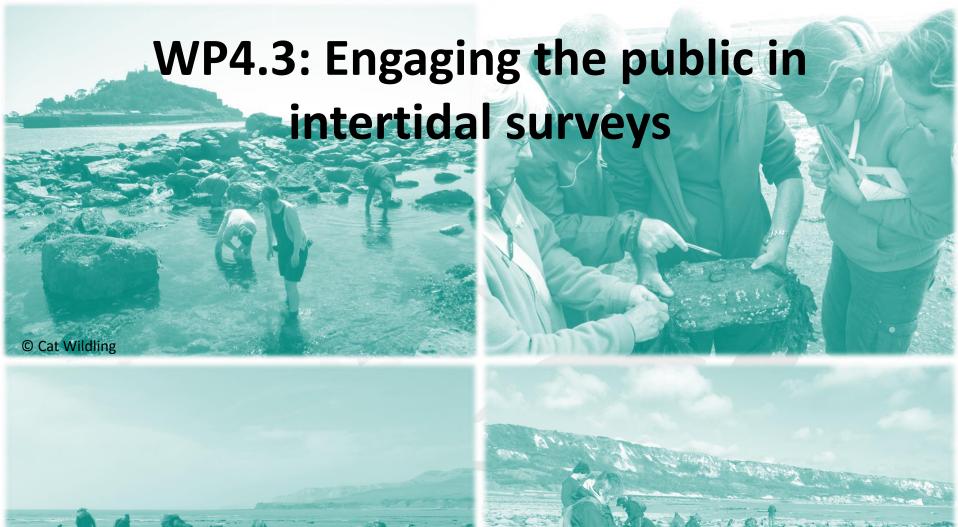


FINAL CONFERENCE - MARCH 17th-18th 2015 - TORQUAY

Intertidal Surveying by Citizen Scientists

Engaging people when they are at the seaside









Programme development

PANACHE key species

Climate change indicator species



★ Species monitored under the Water Framework Directive

Species that characterise the main biological shore zones

▶ Features of Conservation Interest

Development of a standard Intertidal Survey Methodology

★ Walkover survey

Timed species search

★ Transect survey

Quadrat survey



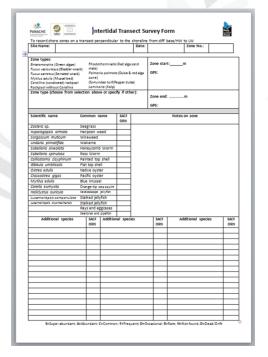




Development of standard survey materials







Honeycomb worm reefs (Sabellaria alveolata)

Description:

A marine worm that builds and lives inside tubes made of sand or shell fragments. Tubes are often densely packed forming a fragile, honeycomb-like reef over rocks. The worm itself is rarely seen.

Where found:

Usually on the middle and lower shore, but can occur subtidally.



Ross worm reefs (Sabellaria spinulosa)

Description:

A marine worm that builds and lives inside tubes made of sand or shell fragments. Tubes are generally separate and attached to large shells or stones creating a fragile reef structure.

Where found:

Sometimes on the lower shore, but more usually subtidally.



Development of standard training materials

Guidance notes and PowerPoint presentations developed covering:

- ★ 4 standard survey methods
- Recognition of intertidal zones and characterising species
- Identification of PANACHE key species
- **▶** Use of the SACFORN scale

Engagement of volunteers as Intertidal Survey Citizen Scientists



ACCUEIL ACTIONS ACTUALITÉS OBSERVATIONS RELAIS





Carte des observations





Participants Participants Participants

Polzeath and the Pool of dreams

Viell first we had the 'Cave of Dreams' (at Fistral'), then we had the 'Rock of Dreams' (Looe), and now we have the 'Pook of Dreams' found on our Cormwall Villdille Trust Shoresearch survey at Polzeath on one of the lowest tides I have ever witnessed on this amazing shore.

As you can see from this photo our transect went down onto rocky kelp covered reefs that would normally be well covered by the w

ater and dangerously close to the surf. However on the day of our survey, 9th September 2014, we were budy to have bright sunshine, high air pressure holding the water down and absolutely zero surfil in this seaweed smothered shallow but pebbly pool we found an incredible diversity of marine life! Once again highlighting how fascinating rockpools can be in Cornwall!



