicated volunteers and a network of community engagement by organisations like the Wildlife Trusts in France.

Here are the results of the citizen science feed back surveys.



Fig 23. Shoresearch at Mounts bay recommended Marine Conservation Zone. Matt Slater

6.7.1. Who are the volunteers?

The majority of those surveyed were female as can be seen in the pie chart below 32% were male and 63% were female. Interestingly this bias was much less so in Shoresearch diving where the ratio is more equal. In Hampshire on Shoresearches men were vastly outnumbered!



Fig 24. Gender of PANACHE Citizen Science Volunteers

It was significant to note the lack of Under 16's and very low numbers of 16- 24's volunteering for the project – the highest proportion of people were from the 40- 59 category as can be seen from the pie chart.



Fig 25. Age distribution of PANACHE Citizen scientists.

6.7.2. Education level

Surprisingly a very high proportion of the PANACHE citizen scientists are qualified to a post graduate level and less than a quarter were only qualified to GCSE or A level standard.



Fig 26. Education level of PANACHE citizen scientists.

6.7.3. Motivation for carrying out surveys

This was generally the same in all of the locations that citizen science was carried out;

People generally are motivated by their curiosity and their interest in learning more about marine identification and ecology.

Meeting like minded people is a major motivation as is having fun!

People responded well to the fact that their efforts were making a real difference to the UK Marine Conservation Zone designation process that was taking place during the time of the project.

The volunteers developed their knowledge and skill and at the end of the programme were demonstrably happy with the project and want to continue to go on and carry out surveys but many stressed the importance of 'led' activities and experienced and friendly leaders.

All said that the Shoresearch and the Seasearch methods were easy to use.

6.7.4. How much did you learn?

When asking how much the citizen scientists had learned from the PANACHE citizen science programme on the subject of marine species identification it is interesting to note the very high score for 3, i.e. those who felt they learned an average amount. This may be because in the UK Wildlife Trusts there is a high percentage of people who are regular volunteers and may have been involved in shore surveying or Seasearch diving for a very long time so didn't learn much. Also the scope of the surveying very much focussed on a small number of species so these type of people may not have been challenged as much as they would have liked possibly to learn about new species.



Fig 27. How has your knowledge of Marine life increased as a result of your involvement in PANACHE citizen science?



Fig 28. How has your knowledge of Marine Protected Areas increased as a result of your involvement in PANACHE citizen science?

Again it is surprising how many people said their knowledge of MPAs had only increased by 3. This may again be due to the high number of people that already have a high level of qualifications in marine science and a good level of knowledge. Another aspect that has been highlighted is the difficulties in fitting in less engaging information about a dry and sometimes contentious topic like this into an engaging activity that is very tide limited and exciting! Those volunteers who were able to attend formal training at the start of each survey season were provided a lot of information on MPAs and the need for a coherent network of these in European waters but this level of information was not always replicated at each survey as would be expected.

VII. Conclusions and recommendations

7.1. Lessons learned by the partners of PANACHE WP4.1

7.1.1. Summary and Lessons learned by Cornwall Wildlife Trust.

Over the 2 years of the PANACHE project Cornwall Wildlife Trusts Marine team provided the public with a total of 34 engaging marine awareness events focussed on Marine Protected Areas. The total number of people engaged was 2615. And a total of 1299.5 volunteer hours were provided by our team of dedicated volunteers who enjoyed helping us run these important events. Many more events were provided by the local Marine Conservation Groups who are supported by Cornwall Wildlife Trust although for this report these figures won't be included as they were not strictly operating using PANACHE funding although it did allow CWT staff to provide them with support and training and provision of an annual conference. The total numbers of public events run by the Your shore network for summer 2014 was 242, engaging with a total of 5834 people provided by 240 active volunteers. So in Cornwall we have a large team dedicated volunteers now actively reaching thousands of members of the public and educating them about our incredible and valuable marine life.

