

NOTIFICATION OF PROPOSED RESEARCH

PART A : GENERAL

1. NAME OF RESEARCH SHIP: **TRIDENS** CRUISE NO: **wk. 21-24**
2. DATES OF CRUISE FROM **22 May 2017** TO **16 June 2017**
3. OPERATING AUTHORITY **J.W. Groen**
Head of Department Midden
Rijkswaterstaat Dienst Noordzee/ Rijksrederij
Visitors address: Lange Kleiweg 34, 2280 HV Rijswijk
Postal address: Postbus 5807, 2280 HV Rijswijk
- TELEPHONE **+31 (0) 70 3366303**
- FACSIMILE **070-3825648** E-MAIL Wim.Groen@rws.nl
4. OWNER
 (If different from
 Para 3)
5. PARTICULARS OF SHIP NAME **TRIDENS**
- NATIONALITY **Dutch**
- OVERALL LENGTH **73,5** METRES
- MAXIMUM DRAUGHT **5,20** METRES
- NETT TONNAGE **659**
- POPULSION **DIESEL**
- CALL SIGN **PBVO**
- REGISTRATION PORT & NUMBER
 (if registered fishing vessel)
6. CREW NAME OF MASTER **K. Reichgeld**
- NUMBER OF CREW **21**
7. SCIENTIFIC PERSONNEL NAME AND ADDRESS OF SCIENTIST IN CHARGE **C.J.G. van Damme**
Wageningen Wageningen Marine Research
P.O. Box 68, IJmuiden
- TEL/FAX NO **+ 31 317 480900/487326**
- NO: OF SCIENTISTS **6**
8. GEOGRAPHICAL AREA IN WHICH SHIP WILL OPERATE (with reference in Latitude & Longitude)
North Sea (see attached maps)
9. BRIEF DESCRIPTION OF PURPOSE OF CRUISE: **North Sea Mackerel egg survey 2017**
10. DATES AND NAMES OF INTEND PORTS OF CALL:
- 27-05-2017 till 29-05-2017 presumably Stavanger, Norway**
03-06-2017 till 05-06-2017 presumably Aberdeen, UK
09-06-2017 till 12-06-2017 presumably Stavanger, Norway
11. ANY SPECIAL REQUIREMENTS AT PORTS OF CALL: **None**

NOTIFICATION OF PROPOSED RESEARCH CRUISE

PART B : GENERAL

1. NAME OF RESEARCH SHIP: **TRIDENS** CRUISE NO: **wk 21-24**
2. DATES OF CRUISE FROM **22-05-2017** TO **16-06-2017**
3. a) PURPOSE OF RESEARCH **Biomass estimation of mackerel stock in the North Sea. To collect data of the distribution of mackerel eggs, to collect data on fecundity of female mackerel and to obtain hydrographical data.**
b) GENERAL OPERATIONAL METHODS (including full description of any fishing gear/trawl type, mesh size etc:)
Mackerel eggs will be collected with a Gulf VII plankton sampler. Mackerel samples will be collected with fishing rod and a pelagic trawl.
4. ATTACH CHART showing (on an appropriate scale) the geographical area of the intended work, positions of intended stations, tracks of survey lines, positions of moored/seabed equipment, areas to be fished:
See maps.
5. a) TYPES OF SAMPLES REQUIRED eg Geological/Water/Plankton/Fish/Radionuclide:
Approximately 200 plankton samples for analysing mackerel eggs. The sampler is dragged behind the vessel, while it is lowered down to approximately 5 meters above the bottom (or 200m depth maximum) and up again. The plankton sampler is clearly NOT a bottom gear. Approximately 10 hauls with fishing rod and or a pelagic trawl to collect spawning mackerel.
b) METHODS OF OBTAINING SAMPLES (eg dredging/coring/drilling/fishing etc)
(When using fishing gear indicate fish stocks being worked, quantity of each species require, quantity of fish to be retained on board)
Gulf VII plankton sampler mounted with a CTD on top for fishing on eggs and fishing rod or pelagic trawl for taking biological fish samples.
6. DETAILS OF MOORED EQUIPMENT: **none**

