

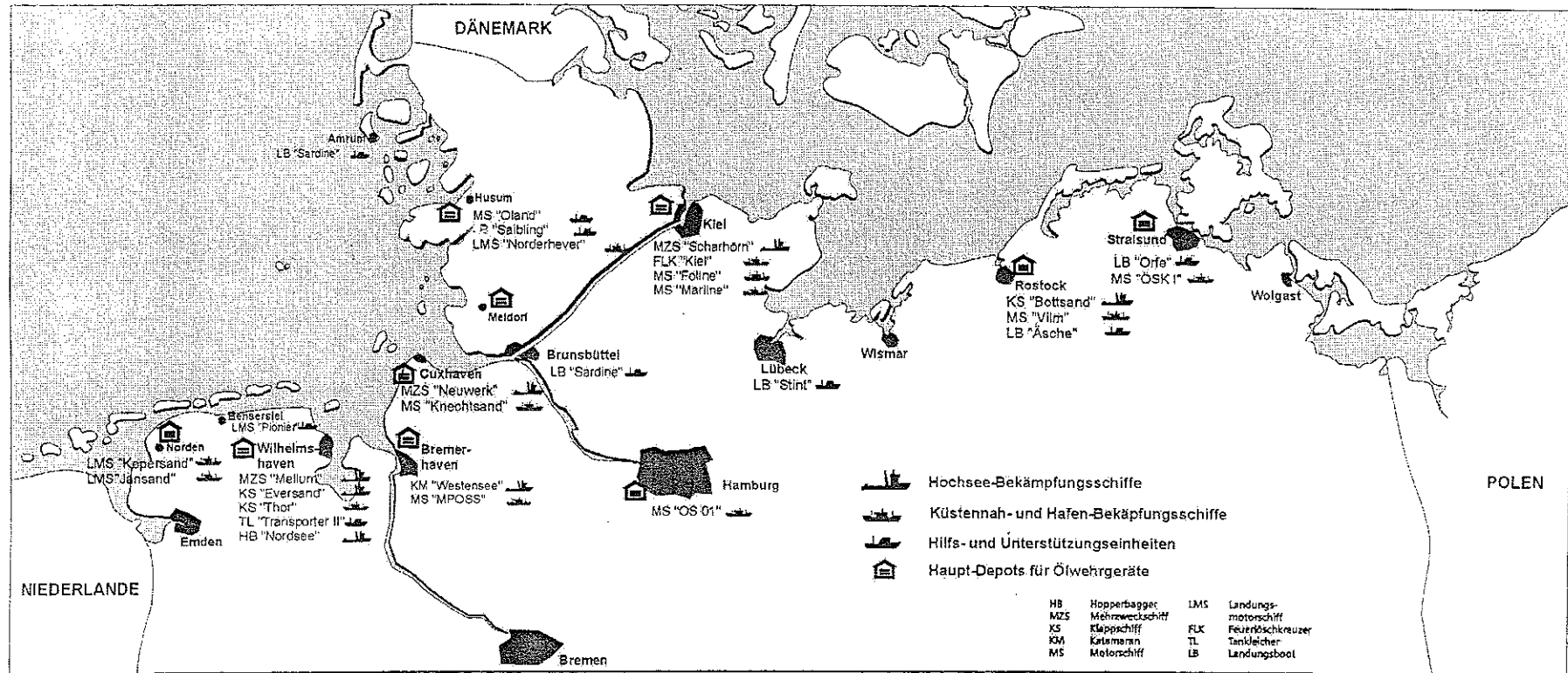
Germany's Precautionary Measures Against Marine Accidental Pollution at Sea and in Coastal Waters



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German Coastal Response Bases



Marine Casualty Response

Important Questions to Ask

- Primary Questions : Who, When, What, Where ?
- Secondary Questions : Acute Hazards, Traffic Safety, Assistance needed, Contingency plan, Responsibilities, Communication means ?
- Third-line Questions : primary measures, On-scene-representatives, information of relevant persons or agencies, shipping agents, P&I-representatives, media?