Lessons learned

In the first year of the PANACHE project we tried to combine public rockpool rambles with Shoresearch surveys. The surveys were led by trained citizen science volunteers and the public rambles were led by CWT staff with the help of a few more volunteers. At the end of the event we would take some samples of seaweeds and hardy rockpool animals up to a 'Shore Lab' at the top of the beach. From here we were able to nicely round off the public event and make sure everyone got the message about Marine Protected Areas and had a chance to provide feedback and ask questions. By having this shore lab in a prominent place on a busy beach after the event we were able to continue to engage with the general public and meet people who wouldn't normally attend a formal event.

We found this approach really successful. It was great from the public perspective as there was plenty for the kids to do and anyone with an interest in science could tag along with the survey. In practice the leader of such an event is very busy especially if the volunteers who are conducting the survey are not very experienced and if you don't have enough people helping out you can sometimes get the feeling you were torn between your long term volunteers and developing them and the public who are equally important. In 2014 we had more volunteers only (Shoresearch) citizen science days where you could really focus on helping the citizen scientists with their shore identification and survey methods, and quite a few public-only rockpooling days, and only 3 days where we carried out both on the same day. (In 2013 we had seven!)

The feedback that we got from the public and from volunteers has been incredible. The shore search blog enabled us to share the photos that were taken at surveys and public events and a huge amount of interest was generated through that and through Facebook.

It is hoped that Cornwall Wildlife Trust will be able to find funding to continue this vital awareness raising work in future years and that it will help contribute to success of local Marine Protected Areas.

7.1.2. Summary and lessons learned by Dorset Wildlife Trust

Over the 2 years of the PANACHE project Dorset Wildlife Trust have provided the public with a total of 24 engaging marine awareness events focussed on Marine Protected Areas. The total number of people engaged was 1716.

In 2013 the most successful event held by DWT was a bioblitz at Kimmeridge bay in June with around 70 volunteers joining us to survey wildlife within the bay. This included divers, trained volunteer seashore surveyors and members of the public who recorded 230 species on the day. A Bioblitz is a multidisciplinary search where teams of volunteers led by experts list all species found in one area in a given time period.

Other events have included Rockpool Rambles, seaweed identification training, seashore species identification and Shore Thing surveys as well as seaweed identification training. For the Rockpool Rambles, these were mainly for public awareness but we also introduced families to the idea of timed searches for particular species which added a new dimension to the normal events and was well received, especially by the children when they found one of the target species!

In 2014, Dorset Wildlife Trust ran a total of 12 public events and attended another 2 events run by other organisations to highlight MPAs and the PANACHE project – these events engaged with just under 1,200 people. These included a mixture of rockpool and seashore discovery sessions, coastal boat cruises, a 2-day Wild About Seahorses event at Studland by rMCZ, and identification courses. We also had a stand and ran several schools sessions at the Lyme Regis Fossil Festival.

At the annual Lyme Regis Fossil Festival in May, which had the theme 'Coastal Treasures', we had a stand for 3 days. We talked about PANACHE, MPAs and citizen science with a focus on recording ray egg-cases. This was what we put in the Fossil Festival programme.

To celebrate World Ocean's Day DWT ran 3 boat trips from Poole Harbour with a total of over 500 passengers. As well as artefacts and displays on-board we also gave talks about PANACHE and the MPAs we encountered during the voyage.

Lessons learned

During seashore events, we found that introducing the idea of doing surveys (to engage them in citizen science) was best done by issuing them with a 'challenge'. This was done towards the end of the event/rockpool ramble by giving them 10 minutes to find certain species on a card that we gave them. Each family, pair or individual was given an ID card with a photo and information about what they were looking for and where to look. Some of the species we had already found and talked about during the event. We found that they took up the challenge very well - however we were careful to give them species we knew were there. We explained how the information we were gathering was being used for conservation and thanked them for helping with this. This was also a good way to get everyone together at the end to record what they had found and gave us opportunity to get some

questionnaires filled in before everyone wandered off.