DATES

<u>Laying</u>	<u>Recovery</u>	<u>Description</u>	<u>Depth</u>	<u>Latitude</u>	<u>Longitude</u>
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7. ANY HAZERDOUS MATERIAL: (Chemicals/Explosives/Gases/Raioactive etc)

(Use separate sheet if necessary) **None**

- a) TYPE AND TRADE NAME
- b) CHEMICAL CONTENT (& Formula)
- c) IMO IMDG CODE Reference & UN Number
- d) QUANTITY & METHOD OF STOWAGE ON BOARD
- e) IF EXPLOSIVES give date(s) of detonation
 - Method of detonation
 - Position of detonation
 - Frequency of detonation
 - Depth of detonation
 - Size of explosive charge in Kgs

8. DETAIL & REFERENCE OF:

a) ANY RELEVANT PREVIOUS/FUTURE CRUISES:
2015 mackerel egg survey

b) ANY PREVIOUSLY PUBLISHED RESEARCH DATA RELATING TO THE PROPOSED CRUISE:
*Planning of this 2017 Mackerel/Horse Mackerel Egg Survey will be given in:
ICES 2017. REPORT OF THE WORKING GROUP on MACKEREL AND HORSE MACKEREL EGG SURVEYS.
ICES CM 2017.*

*Results of the 2015 Mackerel Egg Survey are given in:
ICES 2016. Second Interim Report of the Working Group on Mackerel and Horse Mackerel Egg Surveys
(WGMEEGS). ICES CM 2016/SSGIEOM:09.*

9. NAMES AND ADDRESSES OF SCIENTISTS OF THE COASTAL STATE(S) IN WHOSE WATERS THE PROPOSED CRUISE TAKES PLACE WITH WHOM PREVIOUS CONTACT HAS BEEN MADE:
See Annex 1.

10. STATE:

a) WHETHER VISITS TO THE SHIP IN PORT BY SCIENTISTS OF THE COASTAL STATE CONCERNED WILL BE ACCEPTABLE

YES

b) PARTICIPATION OF AN OBSERVER FROM THE COASTAL STATE FOR ANY PART OF THE CRUISE TOGETHER WITH THE DATES AND THE PORTS FOR EMBARKATION/DISEMBARKATION
Arrangements via Wageningen Marine Research, IJmuiden

c) WHEN RESEARCH DATA FROM THE INTENDED CRUISE IS LIKELY TO BE MADE AVAILABLE TO THE COASTAL STATE AND BY WHAT MEANS
Cruise report and results of this survey will be published in 2018 in the ICES Mackerel and horse mackerel egg survey report.

PART C: SCIENTIFIC EQUIPMENT

COASTAL STATE

UK, Germany, Denmark,
Norway

COMPLETE THE FOLLOWING TABLE -
SEPERATE PAGE FOR EACH COASTAL STATE

PORT CALL

DATES

INDICATE "YES" OR "NO"

LIST SCIENTIFIC WORK BY FUNCTION				DISTANCE FROM COAST		
				WITHIN 12 NMS	BETWEEN 12-200 NM	(CONTINENTAL SHELF WORK ONLY) BEYOND 200 NM BUT WITHIN THE CONTINENTAL MARGIN
eg: MAGNETOMETRY : GRAVITY DIVING : SEISMICS : BATHYMETRY SEABED SAMPLING TRAWLING ECHO SOUNDING : WATER SAMPLING U/W T.V. : MOORED INSTRUMENTS : TOWED INSTRUMENTS	WATER COLUMN INCLUDING SEDIMENT SAMPLING OF THE SEABED	FISHERIES RESEARCH WITHIN FISHING LIMITS	RESEARCH CONCERNING THE NATURAL RESOURCES OF THE CONTINENTAL SHELF OR ITS PHYSICAL CHARACTERISTICS			
Gulf VII plankton sampler	YES, but no sediment sampling	YES	NO	YES	YES	NO
CTD-recorder	YES, but no sediment sampling	YES	NO	YES	YES	NO

