



## SOP I: Assessment of the incident

### 1: HNS INVOLVED



- HNS name, Proper Shipping Name (PSN), UN number, CAS number
- Nature of damage and/or size of the outflow
- Situation of the incident (dynamic/static)

### 2: ADDITIONAL INFORMATION



- Ongoing or planned rescue and response operations by the crew
- Weather impact (sea state, wind direction, tide, forecast)

### 3: HNS DETAILS (SC DPA, databases, HNS experts etc.)



- Form and package of the HNS
- Quantity of HNS, rate of release and the theoretical max. release
- Reactivity and properties of the HNS
- Risk for fire or explosion
- Expected hazards for human and environment
- HNS spreading estimations
- Cargo separation and cargo plan (possible other HNS)

### 4: ACTION PLAN - HIGH RISK OPERATION CABAPILITIES AND RESOURCES

No external assistance needed



Consultation



External assistance; emergency towing, MOB – checklist 6



External assistance - entry team – checklists 4, 5



Evacuation – checklist 6



Intervention impossible caused by HNS – checklist 2



Place of refuge / Safe haven – checklist 6





## SOP 2: Determination of the restriction area

### 1: RESTRICTION AREA



- No information HNS involved → Determine restricted area at least 2NM radius from the DV
- Navigational warnings

### 2: DEFINING THE RESTRICTION AREA



- Based on HNS information and risk assessment
  - Experts, measurements, predictive tools, databases, cargo plan
  - Information on-scene
- National and local warnings

### 3: WORKING AREAS FOR SAR OPERATION



- Hot, Warm and Cold Zone
- Entry point

### 4: NAVIGATIONAL WARNINGS CONCERNING THE SAFETY ZONE



### 5: AREA MONITORING AND SURVEILLANCE





## SOP 3.1: Arrival to the scene of incident

### 1: RESOURCES



- SRUs with capability enter and work in the hazardous area
- SRUs with limited capability to enter
- Rescue crafts onboard SRUs, other vessels, aircrafts and special groups

### 2: SRU CAPABILITIES



- Detection and monitoring
- Decontamination and emergency medical care
- Available personnel, PPE, response equipment

### 3: HNS RISK ASSESSMENT



- Area restrictions, safe direction to approach
- Working zones
- Hazards, HNS drifting estimations
- Weather forecast

### 4: EXECUTING – INFORMATION



- Planned tasks, HNS risk information e.g. explosive / flammable hazard
- Area restrictions, safe direction to approach
- Detection and monitoring plan
- Entry points to warm and hot zone
- Emergency plan
- Latest HNS drifting calculations / estimations / SITREP



## SOP 3.2: Arrival to the scene of incident

### I: SAFETY MEASURES



- Pressurisation
- Gas detection and monitoring systems
- EX-measures (flammable/explosive hazards involved)
- Water curtain or water spray system
- Water / foam cannons
- Emergency evacuation and rescue plan
- Facilities and equipment
  - Emergency medical care / First aid facilities
  - Decontamination procedures
  - PPE equipment
  - Other protective equipment
  - Portable and hand-held detection and measurement equipment

### 2: DETECTION AND MEASUREMENT



- Remote sensors
- Fixed and portable sensors
- Visual monitoring

### 3: SAMPLING



- Sampling plan
- Equipment
- PPE level
- Weather (wind/humidity/waves) and weather forecast

### 4: RCC AND OTHER UNITS INFORMATION (SITREPS)





## SOP 4: Boarding

### 1: RISK ASSESSMENT AND OCCUPATIONAL SAFETY

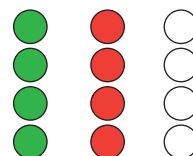
Emergency evacuation

Specific protection procedures

PPEs during transport phase

Boarding / entry team brief

- Action plan, task, situation onboard DV
- Risk assessment, detection and measurement devices
- Communications, PPE level, safety equipment
- Registration of the boarding personnel



### 2: LIMITATIONS

- HNS risk assessment
- Limitations for helicopter
- Weather impact
- Capabilities (SRU/DV)



### 3: PRE BOARDING MEASURES

- Water / foam systems and EX / ignition preventive procedures



### 4: BOARDING POSSIBILITIES

- Safe boarding point
- Landing/winching procedures
- Boarding procedures
- Reception and guidance
- Emergency decontamination / first aid on board DV
- Supplementary SCBAs / EEBDs



### 5: MEANS OF EMBARKATION IN CURRENT SITUATION

- DV crew assistance / boarding team
- SRU alongside / rescue basket etc.
- Hatches (pilot etc.) gangway, ladders, rescue boat





## SOP 5: Rescue operation on board the distressed vessel

### 1: RISK ASSESSMENT



- Updated HNS information
- Action plan

### 2: EARLY PHASE RESPONSE



- Situation onboard
- Ongoing actions
- Planned actions

### 3: RESCUE PROCEDURES AND RESOURCES

#### Preparations



#### Rescue and response team preparation



- PPE
- Equipment
- Emergency decontamination

#### Entry procedure



- Support
- Risk assessment
- Response and detection
- Emergency medical service and evacuation
- Preparations to abandoning / MRO

#### Rescue activities onboard



#### Disembarking

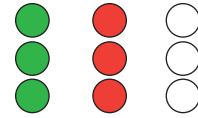




## SOP 6: Evacuation and emergency towing

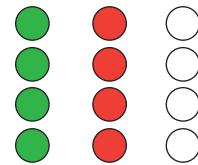
### 1: SITUATION AWARENESS AND RESOURCES

Number of persons to be evacuated  
Number of injured /contaminated and / or deceased persons  
Type of contamination



### 2: FACILITIES ONBOARD SRU

Counting and TRIAGE  
Decontamination  
Emergency medical care  
Connection to the shore / POC on shore (ambulances,hospitals)



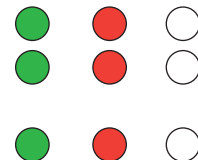
### 3: OPERATION

Possibility to provision for the supplementary PPE  
Emergency decontamination and first aid / emergency medical care



### 4: EMERGENCY TOWING PROCEDURES

Controlling or towing the DV to reduce the impact of the HNS  
Emergency towing procedures onboard DV (DV crew, boarding team)  
Place of refuge / safe haven





## SOP 7: Decontamination

### I: PREPARATION AND ESTABLISHING

Basic requirements



Possibilities for effective operation



Decontamination process planning



- Location
- Personnel, PPEs
- Entry and exit points
- Clean and unclean sites
- Emergency medical care
- HNS specific decontamination process
- Type of contamination, injured persons

### 2: DECONTAMINATION PROCESSES

Emergency decontamination



Responder decontamination



SRU and equipment decontamination



Contaminated waste handling

