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FANTARED II – A Study on Ghost Fishing in European Waters

by

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Abstract

The present poster summarily describes the Project FANTARED II funded by the European Commission. The high level objective of the project is to identify, quantify and ameliorate the impact of static gear lost at sea in European waters. This research extends the work undertaken during EU Study contract no. 94/095 FANTARED I, which covered only shallow water areas. This new study extends the information on lost gears to deep-waters and to a wider range of métiers prosecuted in European waters, as well as includes a comprehensive range of seabed and hydrographic conditions. The partnership and the specific tasks allocated to each partner have been set up with these requirements as a priority. Previous work has shown the extent to which the evolution and impacts of lost gear are métier - and site-specific. To have any credibility in the context of European fisheries management, this kind of research has been undertaken on commercially fished grounds. Mitigating measures with potential to reduce the extent and/or impact of lost gears will be suggested to those fisheries where ghost fishing has a significant contribution to total mortality.

Key Words: Ghost fishing, FANTARED, gillnet, trammel net, tangle net, traps.

Introduction

Ghost fishing by lost gear may have a considerable impact on the environment. The phenomenon has aroused considerable concern world-wide in recent years. Being aware of the problem, the European Commission decided to fund a project to evaluate this problem in European waters. The FANTARED II project, which follows the FANTARED I project that focused on lost gear in shallow waters, deals predominantly with the deep-water gill net sector (including gill, trammel and tangle nets) but also includes a limited amount of work on fish and shellfish traps. This study covers a wide range of fishing *métiers*, from the Mediterranean Sea and the Eastern Atlantic to the North and Baltic Seas, involving research teams from Portugal, Spain, France, England, Sweden and Norway.

The main objectives of this 3-year study, that involves National Advisory Groups (NAGs) engaging the respective national industry in each partner's research, are: 1) establishing the main causes and extent of gear loss; 2) determining the physical evolution of lost gears under a wide range of condition; 3) quantifying the ecosystem impacts of lost gear with particular emphasis on commercially important species; and, 4) evaluating mitigation measures with potential to reduce the extent and impact of lost gears.

Materials and Methods

Following identification of significant *métiers*, either because of the importance of their landings or to the fact that they involve some factor that is important in terms of the ecological impact or character of nets that are lost from the fishery, a number of fishermen will be interviewed. These information, that can subsequently be raised to fleet level, will allow to: establish causes and extent of loss; identify areas of greatest losses; establish the extent and success of attempts to recover lost gear; and identify the extent of conflict between different fishing methods. Areas possibly hosting loss gears (these includes wrecks and open ground) will be surveyed by a wide range of methods: divers, ROV's and sonars. Once these lost gears are located subsequent retrieval will be done, by means of grapnel.

The physical evolution of lost gears is influenced by a range of factors, which are conditioning the biological impact that the gear will cause. Since evolution is strongly site-specific this task accommodate as many of the physical variables as possible at the limits of their variation. A programme of controlled abandonment, monitoring and retrieval of nets is set to study the physical evolution of the nets and their impact on the fisheries. All partners carry on these experiments, thus at the end of the project the team expects to have covered a wide range of situations.

Mitigation measures that are being used world-wide will be reviewed to evaluate whether they would be appropriated to apply to the European fisheries being examined. These may involve technical measures, access arrangements or some other management techniques.

The NAG's involvement is of considerable importance because: 1) their endorsement is necessary in order for the teams to get access to certain types of information; 2) their members' guidance will be invaluable in ensuring that experiments to simulate gear loss are as realistic as possible; and 3) that they will eventually be partners in any activities that seek to manage gear loss and its impacts.

Expected Results

With the present project it is expected to identify, quantify and ameliorate the impact of static gear lost at sea in European waters. The results achieved during the project will allow to know which European *métiers* are most likely to yield the greatest benefit (environmental/ecological/fishery resource) from a reduction in the level of ghost fishing. If it is desirable to reduce the level of ghost fishing, then this will require the introduction of some kind of mitigating measures. Potential measures are of three main categories:

- reducing the levels of interactions between towed and static gear by access arrangements of some kind,
- technical measures such as the use of biodegradable materials and galvanic links which open escape hatches,
- effort-related measures such as the compulsory tagging of gear and restrictions on the amount of gear that can be deployed.

Estimates of costs and difficulties of the introduction of those management measures in the fisheries analyzed will be related to potential benefits in order to realize the balance of one against the other. This will give clear guidance as to how the ghost fishing by particular *métiers* can be reduced, with what benefits and at what cost.