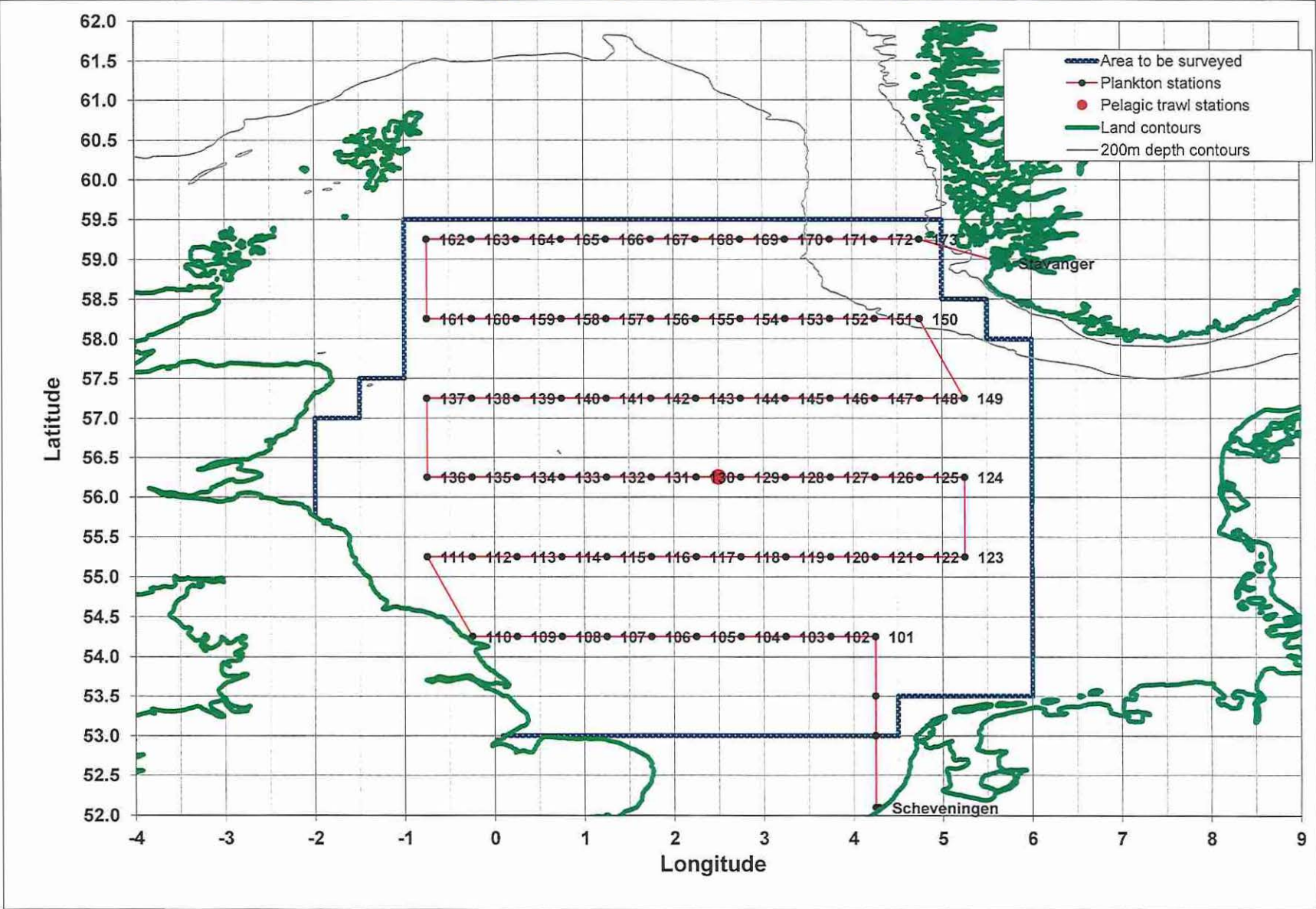

B. Clement
(On behalf to the Principal Scientist)

Dated 30 November 2016

NB IF ANY DETAILS ARE MATERIALLY CHANGED REGARDING DATES/AREA OF OPERATION AFTER THIS FORM HAS BEEN SUBMITTED THE COASTAL STAE AUTHORITIES MUST BE NOTIFIED IMMEDIATELY.

