

Agenda Item 15

Continued Revision to National Reporting
Format

Document Inf.15.e

**Annual National Report 2016
Germany**

Action Requested

- Take note

Submitted by

Secretariat



**NOTE:
DELEGATES ARE KINDLY REMINDED
TO BRING THEIR OWN COPIES OF DOCUMENTS TO THE MEETING**

Secretariat's Note

The Rules of Procedure adopted at the 19th Meeting of the ASCOBANS Advisory Committee remain in force until and unless an amendment is called for and adopted.

German National Report for ASCOBANS

2016

As outlined in ASCOBANS Resolution 8.1 on National Reporting, the national reports covering the year 2016 will cover the following Sections of the Annex to the Resolution:

- Section I
- Section II B3, B4, C8 and D15
- Section VII

The reports submitted will inform discussions at the 23rd Meeting of the Advisory Committee (5-7 September 2017, Le Conquet, France) and will tailor its agenda to focus on the topics selected for this national report.

Section I: General Information

Party Information

Name of Party: Germany

National Coordinator (Focal Point) for ASCOBANS

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Contributors to the report

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List of relevant national institutions

List of national authorities, organizations, research centres and rescue centres active in the field of study and conservation of cetaceans:

Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety (BMUB)
Robert-Schuman-Platz 3; 53175 Bonn, Germany

Federal Ministry of Education and Research (BMBF), Kapelle-Ufer 1, 10117 Berlin, Germany

Ministry of Energy, Agriculture, the Environment and Rural Areas (MELUR), Mercatorstraße 3, 24106 Kiel, Germany

Schleswig- Holstein´s Government-owned Company for Coastal Protection, National Parks and Ocean Protection (LKN), Schlossgarten 1, D-25832

State Chancellery, Düsternbrooker Weg 104, D-24105 Kiel

Federal Agency for Nature Conservation (BfN), Konstantinstr. 110, 53179 Bonn (branch: Vilm, Island of Rügen, 18581 Putbus), Germany

Federal Environmental Agency (UBA), Wörlitzer Platz 1, 06844 Dessau-Roßlau, Germany

National Park Administration Wadden Sea of Lower Saxony (NP-LS), Virchowstr. 1, D-26382 Wilhelmshaven

Institute for Terrestrial and Aquatic Wildlife Research (ITAW) University of Veterinary Medicine Hannover, Foundation; Werftstr. 6, 25761 Büsum, Germany

Federal Maritime and Hydrographic Agency (BSH) Bernhard-Nocht-Straße 78, D-20359 Hamburg

German Oceanographic Museum (DMM), Katharinenberg 14-20, D-18439 Stralsund

Free and Hanseatic City of Hamburg, State Ministry for Environment and Energy (BUE), Administration for the National Park Wadden Sea of Hamburg, Neuenfelder Straße 19, D-21109 Hamburg. Peter Körber, Tel. +49/40/42840-2169, peter.koerber@bue.hamburg.de

Free and Hanseatic City of Hamburg, State Ministry for Environment and Energy (BUE), Department for Nature Conservation / Species Conservation, Neuenfelder Straße 19, D-21109 Hamburg. Sylke Dawartz, Tel. +49/40/42840-3357, sylke.dawartz@bue.hamburg.de

Public Laboratories for Food-Safety, Health Protection and Environmental Assessment: Marckmannstraße 129a, 20539 Hamburg, Tel.: 040 42845-77, Fax: 040 42873-10854, E-Mail: InfoHU@hu.hamburg.de

University of Hamburg, Zoological Institute, Veit Hennig, Martin-Luther-King-Platz 3, D-20146 Hamburg, Tel. +49/40/42838-4235, mail@veit-hennig.de

3.4) *How is the pressure being managed, including a list of relevant regulations / guidelines and the year of implementation (current and planned):*

In 2013 Germany implemented the Concept for the Protection of Harbour Porpoises from Noise Impact. During the Construction of Offshore Windfarms in the German North Sea (Noise Protection Concept, BMUB 2013). It includes a standard of dual noise immission criteria of 160 dB (SEL), resp. 190 dB (peak-peak) at 750 m distance, the use of scaring devices and a ramp-up procedure to enable avoidance of noise levels which could injure harbour porpoises and for the main concentration area around Sylt Outer Reef an instruction how to assess a significant disturbance (which has to be avoided) including a seasonal and a spatial component. This also takes cumulative effects of a number of construction activities into account.

Ancillary provisions in the approval for offshore windfarm constructions enable an adequate control that the noise standards given are met by the windfarm operator. For example, there is an obligation to measure and record noise emissions of piling work at each pile. Approval for piling positions is given only successive until the operator demonstrates that the standard is met.

Management plans for marine protected areas of the Natura 2000 network in the German EEZ are under preparation. These will also include measures for managing noise impact.

3.5) *List relevant new research/work/collaboration:*

- Project funded by Federal Agency for Nature Conservation (BfN): Effects of the Underwater Sound of Offshore Windfarms on Marine Mammals – Underwater Noise Effects („Auswirkungen des Unterwasserschalls der Offshore-Windenergieanlagen auf marine Säugetiere – Unterwasserschalleffekte (UWE)“)
- Study on Effects of offshore pile driving on harbour porpoise abundance in the German Bight (GESCHA). Final report: <http://bioconsult-sh.de/site/assets/files/1573/1573.pdf>

3.6) *Report on noise management for cumulative impact, including assessment of associated or coincidental activities, regulations and guidelines, seismic shot point densities and level of impact that was assessed and deemed acceptable:*

4. Ocean Energy

Wind Energy

4.1) Please enter one table per wind farm.

