

5.3.3 Special Requests

5.3.3.1 Review of the Biologically Sensitive Area/Irish Box

Request

Describe the spawning and nursery grounds of commercially important species in the area of the Irish Box, and in particular hake;

Assess whether the spawning and nursery grounds so described, especially for hake, coincide with the boundaries of the Irish Box, and if not, which criteria could be used for a new definition of such boundaries, and which would then be the description of such boundaries;

Assess the Irish Box effort constraint in the context of other conservation measures adopted in the area, in particular the gear restriction in Regulation 494/2002. In particular, evaluate the relative importance of these measures, whether any results in terms of resource conservation can be attributed to them, their coherence in terms of boundaries and content, and whether they depend in their effectiveness one on another;

Provide an overall appreciation of the usefulness of the Irish Box for the purpose described above.

Background

The Commission has to review the Western Waters access regime that has been in force since 2004. In particular, the Commission has to evaluate the access regime linked to the Irish Box in conjunction with other management measures applicable in the area concerned (Article 6 of Council Regulation 1954/2003). The objective of the Western Waters access regime is to avoid an increase in fishing effort (defined as overall effort directed towards demersal stocks, and effort on some benthic fisheries) compared to levels in 1998–2002. The constraint of maximum effort levels within the Irish Box is designed to accompany the restrictions on the use of demersal gears in that area, in view of its importance as a spawning and nursery ground, in particular for hake.

The Irish Box which was set up under the Iberian Act of Accession 1986, but was replaced in 2003 by a new Box, known as the Biologically Sensitive Area (BSA) under Council Regulation 1954/2003 (Figure 1). The BSA boundaries were formulated in a political context, but were based on an area considered to hold a high concentration of juvenile hake. Council Regulation 1415/2004 (known as the Western Waters Regulation) established a maximum annual fishing effort for each Member State and for each area and fishery within and close to the BSA. Council Regulation 494/2002 had established a “hake box” within part of what became the BSA. This prohibited fishing with towed gears between 55–99 mm and static gears <120 mm within much of the BSA (towed gears of 80–99 mm and static gears <120 mm are commonly used to target hake in ICES Area VII outside the box).