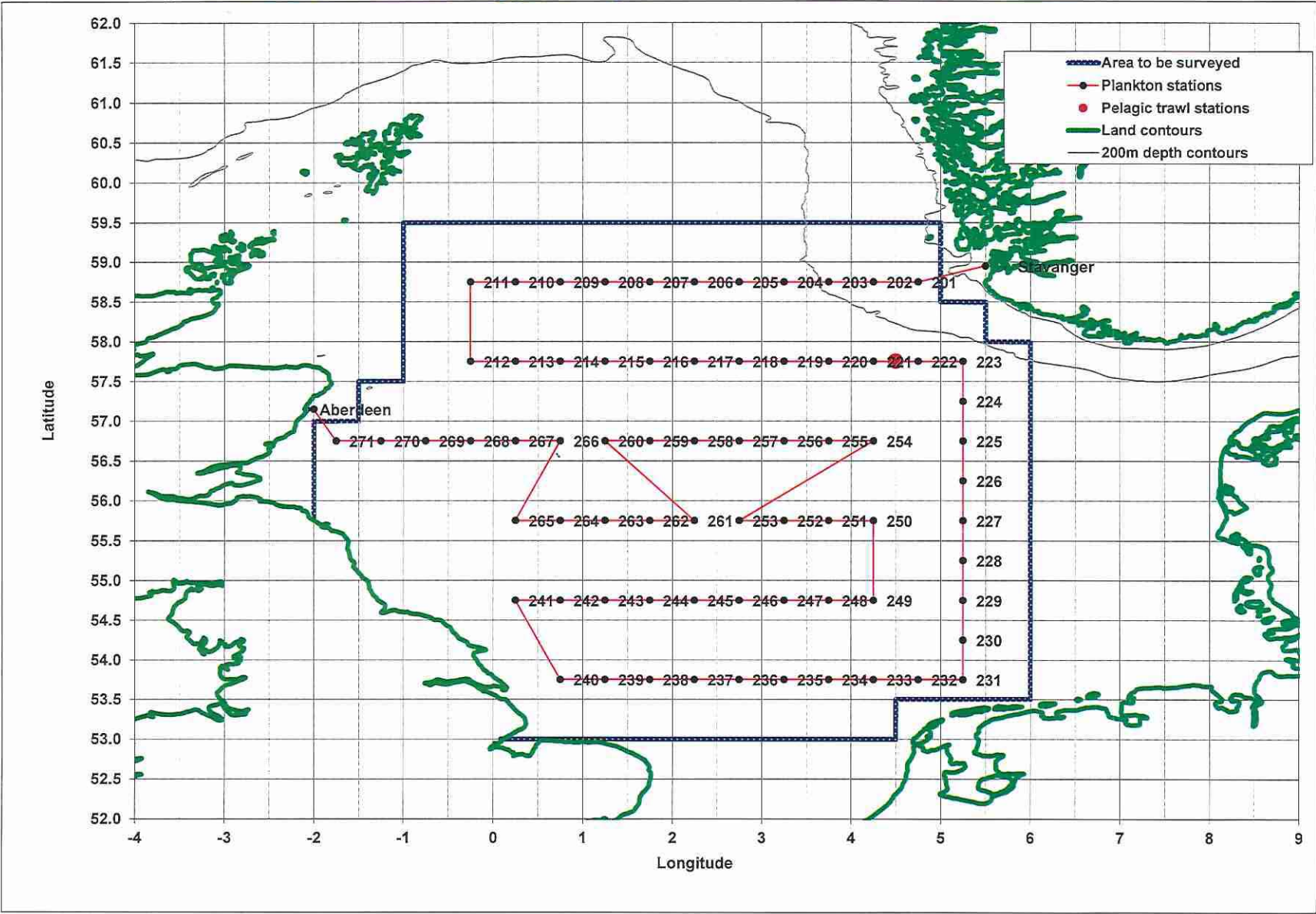
Proposed sampling grid week 21 2017 (may be subject to change due to nautical, weather or technical circumstances)