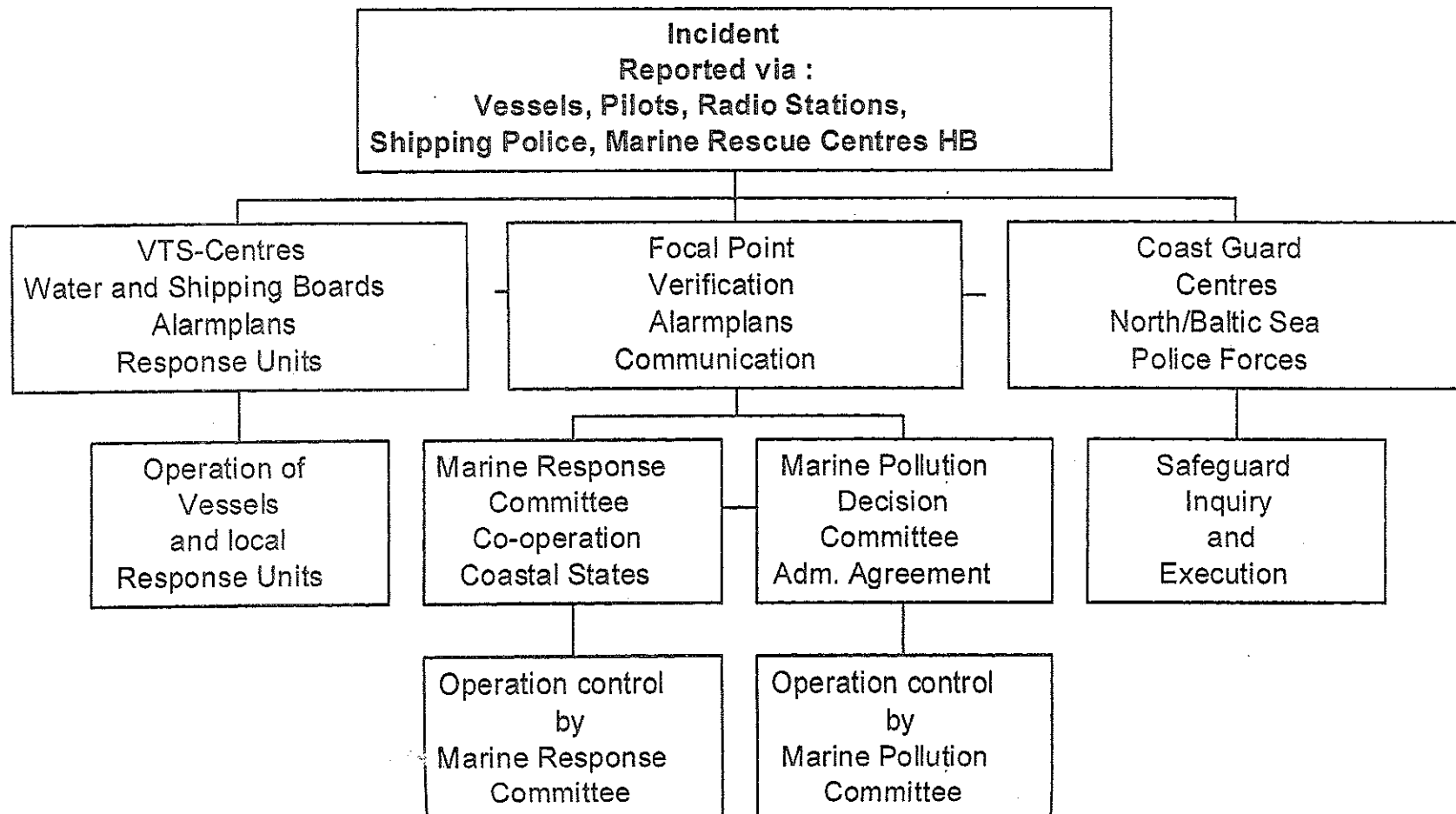
Pollution Incidents in German coastal waters 1981 - 1998

■	1981 MT Afran Zenith	Grounding	Hamburg Port	appr. 100 m ³ crude
■	1982 MT Ondina	Overflow	Hamburg Port	appr. 200 m ³ oil
■	1986 MT Brady Maria	Collision	Elbe/ Brb.	appr. 300 m ³ heavy oil
■	1986 MS Westwood Merit	Collision at berth	Weser/Brhv.	appr. 90 m ³ bunker oil
■	1988 MS Heinrich Heine	Collision	Elbe/Brb.	appr. 100 m ³ bunker oil
■	1992 MS Seki Rolette	Collision, sunk	Outer Weser	appr. 200 m ³ bunker oil
■	1993 MS Kaduna	Overflow	Hamburg Port	appr. 40 m ³ lub. oil
■	1993 Unknown	Marpol-Violation	Baltic Sea Fehmarn	appr. 60 m ³ oil slop
■	1994 Unknown	Marpol-Violation	North Sea TSS	appr. 50 m ³ heavy oil
■	1998 MS Baltic Carrier	Collision	Kiel Canal	appr. 10 m ³ diesel oil
■	1998 MS Pallas	Fire, Grounding	North Sea, Amrum	appr. 150 m ³ bunker oil