Name of wind farm	Nordergründe http://www.4coffshore.com/windfarms/nordergr%C3%BCnde-germany-de20.html
First operational on (if in planning, then please enter foreseen grid connection date)	dd/mm/yy planned 2017 but pending due to problems caused by insolvency
Output in megawatts per turbine	6,5 MW
Number of turbines	18 turbines
How were the individual wind turbines installed in the seabed?	Pile-driving/suction bucket/ gravity foundation/ tripod foundation/ other, please specify: pile driving
Was scour protection added?	Yes/No/Unknown yes
Noise mitigation during construction used (multiple ticks possible)	Single bubble curtains: yes Double bubble curtains: yes Acoustic Deterrent Devices: yes Time/area closures: Other, please specify:
If the wind farm is floating, how was it anchored?	-
Additional information (optional):	-

4.1b) Please enter one table per wind farm.

Name of wind farm	Borkum Riffgat http://www.4coffshore.com/windfarms/riffgat-germany-de21.html
First operational on (if in planning, then please enter foreseen grid connection date)	operational since 2014
Output in megawatts per turbine	3.6 MW
Number of turbines	30 turbines
How were the individual wind turbines installed in the seabed?	Pile-driving/suction bucket/ gravity foundation/ tripod foundation/ other, please specify: pile driving
Was scour protection added?	yes
Noise mitigation during construction used (multiple ticks possible)	Acoustic Deterrent Devices, IHC Noise Mitigation System
If the wind farm is floating, how was it anchored? -	
Additional information (optional): -	

Beyond these two examples cf. more details in the enclosed table 4.1!

4.2 - 4.4) Wave Power / Tidal Energy / Tidal lagoon/barrage

There are no wave power or tidal energy installations or tidal lagoons in Germany.

4.5) The perceived level of risk to favourable conservation status (FCS), i.e. is the pressure increasing, decreasing, staying the same or unknown:

Energy type	Status 2016 relative to previous years
Wind energy	Increasing
Wave power	Not Applicable
Tidal energy	Not Applicable
Tidal lagoon/barrage	Not Applicable

4.6) Any notable instances/issues in the reporting period

The Federal Ministry for the Environment has started to develop a sound protection strategy for harbour porpoises in the German Baltic Sea (EEC) based on the experiences of the existing sound protection strategy of the North Sea (EEC).

4.7) *How the pressure is being managed, incl. relevant regulations / guidelines and the year of implementation (current and planned)*

Cf. former reports and 4.6 !

4.8) *Relevant new research/work/collaboration*

Project funded by Federal Agency for Nature Conservation (BfN): Effects of the Underwater Sound of Offshore Windfarms on Marine Mammals – Underwater Noise Effects („Auswirkungen des Unterwasserschalls der Offshore-Windenergieanlagen auf marine Säugetiere – Unterwasserschalleffekte (UWE)“)

C. Habitat Change and Degradation (incl. potential physical impacts)

8. Unexploded Ordnance

8.1) *To which registers/databases covering conventional and chemical munitions has your country contributed to date?*

OSPAR

(database on munitions encounters 2015 data)

Other, please state:

Munitionskataster Meer (National ammunition cadaster AmuCad)
<https://www.amucad.org>

Mine Warfare Datacenter, German Navy (not public)

8.2) *Please fill in table 8.2 (below) on unexploded ordnance, which except for the last four additional columns is the same as the OSPAR one. For explanation of terms see http://www.ascobans.org/sites/default/files/document/AC22_Inf_4.6.c_OSPAR_MunitionsRec_2010.pdf*

2016 data can be submitted by September when OSPAR reporting is available, additional requested data on munition items need further improvement in German reporting procedures

8.3) *The perceived level of risk that unexploded ordnance and the management thereof is posing to the favourable conservation status (FCS) of small cetaceans, i.e. is the pressure increasing, decreasing, staying the same or unknown.*

Most (by number) objects of warfare material found on seabed is considered to be safe for handling and thus has been remediated and (if containing explosives) destroyed by thermal processes (www.geka-munster.de) on land.

However every year 50 to 100 items of UXO are found in German marine waters (including EEZ) and are considered not handling safe and thus are either being exploded in-situ, or in

some instances translocated into shallow waters for detonation, with and without a bubble curtain as a measure of mitigation. The effects resulting from the shock wave and impulsive sound wave of detonations can be deleterious to individual harbour porpoises and may also in some circumstances have effects at the population level, depending on the radius of injury/hearing loss of a detonation, the number of detonations and the distribution and abundance of porpoises (von Benda-Beckmann et al. 2015). Due to increasing offshore activities, the number of detonations have increased in recent years.

Currently there are no scientific data on the effect of detonations in German waters on harbour porpoises, No post-detonation surveys are being conducted. Thus it is not known whether there is a risk to reaching a favorable conservation status of harbour porpoises.

8.4) Any notable instances/issues in the reporting period.