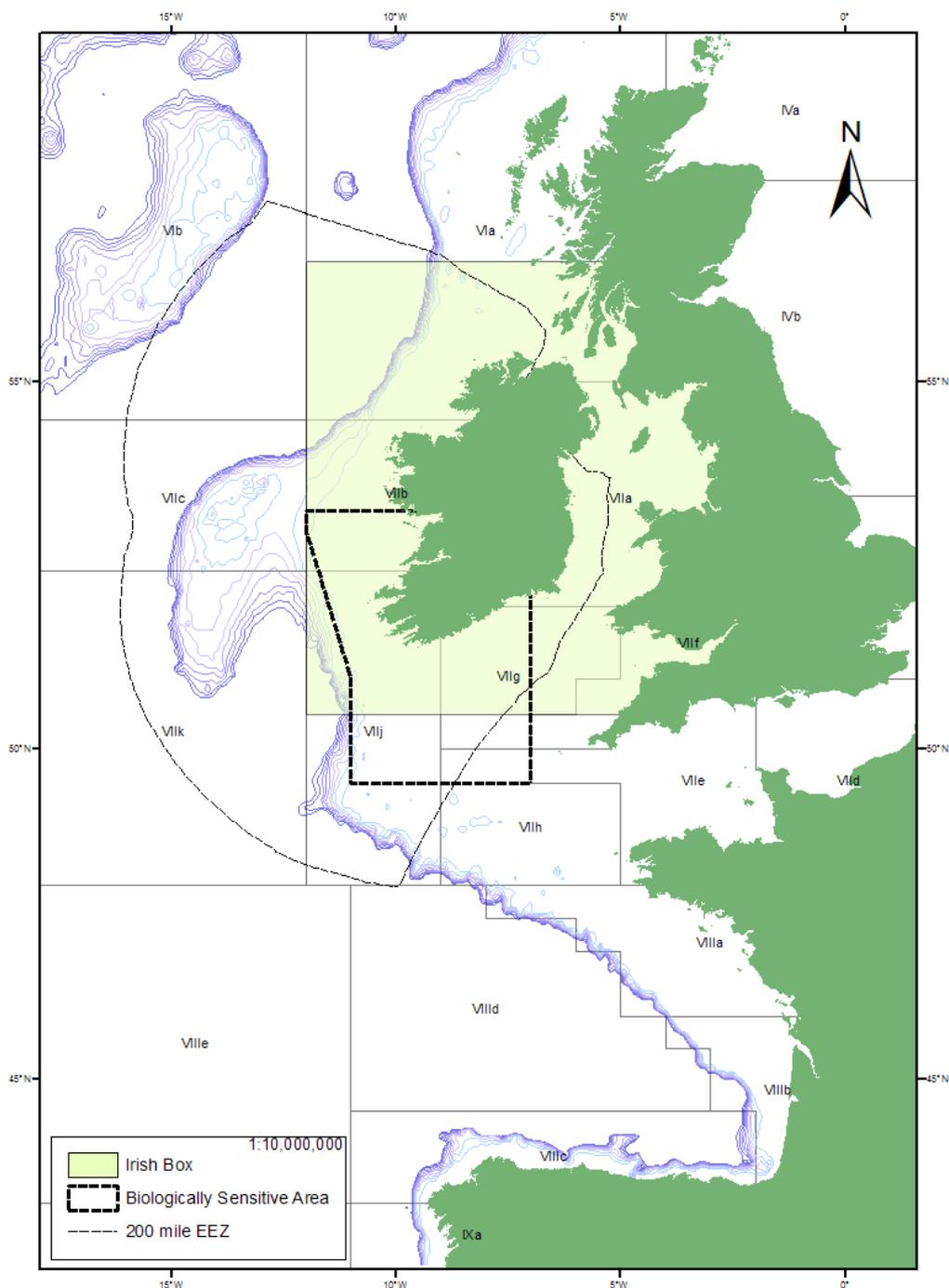


Figure 5.3.3.1.1 The Biologically Sensitive Area (BSA) that replaced the Irish Box.

ICES response

The response given below is built on Lordan and Gerritsen (2009).

a) Spawning and nursery areas

Maps of the spawning and nursery areas of some of the key species in the BSA, based on published and unpublished datasets are presented below (Annex 1 Figures 5.3.3.1.2 – 5.3.3.1.12). These encompass the main species landed (by weight) and include the pelagic species that occur in the area but which are unlikely to be affected by the effort controls on demersal gears in the BSA.

b) Relationship between the spawning and nursery areas and the boundaries of the BSA

Table 5.3.3.1.1 summarises the relevance of the BSA to the spawning and nursery areas for commercially-important species.

Table 5.3.3.1.1

Species	Importance of BSA
Mackerel	Important nursery area, but species unlikely to be impacted by the current controls on demersal gears in the BSA as the gears do not catch juveniles.
Horse mackerel	Important nursery area, but species unlikely to be impacted by the current controls on demersal gears in the BSA as the gears do not catch juveniles.
Blue whiting	Spawning and nursery area is mainly west of the BSA.
Herring	Many inshore spawning sites and nursery areas within the BSA although the BSA and associated management measures are unlikely to affect the species as controls mostly affect fishing further offshore.
Hake	The main spawning area around the BSA lies on and beyond the western boundary. The main nursery area corresponds well to the BSA.
Megrim	The main spawning area for megrim lies mostly within the BSA while the nursery areas are poorly known. The BSA may limit fishing effort target towards megrim and the increased mesh size required in the BSA will result in better selection and less catches of small megrim.
Anglerfish	The BSA appears to be an important nursery area for both species of anglerfish. The BSA may limit trawl effort directed towards anglerfish in the BSA.
Whiting	There are spawning and nursery areas in the coastal parts of the BSA.
Haddock	Important spawning and nursery areas in coastal parts of the BSA, but species unlikely to be affected by the current controls on demersal gears in the BSA as these apply further offshore than the spawning and nursery areas.
Cod	Some inshore spawning areas and nursery areas in coastal parts of the BSA, but species unlikely to be affected by the current controls on demersal gears in the BSA as controls mostly affect fishing further offshore.
<i>Nephrops</i>	There are important <i>Nephrops</i> grounds within the BSA. The effort limitation in the BSA is not thought to affect <i>Nephrops</i> fisheries. The larger mesh size restriction is mainly outside <i>Nephrops</i> grounds.