German Alert System

Marine Casualties

Marine Accident Response



Competence for Maritime Casualties at Sea and in Coastal Areas

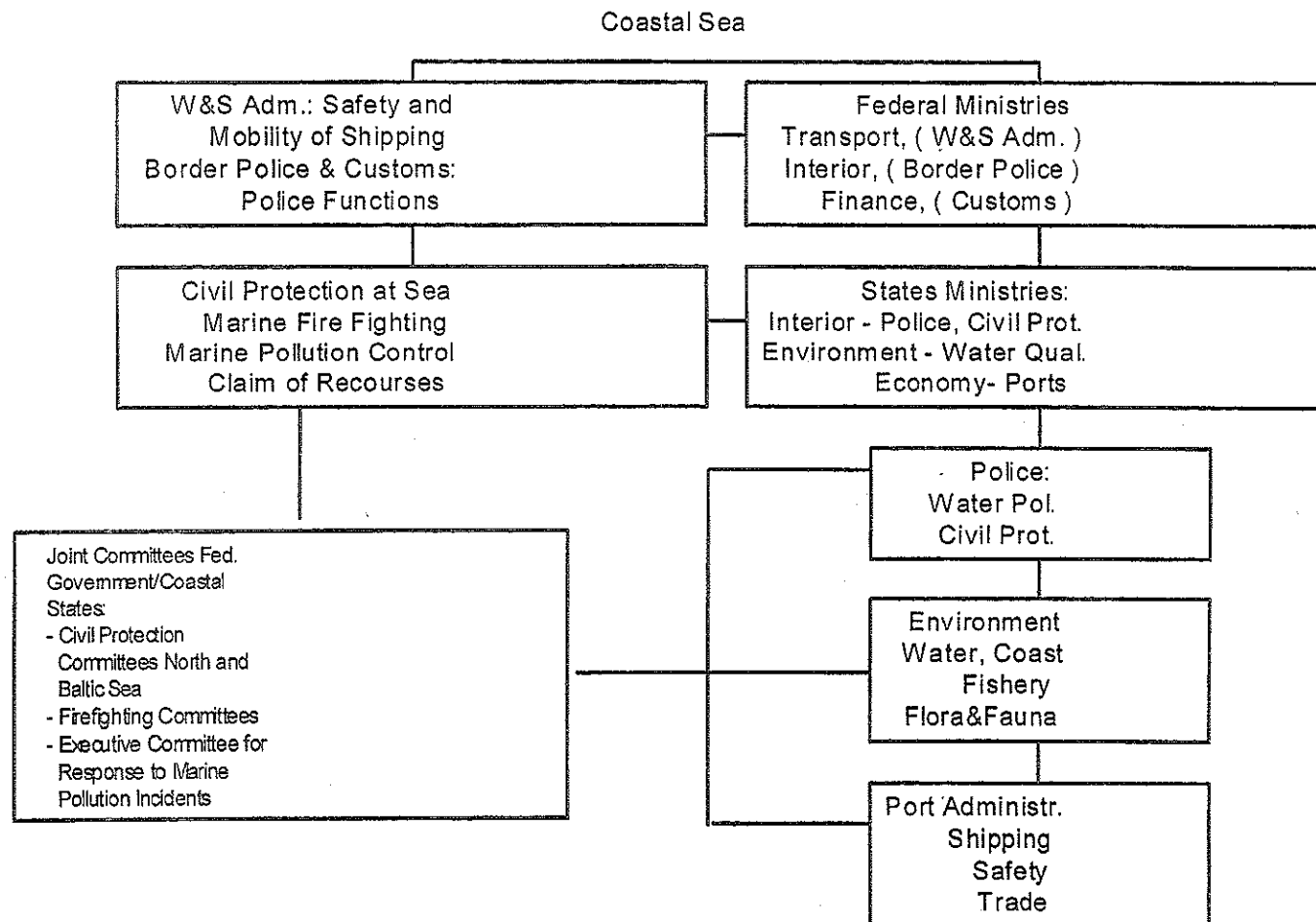
Exclusive Economic Zone (EEZ)

- Min. Transport, W&S Adm.
- Min. Interior/ Border Pol.
- Min. Fin./ Customs
- Min. Agr./Fishery Protect.
- Lifeboat Society, Navy - SAR
Authorized by Mn. Transport

Coastal Sea

- Min. Transport, W&S Adm.
- Water Police Coastal States
- Civil Protection Coastal St.
- Lifeboat Societ, Navy - SAR
Authorized by Min. Transport

Federal Government/Coastal States Authority in Response to Marine Accidents



Resources North-/Baltic Sea

Seagoing Patrol Vessel:

W&S Admin., Border Police, Customs,

Fishery Protection 30

thereof multipurpose vessel W&S Admin.: 3

Emergency Towing vessel 2

Pollution control vessel with gas protection system 3

Seagoing pollution control vessel 6

Auxiliary vessel with gas protection system 2

Coastal pollution control vessel (Coastal States) 15

Patrol vessel of the water police (Coastal Sea) 20

Seagoing lifeboats (German Lifeboat Association) 21

Aerial surveillance:

Remote sensing aircraft Do 228 LM (Navy) 2

Helicopter for maritime missions (Navy, Border Police) 5

Private helicopter for maritime missions 2

Aerial Monitoring of Marine Pollution

2 Do 228 LM (Aerial Sensing of Maritime Pollution)

Sensor package:

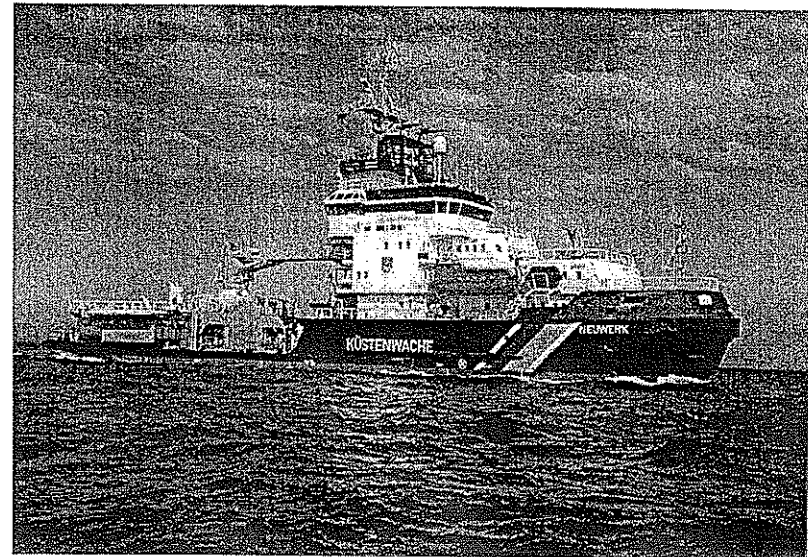
- SLAR Side Looking Airborne Radar
- IR/UV-Sensors
- Microwave Radiometer MWR (3 Chan.)
- Laserfluorosensor (LFS)
- IT network MEDUSA
- Data processor sensor, main computer
- Data display console
- Nav data display
- Optical sensors (Camera, tv, video)
- Photo printer
- Data transfer systems (DDL or Satlink)
- VHF, UHF, Marine radio
- ECDIS navigation charts and routing



Spill Response at Sea

Multi-Purpose Vessel „Neuwerk“

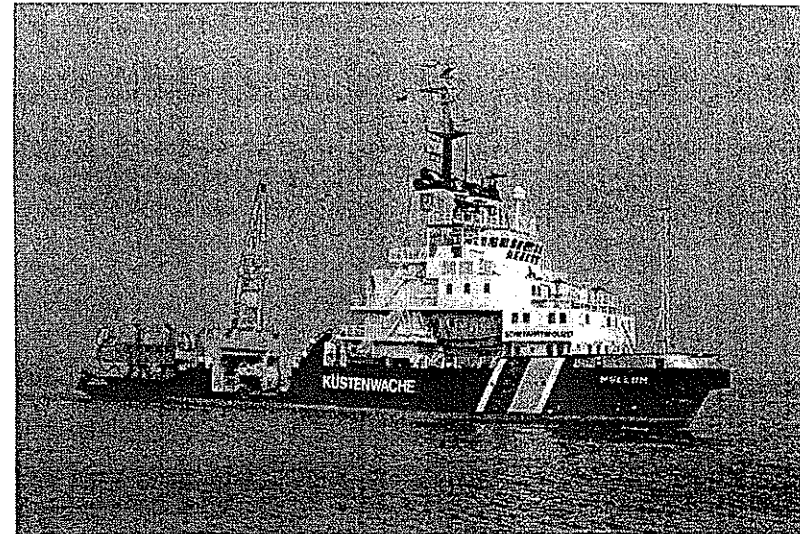
- Length over all: 78,60 m
- Tank capacity : 1000 m³
- Oil and Chemical Spill Response in the German Bight
- 24 hours on duty
- designed as well as emergency tug, fire fighter and ice breaker.



Spill Response at Sea

Multi-Purpose Vessel „Mellum“

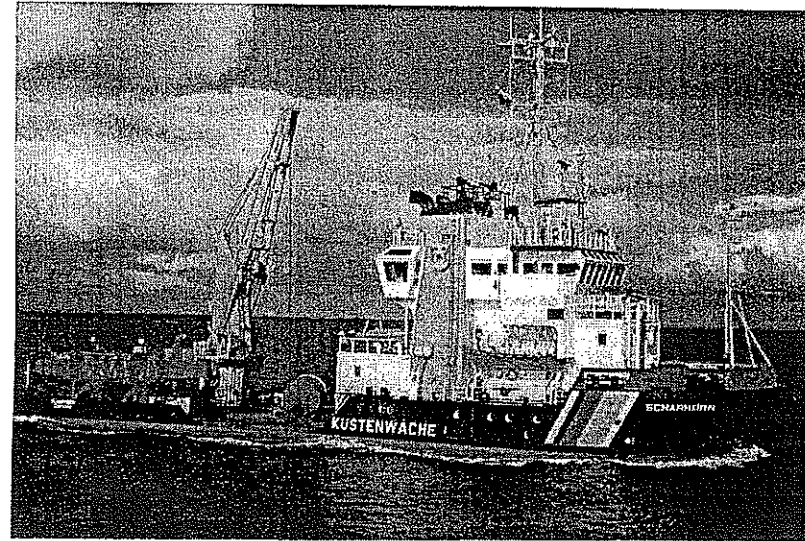
- Length over all : 80,45 m
- Tank capacity : 910 m³
- Oil and Chemical Spill Response in the German Bight
- 24 hours on duty
- designed as well as emergency tug, fire fighter and ice breaker.