Some of our awareness events were not seashore walks but displays where people could look and chat. These were not appropriate for questionnaire type feedback. However we used these events to ask people to support MCZs e.g. by joining the MCZ Friends group online. The measure of success was how many people signed up on the day. However, many people took information away to sign up later and this could not be measured. Or we asked them to sign a pledge for marine life.

7.1.3. Kent Wildlife Trust, summary and lessons learned

Over the 2 years of the PANACHE project Kent Wildlife Trust have provided the public with a total of 11 engaging marine awareness events focussed on Marine Protected Areas. The approximate total number of people engaged was 832. The majority of the events involved rockpooling and craft activities which were very popular.

What worked well?

Rockpooling is a superb way to introduce people to what lives beneath the waves and to provide a focus to introduce the need for Marine Protected Areas. Everyone seems to enjoy peering into crevices and under rocks and get very excited when they discover something darting around.

Having the parents there helps with the safety side of things as well as provides the opportunity to introduce them to MPAs and marine issues.

What didn't work so well?

It's very difficult to take photos that capture the excitement of rockpooling, especially when you are helping people to identify things and learn more about what they have found. Next time I will try to capture a few more group photos.

Also, the idea of alien species is difficult for people to grasp when they are not already familiar with our native marine species. To some extent in those cases everything seems alien!



Fig 29. Reculver marine week, Photo Fiona White.

7.1.4. Nausicaa, summary and lessons learned

Nausicaa carried out a very comprehensive mixture of public and stakeholder events throughout the PANACHE project. They used the advantage of their high visitor numbers and excellent facilities for conferences and multimedia to engage with more people than any other partner in this project.

One of the most successful events was the PANACHE Youth Forum in which with ten British young people and ten French young people were invited to interactive learning and communication workshops held on each side of the Channel. The first meeting was in the UK from 18th to 20th October 2013 at the Purbeck nature reserve, Kimmeridge and was organised by Dorset Wildlife Trust. The 24th second meeting was at Nausicaá from 22th to November 2013. They met several experts who work on MPA and exchanged with them. At the end they wrote some proposals and commitments for a better management of MPA. They presented them first, to Nausicaá visitors on TV Nausicaá and in a second time to the MPA partners during the November meeting.



Fig 29. PANACHE youth Forum.

Many events were held by Nausicaa that mobilized experts. Talks and interactive workshops were held at the aquarium. Events were run for the public including beach cleans, shark and ray egg case hunts (with CapOeRa) and Biolit shore surveys. Teachers were trained and provided a purpose designed resource pack (which was also translated to English) called the Kit Biodiversity Marine to aid them in marine education activities in schools. Nausicaá also created communication tools to invite the public in the different citizen science programs (vidéo, agendas, exposition, blog,...).



Fig 30. Kit Biodiversity Marine produced by Nausicaa.

Lessons learned

The novel approaches to public awareness raising used by Nausicaa; trainings, shore surveys, meetings are aimed to touch in different ways all workshops, kinds of people. With already "aware' public it is easier to explain PANACHE and this public is already convinced by the necessity of MPAs. For instance teachers, are really excited by the idea of being part of science and to invite their pupils to it. They are thirsty for more knowledge. For stakeholders, PANACHE is a good thing, aimed to make more understandable the activities of everyone and try to work in a better dialogue. We have learned from the general public awareness of PANACHE work that marine conservation is not a prior preoccupation for the people. They want first to discover the sea, its inhabitants, the beauty of nature and then and only after all the first steps, they want to discover how to take care of it. So it is only on a second time that people are interested on learning more about preservation and European projects. Our method to explain PANACHE is to go slowly by leading the people outside, to show them the sea, to let them discover the living beings, to feel, to admire and then, we try to make them aware of all the necessity to preserve nature. For young people, the discovery of seaside and its inhabitants is a good thing to introduce more knowledge about MPA.

7.1.5. Port de Dunkerque, summary and lessons learned

The Grand Port Maritime de Dunkerque (GPMD) organized a programme of public awareness raising events through the 2 years of the PANACHE project.