None

8.5) How is the pressure being managed, incl. relevant regulations/guidelines and the year of implementation (current and planned)

Since 2009 the German cross-administrative working group (www.underwatermunitions.de) actively seeks and shares information between public authorities from federal and state-level are being responsible for relevant areas of concern with regard to underwater munitions, as there are safety, security, nature conservation or pollution control issues. As one result some guidelines were implemented between authorities and recommendations were drafted and submitted to the general public. The annual report of the working group in German language is available on the Website:

http://www.schleswig-holstein.de/DE/UXO/Themen/Fachinhalte/textekarten_Berichte.html

EOD teams of the federal states Schleswig-Holstein, Niedersachsen and Mecklenburg-Vorpommern are aware of the potential threat of explosions to small cetaceans. Mitigation measures considered for each planned detonation include separation of the fuse box from the main charge in certain types of air mines, translocation of UXO and detonation in shallow waters or on a sandbank (in air), use of pingers/seal scarers, use of bubble curtains.

Example: Some 150 ground mines found off Schleswig-Holstein between 2012 and 2016 have been defused by intersecting the explosive container from the part with sensors and fuse by blasting practices (requiring only a small charge). The treated objects were translocated to a safe place to be finally destroyed in situ by automatic systems, expected to be available in the near future.

8.6) *Relevant new research/work/collaboration*

Decision Aid for Marine Munitions (DAIMON), international project consisting of partners from Poland, Germany, Sweden, Finland, Norway, Lithuania and Russia (Lead: Poland)- <http://www.daimonproject.com/>

Environmental monitoring for the delaboration of munitions on the seabed (UDEMM) <https://udemmm.geomar.de/>

Robotic underwater salvage and disposal process with the technology to remove explosive ordnance in the sea, in particular in coastal and shallow waters (RoBEMM) <http://www.munitionsraeumung-meer.de/en/national-research/robemm/>

MSFD Measure UZ2-04 (Dealing with munitions at sea) including following aspects:

- Measures for dealing with hazardous situations (e.g., establishment of a national registry for munitions encounters, development of leaflets, research projects as provided above)
- Measures to complete the still incomplete knowledge (e.g., archive research, co-operation project with scientific bodies, investigations at known munitions dumping sites, development of a munitions cadastre (see 8.1), development of scientific methods)
- Development of a systematic procedure for risk assessment and prioritization of munitions contaminated areas.

Management of Cumulative Impacts

15. Marine Spatial Planning

<p><i>Plan(s) in force</i></p>	<ol style="list-style-type: none"> 1. Marine Spatial Planning of the EEZ (North- and Baltic Seas) since 2009 2. State Development Plan 2010 (Landesentwicklungsplan Schleswig-Holstein vom 13.07.2010 (LEP; Amtsbl. Schl.-H. 2010 Seite 719) 3. State Development Plan Mecklenburg Vorpommern (2016) : http://www.regierung-mv.de/Landesregierung/em/Raumordnung/Landesraumentwicklungsprogramm 4. State Development Niedersachsen (2017): http://www.ml.niedersachsen.de/themen/raumordnung_landesplanung/landesraumordnungsprogramm/landes-raumordnungsprogramm-niedersachsen-5062.html
<p><i>Plan(s) in preparation</i></p>	<ol style="list-style-type: none"> 1. Update of the State Development Plan Schleswig-Holstein 2. FABENA (Fachbeitrag Naturschutz zur maritimen Raumordnung; Marine conservation's expert contribution to Maritime Spatial Planning)

<p><i>Further information, including links to online resources and maps where available</i></p>	<ol style="list-style-type: none"> 1. http://www.bsh.de/en/Marine_uses/Spatial_Planning_in_the_German_EEZ/index.jsp 2. The State Development Plan includes the land and the sea areas of Schleswig-Holstein. It outlines the principles and objectives for the spatial development in Schleswig-Holstein and is valid up to the 12 nautical mile border. Principles and objectives for the maritime spatial planning in Schleswig-Holstein will be addressed in the state development plan only, because the municipalities have no jurisdiction beyond their coastlines. (http://www.schleswig-holstein.de/DE/Fachinhalte/L/landesplanung_raumordnung/raumordnungsplaene/landesentwicklungsplan/neuer_landesentwicklungsplan.html) 3. https://www.io-warnemuende.de/project/126/fabena.html 4. State Development Plan Mecklenburg Vorpommern (2016) : http://www.regierung-mv.de/Landesregierung/em/Raumordnung/Landesraumentwicklungsprogramm 5. State Development Niedersachsen (2017): http://www.ml.niedersachsen.de/themen/raumordnung_landesplanung/landesraumordnungsprogramm/landesraumordnungsprogramm-niedersachsen-5062.html
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Contracting Party ID No	Latitude	Longitude	Nature of Encounter	Date	Type of munition	Action taken	State of munition	Release latitude	Release longitude	Remarks
DE-M9TN_AWZ_VM_240-Objekt849_1	54.3045	5.8602	others	4/13/2016	conventional	Destroyed, blasted	partly	54.3045	5.8602	high-explosive bomb GP-250 lb (AN-M57) found during ground survey for wind farm
DE-M9TO_AWZ_VM_250-Objekt1314_2	54.3122	5.8742	others	4/14/2016	firebomb	Destroyed, blasted	heavily	54.3122	5.8742	incendiary bomb (100lbs, AN-M57, partly open), found during ground survey for wind farm
DE-MD9T_OL_06/02/16_3	53.7941	7.9046	found on shore	2/11/2016	conventional	disposed of on land	heavily			German high-explosive shells in different sizes (5pcs 3.7cm, 3pcs 2.0cm), 5pcs fuses, 14.5kg explosive charges, 11pcs propelling charges and 16kg parts of munition; WW II.) and 3pcs British fuses and a PIAT-projectile from second WW), salvaged by EOD Team
DE-M8ZH_OL_07/03/16_4	53.7033	8.0325	found on shore	3/15/2016	conventional	disposed of on land	partly			Three German FLAK grenade detonators (II. WW), salvaged and disposed of on land by EOD Team
DE-MT9Q_AWZ_VM_455-Object 869_5	54.3046	5.8598	others	4/13/2016	firebomb	destroyed, blasted	partly	54.3046	5.8598	incendiary bomb (AN-M 47, 100lbs), found during bottom survey for windfarm, destroyed together with Object 832
DE-M9TR_AWZ_VM_448-Object 832_6	54.2987	5.8552	others	4/13/2016	conventional	destroyed, blasted	partly	54.3046	5.8598	high-explosive bomb (AN-M 47, 250lbs, partly open) found during bottom survey for windfarm, destroyed together with Object 869
DE-M95B_OL_16/03/16_7	53.6883	8.4292	others	3/23/2016	conventional	destroyed, blasted	unknown	53.6883	8.4292	English high-explosive bomb (500lbs) with long-term fuse No.37 (II. WW, 255kg), mined by EOD
DE-M9TS_OL_10/03/16_8	53.8249	8.1674	others	3/16/2016	conventional	disposed of on land	partly			lots of German ammunition from second WW. (4pcs x8.8cm high-explosive shells, 3pcs x10.5cm high-explosive shells, 19kg parts of ammunition, found during ground survey for wind farm