Spill Response at Sea

Multi-Purpose Vessel „Scharhörn“

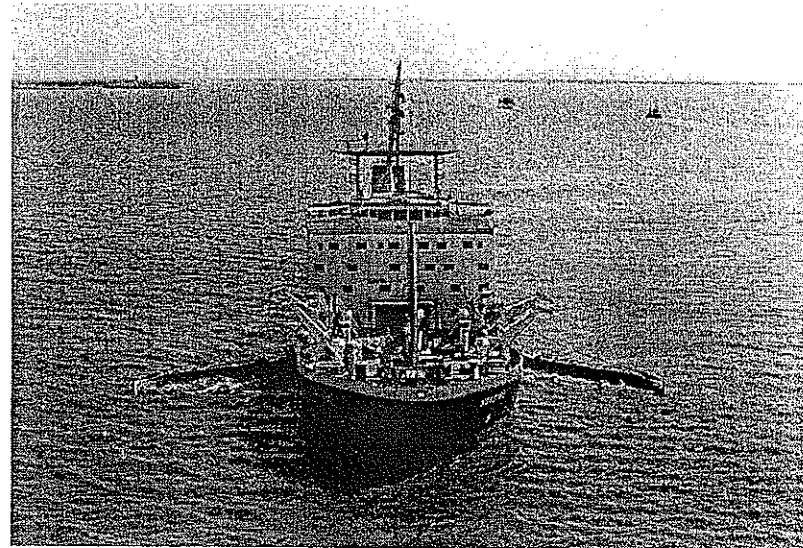
- Length over all : 56,10 m
- Tank capacity : 430 m³
- Oil and Chemical Spill Response in the Baltic Sea
- 24 hours on duty
- designed as well as fire fighter.



Spill Response at Sea

Dredger „Nordsee“

- Length over all : 131,70 m
- Tank capacity : 5400 m³
- equipped with 2 x 22,00 m Sweeping arms
- dredging on river Elbe, Jade, Weser and Ems for the Waterway and Shipping Administration

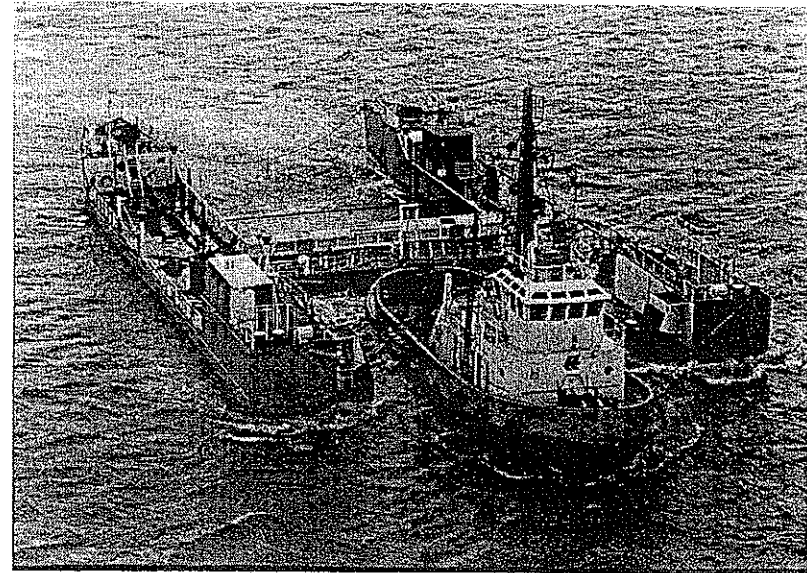


Spill Response at Sea



Oil Skimming Catamaran „Westensee“

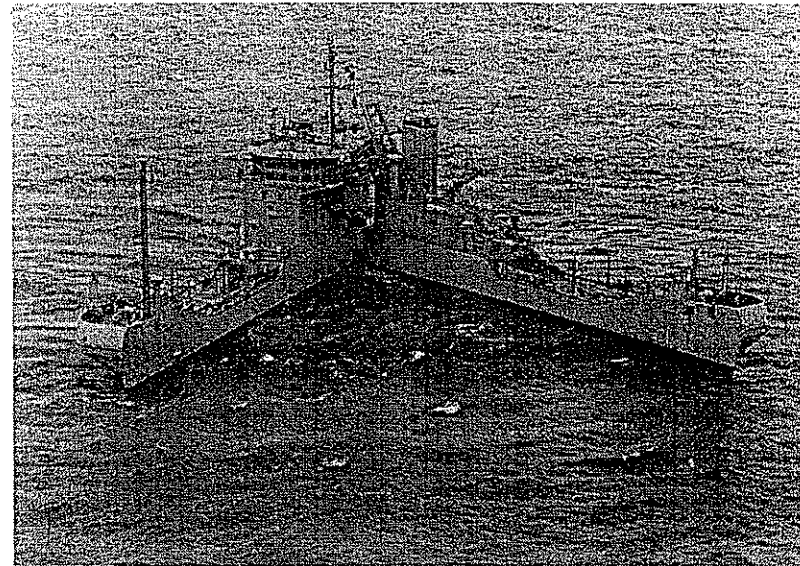
- Length over all : 48,70 m
- Tank capacity : 1960 m³
- non self-propelled unit for oil spill recovery at sea
- stationed at Bremerhaven



