

Seed Mussel Survey Report for the Wicklow Area- 7/07/2016 to 21/07/2016

Vessel: MV T.Burke (BIM), Skipper John Murphy, Survey Officer Nicolas Chopin.

Equipment: 400 kHz side scan sonar, 1 meter dredge, 0.1 m² Day Grab.

Area surveyed: South of Wicklow Head from the Horseshoe Bank to Brittas Bay and extended 3 Nautical Miles East from the shore.

Survey summary:

Throughout July, an extensive survey around Wicklow was carried out. The first location to be checked was last year's seed settlement located southeast of Wicklow Head.

Although the area was fished last year, it seems that whatever remained developed in two small half grown mussel areas. The precise borders were difficult to establish on the side scan sonar data due to other similar features in the same area. Nevertheless, several successful tows and grabs were taken from those areas (see Half Grown Mussel Survey Map).

Table 1: Areas coordinates (in Degrees, decimal minutes WGS84):

Latitude	Longitude
52° 56.044' N	5° 57.389' W
52° 55.845' N	5° 56.585' W
52° 55.597' N	5° 56.853' W
52° 55.820' N	5° 57.445' W

52° 55.393' N	5° 57.181' W
52° 55.517' N	5° 56.838' W
52° 55.289' N	5° 56.715' W
52° 54.731' N	5° 57.279' W
52° 54.827' N	5° 57.444' W

NOTE: The areas displayed on the attached maps have been established following the side scan sonar data verified by ground truthing. These coordinates represent a simplified polygon of the area of the settlements identified.

There is a lot of waste in both areas (between 30 and 50 %), mainly composed of seabed material and empty shells. Only a small amount of starfish were found in the samples, but dogwhelk seems to be the cause of most of the damage.

Otherwise the mussels seemed in good condition with most of the population from the samples (53% over 200 individuals) comprised between 30 and 34 mm (a bit over 400 pieces per Kilograms). Some new settlement is developing in the northern part but only in small quantities and mixed with the half grown.

The northern area represents a little over 29 hectares while the southern one is approximately 35 hectares. The average density on the two zones is around 1.5 kg/m² but grab results showed a large variation within the two areas, from 20 grams to 420 grams per grabs (200 g to 4.2 kg/m²). Therefore the estimated tonnage across both areas is around 700 to 900 tonnes of mixed half grown mussel and new seed.

More areas were surveyed during this period but no other seed mussel or half grown mussel location was found (see Wicklow Survey map).

Bottom type:

As mentioned above, there is a lot of seabed material, mainly coarse sand and stones.

Recommendations:

There is no direct pressure from predation on these settlements and they only represent a small tonnage with a lot of waste.

Nicolas Chopin
BIM Inshore Survey Officer
Aquaculture Technical Section

Notes for the maps:

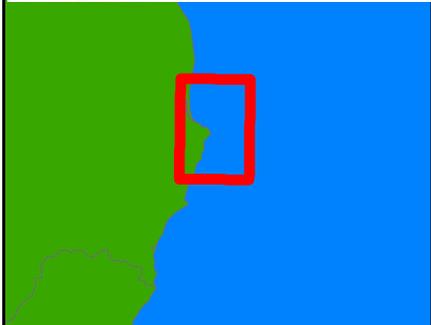
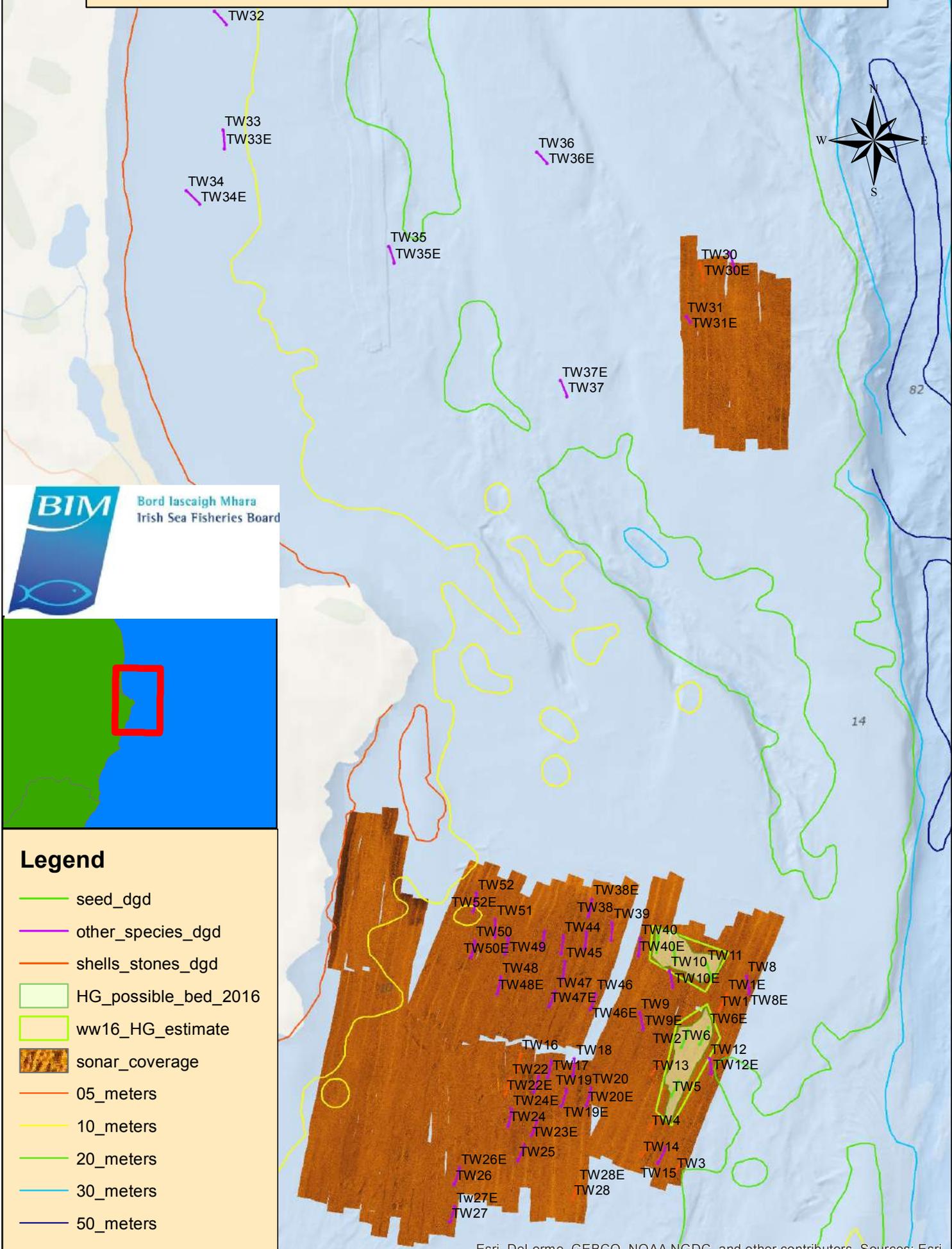
TW stands for Tow Wicklow

GB stands for Grab

In the legend : dgd stands for Dredge, gb stands for grab

Wt per gb in g stands for Weight per grabs in grams

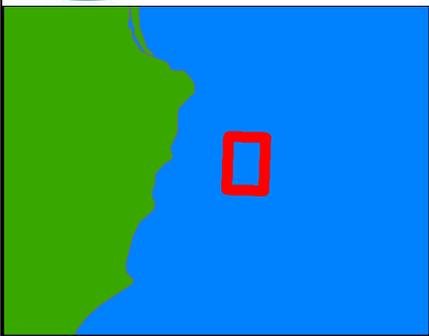
Seed Mussel Survey Map of Wicklow Head - BIM - 7/07/2016 to 21/07/2016



- Legend**
- seed_dgd
 - other_species_dgd
 - shells_stones_dgd
 - HG_possible_bed_2016
 - ww16_HG_estimate
 - sonar_coverage
 - 05_meters
 - 10_meters
 - 20_meters
 - 30_meters
 - 50_meters



Survey Map of Half Grown Mussel Patches at Wicklow Head - BIM - 7/07/2016 to 21/07/2016



Legend

seed_gb
wt_per_gb in g

- 50
- 90
- 100
- 190
- 200
- 250
- 290
- 420

signs_gb

other_species_gb

shells_stones_gb

seed_dgd

other_species_dgd

shells_stones_dgd

HG_possible_bed_2016

ww16_HG_estimate

sonar_coverage

