

Application for Consent to conduct
Marine Scientific Research

Date: 09. January 2015

1. General Information

1.1 Cruise name and/or number:
M118

1.2 Sponsoring Institution(s):	
Name:	DFG Senatskommission Ozeanographie
Address:	MARUM - Zentrum für Marine Umweltwissenschaften Universität Bremen Leobener Str. 28359 Bremen
Name of Director:	Prof. Dr. Michael Schulz

1.3 Scientist in charge of the Project:	
Name:	Prof. Dr. Thorsten Stoeck
Country:	Germany
Affiliation:	University of Kaiserslautern
Address:	Faculty of Biology, Erwin Schroedinger Str. 14 D-67663 Kaiserslautern
Telephone:	+49-631-2052502
Fax:	
Email:	
Website (for CV and photo):	http://www.bio.uni-kl.de/ecology/home/

1.4 Entity(ies)/Participant(s) from coastal State involved in the planning of the project:	
Name:	NONE
Affiliation:	
Address:	
Telephone:	
Fax:	
Email:	
Website (for CV and photo):	

2. Description of Project

2.1 Nature and objectives of the project:
Explaining <u>L</u> atitudinal <u>D</u> iversity <u>G</u> radients (LDG) is one of the biggest challenges and a key question in ecology. Understanding of spatial diversity structures is highly relevant for applied issues of major concern to humankind, including the control of diseases and their vectors, the effects of global climate change on biodiversity (loss) and ecosystem function(ing) and services, and the spread of invasive species. LDGs are well known and described for macroorganisms since more than two centuries. Due to the sparsity of adequate geographic microbial community surveys and the approaches to analyse such patterns, investigations of LDGs in protistan plankton, an essential component for marine ecosystem function(ing) are still in its infancies. The handful of available studies, all of which are based on meta-data collections from the literature, paint different pictures regarding the presence, absence and strength of LDGs in protistan plankton. Therefore, inferences of hypotheses on mechanisms shaping such patterns are nearly impossible. The transit cruise of RV Meteor from Rostock to Mindelo is a unique opportunity to collect a hitherto unprecedented solid (molecular genotype)

dataset to infer possible LDGs and predictors of marine protistan plankton diversity.

2.2 If designated as part of a larger scale project, then provide the name of the project and the Organisation responsible for coordinating the project:

Not applicable

2.3 Relevant previous or future research projects:

- TARA Oceans (mapping microbial eukaryotes in the World's Oceans)
- BioMarKs (Biodiversity of marine microbial eukaryotes in European Coastal Waters)
- Extremophile protists in hypersaline anoxic deep-sea basins (Eastern Mediterranean Sea)
- TransArc (diversity of protists in Arctic waters and contribution to carbon flow, (ARK XXIX/2), RV Polarstern

