



KYSTVERKET
NORWEGIAN COASTAL ADMINISTRATION

NORWEGIAN ENVIRONMENTAL EMERGENCY RESPONSE



Illustration: ESA



The Norwegian Coastal Administration (NCA) is a government agency that provides public services on behalf of the Ministry of Transport and Communications. Our primary responsibility is to safeguard and develop the coastal areas and seaways for all users.

The Norwegian Coastal Administration provides safe travel by sea, good accessibility and a good national preparedness against acute pollution.

PREVENTION IS CRUCIAL

Prevention of accidents is an important cornerstone of Norwegian environmental emergency response. Many of the preventive measures are aimed at shipping.

In order to prevent accidents at sea and acute pollution, The NCA:

- Maintains over 21 000 navigation installations and establishes new ones marking safe sea routes along the Norwegian coast
- Monitors high-risk traffic along the coast and in Norwegian sea areas from our vessel traffic service centre in Vardø (NORVTS)
- Runs and further develops the AIS system (Automatic Identification System) and focus on tracking high-risk traffic
- Provides piloting services and manages a pilot exemption certificate scheme
- Has established and manages recommendatory traffic separation schemes along the coast
- Transmits coastal warnings of incidents and conditions at sea that can affect the navigational conditions for mariners in Norwegian waters
- Runs coordinated aerial and satellite surveillance in coastal and sea areas
- Manages the national emergency towing services
- Runs interdisciplinary environmental emergency response service, operational 24/7

More information on all of this: www.kystverket.no/en



PREPAREDNESS AND ENVIRONMENTAL EMERGENCY RESPONSE

The Norwegian environmental emergency response is divided into private and public environmental emergency response. Moreover, the public emergency response comprises a municipal and a governmental element.

The Norwegian Coastal Administration is responsible for coordinating private and public emergency response schemes. This is done by means of the following tasks:

- Coordinating and running exercises for private, municipal and governmental emergency response resources in the national emergency response system
- Ensuring that the responsible polluter or municipality takes action in accordance with the duty to take action
- Defining requirements for the responsible polluter in the event of acute pollution
- Investing in and maintaining emergency response resources linked with government stockpiles and ships
- Ensuring that procedures are in place for emergency unloading of cargo of disabled ships in the event of accidents
- Mapping and performing quality assurance of emergency ports
- Maintaining an overview of shipwrecks and implementing action to mitigate environmental risk
- Constantly improving the government's environmental emergency response by means of courses and exercises, and development of new equipment and new methods
- Following up national and international agreements on notification and assistance
- Acting as a driving force for international efforts in the specialist field of preparedness and actions to acute pollution

PRIVATE ENVIRONMENTAL EMERGENCY RESPONSE

Any enterprise or organisation performing operations that may cause acute pollution is obliged to ensure that the necessary emergency response measures are in place to prevent, detect, stop, remove and minimise the impact of pollution. This is the main principle of the Norwegian Pollution Control Act. The emergency response must be in reasonable proportion to the likelihood of acute pollution, the extent of the damage and the potential negative environmental effects. The polluter is also financially responsible for implementing the necessary measures and providing compensation in the event of damage to the environment and property.

Around 70 onshore industrial companies, including refineries and tank facilities, have received special environmental emergency response requirements from the Norwegian Environment Agency and established emergency response plans. The oil companies on the continental shelf have their own environmental emergency response requirements as a consequence of the HSE regulations for the petroleum industry. The obligation to maintain environmental emergency response and take action rests with the individual operating companies in the case of the oil industry operating on the Norwegian continental shelf. All operating companies are members of the Norwegian Clean Seas Association for Operating Companies (NOFO), which makes equipment and technical personnel available to these companies.

Anyone with a private emergency response is obliged to assist when actioned by the government and municipalities.

PUBLIC ENVIRONMENTAL EMERGENCY RESPONSE

Municipal environmental emergency response

Norwegian municipalities are required to maintain emergency response and take action in the event of minor instances of acute pollution within their boundaries – for areas that are not covered by private emergency response or where the responsible polluter is incapable of taking sufficient action. This responsibility also applies if the polluter is unknown. Examples of this include: tankers that have overturned, leaks from underground tanks or oil leaks from unknown sources at a port.

Municipalities cooperate on their emergency response by means of intermunicipal emergency response regions, headed by an intermunicipal committee against acute pollution (IUA). The municipalities are obliged to assist the government in the event of major government actions.

Government environmental emergency response

The NCA's emergency response organisation is tasked with preventing and identifying acute pollution and ensuring that the responsible polluter takes the necessary action. The government, via the Norwegian Coastal Administration, has an obligation to maintain a national emergency response system and take necessary action in the event of major instances of acute pollution. In practice, this relates particularly to efforts to prevent major oil leaks or other acute pollution from ships, shipwrecks or unknown sources. This also means that the NCA is able to take over responsibility for the response if a known and responsible polluter is incapable of taking action itself.