Survey: North Sea Mackerel Egg Survey 2017 Period 1 Tridens Week 21



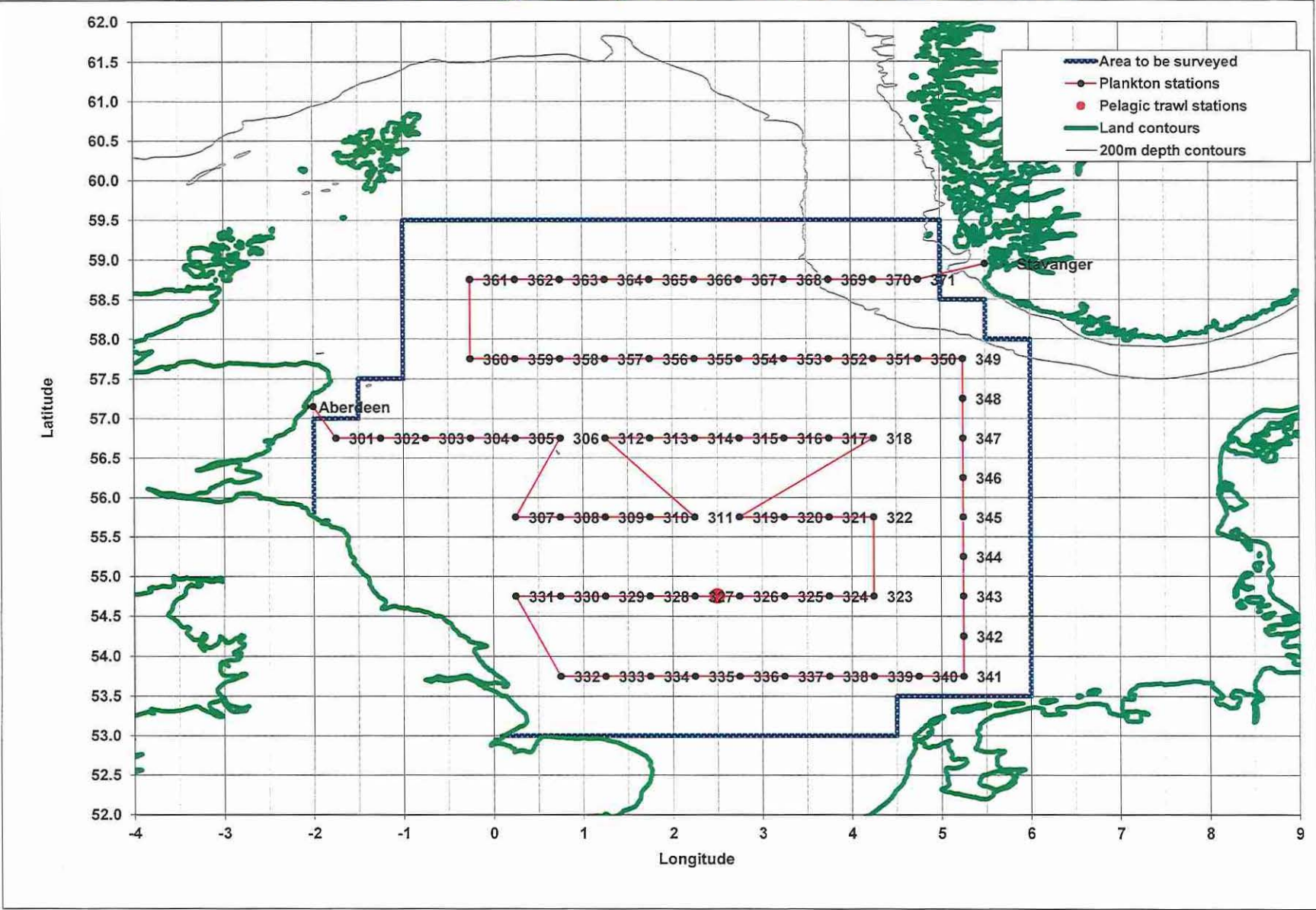
Proposed sampling grid week 22 2017 (may be subject to change due to nautical, weather or technical circumstances)

