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# R/V «Dr. Fridtjof Nansen» - Fishery and oceanographic research vessel



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# Vessel particulars

Owner Norwegian Agency for Development Cooperation

(NORAD)

Operator Institute of Marine Research (IMR)

IMO No 9062934

Flag Norwegian (Nor)

Built 2017

Yard Astilleros Gondan

GRT 3853 tons Length 74,5 m Draught 5,8 m

Max speed 14,5 knots Crew 15 persons

Scientists Up to 30 persons

Cabins 19 single cabins + 13 double cabins

The vessel is outfitted and prepared mainly for the following duties:

- Fisheries Resource Monitoring
- Ecosystem Investigations
- Oceanographic/ Environmental Surveys
- Bottom Habitat Mapping
- Single- and Multibeam Echo Sounder Surveys
- Integrated Data Logging



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## 1. Purpose

The purpose of these instructions is to ensure that all scientific cruises on board the research vessel "Dr. Fridtjof Nansen" are planned, executed and completed in the best possible manner, and in accordance with the defined goals for the cruise.

# 2. Area of application

These instructions apply to all cruises on board the research vessel "Dr. Fridtjof Nansen". It covers planning, preparation, execution and completion of cruises.

# 3. Key terms

Cruise leader - The scientific team leader on board the vessel.

Cruise participants - Scientists, technicians and students participating in the cruise.

Ship employee - anyone working on board the vessel and contributing to fulfill

the aim of the cruise.

Passenger - Persons who are embarked, but not participating in the cruise

activities, only observing activities and/or participating in meetings with the crew and/or cruise team while the vessel is

underway.

#### 4. Critical factors

#### 4.1 Language skills

The working language between crew and cruise participants on board the "Dr. Fridtjof Nansen" is English. All safety information, safety instructions and other communication between crew members and cruise participants must be possible to do in English, so all cruise participants must be able to understand instructions in English, both oral and written. It is the cruise leaders' responsibility to ensure that all members of the cruise party have basic English language skills before being scheduled to participate in a science cruise on the "Dr. Fridtjof Nansen".

#### 4.2 Planning and preparations

Cruise time is a scarce resource which is also very costly, both regarding vessel days and working days for the cruise personnel. Careful planning is therefore vital to ensure that the cruises are executed in the most effective and productive way possible.

This is even more important when the cruise consists of multiple projects and multiple science disciplines, and it is therefore crucial that the cruise leader as early as possible in the planning process establishes clear priorities between different activities and delegates the necessary authority to the different task leaders during the cruise.

#### 4.3 Cooperation

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The main purpose of the research vessel "Dr. Fridtjof Nansen" is to collect data for the maintenance of long term data series and for specific projects. In addition, some cruises also include training of students. A successful preparation and execution of all cruises requires good coordination and cooperation between the vessel crew and every member of the scientific party.

The captain of the vessel and the cruise leader both have a responsibility to cooperate for the best possible outcome of the cruise. This includes a joint responsibility to solve any conflict between crew members and cruise personnel.

The cruise leader and the captain must therefore establish a routine to meet at least once every day during the cruise to inform each other about what has happened since last meeting, plans for the next hours and days, any major changes to the cruise plan etc.

#### 4.4 Safety

The captain is responsible for the safety of the vessel, all personnel embarked, and all equipment on board. In addition, it is his responsibility to avoid any pollution or other harm to the environment.

The captain's responsibilities and authority is defined by the Norwegian Ship Safety and Security Act, the Norwegian Maritime Authorities (NMA) Rules and Regulations, and the IMR/RV Department Ship Safety Management System which is based on the International Maritime Safety (ISM) code.

The cruise leader and all other cruise personnel must therefore respect the captain's formal and personal authority when embarked on the vessel.

#### 4.5 Risk analysis

All non-routine operations that could possibly represent a risk to personnel, equipment, the environment or the vessel shall go through a structured analysis in beforehand to identify any risks, and to plan and execute the necessary actions to minimize or eliminate the identified risks.

The risk analysis shall be documented and will be used as reference material if an investigation becomes necessary after an accident has happened, or if equipment has been lost. The written analysis can also be used as an aid next time a similar operation is planned. It is the captain's responsibility that the risk analysis is done as necessary.

#### 4.6 Scientific work

The cruise leader is responsible for the scientific activities on board, and decides the cruise tracks and stations, and the collection and processing of data and samples.

The cruise leader is also responsible for all scientific equipment taken on board by the scientific team.

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The cruise leader must also ensure in beforehand that all necessary equipment belonging to the vessel, e.g. trawls, CTD, water sampler, nets, ADCP, computers, software, is available and in working order in due time before start of the cruise.

#### 4.7 Storage and use of chemicals and other toxic substances

Each individual cruise participant who brings on board chemicals or other toxic substances, e.g. radioactive isotopes, must ensure that the captain and the cruise leader is informed about rules and regulations for storage, transport and use of these substances, and make sure that the necessary safety information is available on board.

The cruise leader shall appoint one of the cruise participants to act as the Designated Chemical Safety person. He or she is then responsible for the safe storage, use and transportation of all chemicals being used by the cruise personnel, and to make sure that all chemicals brought on board by the scientific team is also removed from the vessel at the end of the cruise. It is important to check and verify, prior to departure, that there are enough sample storage containers (in all necessary sizes) on board. In addition, chemicals being brought on board must arrive in approved/suitable packaging.