A beach clean was held in partnership with local volunteer organizations. This event attracted 40 many people, despite adverse weather conditions. 200kg of waste was collected by 40 people over a mile long stretch of beach. Partners were able to explain several themes including MPAs, Natura 2000, marine mammals, birds, waste. These events were covered by the local press and several articles featured in local newspapers. It was found to be a very popular approach to awareness raising which has been echoed by several PANACHE partners.

The team at GPMD 'piggybacked' in several large events including Les "Fêtes de la mer et du nautisme" (during this week-end, several activities about the sea were proposed freely to public like boat circuits, try dives, canoeing and stand up paddleboarding.)

And L'"Escale à Dunkerque": during this week-end, about twenty old sailing ships were present along the quays of the port of Dunkerque. The public could visit them freely, and enjoy concerts, and plenty of other entertainments.

During these events many stakeholders including GPMD had their own stands. The large numbers of people attending meant it was a perfect opportuninty to explain the Natura 2000 approach, to talk about MPAs and the PANACHE program. Approximately 500 people were engaged. GPMD showed a film about the tides loaned by Nausicaa. At these events the PANACHE public event questionnaires were trialled but in a similar way to other project partners we found it impractical as people were not prepared to stop long enough to answer all the questions. It was found that the bucket question method was far more successful way of judging engagement.

GPMD organized many field trips around Dunkerque-port with students and general public. Sometimes by bus, sometimes by bike. It was an opportunity for them to communicate about biodiversity. It was found that people were interested in talking about MPAs. Sometimes partners were invited to come along to talk about different subjects linked to MPAs which was a successful approach.



Fig 32. Tour of Dunkerque port on bicycle.

GPMD organized meetings with local stakeholders to promote GPMD's activities linked with MPAs. There were 2 conferences, about dredging in MPAs and about biodiversity in MPAs. In each event, more than 60 people were at GPMD to discuss, debate about those subjects. Those events were declined in the form of field trips to really understand key issues. Then GPMD welcomed two round tables in which MPAs were discussed.



Fig 32. Professional conference at Dunkerque port

Also GPMD are also currently working with other local organisations to develop common projects about biodiversity and sports. The idea is to discover biodiversity while practicing a sport. For example, we can imagine a field trip to discover birds while stand up paddle boarding. This idea came to us because we understood that a lot of people are participating regularly in outdoor sports and they don't have knowledge about biodiversity, these people already have an appreciation for the area so are likely to be more receptive to information on MPAs. Sometimes informal learning while taking part in a sport is a more effective method of engagement with the public. This is an approach that the Wildlife Trusts in the UK are keen to develop and certainly kayak trips, snorkelling, diving have all been shown to have a positive effect on the UK side of the channel too.

7.1.6. Hampshire and Isle of Wight Wildlife Trust, summary and lessons learned

Over the 2 years of the PANACHE project Hampshire and Isle of Wight Wildlife Trust's Marine team has run 14 marine awareness events focused on Marine Protected Areas (MPAs), engaging at least 3075 members of the public. The events have ranged from family friendly public events offering MPA themed displays with games, arts and crafts and rockpooling, to marine discovery days with boat trips, rockpooling within MPAs (or areas proposed for protection) and public talks to inform audiences from wide backgrounds about the marine environment and MPAs. The diversity of events we ran enabled us to reach a wide audience, from children to adults and from those already with a keen interest in the oceans and marine conservation to those less experienced and knowledgeable about the issues and problems.

We've had great feedback from participants, with the vast majority saying they'd recommend our public events to friends and family. Those events for which booking was essential were always booked up and often over-subscribed. Talks were well attended and generated vibrant question and answer sessions as the audience identified and engaged with the subjects covered.