DE-M9TT_OL_1 0/03/16_9	53.8240	8.16 91	others	3/16/2 016	conventio nal	dispose d of on land	partly			a German 10.5cm high-explosive shell from second WW. , found during ground survey for wind farm
DE-M9TU_OL_1 0/03/16_10	53.8242	8.16 90	others	3/16/2 016	conventio nal	dispose d of on land	partly			two German 10.5cm high-explosive shells from second WW., found during ground survey for wind farm
DE-M9TV_OL_1 0/03/16_11	53.8242	8.16 91	others	3/16/2 016	conventio nal	dispose d of on land	partly			two German 10.5cm high-explosive shells from second WW. found during ground survey for wind farm
DE-M9TW_OL_1 10/03/16_1 2	53.8255	8.16 14	others	3/17/2 016	conventio nal	destroy ed, blasted	partly	53.7042	8.0987	a German 30.5cm high-explosive shell from second WW. (found during ground survey for wind farm), removed to blasting place by EOD Team, blasted during low tide
DE-M9TX_OL_1 0/03/16_13	53.8286	8.15 68	others	3/17/2 016	conventio nal	destroy ed, blasted	partly	53.7042	8.0987	a German 28cm high-explosive shell from second WW. (found during ground survey for wind farm), removed to blasting place by EOD Team, blasted during low tide
DE-M9TY_OL_1 0/03/16_14	53.8246	8.16 59	others	3/17/2 016	conventio nal	destroy ed, blasted	partly	53.7042	8.0987	a German 24cm high-explosive shell from second WW. (found during ground survey for wind farm), removed to blasting place by EOD Team, blasted during low tide
DE-M9TZ_OL_1 0/03/16_15	53.8253	8.16 48	others	3/17/2 016	conventio nal	destroy ed, blasted	partly	53.7042	8.0987	a German 24cm high-explosive shell from second WW. (found during ground survey for wind farm), removed to blasting place by EOD Team, blasted during low tide
DE-M9U0_OL_1 0/03/16_16	53.8245	8.16 48	others	3/17/2 016	conventio nal	destroy ed, blasted	partly	53.7042	8.0987	a German 24cm high-explosive shell from second WW. (found during ground survey for wind farm), removed to blasting place by EOD Team, blasted during low tide
DE-M9U1_OL_1 0/03/16_17	53.8262	8.16 52	others	3/17/2 016	conventio nal	destroy ed, blasted	partly	53.7042	8.0987	a German 24cm high-explosive shell from second WW. (found during ground survey for wind farm), removed to blasting place by EOD Team, blasted during low tide
DE-M9U2_OL_1 0/03/16_18	53.8261	8.16 41	others	3/17/2 016	conventio nal	destroy ed, blasted	partly	53.7042	8.0987	a German 24cm high-explosive shell from second WW. (found during ground survey for wind farm), removed to blasting place by EOD Team, blasted during low tide
DE-M9U3_OL_1 0/03/16_19	53.8260	8.16 36	others	3/17/2 016	conventio nal	destroy ed, blasted	partly	53.7042	8.0987	a German 24cm high-explosive shell from second WW. (found during ground survey for wind farm), removed to blasting place by EOD Team, blasted during low tide
DE-M9U4_OL_1 0/03/16_20	53.8254	8.16 07	others	3/17/2 016	conventio nal	destroy ed, blasted	partly	53.7042	8.0987	a German 24cm high-explosive shell from second WW. (found during ground survey for wind farm), removed to blasting place by EOD Team, blasted during low tide
DE-M9U5_OL_1 0/03/16_21	53.8223	8.17 05	others	3/17/2 016	conventio nal	destroy ed, blasted	partly	53.7042	8.0987	a German 24cm high-explosive shell from second WW. (found during ground survey for wind farm), removed to blasting place by EOD Team, blasted during low tide