Survey: North Sea Mackerel Egg Survey 2017 Period 2 Tridens Week 22



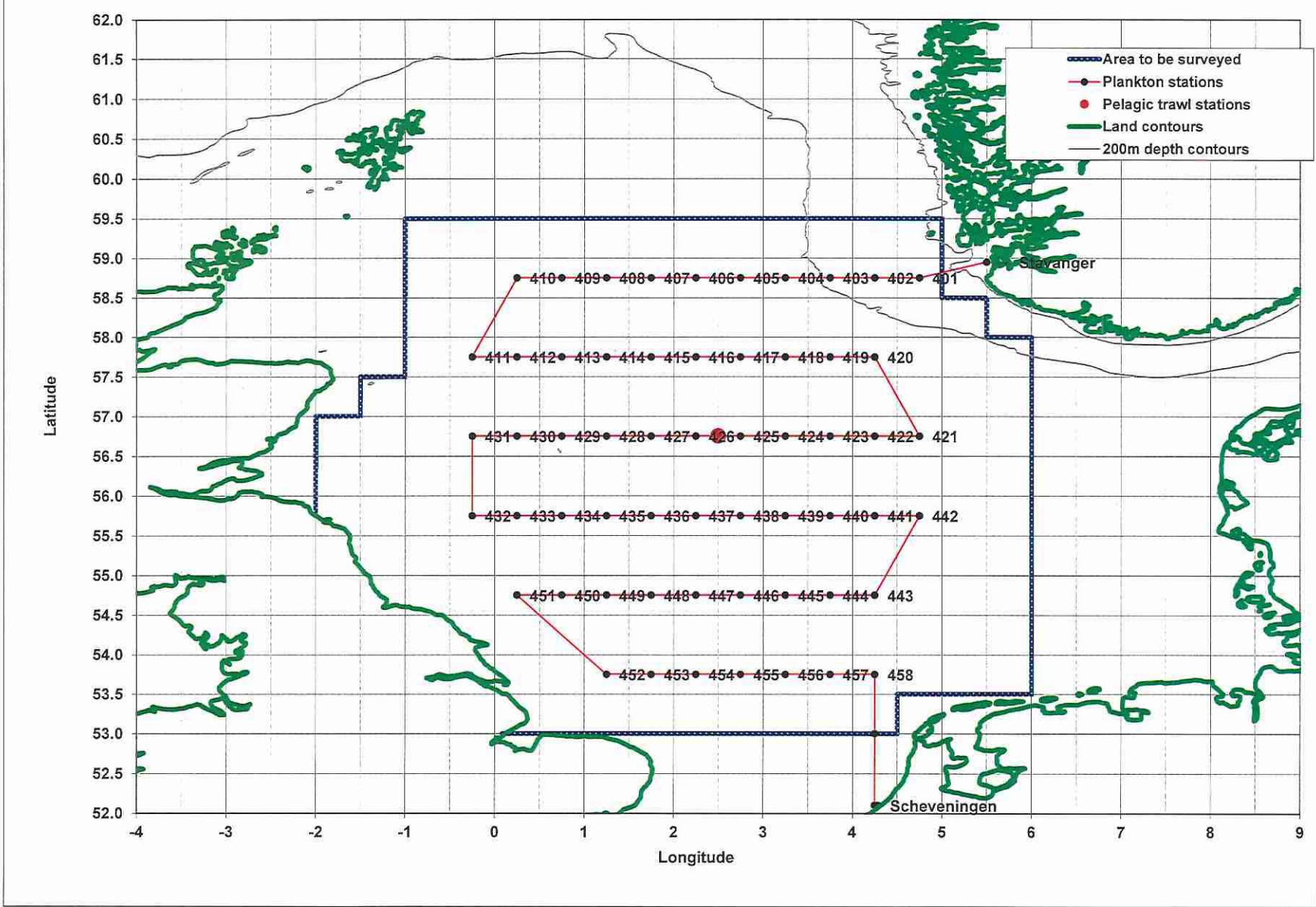
Proposed sampling grid week 23 2017 (may be subject to change due to nautical, weather or technical circumstances)