Fig 33. Rockpooling at Bembridge

What worked well

We found it's easy to engage young children with the wonders of marine life when they're on a beach and have direct access to the animals and plants we're talking about. They have an amazing ability to find small things and their interest in charismatic creatures can be used to entice them to start exploring e.g. looking for crabs or going on a shark egg hunt. With young audiences we aim to inspire them to want to find out more about marine life and care for the environment it lives in. Children respond to simple conservation messages, such as not leaving litter on beaches will help marine life. Running family events brings in an audience of adults with the children, who discover and learn with them. These events can act as 'taster' sessions for citizen science projects and are an opportunity to promote ways they can get involved, either through coming to a survey or getting involved in a campaign, for example by contacting their local MP, or signing up to be a Friend of Marine Conservation Zones.

The offer of a boat trip was a good draw to get people to an event and we trialled some activities to engage people with marine life whilst on the water. Fishing plankton out of the sea to show people with portable microscopes was very popular as was using binoculars to spot seabirds and seals.

At one event we worked with an artist who ran an activity for people to make jellyfish models out of recycled plastic bottles. This activity was accessible to a wide age range (age 3 to adult) and was very popular. As it was something 'different' it also generated a good level of publicity.

Our public talks were also a very good way to engage with a slightly different type of audience. These talks were much more focused on people already partially engaged as only people with some interest in marine conservation already would attend. Audiences often contained groups with particular marine stakeholder interests and views which were not necessarily supportive of marine conservation. However, the wide range of opinions and knowledge of these audiences brought provided a good platform to convey a lot of information and answer specific questions, as well as explain that people have a voice and can contribute. Public talks also provided a good opportunity to fully explain MPAs (and the complex processes leading to their designation!) and encourage people to take action. Even the views of groups with reservations about the creation of MPAs were useful as it enabled us to identify areas of common ground and begin to work together to dispel some of the many myths which surround MPAs.

What didn't work so well

We found that when running a public session outside that involved hands-on activities such as rockpooling, it was much harder to explain complex conservation issues and the concept of MPAs than when in a more structured environment such as indoors. However, outdoor events lend themselves to running more engaging activities and attracting new audiences. This made the need to have a variety of types of events to engage with the public essential in order to reach a wide audience and get the messages across.

We found it hard to gather questionnaire type feedback during our WP4.1 activities as the nature of the events did not lend themselves well to getting detailed questionnaires filled in. However, we found the simple 'bucket' questionnaire a very useful tool which people were willing to participate in, possibly because it is very quick and simple.



Fig 34. Rockpooling with HIWWT photo Abbi Scott

VIII. Overall summary

The PANACHE project has enabled the project partners to strategically engage with a significant number of key people who will act as information multipliers and spread our message on to the wider population. Many new approaches to public awareness raising have been trialled and the effectiveness of these initiatives assessed.

At this key time for marine conservation within the Channel ecosystem it is vital that the public support the establishment and effective management of a network of Marine Protected areas. 'Buy-in' from local people, stakeholders and policy makers is vital to the success of these initiatives. We hope that initiatives like Cornwall Wildlife Trusts 'Your Shore network' of local Marine Conservation volunteer groups will be replicated through the UK and on the French side of the Channel as their actions are having a marked effect on changing public perceptions of our local marine environment.

Additionally the clear beneficial effects of the establishment of engaging and interactive Citizen science programmes have been shown on the UK side of the channel to have a real value in increasing public awareness, involvement and sense of ownership and stewardship of coastal ecosystems. In years to come there is likely to be an increased role for web based reporting and surveying forms but it is important that the people behind these schemes also provide opportunities for face to face contact and support for citizen scientists as without this you miss a great opportunity to widen peoples knowledge and an opportunity to create information multipliers that will pass on your messages of conservation and the benefits of Marine Protected Areas.

In a recent EU White paper addressing the subject of citizen science this is reflected

To quote; "Dissemination and engagement plans for all stakeholders are needed that include specific strategies and activities designed to maximize the impact across the general public, the scientific community and other actors. This measure goes hand in hand with the development of attractive communication material on Citizen Science topics and innovative communication strategies for greater awareness-raising. Collaborations need to be sought with artistic and culture related initiatives as well as with existing science communication organisations and initiatives. Strategies and communication means to better link grassroots movements and civil society initiatives to scientific institutions and actors are also required."