Photo: Olav Helge Matvik



Photo: Lill Haugen Kyv

REPORTING ACUTE POLLUTION

Anyone discovering acute pollution is obliged to report through the Norwegian emergency telephone number 110.

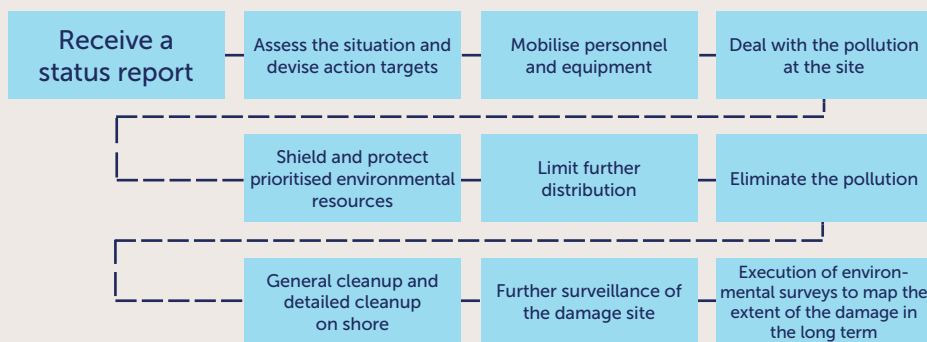
Exception: Ships at sea report to the nearest Maritime Radio service or the Joint Rescue Coordination Centre (JRCC). Offshore operations report to the JRCC and/or the Petroleum Safety Authority Norway. There are other separate schemes for reporting from aircraft, etc. Reports received by 110, Maritime Radio or others are immediately forwarded to the NCA's environmental emergency response service.

The NCA receives 1000–1200 reports of this kind relating to acute pollution or risk of acute pollution every year. The NCA watch team maps, monitors, assesses, provides advice and assistance. It also issues orders to polluters in respect of any measures; or takes action to limit the damage, depending on the nature and scope of the incident.

GOVERNMENT ACTION TO PREVENT ACUTE POLLUTION

If a major instance of acute pollution is reported, the NCA's environmental emergency response service will mobilise emergency response personnel and equipment from the municipal and government emergency response organisation. Mobilisation will take place in cooperation with the region/municipality or polluter involved. Other resources could also be designated in the event of chemical accidents.

Tasks in the various phases of the action:



A protection action may take anything from a few days to several months or years, and may involve a large number of individuals and equipment. Oil spill responses may potentially be highly resource-intensive and may involve major expenditure.



WHAT MUST BE GIVEN PRIORITY IN THE EVENT OF AN ACCIDENT?

In other words, after life and health the environment must be given priority during an action. The properties of the substances released determine how the pollution is spreading in the environment and what damage it may cause to the ecosystem. The adverse impacts may vary from direct mortality of living organisms to more long-term effects such as reduced reproduction and changes to DNA in some species.

Experience from Norway and other countries has shown that spills taking place close to shore will also involve pollution on beaches in most instances. It is therefore important to quickly implement measures, and apply the most eco-friendly clean-up methods to prevent the polluting substance from further being spread by the tide, wind and current.

Incidents that cause acute pollution are rarely entirely the same. How best to implement Environmental emergency response against acute pollution must be assessed in each individual case. Although Norway is one of the world's leading countries on know-how, research and development on emergency environment response to acute pollution, there are nevertheless limits on what is possible to achieve.

The following priorities are applicable when taking action against acute pollution:

- 1) life and health
- 2) environment
- 3) business interests

FACTORS THAT INFLUENCE THE SITUATION AND HOW IT IS HANDLED:

- Amount of pollution
- Type of pollution
- Vulnerability of the environment in the area
- Weather conditions
- Temperature
- Lighting conditions
- Topography
- Infrastructure
- How accessible the polluted area is

CONDITIONS ALSO OF IMPORTANCE IN THE EVENT OF OIL SPILLS AT SEA:

- Response time and access to ships
- Sea conditions (including wave height and current)
- Windspeed and direction
- Current speed and direction
- Physical properties of the oil
- Distance to the nearest equipment depot
- Access to equipment and personnel
- Tides
- Distance to land

The impact of the emergency response equipment is limited by challenging weather and climate conditions. Wind and waves reduce the ability of the equipment to collect and remove oil from the sea. Therefore, it is anticipated that effective damage limitation at sea can take place on around 60 per cent of the days of the year.

