



Progress report n°2 – EU-PRAGMA – period covered: 21/11/20006 →01/07/2007

Grant agreement N°07.030900/2005/429172/SUB/A5 – "A pragmatic and integrated approach for the evaluation of environmental impact of oil and chemicals spilled at sea: input to European guidelines".

Main milestones for the period covered/Summary of research activities

A. WP2 – Pilot study experiments: laboratory exposure o chemical and oil compounds.

- November 2006 - Completion of experimental study with styrene and mussel at IRIS – Exposure lasting for 19 days, followed by 15 days in clean seawater (“recovery”). No technical problem
- December 2006 – Completion of experimental study with fuel oil and fish at CEDRE facility, and together with UBO partner – Exposure lasting for 3 weeks, followed by one week in clean seawater for recovery. The exposure has induced a strong mortality of fish after 2-3 weeks of contamination, but no technical problem otherwise.
- Januar 2006 – First series of samples from CEDRE/UBO forwarded to UPV and UNIFI (subcont. biosensor analytical work) for further analytical work
- April 2007 – Completion of experimental study with fuel oil and mussel at IRIS. 5 months exposure of weathered oil followed by ≈ 1 month recovery in clean seawater – Pamela Ruiz (UPV) participates to last sampling. All samples collected for analytical work by UPV are sent.
- Mai 2007 – Running and completion of experimental work with styrene and fish by CEDRE and UBO. Samples sent thereafter for analytical work to UPV and UNIFI (subcont. biosensor analytical work)

B, WP3 – Analysis of results

Fish pilot study

- Fuel oil exposure - All analytical work performed by UBO is finished. Biosensor analytical work subcontracted to UNIFI is done: work performed on fish bile.
- Styrene exposure – All the analyses are done excepted half of the analytical work done on fish bile and blood (erythrocytic nuclear abnormalities).
- UPV analytical work in progress.

Mussel pilot study

- Fuel oil exposure – All analytical work under the responsibility of IRIS is completed.
- Styrene exposure. Idem

- UPV analytical work in progress.
- A first internal preliminary report by Sjur Vingen (Master student University of Stavanger) is entitled “Biological responses in mussel (*Mytilus edulis*) exposed to heavy oil and styrene in the laboratory: Linking physiological condition to contaminant accumulation – Method evaluation”

IRIS works towards the integration of chemical and biological measurements into an environmental index for aiding interpretation with a pragmatic environmental decision-making approach. This work is done as part of a Master Degree (Emilie Sinet – ENSAIA-National Engineering School of Agronomy and Food Sciences, Nancy, France). This task is conducted in two parts; a first section consists of a theoretical review and appraisal of some of the most recent analytical methods based exclusively on scientific literature, and a second section consists of the trial of several of these reviewed methodologies with data obtained from monitoring surveys and data derived from PRAGMA.

C. WP4 – Dissemination of knowledge and input to EU guidelines

- Further work done to update the website of Pragma (<http://www.iris.no/pragma>).
- Presentation of Pragma at the SETAC international conference in Porto, May 2007. The poster summarizes the project goals and is illustrated with some result examples from the pilot studies and analytical work performed by the partners. See pdf copy of Poster attached to the present document.

On going and planned activities

- Further analytical work by UPV on biological samples of fish and mussel to be completed
- Further analytical work by IRIS and all partners towards the integration of results into a simple decision-making environmental index.
- All partners to participate in a workshop organized by CEDRE in October 2007. However, this activity is not actually part of the PRAGMA project (outside project period)

Financial summary

For the period starting from the start of the project (14/02/2007) to July 01, 2007, the total project eligible cost was estimated to 217.397,00 euros. However, based on the recent technical and financial monitoring visit by Thomas Försch on 9 July 2007, new findings and recommendations have been sent to IRIS. They will be incorporated into the final financial report due in December 2007 at the latest.