Any revision of the boundary of the BSA would need to be based on an explicit objective for the management measure. Thus if the objectives are to protect hake at spawning time then an area along the 500-120m depth contour from 45°N to 55°N from February to July would cover the majority of the Northern spawning area. In the absence of specific management objectives, ICES cannot advise on more appropriate boundaries.

c) Evaluation of the relative importance of effort constraint in the BSA in the context of other conservation measures adopted in the area

The objectives of the BSA and associated effort constraints were not defined at the outset making an evaluation of whether these met their objectives impossible. The BSA is linked to the hake recovery plan and recent assessments have indicated that the hake SSB has increased above B_{pa} (ICES, 2009 (Section 9.4.1)). The degree to which the BSA contributed to this SSB increase (or not) is unclear. The BSA does correspond well to a known nursery area of juvenile hake west and southwest of Ireland. The BSA is also adjacent or overlapping somewhat with the main hake spawning area in ICES Area VII.

The BSA also overlaps with spawning and nursery areas for several other important demersal stocks and pelagic stocks. Based on the overlap and the impact of the associated management measures (i.e. demersal effort limit and increased mesh size for towed and fixed gear), the main stocks that may have benefited from the presence of the BSA are megrim and anglerfish.

The spatial distribution of fishing effort by country and gear from VMS indicates that Ireland is the most important fisher in the BSA followed by France and Spain. There are several inconsistencies in the effort statistics for the BSA as reported to the EC, to STECF SGMOS and as estimated directly using VMS data. This lack of consistency and transparency prevents any definitive conclusions on whether the BSA actually limits fishing effort for member states. For example Spain reports effort levels close to their limit but VMS estimates of effort are significantly below reported levels. Other countries reported and VMS estimated effort levels for demersal gears are well below their limits in most cases.

d) Overall appreciation of the usefulness of the Irish Box

As stated above, it is not possible to draw conclusions on the usefulness of the BSA. The current effort control regime appears not to be limiting fishing effort for most countries. The precautionary approach would be to retain the measures associated with BSA since removal may result in some undesired changes in fishing patterns. However, if the BSA is retained its objectives need to be clearly defined and effort baselines need to be transparently calculated, routinely reported and properly enforced. Given the complex area of the BSA an improved VMS based effort reporting system with integrated vessel, gear, logbook and fishing track information would be the optimum way of doing this. The increased mesh size within the BSA may have benefited the hake and megrim stock both of which have significant nursery area overlap with the area of increased mesh size.

Source of information

ICES. 2009. Report of the ICES Advisory Committee, 2009. ICES Advice, 2009. Book 9.

Lordan, C. and Gerritsen, H. 2009. Assessment of the "Irish Box" in the context of the Western Waters Regime. Working paper prepared for ICES Advisory Committee.

Annex 1 - Spawning and nursery areas of commercially important species in the area of the Biologically Sensitive Area

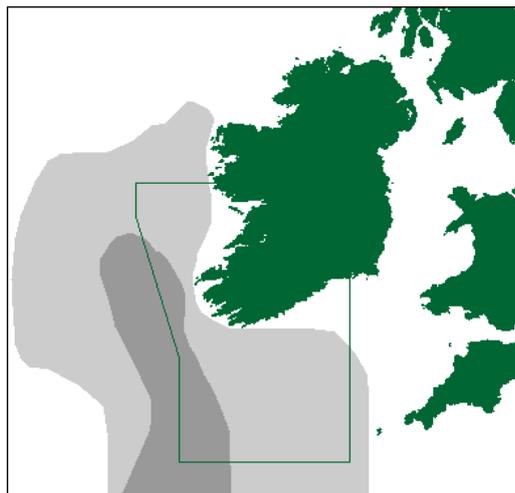


Mackerel spawning areas

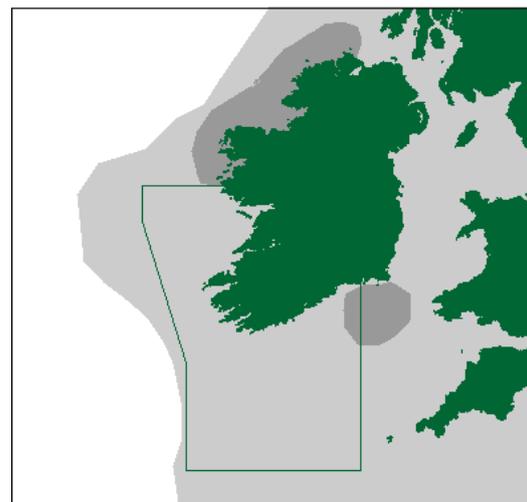


Mackerel nursery areas

Figure 5.3.3.1.2 Mackerel spawning and nursery areas around Ireland (the darker grey indicates the most important area)