Spill Response at Sea

Twin Hull Vessels „Bottsand“ / „Eversand“

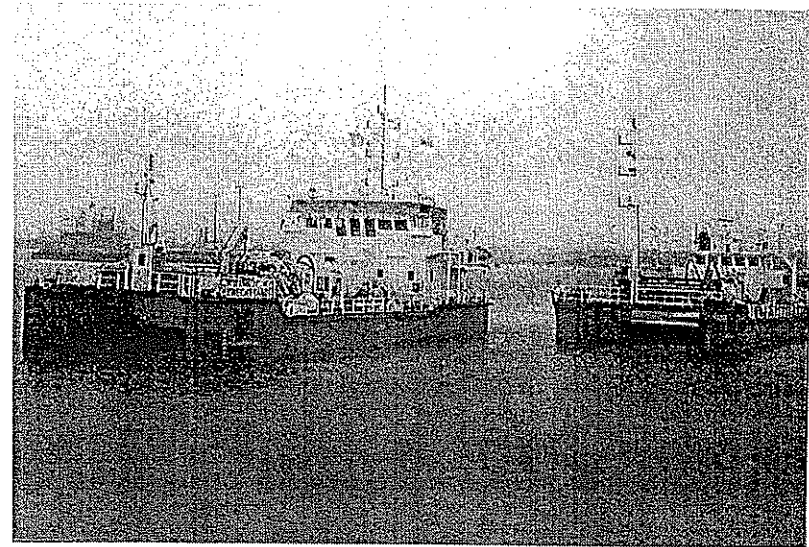
- Length over all : 43,30 m / 48,70 m
- Tank capacity : 790 m³ / 790 m³
- Vessels resembles a very wide-bodied coastal tanker. The hull can split open along the fore-and-aft centreline and is equipped with special oil recovery equipment
- Stationed at the naval base of Rostock/ Warnemünde and of Wilhelmshaven



Spill Response in the Coastal Area and in Shallow Waters

Oil Skimmer Catamarans „Knechtsand“ / „MPOSS“

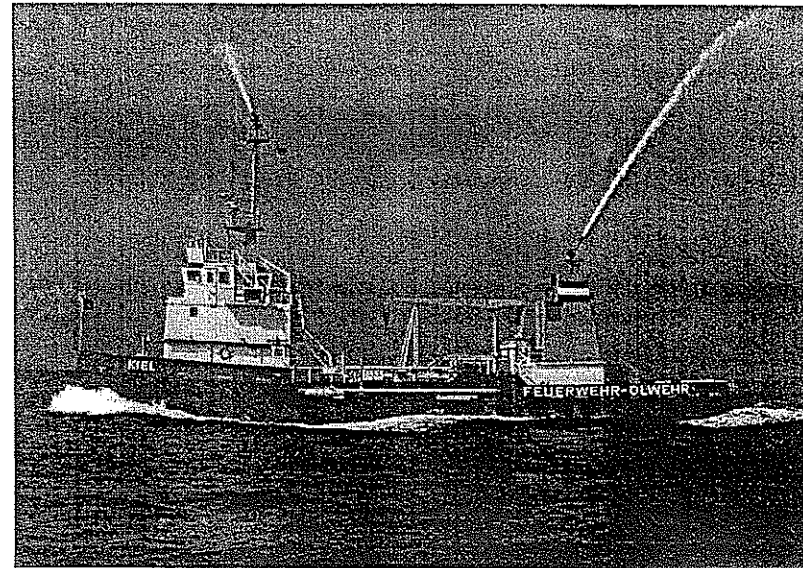
- Length over all : 38,50 m / 34,20 m
- Tank capacity : 400 m³ / 300 m³
- special crafts designed for the coastal areas and the Wadden Sea.
- Stationed at Cuxhaven and Bremerhaven.