DE-M9U6_OL_1 0/03/16_22	53.8217	8.17 13	others	3/17/2 016	conventio nal	destroy ed, blasted	partly	53.7042	8.0987	a German 24cm high-explosive shell from second WW. (found during ground survey for wind farm), removed to blasting place by EOD Team, blasted during low tide
DE-M9U7_OL_1 0/03/16_23	53.8240	8.16 61	others	3/17/2 016	conventio nal	destroy ed, blasted	partly	53.7042	8.0987	a German 24cm high-explosive shell from second WW. (found during ground survey for wind farm), removed to blasting place by EOD Team, blasted during low tide
DE-M9U9_OL_1 0/03/16_24	53.8241	8.16 76	others	3/17/2 016	conventio nal	dispose d of on land	partly			German high-explosive shells (3pcs x10.5cm, 2pcs x8.8cm) and 3kg parts of ammunition, found during ground survey for wind farm
DE-M9UA_OL_1 0/03/16_25	53.8261	8.16 74	others	3/17/2 016	firebomb	dispose d of on land	partly			two British incendiary bombs 30lbs, II. WW, found during ground survey for wind farm
DE-M9UB_AWZ _VM_Target 1275_26	54.3162	5.88 44	others	4/14/2 016	conventio nal	destroy ed, blasted	partly	54.3162	5.8844	British ground mine A MK-4, found during bottom survey for windfarm, destroyed together with Objects 05 and 1769
DE-M9UC_AWZ _VM_Objekt 337_27	54.3133	5.91 76	others	4/14/2 016	conventio nal	dispose d of on land	partly			practice bomb (5 kg), found during bottom survey for wind farm
DE-MA9E_OL_1 5/04/16_28	53.7940	7.90 46	found on shore	4/19/2 016	conventio nal	dispose d of on land	heavily			diverse German high-explosive shells (2x15mm, 18x2cm, 9x3.7cm, 2x8.8cm, 1x10.5cm), 2pcs fuses, 0.7kg explosive, 125x fuse charges, 26kg ammunition parts, 1x6cm amour-piercing shell, 1x5cm hand-grenade, 1x bazooka; second WW.), salvaged and disposed of on land by EOD Team
DE-MA9J_2- 23-05-2016- 1_29	54.1882	7.90 94	found on shore	5/23/2 016	conventio nal	dispose d of on land	unknown			an one 113mm grenade found by civilian, salvaged by EOD Team
DE-MAAX_OL_1 7/05/16_30	53.5842	8.22 96	found on shore	5/13/2 016	conventio nal	dispose d of on land	heavily			3pcs 3.7cm high-explosive shell and 7pcs fuses (German; from WW II.) found by civilian, salvaged and disposed of on land by EOD Team
DE-MAAY_OS_0 8/05/16_31	53.7239	7.23 13	found on shore	5/23/2 016	conventio nal	dispose d of on land	heavily			2kg German ammunition parts from second WW II. found by civilian, salvaged and disposed on land by EOD Team
DE-M9VA_3952 46/2016_32	53.9000	9.15 83	dredging	6/19/2 016	conventio nal	dispose d of on land	unknown			FLAK-grenade found during dredging, salvaged and disposed on land by EOD Team

DE-MA89_004/5A/0418717/2016_33	53.8942	8.5633	others	6/24/2016	conventional	destroyed, blasted	unknown	53.8900	8.5632	40mm FLAK-grenade moved to detonation place (approx. 500m south of place of discovery), cmined by EOD Team
DE-MA80_Vg/436692/2016_34	53.8933	9.1483	dredging	7/5/2016	conventional	disposed of on land	unknown			a full magazin with 30 x 2cm FLAK-grenades found during dredging, salvaged and disposed on land by EOD Team
DE-MAAW_OL_15/07/16_35	53.6811	6.5520	laying pipelines or cables	7/25/2016	conventional	destroyed, blasted	unknown	53.6811	6.5520	identified German EMA found during bottom survey, cmined by EOD Team
DE-MAAV_OL_13/07/16_36	53.6876	6.5543	laying pipelines or cables	7/23/2016	conventional	destroyed, blasted	heavily	53.6876	6.5543	identified British moored mine found during ground survey for laying of cable, cmined by EOD Team
DE-MAAU_OL_14/07/16_37	53.7613	6.5375	laying pipelines or cables	7/24/2016	conventional	destroyed, blasted	heavily	53.7613	6.5375	British moored mine MK-2 (II. WW), cmined at location by EOD Team
DE-MABE_OL_12/07/16_38	53.7884	6.5286	laying pipelines or cables	7/21/2016	conventional	destroyed, blasted	heavily	53.7884	6.5286	British floating mine from second WW. found during bottom survey, cmined by EOD Team
DE-MACM_OL_19/06/16_39	53.8232	8.1697	others	6/13/2016	conventional	destroyed, blasted	heavily	53.7042	8.0987	German 24cm high-explosive grenade from the second WW. (found during ground survey for wind farm) moved to the blasting place , cmined by EOD Team during low tide
DE-MACO_OL_19/06/16_40	53.8224	8.1668	others	6/13/2016	conventional	destroyed, blasted	heavily	53.7042	8.0987	German 24cm high-explosive grenade from the first WW. (found during ground survey for wind farm) moved to the blasting place , cmined by EOD Team during low tide
DE-MACP_OL_19/06/16_41	53.8229	8.1681	others	6/13/2016	conventional	destroyed, blasted	heavily	53.7042	8.0987	German 24cm high-explosive grenade from the first WW. (found during ground survey for wind farm) moved to the blasting place , cmined by EOD Team during low tide
DE-MACQ_OL_19/06/16_42	53.8263	8.1645	others	6/13/2016	conventional	destroyed, blasted	heavily	53.7042	8.0987	German 24cm high-explosive grenade from the first WW. (found during ground survey for wind farm) moved to the blasting place , cmined by EOD Team during low tide