Survey: North Sea Mackerel Egg Survey 2017 Period 3 Tridens Week 23



Proposed sampling grid week 24 2017 (may be subject to change due to nautical, weather or technical circumstances)

Survey: North Sea Mackerel Egg Survey 2017 Period 4 Tridens Week 24



- Area to be surveyed
- Plankton stations
- Pelagic trawl stations
- Land contours
- 200m depth contours

Latitude

Longitude

Stavanger

Scheveningen

Station positions

Period 1

Station	Latitude	Longitude
101	54.15	4.15
102	54.15	3.45
103	54.15	3.15
104	54.15	2.45
105	54.15	2.15
106	54.15	1.45
107	54.15	1.15
108	54.15	0.45
109	54.15	0.15
110	54.15	-0.15
111	55.15	-0.45
112	55.15	-0.15
113	55.15	0.15
114	55.15	0.45
115	55.15	1.15
116	55.15	1.45
117	55.15	2.15
118	55.15	2.45
119	55.15	3.15
120	55.15	3.45
121	55.15	4.15
122	55.15	4.45
123	55.15	5.15
124	56.15	5.15
125	56.15	4.45
126	56.15	4.15
127	56.15	3.45
128	56.15	3.15
129	56.15	2.45
130	56.15	2.15
131	56.15	1.45
132	56.15	1.15
133	56.15	0.45
134	56.15	0.15
135	56.15	-0.15
136	56.15	-0.45
137	57.15	-0.45

Station	Latitude	Longitude
138	57.15	-0.15
139	57.15	0.15
140	57.15	0.45
141	57.15	1.15
142	57.15	1.45
143	57.15	2.15
144	57.15	2.45
145	57.15	3.15
146	57.15	3.45
147	57.15	4.15
148	57.15	4.45
149	57.15	5.15
150	58.15	4.45
151	58.15	4.15
152	58.15	3.45
153	58.15	3.15
154	58.15	2.45
155	58.15	2.15
156	58.15	1.45
157	58.15	1.15
158	58.15	0.45
159	58.15	0.15
160	58.15	-0.15
161	58.15	-0.45
162	59.15	-0.45
163	59.15	-0.15
164	59.15	0.15
165	59.15	0.45
166	59.15	1.15
167	59.15	1.45
168	59.15	2.15
169	59.15	2.45
170	59.15	3.15
171	59.15	3.45
172	59.15	4.15
173	59.15	4.45

Period 2

Station	Latitude	Longitude
201	58.45	4.45
202	58.45	4.15
203	58.45	3.45
204	58.45	3.15
205	58.45	2.45
206	58.45	2.15
207	58.45	1.45
208	58.45	1.15
209	58.45	0.45
210	58.45	0.15
211	58.45	-0.15
212	57.45	-0.15
213	57.45	0.15
214	57.45	0.45
215	57.45	1.15
216	57.45	1.45
217	57.45	2.15
218	57.45	2.45
219	57.45	3.15
220	57.45	3.45
221	57.45	4.15
222	57.45	4.45
223	57.45	5.15
224	57.15	5.15
225	56.45	5.15
226	56.15	5.15
227	55.45	5.15
228	55.15	5.15
229	54.45	5.15
230	54.15	5.15
231	53.45	5.15
232	53.45	4.45
233	53.45	4.15
234	53.45	3.45
235	53.45	3.15
236	53.45	2.45
237	53.45	2.15

Station	Latitude	Longitude
238	53.45	1.45
239	53.45	1.15
240	53.45	0.45
241	54.45	0.15
242	54.45	0.45
243	54.45	1.15
244	54.45	1.45
245	54.45	2.15
246	54.45	2.45
247	54.45	3.15
248	54.45	3.45
249	54.45	4.15
250	55.45	4.15
251	55.45	3.45
252	55.45	3.15
253	55.45	2.45
254	56.45	4.15
255	56.45	3.45
256	56.45	3.15
257	56.45	2.45
258	56.45	2.15
259	56.45	1.45
260	56.45	1.15
261	55.45	2.15
262	55.45	1.45
263	55.45	1.15
264	55.45	0.45
265	55.45	0.15
266	56.45	0.45
267	56.45	0.15
268	56.45	-0.15
269	56.45	-0.45
270	56.45	-1.15
271	56.45	-1.45

