

Discussion

MH finished his talk with the conclusion that Beached Bird Surveys (BBS) can certainly be used to measure the effectiveness of steps taken to combat chronic oil pollution at sea. The most obvious lesson learned from the BBS on Shetland is that oil terminals should not be opened without the establishment of ballast reception facilities. Looking at the Shetland BBS, with hindsight, surveys should have been started up earlier to provide more baseline data and there should have been a better system for sampling oil from both plumage and beaches. The talk covered 1976-1983, but a similar programme still goes on on Shetland.

It is allowed to discharge small amounts of oil in the North Sea. GD concluded that the mere presence of a discharge limit could lead to illegal discharges. The reason is, that discharge limits cannot be met nowadays. In a detailed study, testing monitoring equipment on board ships, it was found that while the maximum concentration of oil in a bilge water discharge should be between 15 and 100 ppm (MARPOL Convention), it averaged 450 ppm with a maximum of 54,000 ppm. If oil discharges over 15 ppm are totally forbidden, which would be the case when the North Sea was declared 'Special Area' according to MARPOL standards, all detected oil slicks refer to illegal shipping/offshore operations.

MH asked why there is such a difference between the presence of crude oil on birds and beaches in Denmark. GD replied that there is a problem with representativity of the samples in the project. MH remarked that on Shetland in 1979 he had found exactly that same difference between beaches and birds. JAF asked whether in sampling projects like this the role of shipping (mainly nearshore) is likely to be overestimated compared to offshore industry (mainly far offshore). GD did not consider this a major problem. Moreover, the North Sea crudes found in Denmark were from shipping operations rather than discharges from platforms (crudes found were from the northern North Sea).

Questions arose on the possibilities to detect Nonylphenol or Dodecylphenol slicks from the air (CJC, MLT). GD explained that Dodecylphenol would most certainly have been visible since it was an additive in lubricating oil. Identification from the air, using remote sensing equipment, would be more complex, but perhaps not impossible. It is at presently unknown what proportion of the beached birds is killed by non mineral oils (biogenic compounds), and the joint sampling project, as described by GD, will provide first hand information on this topic. All substances found in samples from feathers and beaches will be identified in this project. CJ asked for international cooperation in this field but also for the integration of pathological, parasitological and toxicological research on collected beached birds. AJB remarked that too much sampling could lead to capacity problems in laboratories, and to very expensive projects.

Abbreviations: AJB A.J.Baars, CJC C.J.Camphuysen, GD G.Dahlmann, JAF J.A. van Franeker, MH M.Heubeck CJ C.Joiris, MLT, M.L.Tasker