DE-MACR_OL_1 9/06/16_43	53.8262	8.16 44	others	6/13/2 016	conventio nal	destroy ed, blasted	heavily	53.7042	8.0987	two German 24cm high-explosive grenades from the second WW. (found during ground survey for wind farm) moved to the blasting place , cmined by EOD Team during low tide
DE-MACS_OL_1 9/06/16_44	53.8260	8.16 32	others	6/13/2 016	conventio nal	destroy ed, blasted	heavily	53.7042	8.0987	German 24cm high-explosive grenade from the second WW. (found during ground survey for wind farm) moved to the blasting place , cmined by EOD Team during low tide
DE_MAD3_OL_19/06/16_45	53.8259	8.16 33	others	6/13/2 016	conventio nal	destroy ed, blasted	heavily	53.7042	8.0987	German 24cm high-explosive grenade from the second WW. (found during ground survey for wind farm) moved to the blasting place , cmined by EOD Team during low tide
DE-MAD4_OL_1 9/06/16_46	53.8261	8.16 55	others	6/13/2 016	conventio nal	destroy ed, blasted	heavily	53.7042	8.0987	German 24cm high-explosive grenade from the first WW. (found during ground survey for wind farm) moved to the blasting place , cmined by EOD Team during low tide
DE-MAD5_OL_1 9/06/16_47	53.8264	8.16 55	others	6/13/2 016	conventio nal	destroy ed, blasted	heavily	53.7042	8.0987	German 24cm high-explosive grenade from the first WW. (found during ground survey for wind farm) moved to the blasting place , cmined by EOD Team during low tide
DE-MAD6_OL_1 9/06/16_48	53.8265	8.16 54	others	6/13/2 016	conventio nal	destroy ed, blasted	heavily	53.7042	8.0987	German 24cm high-explosive grenade from the first WW. (found during ground survey for wind farm) moved to the blasting place , cmined by EOD Team during low tide
DE-MAD7_OL_1 9/06/16_49	53.8237	8.16 84	others	6/13/2 016	conventio nal	destroy ed, blasted	heavily	53.7042	8.0987	German 24cm high-explosive grenade from the first WW. (found during ground survey for wind farm) moved to the blasting place , cmined by EOD Team during low tide
DE-MAD8_OL_1 9/06/16_50	53.8242	8.16 46	others	6/13/2 016	conventio nal	destroy ed, blasted	heavily	53.7042	8.0987	German 24cm high-explosive grenade from the first WW. (found during ground survey for wind farm) moved to the blasting place , cmined by EOD Team during low tide
DE-MAD9_OL_1 9/06/16_51	53.8217	8.16 65	others	6/13/2 016	conventio nal	destroy ed, blasted	heavily	53.7042	8.0987	German 28cm high-explosive grenade from the first WW. (found during ground survey for wind farm) moved to the blasting place , cmined by EOD Team during low tide
DE-MADA_OL_1 9/06/16_52	53.8212	8.16 87	others	6/13/2 016	conventio nal	destroy ed, blasted	heavily	53.7042	8.0987	three German 10.5cm high-explosive grenades from the first WW. (found during ground survey for wind farm) moved to the blasting place , cmined by EOD Team during low tide

DE-MADB_OL_1 9/06/16_53	53.8227	8.17 04	others	6/13/2 016	conventio nal	destroy ed, blasted	heavily	53.7042	8.0987	German 21cm high-explosive grenade from the first WW. (found during ground survey for wind farm) moved to the blasting place , cmined by EOD Team during low tide
DE-MADC_OL_1 9/06/16_54	53.8227	8.17 04	others	6/13/2 016	conventio nal	destroy ed, blasted	heavily	53.7042	8.0987	two German 10.5cm high-explosive grenades from the first WW. (found during ground survey for wind farm) moved to the blasting place , cmined by EOD Team during low tide
DE-MADD_OL_ 19/06/16_5 5	53.8229	8.16 98	others	6/13/2 016	conventio nal	destroy ed, blasted	heavily	53.7042	8.0987	German 21cm high-explosive grenade from the first WW. (found during ground survey for wind farm) moved to the blasting place , cmined by EOD Team during low tide
DE-MADE_OL_1 9/06/16_56	53.8227	8.16 82	others	6/13/2 016	conventio nal	destroy ed, blasted	heavily	53.7042	8.0987	German 21cm high-explosive grenade from the second WW. (found during ground survey for wind farm) moved to the blasting place , cmined by EOD Team during low tide
DE-MADF_OL_1 9/06/16_57	53.8243	8.16 89	others	6/13/2 016	conventio nal	destroy ed, blasted	heavily	53.7042	8.0987	three German 10.5cm high-explosive grenades from the second WW. (found during ground survey for wind farm) moved to the blasting place , cmined by EOD Team during low tide
DE-MADG_OL_ 19/06/16_5 8	53.8257	8.17 65	others	6/13/2 016	conventio nal	destroy ed, blasted	heavily	53.7042	8.0987	German 32cm high-explosive grenade from the second WW. (found during ground survey for wind farm) moved to the blasting place , cmined by EOD Team during low tide
DE-MADH_OL_ 19/06/16_5 9	53.8223	8.17 05	others	6/13/2 016	conventio nal	destroy ed, blasted	heavily	53.7042	8.0987	German 21cm high-explosive grenade from the first WW. (found during ground survey for wind farm) moved to the blasting place , cmined by EOD Team during low tide
DE-MADI_OL_1 9/06/16_60	53.8212	8.16 87	others	6/13/2 016	conventio nal	destroy ed, blasted	heavily	53.7042	8.0987	German 21cm high-explosive grenade from the first WW. (found during ground survey for wind farm) moved to the blasting place , cmined by EOD Team during low tide
DE-MADJ_OL_1 9/06/16_61	53.8242	8.16 90	others	6/13/2 016	conventio nal	destroy ed, blasted	heavily	53.7042	8.0987	two German 10.5cm high-explosive grenades from the second WW. (found during ground survey for wind farm) moved to the blasting place , cmined by EOD Team during low tide
DE-MADK_OL_1 9/06/16_62	53.8240	8.16 91	others	6/13/2 016	conventio nal	destroy ed, blasted	heavily	53.7042	8.0987	two German 10.5cm high-explosive grenades from the second WW. (found during ground survey for wind farm) moved to the blasting place , cmined by EOD Team during low tide

