

## BELGICA – CAMPAIGN REPORT

**1. Campaign no.:** 2009/03

**2. Date:** VTV : 02/02/2009 at 10:45  
VTA : 06/02/2009 at 07:45

**3. Objectives:**

### **ILVO-Polet – Testing the performance of an alternative beam trawl.**

The Belgian fishing fleet consists mainly of beam trawlers. This fishing method has some serious drawbacks like high fuel and material consumption, high discard levels and a significant environmental impact. ILVO-Fishery (Oostende) is developing an alternative beam trawl in close cooperation with the fishery sector in order to reduce these drawbacks. Several alterations are being tested and are already used on board of some commercial beam trawlers on an experimental and voluntary basis.

This alternative beam trawl is being developed in the frame of:

- the biodiversity directives of the European Commission (background: the Johannesburg Declaration),
- the “North Sea Cod Recovery Plan” and other management plans to protect commercial fish
- stocks,
- the EU-project DEGREE and an on-going cooperation with the fishing industry,
- a general concern in ILVO-Fishery about the quality of the marine environment and
- an increased profitability of the Belgian fishing sector.

The present Belgica voyage was dedicated to the following objectives:

- The development of a benthic treshold.

In addition to this work, two more task are being carried out, i.e.:

- Survival study of discarded fish in a 4m beam trawl
- Monitoring of the sole, plaice, turbot, brill and cod populations.

**4. Coordinator:** H. POLET (ILVO-Fishery)

**5. Fishing Area:**

Areas in the Southern North Sea: Drill Stones, Goodwin NE, Inner Gabbard, Shipwash, Orfordness, Galloper, Inner Gabbard.

**6. Researchers:**

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Name	Institute
1. H. POLET	ILVO Fishery
2. F. DELANGHE	ILVO Fishery
3. J. VANHEE	ILVO Fishery
4. J. DEPESTELE	ILVO Fishery
5. D. VERHAEGHE	ILVO Fishery
6. N. VAN CRAEYNEST	ILVO Fishery
7. C. VANDEN BERGHE	ILVO Fishery
8. B. GOES	ILVO Fishery
9. J. BOSSAERT	ILVO Fishery
10. C. DEPUTTER	ILVO Fishery
11. M. DESENDER	UGENT

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### **7. Departure and arrival:**

**Departure:** Monday 02 February 2009 at 10:45

**Arrival:** Friday 06 February 2009 at 07:45

### **8. Programme:**

**Fishing gear :** 8 meter 120mm twin beam trawl with standard cod-ends (80 mm).



Following selective devices were tested:

- a benthos treshold

**Catch sampling:** After each haul the total weight of the catch of each cod-end was determined and after sorting, the weight of the benthos and trash fraction. All commercial fish species were sorted out and measured to the cm below. For all selected hauls, a benthos sample was taken for further analysis in the laboratory and for selected hauls, the total catch was analysed. The catch comparison of starboard and port side allows determining the catchability of the experimental net in comparison with a standard commercial beam trawl.

**Survival tests:** For a selection of hauls several commercial and non-commercial fish and invertebrates were collected from the cod-end, the catch processing was simulated and the animals were then stored in survival tanks. The animals were monitored for about 3 days and the survival was assessed. The condition of the fish was assessed with IIM (Injury Index Method).

**Monitoring:** Sole, plaice, turbot brill and cod were taken from the catch, measured and otoliths were collected.

## **9. Report of Activities:**

### **Mondag 02 February 2009**

- **09:00:** Embarkment.  
Rigging the fishing gear.
- **10:30:** Departure Zeebrugge and steaming to the fishing grounds.
- **16:15:** Arrival on fishing grounds: “Drill Stones” and preparing the fishing gear.
- **16:30** Start of the fishery.
- **16:30 – 118:00:** haul 01  
start position: N 51° 24.300' E 01° 41.970'  
end position: N 51° 23.150' E 01° 41.330'
- **18:20 – 20:00:** haul 02  
start position: N 51° 24.170' E 01° 41.930'  
end position: N 51° 23.920' E 02° 42.080'
- **20:15 – 21:45:** haul 03  
start position: N 51° 24.840' E 01° 42.520'  
end position: N 51° 25.020' E 01° 42.660'
- **End of activities:** 22:30