# 4.8 Certification and control of scientific equipment which will be handled by cranes and/or winches

All equipment that the cruise leader, or any member of the scientific party, wishes to bring on board to be used during the cruise and that must be handled by crane and/or winch during on- and offloading, or during deployment and use at sea, must be certified for hoisting and/or towing.

The necessary certificates shall be shown to the vessel's captain or chief officer before the equipment is handled by the vessel's cranes and/or winches. If such certificates are not made available to the captain, he shall make his own investigations and inspections and if found necessary initiate his own control/test of the equipment's ability to be lifted and/or towed without representing any potential danger to personnel, vessel, environment or the equipment itself.

If the necessary certificates are not made available, and the captain is not able to make the necessary test/inspections before taking the equipment on board, then the equipment shall not be taken on board the vessel.

#### 4.9 Work and rest regulations

In accordance to International Labour Organisation (ILO) Convention 180 "Seafarers hours of work and the manning of ships convention, 1996" it is not allowed for employees on ships to work more than 14 hours pr. day. Rest periods shall be divided in at least two periods pr day, and one of them shall be of at least 6 hours' length, and the interval between two consecutive rest periods shall not exceed 14 hours.

All cruise personnel, except passengers, must complete the registration form "Record of hours of rest of seafarers". The form is handed out by the cruise leader before the start of the voyage. It is important that all participants do this registration daily. This shall be signed

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individually and handed over to the Captain by the end of each cruise and before leaving the vessel.

#### 4.10 Diplomatic clearance for operations in other countries economical zone

It is the responsibility of the cruise coordinator or cruise leader to apply for permit to operate in a country's economical zone.

#### 4.11 Safety training

All cruise personnel should as a minimum have taken part in a one-day training course in use of survival suit, behavior in the water etc during the last five years. Valid training certificates for the cruise personnel shall be delivered to the vessel captain before commencement of the cruise.

If some of the cruise personnel lacks such formal training, the captain can order an on-board safety training of cruise personnel before leaving the harbor.

In any case, the chief mate will give a detailed safety brief for all cruise personnel before the vessel leaves the harbor. It is mandatory for all cruise personnel to attend this safety brief regardless of how many times they have heard the same brief before!

#### 4.12 Health certificate

All cruise personnel, except passengers, must have a valid health certificate issued by a NMA-certified seafarer's medical doctor, see

https://www.sjofartsdir.no/en/seafarers/seamens-doctors/list-of-seamans-doctors/

Documents showing that all cruise personnel have valid health certificates shall be handed over to the captain before the start of the cruise. Those who cannot show such certificate will not be allowed to participate on the cruise, and must leave the vessel prior to departure.

If not above can be followed, the doctor must be approved for these skills in the actual country, and also have to use standard forms for Medical examination.

#### 4.13 Medical vaccination

All cruise personnel, including passengers, must bring a valid vaccination card covering relevant operation area of the vessel.

#### 4.14 Insurance

All members of the scientific cruise party must bring a personal insurance document stating what insurance coverage the person has regarding health care in case of injury or illness, and for transportation home in case of injury, illness or death. The document must include contact information to the insurance company or government agency if the person is employed by a government agency which is self insured.

#### 4.15 Passport

All members of the scientific cruise party, including passengers, must bring a valid passport.

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#### 4.16 Next of Kin information

All cruise personnel and passengers shall state name, address, phone number and family relation with the person they have listed as their "Next of Kin". They must also provide name and phone number to their employer Point of Contact (PoC) at their home institution. The NOK list and the employer PoC list shall be handed to the vessel's captain before the cruise starts.

#### 4.17 Health and safety meetings

The vessel's captain shall arrange at least one health and safety meeting for the crew during their 5/6-week work period on board. The cruise leader and the designated Health & Safety representative for the cruise personnel shall be invited to participate in every meeting Health and Safety meeting on board.

If any discrepancies regarding the Health and Safety for personnel, equipment or the environment is identified a Safety Improvement Report (SAFIR) shall be filled in by the captain and submitted to the "Designated Person Ashore" at the IMR/RV Department for analysis and implementation of corrective actions.

#### 4.18 Use of spare cruise time

At the beginning of every cruise, the cruise leader shall investigate if there are any tasks that could be executed if some spare time occurs during the cruise. Such tasks could be work that was planned but not done on previous cruises, vessel maintenance or that the following cruise could start earlier than originally planned.

The cruise leader shall, together with the captain, make sure that the cruise time is used in the best possible manner.

#### 4.19 Information management

It is very important for the success of the cruise that all personnel involved, including scientists, technicians and vessel crew are well informed about the purpose of the cruise, the planned stations and activities.

This is because informed personnel are much more motivated for their tasks if they know why they do them compared to personnel who don't!

It is also customary to give the vessel crew a brief about the results of the cruise at the end so they get a good understanding of what went well and where there is room for improvement.

#### 4.20 Cleaning of labs during and at the end of the cruise

There is limited lab space on board, and the labs are the work place for many persons, so it is very important to keep the labs as tidy and clean as possible during the cruise.

It is also critically important that the labs are left tidy and clean at the end of the cruise so the next science party coming on board does not have to start their cruise with cleaning after the previous cruise!



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## 4.21 Alcohol and drugs policy

It is forbidden to bring on board or use any kind of narcotics on board the "Dr. Fridtjof Nansen". The same goes for alcohol in general, but the captain can obtain permission from the director of the IMR/RV Department for serving limited amounts of alcohol on special occasions.