DE-MADL_OL_24/06/16_63	53.8241	8.1676	others	6/15/2016	conventional	disposed of on land	heavily			two German 8.8cm high-explosive grenades from the second WW. (found during ground survey for wind farm), salvaged and disposed on shore by EOD Team
DE-MADM_OL_24/06/16_64	53.8240	8.1676	others	6/15/2016	conventional	disposed of on land	heavily			a German 10.5cm and two 8.8cm high-explosive grenades from the second WW. (found during ground survey for wind farm), salvaged and disposed on shore by EOD Team
DE-MADN_OL_24/06/16_65	53.8229	8.1698	others	6/15/2016	conventional	disposed of on land	heavily			two German 8.8cm high-explosive grenades from the second WW. (found during ground survey for wind farm), salvaged and disposed on shore by EOD Team
DE-MADO_OL_24/06/16_66	53.8319	8.1554	others	6/15/2016	conventional	disposed of on land	heavily			German 7.5cm high-explosive grenade from the second WW. (found during ground survey for wind farm) , salvaged by EOD Team
DE-MADP_OL_24/06/16_67	53.8229	8.1681	others	6/15/2016	conventional	disposed of on land	heavily			four German 3.7cm high-explosive grenades from the second WW. (found during ground survey for wind farm) , salvaged by EOD Team
DE-MADQ_OL_24/06/16_68	53.8243	8.1679	others	6/15/2016	conventional	disposed of on land	heavily			two German 8.8cm high-explosive grenades from the second WW. (found during ground survey for wind farm) salvaged by EOD Team
DE-MADR_OL_24/06/16_69	53.8232	8.1697	others	6/15/2016	conventional	disposed of on land	heavily			German 8.8cm high-explosive grenade from the first WW. (found during ground survey for wind farm) salvaged by EOD Team
DE-MACL_OS_07/06/16_70	53.7401	6.5444	laying pipelines or cables	6/17/2016	conventional	disposed of on land	heavily			British second World War moored mine without fuse, recovered by civil firm and transferred to harbour Emden and handed over to the EOD Team
DE-MADT_OL_34/06/16_71	53.8277	8.1648	others	6/28/2016	conventional	destroyed, blasted	heavily	53.7042	8.0987	German 28cm high-explosive grenade from the second WW. (found during ground survey for wind farm) moved to the blasting place and cmined by EOD Team during low tide
DE-MADU_OL_34/06/16_72	53.8230	8.1711	others	6/28/2016	conventional	destroyed, blasted	heavily	53.7042	8.0987	German 24cm high-explosive grenade from the first WW. (found during ground survey for wind farm), moved to the blasting place and cmined by EOD Team during low tide
DE-MADV_OL_34/06/16_73	53.8258	8.1771	others	6/28/2016	conventional	destroyed, blasted	heavily	53.7042	8.0987	German 24cm high-explosive grenade from the first WW. (found during ground survey for wind farm), moved to the blasting place and cmined by EOD Team during low tide

