Marine predators and high energy environments: challenges and solutions to understanding behaviour

**Organisers**:

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**Details**: Marine predator (bird, mammal, fish, reptile) use of high energy and ephemeral environmental features such as eddies, tidal currents, fronts and foul weather has been little studied and so poorly understood. The fine-scale spatial and temporal nature of such features, the difficulty in accessing these sites and a requirement for high resolution telemetry equipment and remote

sensed data sets has limited the effective measurement of predator interactions. These deficiencies have come to the fore in recent years with both the growing need for a better understanding (with drivers such as offshore renewable energy) and the opportunity provided by a significant improvement in animal-borne and sensor technologies.

This workshop aims to:

1) showcase current research being undertaken in high energy/ephemeral marine systems in Scotland and further afield and

2) identify technological needs, opportunities for exchange of methodologies between studies of different taxa and

3) consider MASTS relevant collaboration opportunities.

**Expected Outcomes/Outputs**:

* A review of recent/leading research on marine predators behaviour in high energy environments.
* A wishlist of technologies needed to effectively study marine predators in high energy, ephemeral environments.
* Kick-start collaboration discussions for combined funding opportunities.

**Workshop programme – Thursday 29th August 2013, 9am-12:30pm**

9:00-9:00 Welcome and introduction (Mary-Anne Lea, IMAS University of Tasmania)

9:05-9:20 Mary-Anne Lea (IMAS University of Tasmania): Challenges of characterising

predator interactions within ephemeral environments

*Scottish perspectives (draft titles)*

9:20-9:35 Andy Dale (SAMS-UHI): Tidal features at animal relevant scales

9:35-9:50 Steven Benjamins (SAMS-UHI): Porpoise distribution in tide-space

9:50-10:05 Jonathan Gordon (SMRU, University of St Andrews): Porpoise diving in moving water

*Stretch break*

10:15-10:30 Benjamin Williamson & James Waggitt (University of Aberdeen): Predator-prey

interactions in moving water

10:30-10:45 Gordon Hastie (SMRU, University of St Andrews): Using telemetry and

cameras to capture seal distribution in tide-space

10:45-11:00 Angus Jackson (ERI-UHI): Seabirds in rough seas

11:00-11:30 *Morning tea*

*Discussions*

11:30-11:45 Characterising ephemeral environments (Chair Beth Scott, AU)

11:45-12:00 Suitable technologies (Chair Gordon Hastie, SMRU)

12:00-12:15 Combining fine-scale spatial and temporal data (Chair TBC)

12:15-12:30 Round-up and look forward (Ben Wilson, SAMS)

12:30 *Lunch*