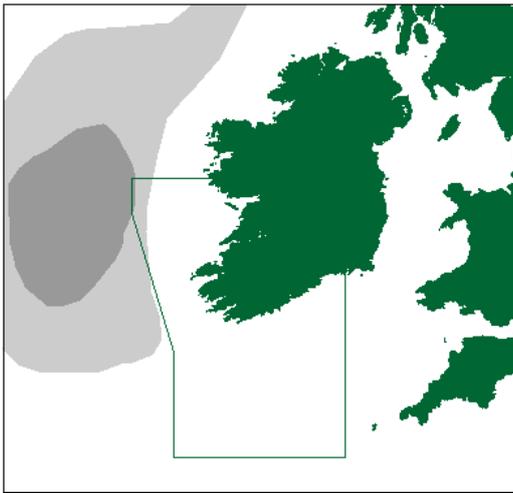


Horse mackerel spawning areas



Horse mackerel nursery areas

Figure 5.3.3.1.3 Horse mackerel spawning and nursery areas around Ireland (the darker grey indicates the most important area)



Blue whiting spawning areas

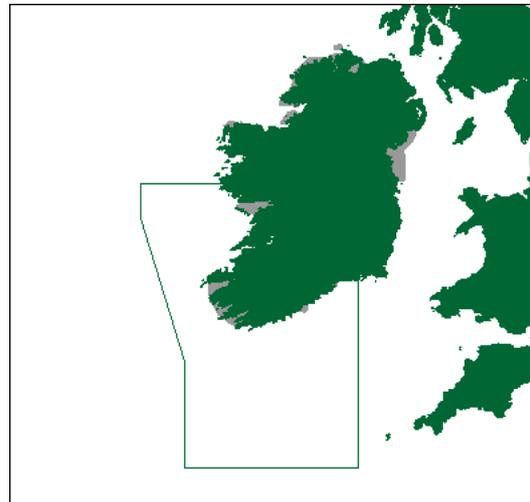


Blue whiting nursery areas

Figure 5.3.3.1.4 Blue whiting spawning and nursery areas around Ireland (the darker grey indicates the most important area)

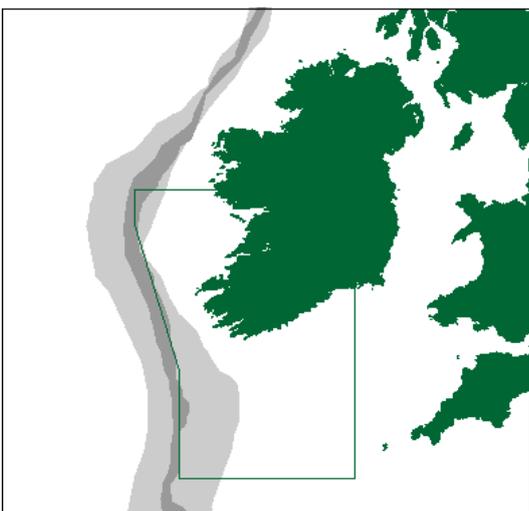


Herring spawning areas



Herring nursery areas

Figure 5.3.3.1.5 The location of herrings spawning grounds around the Irish coast (the dark grey indicates autumn spawners and the lighter grey shows winter spawners)



Hake spawning areas

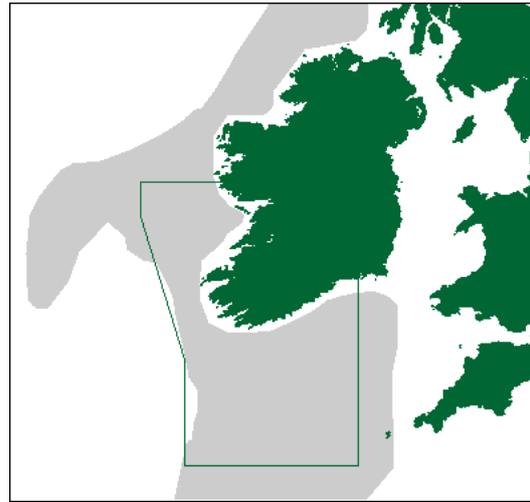


Hake nursery areas

Figure 5.3.3.1.6 Hake spawning and nursery areas around Ireland (the darker grey indicates main areas). The BSA is shown with dark green lines.