Experiences from government actions show that it is rarely possible to remove more than 10–15 per cent of escaped oil in the event of oil spill responses at sea. The rest evaporates, is mixed into the water, is chemically dissolved or ends up on shore.

Accidents resulting in spills of other chemicals than oil may create a completely different scenario. Many chemicals will mix with sea water, while others will float on the surface.

The choice of methods for limiting the damage to humans and the environment is assessed carefully, and will vary in each individual case.





Photo: Jan Morten Bjørnbakk, NTB



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RESOURCES

The NCA's specialists have extensive know-how and experience of both national and international pollution responses. This experience and expertise is at the heart of the environmental emergency response, along with access to emergency response resources.

AERIAL SURVEILLANCE

The NCA's surveillance aircraft patrols the coast of Norway for 600–800 hours a year in cooperation with the coast guard and NOFO. Remote monitoring equipment aboard the aircraft makes it possible to detect unlawful discharges and calculate amounts of pollution. Aerial surveillance is used actively during responses in order to establish and map the distribution of the pollution. The information collected provides us with important information so that we can form an overview, allowing the oil spill response to be deployed in the most effective locations.

SATELLITE SURVEILLANCE

The NCA also uses information from satellites to detect possible pollution at sea. If the satellite images show signs of pollution, the NCA could send out surveillance aircraft or ships to verify the satellite observation. If pollution is confirmed, we can take action to identify the party responsible for the spill. Observations of this type will normally involve unlawful discharges. Illegal discharges are followed up in cooperation with the police and the Norwegian Maritime Authority, among others.

OIL SPILL RESPONSE EQUIPMENT

On land: Equipment stockpiles

The NCA has oil spill response stockpiles along the coast of Norway and on Svalbard. Trained personnel are associated and may be mobilised on short notice.

The locations of the stockpiles and the types and quantities of equipment stored there are based on

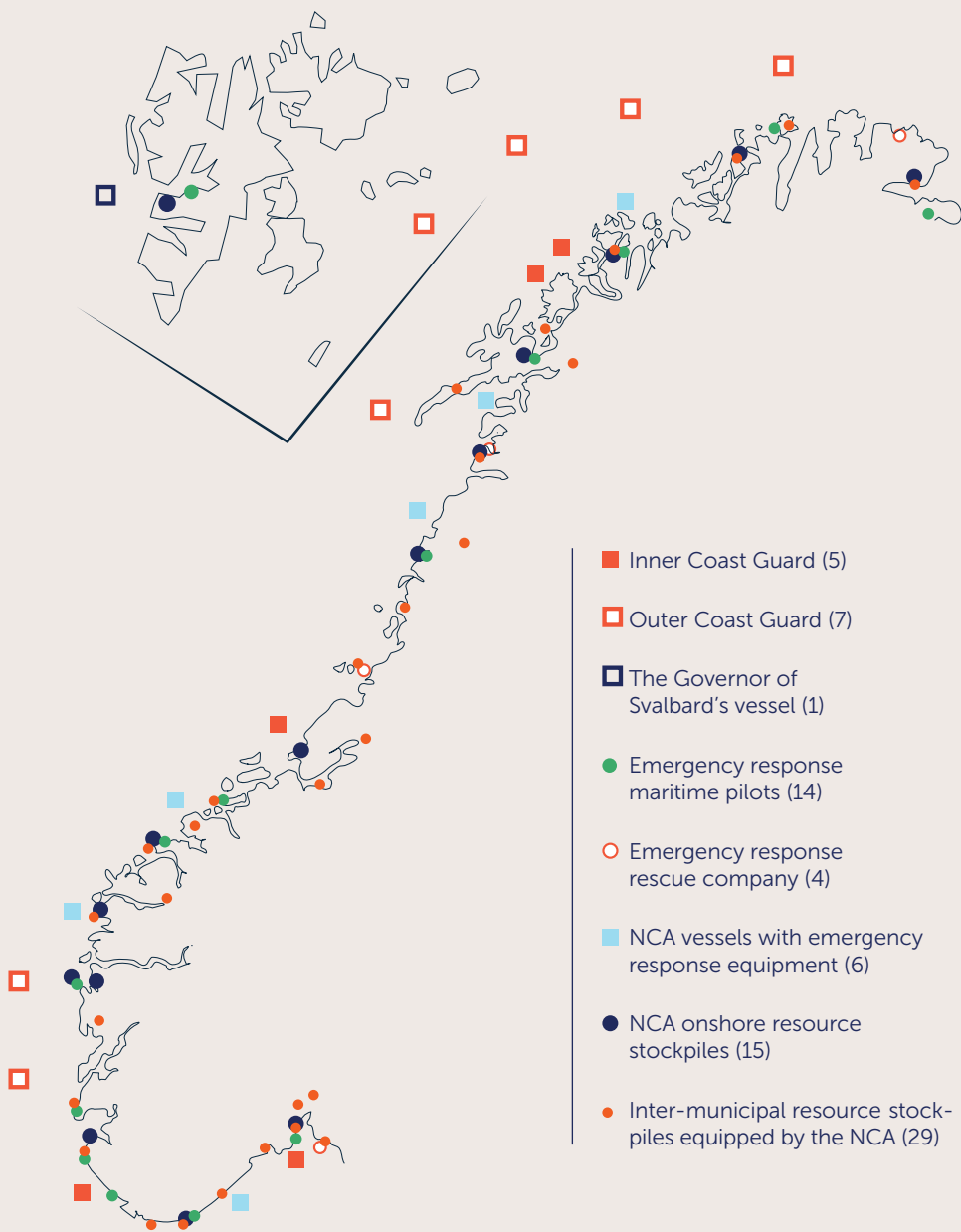
the NCA's environment and emergency response analysis. The emergency response analysis indicates the likelihood of acute pollution on the various sections of coastline, as well as potential consequences.