Period 3

Station	Latitude	Longitude
301	56.45	-1.45
302	56.45	-1.15
303	56.45	-0.45
304	56.45	-0.15
305	56.45	0.15
306	56.45	0.45
307	55.45	0.15
308	55.45	0.45
309	55.45	1.15
310	55.45	1.45
311	55.45	2.15
312	56.45	1.15
313	56.45	1.45
314	56.45	2.15
315	56.45	2.45
316	56.45	3.15
317	56.45	3.45
318	56.45	4.15
319	55.45	2.45
320	55.45	3.15
321	55.45	3.45
322	55.45	4.15
323	54.45	4.15
324	54.45	3.45
325	54.45	3.15
326	54.45	2.45
327	54.45	2.15
328	54.45	1.45
329	54.45	1.15
330	54.45	0.45
331	54.45	0.15
332	53.45	0.45
333	53.45	1.15
334	53.45	1.45
335	53.45	2.15
336	53.45	2.45
337	53.45	3.15

Station	Latitude	Longitude
338	53.45	3.45
339	53.45	4.15
340	53.45	4.45
341	53.45	5.15
342	54.15	5.15
343	54.45	5.15
344	55.15	5.15
345	55.45	5.15
346	56.15	5.15
347	56.45	5.15
348	57.15	5.15
349	57.45	5.15
350	57.45	4.45
351	57.45	4.15
352	57.45	3.45
353	57.45	3.15
354	57.45	2.45
355	57.45	2.15
356	57.45	1.45
357	57.45	1.15
358	57.45	0.45
359	57.45	0.15
360	57.45	-0.15
361	58.45	-0.15
362	58.45	0.15
363	58.45	0.45
364	58.45	1.15
365	58.45	1.45
366	58.45	2.15
367	58.45	2.45
368	58.45	3.15
369	58.45	3.45
370	58.45	4.15
371	58.45	4.45

Period 4

Station	Latitude	Longitude
401	58.45	4.45
402	58.45	4.15
403	58.45	3.45
404	58.45	3.15
405	58.45	2.45
406	58.45	2.15
407	58.45	1.45
408	58.45	1.15
409	58.45	0.45
410	58.45	0.15
411	57.45	-0.15
412	57.45	0.15
413	57.45	0.45
414	57.45	1.15
415	57.45	1.45
416	57.45	2.15
417	57.45	2.45
418	57.45	3.15
419	57.45	3.45
420	57.45	4.15
421	56.45	4.45
422	56.45	4.15
423	56.45	3.45
424	56.45	3.15
425	56.45	2.45
426	56.45	2.15
427	56.45	1.45
428	56.45	1.15
429	56.45	0.45
430	56.45	0.15
431	56.45	-0.15
432	55.45	-0.15
433	55.45	0.15
434	55.45	0.45
435	55.45	1.15
436	55.45	1.45
437	55.45	2.15

Station	Latitude	Longitude
438	55.45	2.45
439	55.45	3.15
440	55.45	3.45
441	55.45	4.15
442	55.45	4.45
443	54.45	4.15
444	54.45	3.45
445	54.45	3.15
446	54.45	2.45
447	54.45	2.15
448	54.45	1.45
449	54.45	1.15
450	54.45	0.45
451	54.45	0.15
452	53.45	1.15
453	53.45	1.45
454	53.45	2.15
455	53.45	2.45
456	53.45	3.15
457	53.45	3.45
458	53.45	4.15

Annex 1: Contact persons for the mackerel egg surveys in 2017

SURNAME	NAME	INSTITUTION	E-MAIL	Country
Ulleweit	Jens	Ti	jens.ulleweit@ti.bund.de	Germany
Thorsen	Anders	IMR	Anders.thorsen@imr.no	Norway
Payne	Mark	DTU Aqua	mpay@aqua.dtu.dk	Denmark
Burns	Finlay	MSS	F.Burns@marlab.ac.uk	UK (Scotland)
Van Damme	Cindy	Wageningen Marine Research	cindy.vandamme@wur.nl	Netherlands