Megrin spawning areas

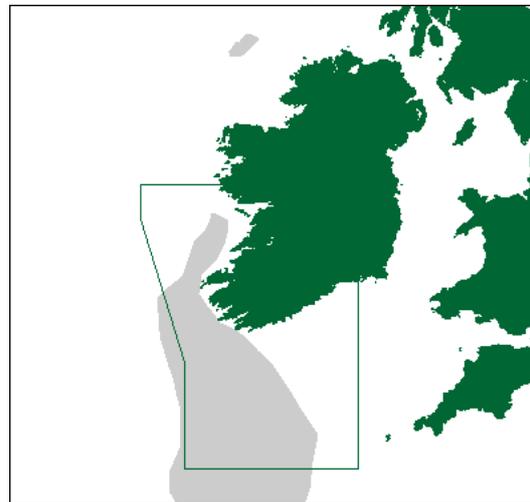


Megrin nursery areas

Figure 5.3.3.1.7 Megrin spawning and nursery areas around Ireland (the darker grey indicates main areas). The BSA is shown with dark green lines. Nursery areas are poorly known due to low catchability of juvenile megrim



***L. piscatorious* nursery areas**



***L. budegassa* nursery areas**

Figure 5.3.3.1.8 Anglerfish nursery areas around Ireland. The BSA is shown with dark green lines. The spawning locations for anglerfish in the area are not known.



Whiting spawning areas

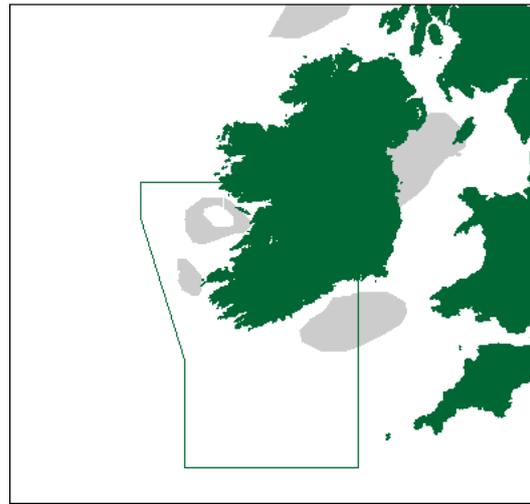


Whiting nursery areas

Figure 5.3.3.1.9 Whiting spawning and nursery areas around Ireland (the darker grey indicates main areas). The BSA is shown with dark green lines.



Haddock spawning areas



Haddock nursery areas

Figure 5.3.3.1.10 Haddock spawning and nursery areas around Ireland. The BSA is shown with dark green lines.



Cod spawning areas



Cod nursery areas

Figure 5.3.3.1.11 Cod spawning and nursery areas around Ireland (the darker grey indicates main areas). The BSA is shown with dark green lines.

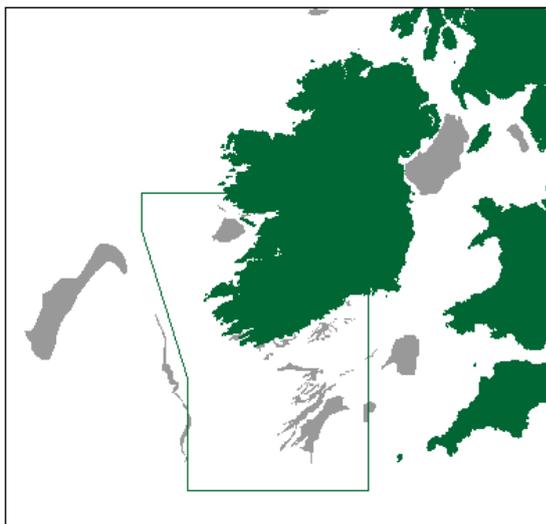


Figure 5.3.3.1.12 *Nephrops* spawning and nursery areas around Ireland. The BSA is shown with dark green lines.