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Report: Sea loch fieldwork 2008 Part I

1. SPIES Detox Auto-sampler tests(C77100)
2. Loch circulation model validation (FC11102)
3. CAPTOR buoy deployment (AE11100)

23-27 June 2008

Locations:

Loch Ewe, Ross-shire
Loch Shieldaig & Loch Torridon, Ross-shire

Personnel:

D Lichtman
M Geldart
G Hermann

Vessels and transport:

MV Glen Tarff
MV FRAM
Ford Ranger
Estate
Pick-up truck

Objectives:

- 1 Test SPIES Detox Auto-sampler, manually take water samples for comparative data, deploy SPIES passive sampler bags and deploy passive organic sampler strips (SPMD).
- 2 Recover two moored water level recorders deployed at locations in Loch Ewe in February 2008.
- 3 Deploy the AADI data buoy in Loch Shieldaig.
- 4 Re-deploy the CAPTOR buoy in Loch Torridon, with the addition of a Sontek XR current meter set up to measure the surface flow close to the buoy.
- 5 Deliver equipment for Water Framework Directive sampling to the staff at the Shieldaig Field Station.

Procedure:

Staff travelled to Loch Ewe on Monday 23 June. That afternoon, the equipment was loaded on board *MV Glen Tarff* and the Auto-sampler was set up. SPIES passive sampler bags and passive organic sampler strips were attached to the Auto-sampler frame. The mooring was fine tuned and tested for ease of deployment and recovery before being deployed, at about 57° 50' 34" N, 005° 37' 27" W, the next day. This was all done in good time, which allowed water level recorders to be recovered before heading back to harbour.

The next day, it was found that the Auto-sampler had jammed so it was taken to FRS laboratory at Mellon Charles for servicing. The Auto-sampler was re-deployed and there were no further problems with the Auto-sampler for the rest of the week. The software for the Loch Ewe weather station was checked and updated. That afternoon D Lichtman and M Geldart travelled to Shieldaig. G Hermann remained in Aultbea to continue the Auto-sampler tests.

On the Wednesday, the receiving equipment for the Aanderaa Data Buoy was set up at the FRS Shieldaig Field Station and the broken weather station removed. The equipment for the Water Framework Directive sampling was handed over. In the afternoon the AADI data buoy, CAPTOR buoy, rope and bottom weights arrived on the pick-up truck and were off loaded. At Loch Ewe, the Auto-sampler tests continued with a sample bag change, manual water samples were taken and the SPIES bags retrieved.

The following day, sample bags were changed again, manual water samples taken and the SPIES bags retrieved at Loch Ewe. Bad weather in the Loch Shieldaig and Loch Torridon area meant that the morning was spent in preparation and loading of equipment on to the *MV FRAM*. By the afternoon, the wind had calmed enough to deploy the AADI data buoy in Loch Shieldaig.

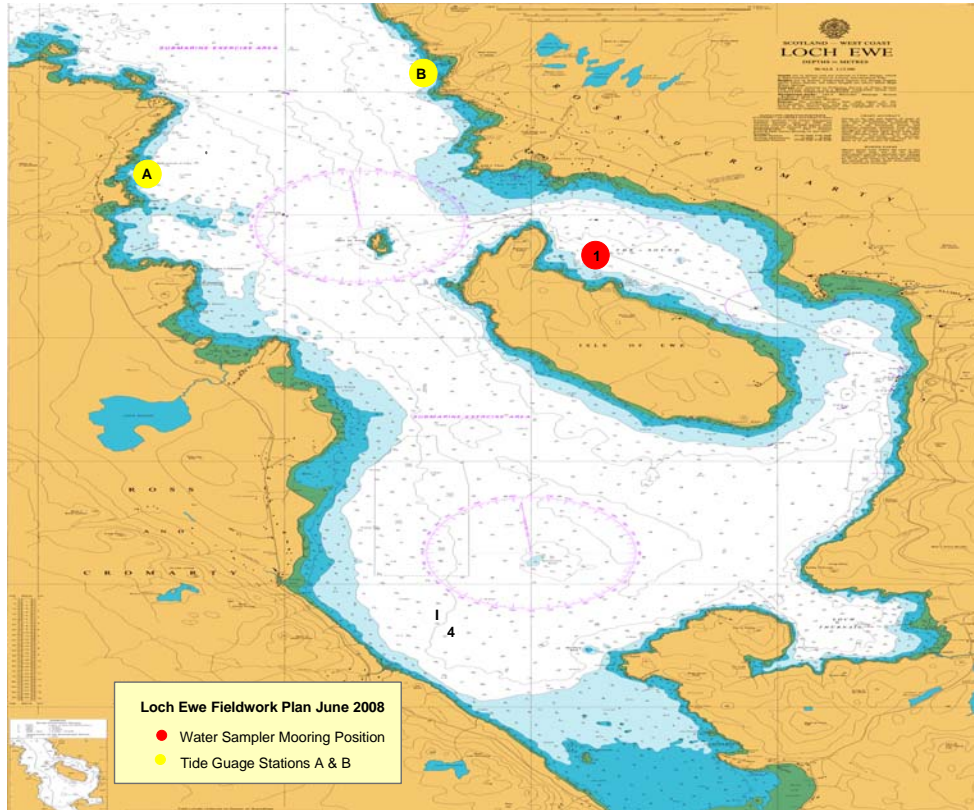
The Friday turned out to be still and calm offering very good working conditions. The CAPTOR buoy deployment in Outer Loch Torridon went as smoothly as could be asked for. In Loch Ewe, a final bag change was done and the Auto-sampler re-programmed for a three-week deployment. The last SPIES bags were retrieved and half of the passive organic sampler strips recovered. Staff returned to Aberdeen in the afternoon.

Acknowledgements:

Thanks to Jane and Willie Grant of the *MV Glen Tarff* for their help in making the Auto-sampler tests run so smoothly and to Kenny Livingstone and Davey of the *MV FRAM* for aid and advice in the Loch Shieldaig and Loch Torridon buoy deployments. Also thanks to John Mclean for organising the fork-lift to off load the pick-up truck at Shieldaig.

D Lichtman
4 July 2008

Loch Ewe



Loch Shieldaig & Loch Torridon