DE-MADW_OL_34/06/16_74	53.8243	8.1674	others	6/28/2016	conventional	destroyed, blasted	heavily	53.7042	8.0987	German 10.5cm high-explosive grenade from the first WW. (found during ground survey for wind farm) moved to the blasting place and cmined by EOD Team during low tide
DE-MACI_DW_OL_10/07/16_75	53.6964	6.5544	laying pipelines or cables	7/29/2016	conventional	destroyed, blasted	unknown	53.6048	6.8716	German 30.5cm high-explosive shell found during seabed survey, moved near to blasting point and cmined by EOD
DE-MACJ_DW_OL_10/07/16_76	53.6966	6.5542	laying pipelines or cables	7/29/2016	conventional	destroyed, blasted	unknown	53.6048	6.8716	German 30.5cm high-explosive shell found during seabed survey, moved near to blasting point and cmined by EOD
DE-MACK_OL_10/07/16_77	53.7090	6.5545	laying pipelines or cables	8/18/2016	conventional	disposed of on land	heavily			artillery shell "Bleihemd" (24.5cm, I. WW) found during bottom survey, salvaged by civil company and handed over to the EOD Team
DE-MBV0_OL_07/07/16_78	53.6139	8.4250	others	7/13/2016	conventional	destroyed, blasted	heavily	53.6139	8.4250	German 28cm high-explosive shell from the first WW., destroyed at the location by EOD Team
DE-MBV1_OL_07/07/16_79	53.6141	8.4245	others	7/13/2016	conventional	destroyed, blasted	heavily	53.6141	8.4245	German 28cm high-explosive shell from the first WW., destroyed at the location by EOD Team
DE-MBNQ_AWZ_BW3_NL_MG_0813_L2B19_80	54.3333	6.4602	laying pipelines or cables	9/12/2016	conventional	destroyed, blasted	good condition	54.3333	6.4602	American aircraft bomb 1000lbs (charge are TNT and Amatol), found during bottom survey on cable route
DE-MDA3_OL_03/08/16_81	53.6212	8.1486	dredging	8/2/2016	conventional	disposed of on land	heavily			a British high-explosive shell (105mm) found in the catch box of a suction dredge NORDSEE, salvaged and disposed of on land by EOD Team (hint: position is not exact)
DE-MDA4_OS_16/08/16_82	53.7941	7.9046	found on shore	8/29/2016	conventional	disposed of on land	heavily			a lot of German high-explosive shells in different sizes (13pcs 2cm, 9pcs 3.7cm, 1x8.8cm, 4pcs 5cm hand-grenades, a smoke candle 42, 10pcs fuses and 5kg parts of ammunition, 0.3kg explosive charges; WW II.), salvaged and disposed of on land by EOD TEam
DE-MBCD_004/5A/0578540/2016_83	53.9583	8.4267	found on shore	9/3/2016	conventional	disposed of on land	heavily			two stick-grenades M24, id and removed on shore by EOD Team

DE-MBKE_OL_03/09/16_84	53.6167	8.1500	dredging	9/6/2016	conventional	disposed of on land	heavily			a British fuse (II.WW) found in the catch box of a suction dredge NORDSEE, salvaged by EOD Team
DE-MBKF_OS_10/09/16_85	53.2833	7.2260	entanglement in nets	9/23/2016	conventional	disposed of on land	heavily			two German high-explosive charges (3.7cm calibre) found during fishing, salvaged and disposed of on land by EOD Team
DE-MBW2_OL_04/11/16_86	53.6220	8.1961	laying pipelines or cables	11/11/2016	conventional	disposed of on land	partly			German high-explosive shell (10.5cm calibre) from second WW. found during laying of cable, salvaged and disposed of on land by EOD Team
DE-MDFG_OL_04/11/16_87	53.6492	8.1844	laying pipelines or cables	11/11/2016	conventional	disposed of on land	partly			German high-explosive shell (8.8cm calibre) from second WW. found during laying of cable, salvaged and disposed of on land by EOD Team
DE-MDFH_OL_04/11/16_88	53.6223	8.1986	laying pipelines or cables	11/11/2016	conventional	disposed of on land	partly			five German high-explosive shells (3.7cm calibre) from second WW. found during laying of cable, salvaged and disposed of on land by EOD Team
DE-MDFI_OL_04/11/16_89	53.6503	8.1830	laying pipelines or cables	11/11/2016	conventional	disposed of on land	partly			four German mortar shells (10cm) from second WW. found during laying of cable, salvaged and disposed of on land by EOD Team
DE-MDFJ_OL_04/11/16_90	53.6498	8.1826	laying pipelines or cables	11/11/2016	conventional	disposed of on land	partly			fourty-nine German fuses in a case from second WW. found during laying of cable, salvaged and disposed of on land by EOD Team
DE-MBW3_OL_08/11/16_91	53.7941	7.9046	found on shore	11/24/2016	conventional	disposed of on land	heavily			lots of ammunition (high-explosive shells 4 x2cm, 4 x3.7cm, 2 x10.5cm; 6 detonators; 10kg parts of munition; 1 German smoke candle 42) from the second WW. found during routine check, salvaged and disposed of on land by EOD Team
DE-MDFL_92	53.9500	8.3667	others	11/15/2016	unknown	released at sea	unknown			part of propelling charge
DE-MBVI_93	53.5575	6.6572	entanglement in nets	11/24/2016	unknown	released at sea	unknown			unexploded object, lost by fishing vessel (reported by Bfs 195/16 also)
DE-MDFM_AWZ_VM_Objekt 1769_94	54.3162	5.8844	others	4/14/2016	conventional	destroyed, blasted	good condition	54.3162	5.8844	dropped 5kg practice bomb, found during bottom survey for windfarm, destroyed together with Objetscs 05 and 1275
DE-MDFN_AWZ_VM_Objekt 05_95	54.3162	5.8844	others	4/14/2016	conventional	destroyed, blasted	good condition	54.3162	5.8844	dropped 5kg practice bomb, found during bottom survey for windfarm, destroyed together with Objects 1769 and 1275

DE-MBLO_96	54.1883	7.88 17	found on shore	10/11/ 2016	conventio nal	destroy ed, blasted	unknown			five anti-tank mines from second WW. found on shore, cmined by EOD Team
DE-MBM5_97	53.9583	8.42 88	found on shore	10/13/ 2016	conventio nal	dispose d of on land	unknown			explosive part (TNT-charge) of hand-grenade 24, found by civilian and salvaged by EOD Team
DE-MBIR_98	53.9638	8.43 67	others	9/27/2 016	conventio nal	dispose d of on land	unknown			fragment of 7.5cm German grenade incl. charge and a sea marker, id and removed to shore by EOD Team
DE-MBVJ_99	53.6319	6.74 74	found on shore	8/16/2 016	conventio nal	destroy ed, blasted	unknown			grenade was cmined, reported by BfS 140/16