This has been an exciting two years and we thank INTERREG for funding the PANACHE project which has been an invaluable learning process for all of the partners of this project.

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Appendix

Appendix 1. Helpful Hints for successful MPA public awareness raising events

There are many different approaches to running successful events. Here are some tips that I have gleaned from 15 years of engaging with the public on marine conservation issues. Always base an event around a **fun and engaging activity** some examples include

- Rockpooling
- Snorkelling
- Arts and Crafts activities
- Strandline survey
- Beach clean
- Shark and ray egg case hunt
- Crabbing with crab lines (avoid who can catch the most crabs better to say who can catch the largest!)
- Boat trips
- Kayaking or stand up paddle boarding.

One Main Point. As well as choosing an engaging activity it is good to decide before the event what main issue you want to get over to people and to focus your serious discussions **at the end of the event** on that one issue. Avoid the temptation to tell them everything you know as this is likely to be far too much detail for an ordinary member of the public to take in. Always leave them wanting to learn more.

Cut the Jargon

The public are easily put off by use of scientific or environmental jargon. Some words are over used and have now got negative connotations, or at least they have for the general public. Use of these words will drastically cut engagement.

Words to avoid over using, particularly in promotional material for events and to a degree during events :

• MPA, MCZ, SAC, BAP, NTZ, VMCA. If you have to use these terms use the full name and say it slowly and explain what it means hopefully you won't have to explain more than one!

- Conservation
- Sustainable
- Ecosystem
- Biodiversity
- Scientific names (try to resist showing off how many of these you know... you have an unfair advantage! I still drop a few of the cool sounding ones but don't over do it!)
- Crustacean, mollusc, teleost, macro algae. Instead say Crabs and lobsters, shell fish, fish, seaweed.
- Intertidal, Benthic, pelagic, demersal, subtidal. All these things mean nothing to a member of the public, instead use; shore, seabed, mid water, near the seabed and below the low tide line.

At the event

Give people a **quick** introduction and a **health and safety** briefing and then get them finding cool stuff/ doing a fun activity.

At the end of the event debrief and talk about the wider picture of marine protection. Save detailed discussion on serious topics until the end. Put them at the beginning and you will loose people. Keep events fun, interactive and engaging.

Hands on experiences work far better than hands off. Show people how to handle a crab, let people feel the back of a starfish etc. (never hold starfish out of water for more than a few seconds though!) Things that people are interested in

- 1. Fascinating facts about common species the more gruesome the better. Some examples:
 - Crabs breathe through their armpits and taste with the hairs on their legs.
 - Sea cucumbers squirt out their guts when frightened.
 - Starfish squirt out their guts to eat their food.
 - Dog whelks drill holes in limpets, barnacles and mussels, then they inject saliva, digest the meat and suck out the juice!
 - Barnacles start out life as planktonic shrimps. When they find a rock to live on they cement their head to the rock, and then grow shells around them they then spend the rest of their lives head-standing and filter-feeding with their feathery legs!
 - Limpets can fight back, lifting their shells and stamping on the arms of a marauding starfish.

- 2. Seeing something rare. If possible show them something special that they won't have seen before.
- 3. Aliens, non-native species are always intriguing for the public.
- 4. How they can help; join Wildlife Trust, online campaigns, become a citizen scientist, volunteer for local marine group.
- 5. How MPAs work in practice, what they protect, what activities will be affected, how will they be policed. (or how is it likely that this will be achieved).
- 6. Give them a leaflet or ideally a small business card flyer with the most important web address on it.

These kinds of events are a good start – get people intrigued and get them wanting to learn more. **Get a volunteer to take photos** (and get parents to sign photo release forms) – these are invaluable for publicity and promotion. Get photos of people enjoying themselves as well as of animals you find. Get **plenty of volunteers** to help you if you are leading a rockpooling event as there will be lots of questions and people needing help!

