CRUISE SUMMARY REPORT

FOR COLLATIMG CENTRE USE Centre: DOD Ref. No.: \boxtimes Is data exchange No Yes In part restricted

SHIP enter the full name and international radio call sign of the ship from which the data were collected, and indicate the type of ship, for example, research ship; ship of opportunity, naval survey vessel; etc.

Name: POSEIDON Call Sign: DBKV

Type of ship: Research Vessel

CRUISE NO. / NAME POS532

enter the unique number, name or acronym assigned to the cruise (or cruise leg, if appropriate).

CRUISE PERIOD

start (set sail)

4/02/19 to day/ month/ year

24/2/2019 day/ month/ year end

(return to port)

PORT OF DEPARTURE (enter name and country) Mindelo/Cape Verde

PORT OF RETURN (enter name and country) Mindelo/Cape Verde

RESPONSIBLE LABORATORY enter name and address of the laboratory responsible for coodinating the scientific planning of

the cruise

Name: GEOMAR Helmholtz-Zentrum für Ozeanforschung Kiel

Address: Wischhofstraße 1-3, 24148 Kiel

Country: Germany

CHIEF SCIENTIST(S) enter name and laboratory of the person(s) in charge of the scientific work (chief of mission) during the cruise.

Dr. Henk-Jan Hoving GEOMAR Helmholtz Centre for Ocean Research Kiel

OBJECTIVES AND BRIEF NARRATIVE OF CRUISE enter sufficient information about the purpose and nature of the cruise so as to provide the context in which the report data were collected.

The aim of this cruise was to investigate the role of gelatinous zooplankton in the biological carbon pump, i.e. transporting carbon from the surface into the deep sea. In addition, the cruise aimed to better understand the biodiversity, abundance and distribution of pelagic fauna including nekton and macrozooplankton in the Cape Verde region, and to provide one of the first bottom surveys in the coastal deep seas of Cape Verde. The latter resulting in new faunal records and biological observations.

We used the manned submersible JAGO (17 dives), the towed camera system PELAGIOS (13 deployments), and two kinds of multinet (midi and maxi) (14 and 7 hauls respectively). Biological specimens were preserved as voucher specimens and samples were obtained for DNA barcoding. CTD sampling was performed to collect hydrographic data. We also collected water samples for environmental DNA and to analyze these samples in the lab for traces of deep-sea organisms such cephalopods. To quantify pelagic biomass and track migration via bioacoustics we used an EK80. Elaborate physical sampling around the islands was performed using CTD and ADCP. In the leeway of the islands Santo Antão and Fogo we performed mesopelagic stations (1000 m) and bathypelagic stations (3000 m) using the mentioned instruments. An offshore mesoscale eddy was sampled with all our oceanographic instruments. Additionally we performed a full oceanographic and biological sampling at the Cape Verde Ocean Observatory, north of Sao Vicente.

PROJECT (IF APPLICABLE) if the cruise is designated as part of a larger scale cooperative project (or expedition), then enter the name of the project, and of organisation responsible for co-ordinating the project.

Project name: DeepC-Jelly

Coordinating body:

PRINCIPAL INVESTIGATORS: Enter the name and address of the Principal Investigators responsible for the data collected on the cruise and who may be contacted for further information about the data. (The letter assigned below against each Principal Investigator is used on pages 2 and 3, under the column heading 'PI', to identify the data sets for which he/she is responsible)

- A. Henk-Jan Hoving
- **B.** Helena Hauss
- C. Karen Hissmann
- D. Anna Christina Hans
- E. Karen Osborn
- F. Veronique Merten/Stella Scheer
- G. Jens Klimmeck

MOORINGS, BOTTOM MOUNTED GEAR AND DRIFTING SYSTEMS

This section should be used for reporting moorings, bottom mounted gear and drifting systems (both surface and deep) deployed and/or recovered during the cruise. Separate entries should be made for each location (only deployment positions need be given for drifting systems). This section may also be used to report data collected at fixed locations which are returned to routinely in order to construct 'long time series'.

PI See top of page.	APPROXIMATE POSITION						DATA TYPE	DESCRIPTION Identify, as appropriate, the nature of the instrumentation the parameters (to be)
	deg	ATITUDI min	N/S	deg	ONGITUE min	E/W	enter code(s) from list on cover page.	Identify, as appropriate, the nature of the instrumentation the parameters (to be) measured, the number of instruments and their depths, whether deployed and/or recovered, dates of deployments and/or recovery, and any identifiers given to the site.