### **Tuesday 03 February 2009**

- **06:10 – 07:40:** haul 04  
start position: N 51° 43.880' E 01° 46.920'

- end position: N 51° 49.090' E 01° 49.950'
- **08:50 – 10:20:** haul 05  
start position: N 51° 53.300' E 01° 50.360'  
end position: N 51° 57.570' E 01° 47.880'
  - **10:35 – 12:05:** haul 06  
start position: N 51° 57.690' E 01° 46.480'  
end position: N 52° 01.380' E 01° 43.550'
  - **12:15 – 13:45:** haul 07  
start position: N 52° 02.010' E 01° 44.200'  
end position: N 51° 58.800' E 01. 44.390'
  - **14:00 – 15:30:** haul 08  
start position: N 51° 58.840' E 01° 44.130'  
end position: N 52° 04.200' E 01° 44.490'
  - **16:15 – 17:45:** haul 09  
start position: N 52° 04.640' E 01° 47.900'  
end position: N 52° 05.010' E 01° 52.290'
  - **18:00 – 19:30:** haul 10  
start position: N 52° 05.000' E 01° 51.100'  
end position: N 52° 04.670' E 01° 55.470'
  - **End of activities:** 21:00

### Wednesday 04 February 2009

- **05:55 – 07:30:** haul 11  
start position: N 51° 45.800' E 01° 53.120'  
end position: N 51° 46.780' E 01° 51.740'
- **07:45 – 09:15:** haul 12  
start position: N 51° 47.160' E 01° 52.460'  
end position: N 51° 46.020' E 01° 50.400'
- **09:30 – 11:00:** haul 13  
start position: N 51° 46.960' E 01° 50.440'  
end position: N 51° 52.800' E 01° 50.830'
- **11:15 – 12:45:** haul 14  
start position: N 51° 54.000' E 01° 51.260'

- end position: N 51° 57.960' E 01° 47.130'
- **13:00 – 14:30:** haul 15  
start position: N 51° 57.940' E 01° 45.760'  
end position: N 52° 02.460' E 01° 49.640'
  - **14:55 – 16:05:** haul 16  
start position: N 52° 03.360' E 01° 50.410'  
end position: N 52° 04.950' E 01° 52.440'
  - **16:20 – 17:50:** haul 17  
start position: N 52° 04.830' E 01° 50.990'  
end position: N 52° 05.180' E 01° 53.100'
  - **18:30 – 20:00:** haul 18  
start position: N 52° 05.660' E 01° 52.940'  
end position: N 52° 04.530' E 01° 49.640'
  - **End of activities:** 23:30

**Thursday 05 February 2009**

- **06:00 – 07:30:** haul 19  
start position: N 52° 19.950' E 01° 59.520'  
end position: N 52° 20.650' E 01° 59.990'
- **07:50 – 09:20:** haul 20  
start position: N 52° 20.330' E 01° 59.650'  
end position: N 52° 21.350' E 02° 00.470'
- **09:40 – 11:05:** haul 21  
start position: N 52° 20.500' E 01° 59.970'  
end position: N 51° 22.400' E 02° 00.320'
- **11:20 – 13:00:** haul 22  
start position: N 52° 21.900' E 02° 00.720'  
end position: N 52° 23.490' E 02° 00.780'
- **13:15 – 14:45:** haul 23  
start position: N 52° 23.710' E 02° 01.440'  
end position: N 52° 24.010' E 02° 00.760'
- **15:00 – 16:30:** haul 24  
start position: N 52° 24.205' E 02° 01.210'  
end position: N 52° 21.100' E 02° 00.070'

- **16:45 – 18:20:** haul 25  
start position: N 52° 21.700' E 02° 00.340'  
end position: N 52° 21.400' E 02° 00.040'
- **18:35 – 20:05:** haul 26  
start position: N 52° 22.140' E 02° 00.230'  
end position: N 52° 20.230' E 01° 59.980'
- **End of activities:** 23:30

**Friday 06 February 2009**

- **07:45:** Arrival at Zeebrugge
- **08:00 – 10:30:**  
Disembarkment of apparatus and personal material.  
Disembarkment of the fishing gear.

**Remarks**

The ILVO-Fishery team would like to thank the Cdt and crew of RV Belgica for the good cooperation.

Oostende, 12/02/2008

Hans POLET,

Chief Scientist.