2.4 Previous publications relating to the project:

<http://www.bio.uni-kl.de/ecology/publications/>

3. Geographical Areas

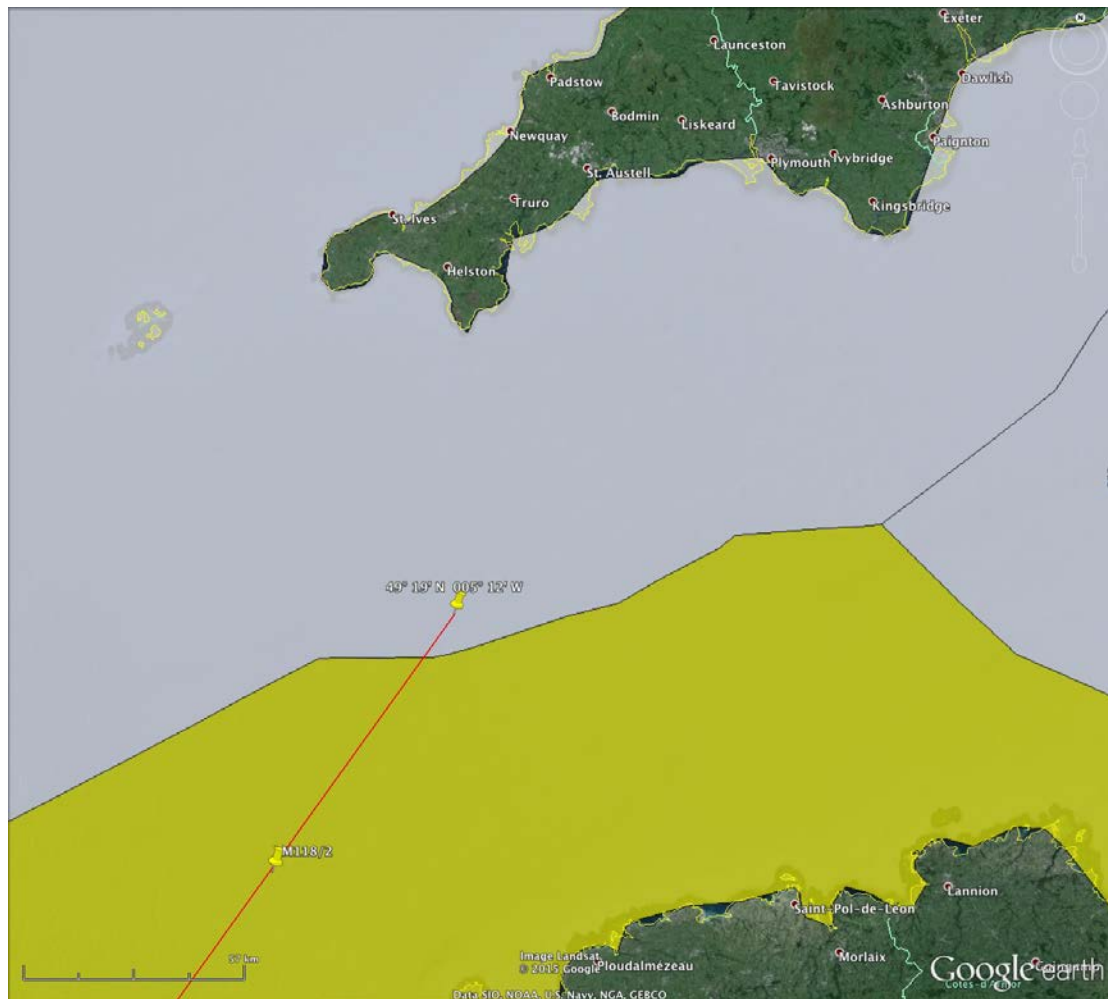
3.1 Indicate geographical areas in which the project is to be conducted (with reference in Latitude and longitude in decimal degrees, including coordinates of cruise/track/way points/sampling stations). Please provide coordinates in a separate excel spreadsheet.