Spill Response in the Coastal Area and in Shallow Waters

Fire Fighting Vessel „Kiel“

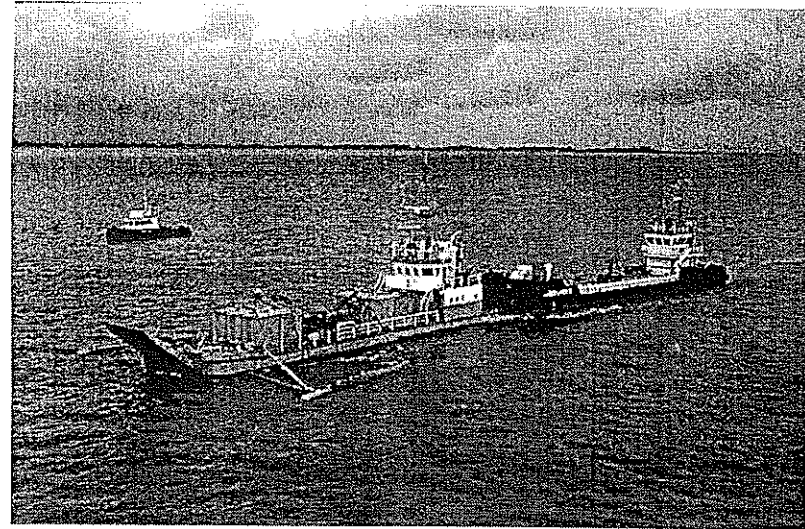
- Length over all : 48,00 m
- Tank capacity : 350 m³
- equipped with fire fighting and oil recovery appliances.
- Stationed at the Fire Brigade of Kiel.



Spill Response in the Coastal Area and in Shallow Waters

Landing Crafts

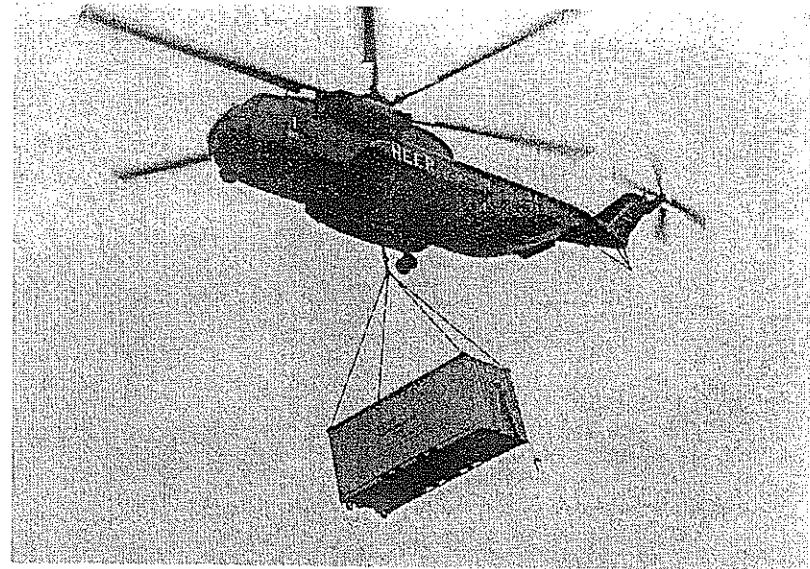
- Length over all : 30,00 m
- Tank capacity : 63 m³
- equipped with oil recovery equipment.
- Low draught for Wadden Sea Area
- 3 vessels are stationed along the North Sea coast line at different locations.



Spill Response in the Coastal Area and in Shallow Waters

Helicopter „CH 53“

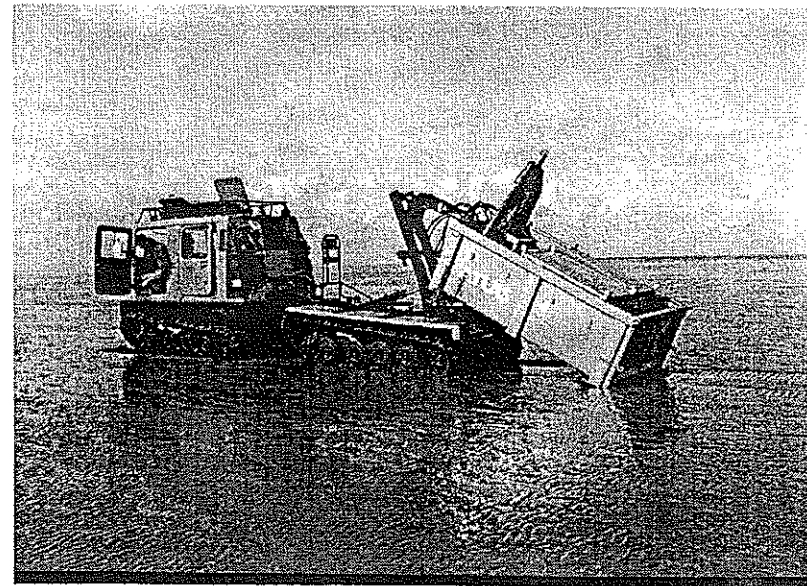
- Helicopter designed for the transport of heavy loads inside and outside of the helicopter.
- Stationed at the Army Air Base of Rheine / Westfalen



Spill Response in the Coastal Area and in Shallow Waters

Multi-purpose 4 WD Vehicle (Hägglunds)

- Length over all: 6,87 m
- Power: 93 KW
- Velocity Street / Water: 50 km/h
/ 3 km/h
- Off-Road Vehicle for the Transport of Equipment and Persons
- Vehicle is suitable for use in the Wadden Sea