SUMMARY OF MEASUREMENTS AND SAMPLES TAKEN

Except for the data already described on page 2 under 'Moorings, Bottom Mounted Gear and Drifting Systems', this section should include a summary of all data collected on the cruise, whether they be measurements (e.g. temperature, salinity values) or samples (e.g. cores, net hauls).

Separate entries should be made for each distinct and coherent set of measurements or samples. Different modes of data collection (e.g. vertical profiles as opposed to underway measurements) should be clearly distinguished, as should measurements/sampling techniques that imply distinctly different accuracy's or spatial/temporal resolutions. Thus, for example, separate entries would be created for i) BT drops, ii) water bottle stations, iii) CTD casts, iv) towed CTD, v) towed undulating CTD profiler, vi) surface water intake measurements, etc.

Each data set entry should start on a new line - it's description may extend over several lines if necessary.

NO, UNITS: for each data set, enter the estimated amount of data collected expressed in terms of the number of 'stations'; miles' of track; 'days' of recording; 'cores' taken; net 'hauls'; balloon 'ascents'; or whatever unit is most appropriate to the data. The amount should be entered under 'NO' and the counting unit should be identified in plain text under 'UNITS'.

	1	under 'NO' and	the counting unit	should be identified in plain text under 'UNITS'.
				DESCRIPTION
PI	NO	UNITS	DATA TYPE	Identify, as appropriate, the nature of the data and of the instrumentation/sampling gear and list the parameters measured. Include any supplementary information that may be appropriate, e. g. vertical or horizontal profiles, depth
see page 2	see above	see above	Enter code(s) from list on cover page	horizons, continuous recording or discrete samples, etc. For samples taken for later analysis on shore, an indication should be given of the type of analysis planned, i.e. the purpose for which the samples were taken.
Α	13	profiles	B09, B11,	3 PELAGIOS and 10 PELAGIOS II in total 21 hours of pelagic transect video to be analysed on shore
		•	B90, B20, B21, B14	(including day and night tows), biodiversity, abundance and distribution analysis
_		profiles		63 formaldehyde-fixed zooplankton samples from Multinet Maxi, to be analyzed on shore, biodiversity,
B B	7		B09,B11	abundance and distribution 70 formaldehyde-fixed zooplankton samples from Multinet Midi, to be analyzed on shore, biodiversity,
	14	profiles	B09,B11	abundance and distribution
В	10	Profiles	D71	Acoustic profiles using a Simrad EK80 echosounder
С	17	dives	B09, B11, B90, B20, B21, B14	13 scientific open water dives with manned submersible JAGO at day and night time, 3 bottom survey dives, 1 test dive, total dive time 45h42min, survey depth 25-385 m, USBL position data for each dive, 8 different dive participants, 38h04min HD video recordings (2.8 TB)
•	40	hl-	B00 B04	Collection of pelagic organisms during submersible dives with scoop tubes and suction sampler, to be
С	40	hauls	B09, B21	analysed on board the vessel and ashore
D	21	days		Underway measurements using the vessel-mounted thermosalinograph
D	21	days	D71	Underway measurements using the vessel-mounted ADCP at 300hHz
D	26	Profiles	H9, H10	CTD profiles hydrography
E	3042	photos	B09, B11	Scientific voucher photographs for analysis onshore
Е	579	specimens	В09	Biological specimens collected for further analysis onshore
E	517	extracts	B90	517 DNA extracts/RNAlater samples for analysis onshore
F	15	profiles	B90	400 files and makes a second of the DNA analysis
	18	hours	D90	180 filtered water samples for eDNA analysis Video recordings for outreach and science communication purposes
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<u> </u>	400	photos		For outreach and science communication purposes
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TRACK CHART: You are strongly encouraged to submit, with the completed report, an annotated track chart illustrating the route followed and the points where measurements were taken.

Insert a tick(♥) in this box if a track chart is supplied



GENERAL OCEAN AREA(S): Enter the names of the oceans and/or seas in which data were collected during the cruise – please use commonly recognised names (see, for example, International Hydrographic Bureau Special Publication No. 23, 'Limits of Oceans and Seas').

North-east tropical Atlantic

SPECIFIC AREAS: If the cruise activities were concentrated in a specific area(s) of an ocean or sea, then enter a description of the area(s). Such descriptions may include references to local geographic areas, to sea floor features, or to geographic coordinates. **Please insert here the number of each square in which data were collected from the below given chart**

Cape Verde (Bay of Tarrafal, Fogo, CVOO time series station)

Squares: 39