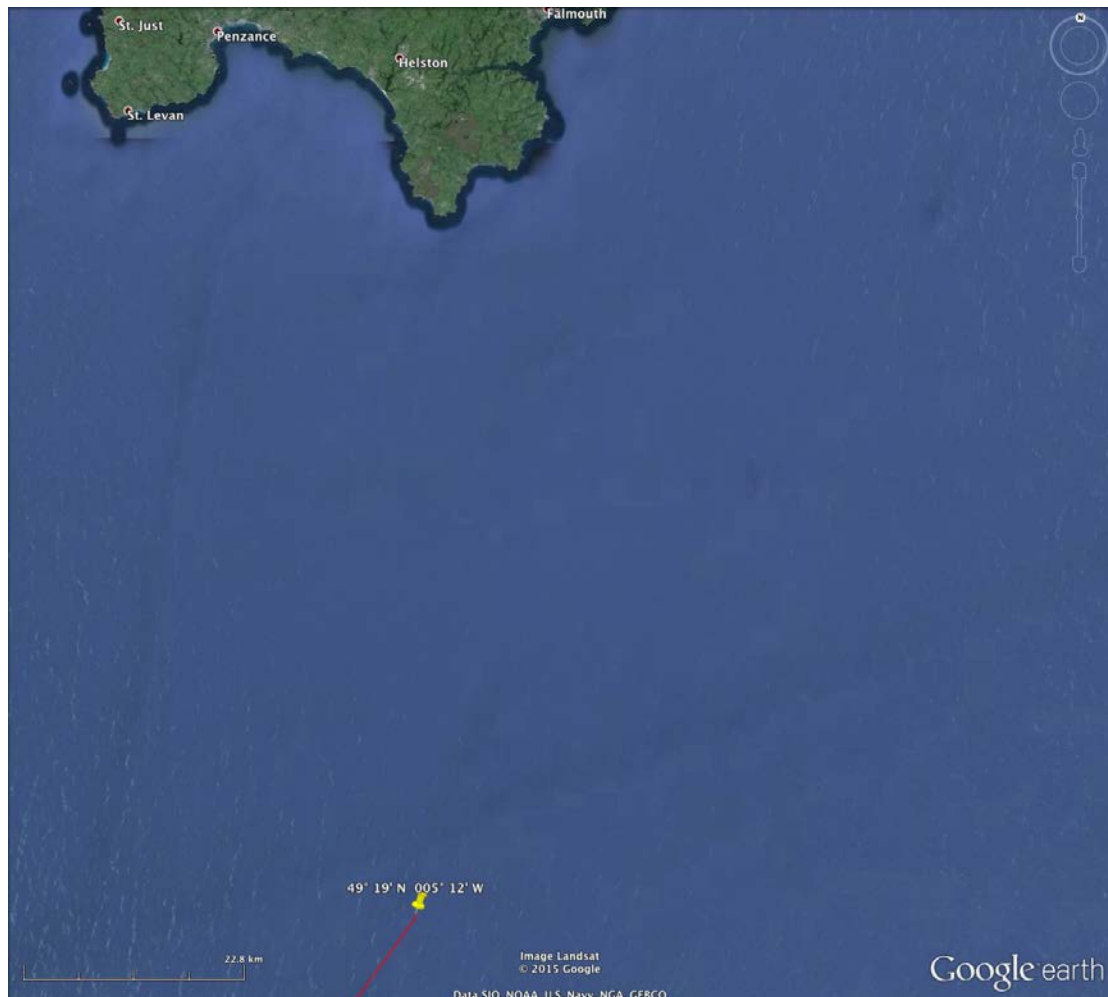
One sampling site at:
49.316 N
5.2 W

3.2 Attach chart(s) at an appropriate scale (1 page, high-resolution) showing the geographical Areas of the intended work and, as far as practicable, the location and depth of sampling Stations, the tracks of survey lines, and the locations of installations and equipment.

Sampling depth: ca. 20 meters, no installation of equipment, no survey track, only one single sample site, map see below

United Kingdom





4. Methods and means to be used

4.1 Particulars of vessel:	
Name:	METEOR
Type/Class:	Research Vessel
Nationality (Flag State):	German
Identification Number (IMO/Lloyds No.):	IMO Nr.: 8411279
Owner:	Federal Ministry of Education and Research
Operator:	University of Hamburg, Institute of Oceanography, Bundestraße 53, 20146 Hamburg
Overall length (meters):	97,5 m.
Maximum draught:	5,6 m.
Displacement/Gross Tonnage:	3825 t / 4280 BRZ
Propulsion:	Diesel
Cruising & maximum speed:	11,5 kn
Call sign:	DBBH
INMARSAT number and method and capability of communication (including emergency frequencies):	V-Sat: 0049 421 98504370 Iridium: 00881 631812465 SAT: 00870 761651726
Name of Master:	Michael Schneider
Number of Crew:	Max. 34
Number of Scientists on board:	Max. 30

4.2 Particulars of Aircraft: NOT APPLICABLE	
Name:	
Make/Model:	
Nationality (flag State):	
Website for diagram & Specifications:	
Owner:	
Operator:	
Overall Length (meters):	
Propulsion:	
Cruising & Maximum speed:	
Registration No.:	
Call Sign:	
Method and capability of communication (including emergency frequencies):	
Name of Pilot:	
Number of crew:	
Number of scientists on board:	
Details of sensor packages:	
Other relevant information:	

