

“Bioremediation of Waste from Marine Pollution”

03 - 07 November 2002 in Bremen, Germany

carried out by: Institut für Kreislaufwirtschaft GmbH (Institute for Recycling and Environmental Protection), Bremen and BLG Consult GmbH, Bremen

co-funded by the European Commission in the framework of the three-year rolling plan for Community action in the field of response to marine pollution

Aims and Objectives

The overall objectives for this course were to foster co-operation between the member countries in the field of combating accidental marine pollution and treatment of resulting wastes and to enhance information exchange between professionals inside the European Union and to evaluate experiences gained in this context. In addition it was aimed for to further develop the practical and professional knowledge of personnel from local, regional and government authorities dealing with the issues under question.

The specific objectives were defined as follows:

- Detailed information on the actual techniques used in the area of bioremediation of oily and other wastes;
- In depth knowledge gained from practical examples and case studies;
- Detailed understanding of the costs, benefits, duration and constraints of different techniques;
- Development of Guidelines for use of the techniques.

Brief Description of the Action

The course on “Bioremediation of Waste from Marine Pollution” was executed by the Institut für Kreislaufwirtschaft GmbH (Institute for Recycling and Environmental Protection) in cooperation with the BLG Consult GmbH in Bremen in November 2002. Sixteen delegates from 12 Maritime Member States participated the course.

As one of the main features of the course lectures were given by national and international experts to provide the necessary theoretical background upon various aspects of Bioremediation (see table 1).

In addition a number of opportunities were offered to the participants for own contributions and exchange of ideas and experiences. Thirdly an excursion to a company was arranged which is involved in the bioremediation of contaminated soils and sediments

Table 1: Lecturers of the training course on “Bioremediation of Waste from Marine Pollution”

Lecturers	Institutions	Topic
Dr. Karlo van Bernem	GKSS, Institute for Coastal Research, Geesthacht, Germany	Bioremediation and Marine Pollution
Dr. Gustav A. Henke	Umweltschutz Nord GmbH & Co., Ganderkesee, Germany	Practical Experiences with the Treatment of Contaminated Soils, Sands and Sediments
Dipl.-Ing. Bernhard Knollmann	Bezirksregierung Lüneburg, Germany	Case study: Landfarming of Oil Contaminated Clay
Dr. Stéphane Le Floch	CEDRE, Brest, France	The ERIKA incident - methodology to assess the potential of bioremediation
Dr. Sarah MacNaughton	AEA Technology Plc, UK	Case studies on bioremediation of marine pollution
Dr. Lars Stemmler	BLG Consult GmbH, Bremen, Germany	Relevant Regulation on European and National Level
Dr. Martin Wittmaier	Institut für Kreislaufwirtschaft, Bremen	Case study: Bioremediation of TBT-contaminated harbour sediment
Mr. Henning Voss	German Central Command for Maritime Emergencies CCME	The German strategy for spill response The tasks of the MCMP - Management Committee on Marine Pollution
Dr. Johanna Wesnigk	Max-Planck-Institute Marine Microbiology, Bremen, Germany	Constraints to Biological Degradation in the Marine Environment
Dr. Hilke Würdemann	Universität Karlsruhe, Institute of Aquatic Environmental Engineering, Germany	In-situ, On Site and Off Site Methods, Framework Conditions; Draft Guidelines for Bioremediation- Results of the EC-Workshop in Cadiz July 2002 Discussion

Dr. Christopher Wooldridge Cardiff University, Cardiff Marine Institute, UK

In addition contributions of the participants were asked for: On the first day the participants had the opportunity to present their background and responsibilities. Discussion sessions were held after most lectures, and one was explicitly scheduled on European shortcomings. Thirdly a practical simulation exercise on damage evaluation was organised for the participants, in which three working groups worked on different scenarios. Excursions to two companies were arranged which are involved in the treatment of contaminated and oily waste. Finally as a main result from this course, training needs for future courses have been identified with the help of the participants. At the end of the week the participants evaluated the course and received personal certificates for their participation.

The pre-organized joint meals had the positive effect of giving a lot of opportunity for the participants and the lecturers of the respective day to communicate and exchange views and ideas. Additionally the coffee breaks left ample time for discussions within the group and/or with the lecturers.

Results and Impacts for the Future

The participants expanded their knowledge and gained experiences on the topics according to the objectives set for the course. The presentations of the expert lecturers often were used as a basis for further discussions and information exchange among the group and with the lecturers and the opportunity was used to question further details.

The simulation exercise on damage evaluation techniques was designed to be a synthesis of the course and to integrate the substantial professional experience of the participants as well as the contents of the lectures attended. In conclusion the simulation provided a vivid insight into the challenges of identifying relevant cost categories and evaluation criteria and considering legal and environmental factors whilst working in an international forum within strict time limits.

The participants defined further training needs in the field of “liability and compensation” according to three categories, basic training, advanced training and special training courses and specified them in terms of objectives, target groups, format and further details. It was interesting that the topics environmental liability and compensation and especially how to evaluate environmental and ecological damage were proposed as important. A course on this emerging issues would surely be well received by member states in the next years.

Furthermore, a strong recommendation was made to work on harmonisation and cooperation in order to give European guidance to regional and local administrators, and other target groups. Therefore a series of workshops to develop a manual on best European practice in (environmental) liability of marine oil and chemical spills, compensation cases and claims accepted, would be appreciated in probably all member states and would lead to further cooperation and harmonisation on a European level.