Follow up with an email, blog entry, facebook post, tweet and press release. Have fun!

Matt Slater Cornwall Wildlife Trust Marine Awareness Officer

Blue Sound Project Evaluation

Marine Biological Association of Great Britain and National Marine Aquarium

Notes from phone call with Lauren Humphry Lauren.humphrey@national-aquarium.co.uk

Blue Sound is a public awareness raising programme carried out by The Marine Biological Association. The National Marine Aquarium were consultants on the project.

Methods of evaluation used were overseen by the team who do evaluation for Natural England.

Blue Sound Project Evaluation strategy

Looked at project outcomes

Need to choose outcomes that are specific and measurable – some are impossible to evaluate i.e. – behaviour and actions difficult

Open questioning

You can ask people if they feel they have learned something. You can ask if they enjoyed themselves as generally speaking enjoyment makes people more

receptive to learning – more memorable.

Collect numerical data - quantitative - i.e. numbers of participants etc

Better not to rely on forms – people don't like form filling

Less time consuming methods

- Putting pebbles or counters into buckets need five buckets ask a question and then get people to score it 1 – 5 – good as it is anonymous.
- 2. Or if you want to be really quick draw 5 circles in sand and number them and ask people choose and stand in their chosen circle more difficult less anonymous
- Recording sound bites labour intensive use Dictaphone or video camera ask open questions -transcribe and analyse – against learning outcomes

For blue sound leaning outcomes were

- Knowledge and understanding
- Skills
- Attitudes and values
- Enjoyment
- Activity behaviour and Progression
 - 1. Board with post it notes comments box

Concept mapping – this is used when working with groups of people for a longer time period to analyse how their perception has changed

Give them a piece of paper with a word in the centre They write down everything they know / feel about it and link it – mind map / spider diagram style Then analyse against learning outcomes to score it (code the data)

Towards end of the process carry out the same Concept map – and see if they score more highly – have learned – feel differently

Focus groups

Discussion with the people you have engaged - list of questions – warm up ones to begin with and serious ones at end In-depth Can do telephone interviews, depends on group

Email questionnaires – Lauren uses Survey monkey – can design your own survey – programme analyses it for you

On line resources

Visitors study group – website - advice on structuring surveys etc. – tips such as ask demographic questions at the end of surveys as people like to end on the easy questions

Hough et al 2005, "Using concept mapping to assess change in teachers understanding of algebra"article online



PANACHE is a project in collaboration between France and Britain. It aims at a **better protection** of the Channel marine environment through the **networking** of existing marine protected areas.

The project's five objectives:

- Assess the existing marine protected areas network for its ecological coherence.
- Mutualise knowledge on monitoring techniques, share positive experiences.
- Build greater coherence and foster dialogue for a better management of marine protected areas.
- Increase general awareness of marine protected areas: build common ownership and stewardship, through engagement in joint citizen science programmes.
- **Develop** a public GIS database.

France and Great Britain are facing similar challenges to protect the marine biodiversity in their shared marine territory: PANACHE aims at providing **a common, coherent and efficient reaction**.

PANACHE est un projet franco-britannique, visant à une **meilleure protection** de l'environnement marin de la Manche par la **mise en réseau** des aires marines protégées existantes.

Les cinq objectifs du projet :

- Étudier la cohérence écologique du réseau des aires marines protégées.
 - Mutualiser les acquis en matière de suivi de ces espaces, partager les expériences positives.
 - Consolider la cohérence et encourager la concertation pour une meilleure gestion des aires marines protégées.
 - Accroître la sensibilisation générale aux aires marines protégées : instaurer un sentiment d'appartenance et des attentes communes en développant des programmes de sciences participatives.
 - Instaurer une base de données SIG publique.

France et Royaume-Uni sont confrontés à des défis analogues pour protéger la biodiversité marine de l'espace marin qu'ils partagent : PANACHE vise à apporter **une réponse commune, cohérente et efficace**.

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