4.3 Particulars of Autonomous Underwater Vehicle (AUV): NOT APPLICABLE	
Name:	
Manufacturer and make/model:	
Nationality (Flag State):	
Website for diagram & Specifications:	
Owner:	
Operator:	
Overall length (meters):	
Displacement/Gross tonnage:	
Cruising & Maximum speed:	
Range/Endurance:	
Method and capability of communication (including emergency frequencies):	
Details of sensor packages:	
Other relevant information:	

4.4 other craft in the project, including its use:
none

4.5 Particulars of methods, full description of scientific instruments to be used(for fishing gear specify type and dimension) and location			
Types of samples and Measurements:	Methods to be used:	Instruments to be used:	To be carried out within 12nm (yes or no):
Water samples (ca. 100 litres) for filtration (collection of microorganisms)	Niskin bottle sampling	Niskin bottles	no
Measurements of physico-chemical parameters (temperature, salinity, chlorophyll, dissolved oxygen, conductivity, density, turbidity, PAR)	In situ probe measurements	Seabird CTD	no

vessel mounted systems:			
hydroacoustic mapping / measuring		ADCP, Parasound and Simrad Swathsonder	no
permanent surface water sampling / pumping		Pump, Thermosalinograph	no

4.6 Indicate nature and quantity of substances to be released into the marine environment:

None

4.7 Indicate whether drilling will be carried out. If yes, please specify:

No drilling

4.8 Indicate whether explosives will be used. If yes, please specify type and trade name, Chemical content, depth of trade class and stowage, size, depth of detonation, frequency of Detonation, and position in latitude and longitude:

none

5. Installations and Equipment

Details of installations and equipment (including dates of laying, servicing, method and Anticipated timeframe for recover, as far as possible exact locations and depth, and Measurements):

No installations

6. Dates

6.1 Expected dates of first entry into and final departure from the research area by the research vessel and/or other platforms:

August 23, 2015 departure: August 24, 2015

6.2 Indicate if multiple entries are expected:

No multiple entries

7. Port Calls

7.1 Dates and Names of intended ports of call:

none

7.2 Any special logistical requirements at ports of call:

none

7.3 Name/Address/Telephone of shipping agent (if available):

none

8. Participation of the representative of the coastal State

8.1 Modalities of the participation of the representative of the coastal State in the research Project:
none

8.2 Proposed dates and ports for embarkation/disembarkation:
none

9. Access to Data, Samples and Research Results

9.1 Expected dates of submission to coastal State of preliminary report, which should include The expected dates of submission of the data and research results:
Dec 2015

9.2 Anticipated dates of submission to the coastal State of the final report:
July 2016

9.3 Proposed means for access by coastal State to data (including format) and samples:
<ul style="list-style-type: none"> - Data will be available in public data bases (NCBI's GenBank) and published in scientific journal - samples will be available from the Scientist in Charge (Thorsten Stoeck) upon request

9.4 Proposed means to provide coastal State with assessment of data, samples and Research results:
<ul style="list-style-type: none"> - final report to coastal State - publications in scientific journals

9.5 Proposed means to provide assistance in assessment or interpretation of data, samples And research results:
- the chief scientist (Thorsten Stoeck) and the scientific team involved in the project will assist in assessment or interpretation of data, samples and research results

9.6 Proposed means of making results internationally available:
- deposition of data in public data bases, publication of results and discussion of results in scientific journals

10. Other permits Submitted

10.1 Indicate other types of coastal state permits anticipated for this research (received or Pending):
none

11. List of Supporting Documentation

11.1 List of attachments, such as additional forms required by the coastal State, etc.:
a) schematic map of cruise track and sampling sites

Signature:

Contact information of the focal point:	
Name:	Leitstelle Deutsche Forschungsschiffe
Country:	Germany
Affiliation:	University of Hamburg Institute for Oceanography
Address:	Bundesstr. 53 20146 Hamburg
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Fax:	+49 (40) 42838-4644
Email:	leitstelle@ifm.uni-hamburg.de