At sea: Ships

The NCA has specialised oil spill response ships, as well as oil spill response equipment deployed aboard eleven coast guard vessels. The crews aboard these vessels are trained to use the equipment in the event of any response to acute pollution.

The NCA also has contracts with 35 smaller boats affiliated to the stockpiles. These are private boats that are intended to assist the NCA in the event of an oil spill response operation. These boats do not carry oil spill response equipment aboard, but in the event of an action they have to use the equipment from the oil spill response stockpiles.

The government emergency towing service aims to prevent ships with propulsion problems drifting onto land. The NCA has an agreement with the coast guard with regard to the government emergency tugboat response service. Besides 12 coast guard vessels included in this activity, the NCA funds two tugboats that are staffed and operated by the coast guard. These operate mostly in northern fairways. Depending on the weather and high-risk cargoes being transported along the coast, these tugboat resources are positioned so that they can intervene if a ship transporting hazardous cargo suffers engine failure, for example.





The Norwegian Coast Guard's 12 vessels and The NCA's 6 carry specialized equipment for environmental emergency response.



COOPERATION

The NCA regularly exchanges experiences and intelligence with partners on a national and international level. This is done to ensure that we are well coordinated with other authorities and institutions so that our environmental emergency response efforts can be implemented as efficiently as possible.

NATIONAL PARTNERS

We have a number of formal cooperation agreements with Norwegian specialist agencies and research institutes. These agreements facilitate early reporting and provision of mutual assistance in the form of intelligence and equipment, where required. Important partners include the Norwegian Armed Forces, the Petroleum Safety Authority Norway, the Norwegian Maritime Authority, the Norwegian Directorate of Fisheries, the Governor of Svalbard, the Norwegian Directorate for Civil Protection, the Institute of Marine Research, the Norwegian Polar Institute, the Norwegian Environment Agency, the Norwegian Food Safety Authority, NOFO (the Norwegian Clean Seas Association for Operating Companies) and Norwegian Oil and Gas.

Separate coordination agreements have also been entered into with major oil plants: Esso Slagentangen and Equinor Sture and Mongstad. The NCA and a number of fire services also work together with a view to providing assistance in the event of chemical accidents at sea by means of what are known as the RITS-Chem (Rescue Forces at Sea – chemical response) or Maritime Incident Response Group (MIRG).

INTERNATIONAL COOPERATION

Environmental emergency response can be so extensive that international assistance is required. Other countries may also request assistance from Norway, or Norway may request assistance from other countries. Norway has signed several international agreements that aim

to ensure that countries can notify one another or request assistance promptly. Annual meetings and exercises are an important element in the international effort, and the NCA plays an active part in order to ensure good coordination and rapid emergency response across national borders.

Examples of international agreements and cooperation fora include the Copenhagen Agreement, the Bonn Agreement, the Norway-Russia Agreement, the Agreement on Cooperation on Marine Oil Pollution Preparedness and Response in the Arctic and the NorBrit Plan. We also represent Norway in the EU system with organisations such as EMSA (the European Maritime Safety Agency) and follow up enquiries from the EU via the European Commission Emergency Response Coordination Centre (EU ERCC) in the event of maritime incidents.

Other important international fora handling issues on environmental emergency response are the Arctic Council and their workgroup Emergency Prevention, Preparedness and Response (EPPR) and IMO (the UN's International Maritime Organization). We also have a good partnership with the USA/US Coast Guard and Canada/Canadian Coast Guard.

The Norwegian Coastal Administration provides development aid for environmental emergency response on several continents. This work is connected to the Oil for Development programme funded by the Norwegian Agency for Development Cooperation.





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