Targets and Tasks of Project-Consultancy

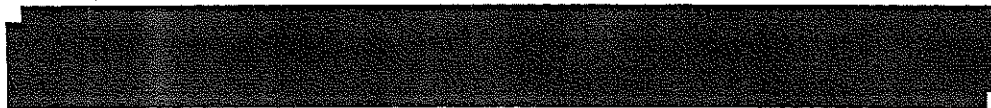
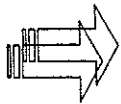
- Consultancy includes:
 - neutral, W&S Administration overlapping and target oriented project support
 - no subject oriented targets
 - recommendations for project re-organization
 - clarification of responsibilities
 - support in decision finding; but no individual decision competence
- consultancy in method of work i. e.
 - ISO-Standards for quality control
 - Min. Transport standards on project work
 - on request of project manager
 - as pilot project in the Waterways and Shipping Administration

General federal Policy for the development of the computer-aided marine incident management system (REMUS)

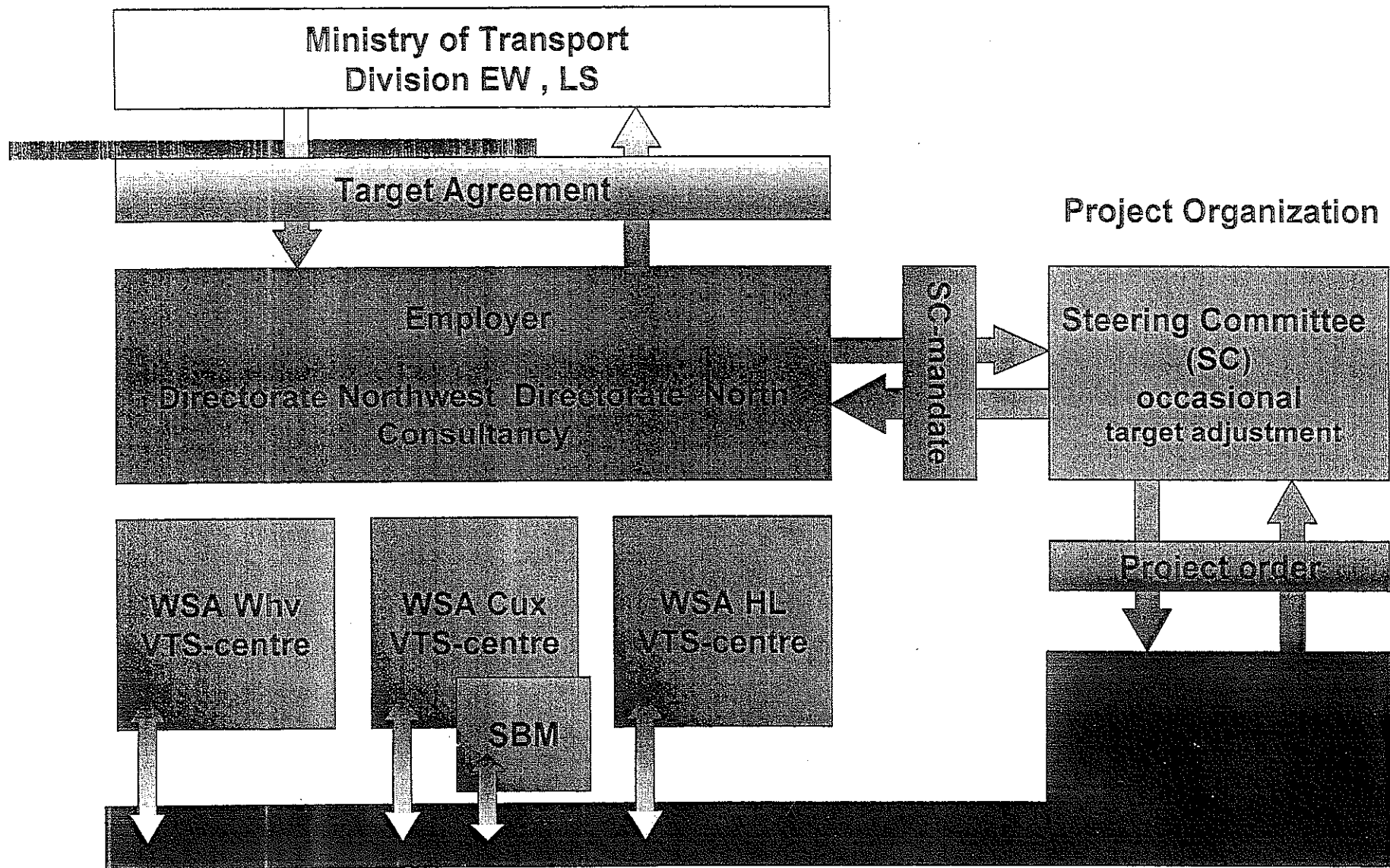
Obligations of the Federal Government to respond to marine casualties and their consequences for human health and livelihood, the marine environment and material goods

achieved by i. e.:

- operation of VTS-centres
- organization of alarm procedures
- organization of quality-controlled accident response management
- provision and development of suitable IT-systems (REMUS, ZMS-data transfer system HAZMAT)



REMUS-Organization



New Organizational Structure of German Marine Casualty Response

Organigram