Project delivery

Delivery of training in PANACHE Intertidal Survey Methods

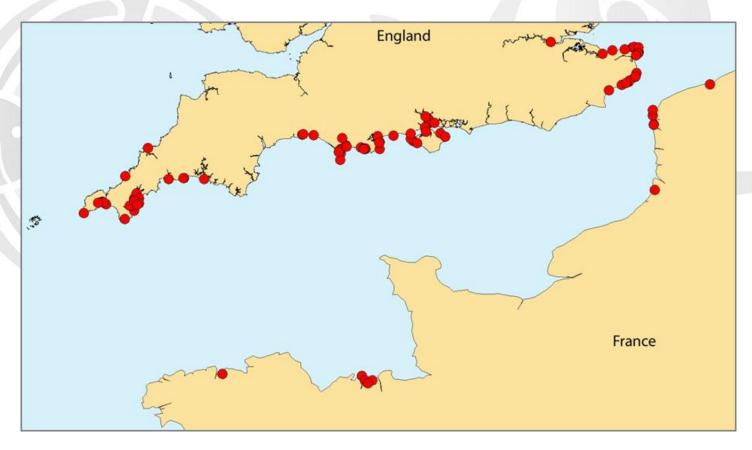
- ★ 39 Intertidal survey training events
- √ 550+ volunteers
- ★ Various formats classroom, shore-based, mixture
- Specialist workshop in the identification of sponges, hydroids and bryozoans





Delivery of surveys

- ★ 210 surveys
- ¶ 1,325 volunteers



Data

- ➤ Surveys led by experienced staff with good marine biological knowledge
- Data entered into national MarineRecorder database

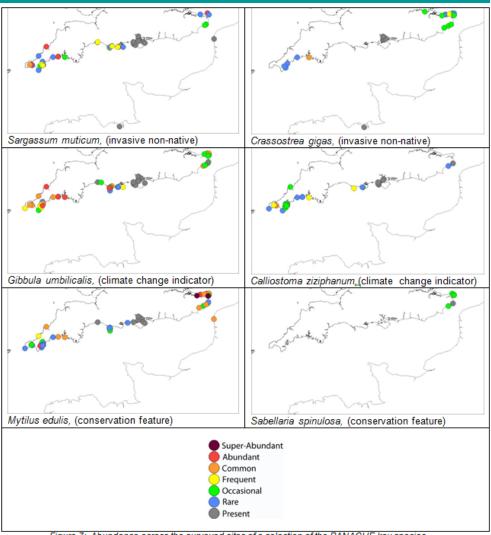


Figure 7: Abundance across the surveyed sites of a selection of the PANACHE key species

Analysis of methods used

Walkover survey



Popular with volunteers



Flexible – effective for volunteers keen to find new or unusual species



Good way to accurately capture presence or absence of PANACHE species

Timed species search

- Popular in some locations
- Effective way to introduce volunteers to key species
- Volunteers more likely to see and record key species in other survey methods

- Unpopular in some locations
- Can lead to frustrated volunteers and misidentification

Suggestion:

Smaller packages of species which include several likely to be found and recognised.

Transect survey

Popular among volunteers with an interest in science or a defined search area

Works well with small groups and on shores with clearly defined zones

Less popular with volunteers keen to explore further afield or for certain species

 Shores with less defined zones can result in confusion

Suggestion: Use coloured buckets to mark out the zones

Quadrat survey

Popular among volunteers with an interest in science



SACFORN scale

- ★ Plenary session ensured accuracy of use
- With experience, volunteer confidence and accuracy grew

Conclusions

- ★ Each method was found to be effective in engaging citizen scientists
- Walkover and timed species search can be used by volunteers unsupervised
- Transect and quadrat surveys are better with supervised groups
- Data quality is dependent upon experience of volunteers. Training provided ensured for a core of robust data
- Important to select the correct survey method to suit the volunteers on the day
- Volunteer engagement in marine surveys is more developed in the UK than in France, but activities throughout this work package have resulted in a suite of tools effective in engaging the public in MPAs and in producing useful data to support their management
- The survey methods developed will continue to be used































































