



AUTORITATEA COMPETENTĂ DE REGLEMENTARE A
OPERAȚIUNILOR PETROLIERE OFFSHORE LA MAREA NEAGRĂ



The Emergency Response Strategy in the Black Sea

Workshop on Emergency Response in Offshore
Hydrocarbon Installations, Athens, June 25th , 2019



The Black Sea

particularities to be considered for drafting an efficient Emergency Response Plan

- ❑ A “closed sea” – the Bosphorus strait does not ensure a proper change of water – as a consequence, any potential oil spill will stay within the Black Sea
- ❑ The sea bottom descending angle is very low on the Romanian continental shelf - as a result, deep waters locations are beyond 100 NM from the coast line
- ❑ A maximum height of 54 meters allowed for any offshore installation passing the Bosphorus strait



Challenges

- The use of dispersants in a pollution response should not be considered as the first choice in emergency response, unless another option (i.e. mechanical containment) is not permitted by the sea state conditions
- Long distances from the coast line, in deep waters locations, means a careful analysis of the time of response in an emergency situation
- The emergency response means should be adequate in type and number as to cover any potential emergency situation

Questions to be answered by the Operators prior to develop an emergency response plan

- Do I have the personnel with the right competence in dealing with the first phases of emergency response?
- Are the means I will put in place c/w the right equipment, procedures, etc.?
- At what extend any potential emergency situation can develop? Am I prepared to deal with it?
- Do I have the right support from the local authorities in responding to a major emergency situation?
- For deep waters locations:
 - Do I have the means available in a reasonable time to close in a blowing well?
 - Do I have the means to drill a “rescue” well?



What AROPO did to make sure all these challenges and questions are dealt with in a reasonably manner?

The Regulatory Framework contains clear requests covering all these challenges and answers:

- ❖ Ensuring a stand-by vessel equipped and manned following a developed SBV guideline is in place for all duration of the project
- ❖ The internal emergency response plan developed by the Operators shall cover all the potential emergency situations foreseen during the project. The link between the internal emergency response plan and the external emergency response plan should be also clearly described
- ❖ Availability in close locations of sufficient means for response, both in quantity and quality (i.e. SAR and MEDEVAC helicopters, SAR and Oil. Rec. vessels, Oil. Rec. equipment, dispersants, an offshore installation capable to set a capping stack on top of a blowing well, an offshore installation capable to drill a rescue well, etc.)
- ❖ We are working to develop a Minimum Competence matrix for all people working offshore, including the competence of those with roles and attributions in an emergency response. This matrix shall become mandatory for all Operators and Rig Owners)



Introducing the “Emergency Response Logistic Hub” concept

What this concept is about?

Moving the logistic support offshore, closer to an offshore installation, or group of installations.

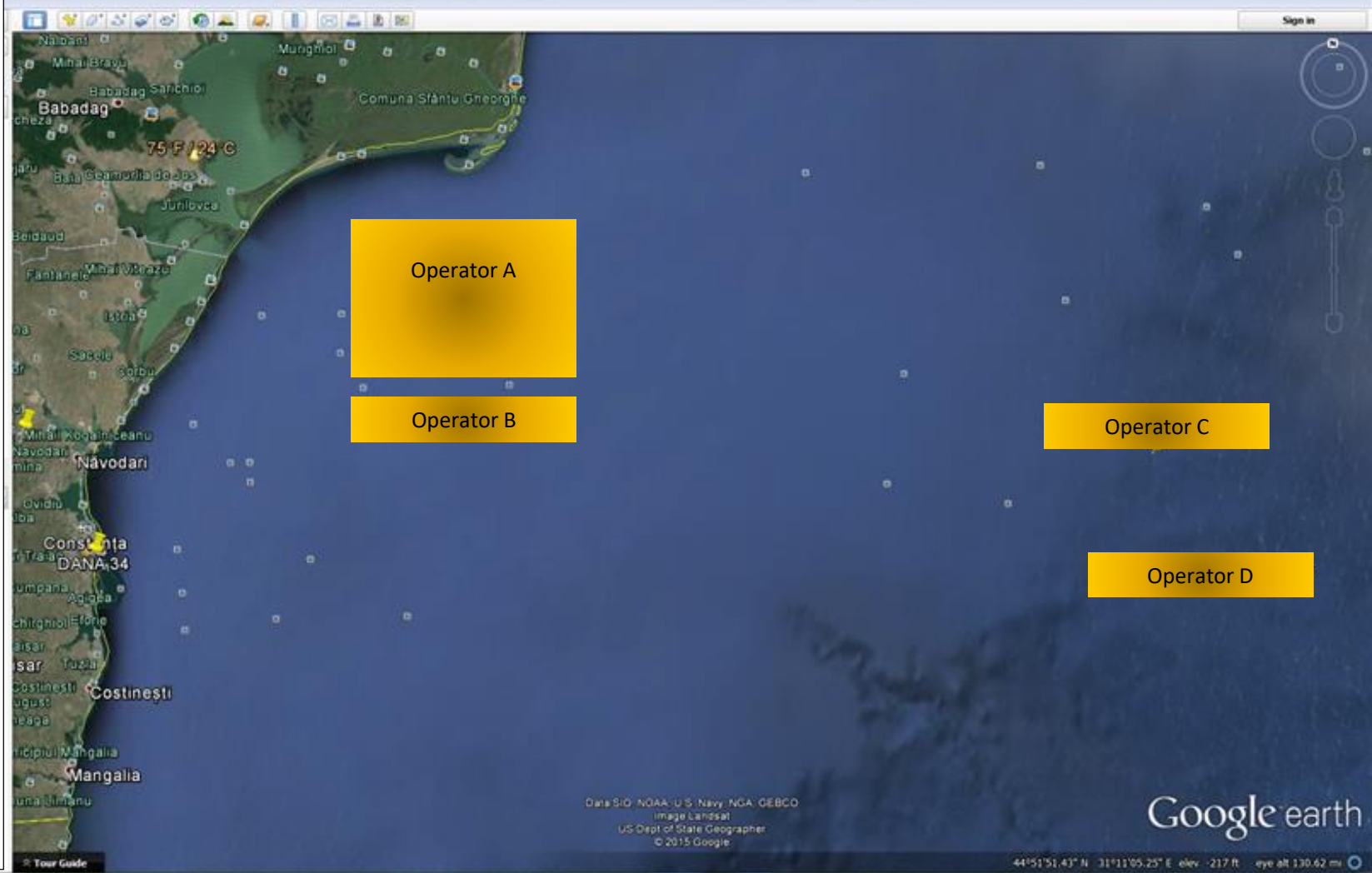
What this concept brings?

A complete new way to respond to an emergency situation reported offshore.

It means faster, more flexible and more efficient response in any emergency response reported offshore.

Case study:

oil & gas
operations in
the Romanian
sector of the
Black Sea –
present
situation



Distance Constanta port – Operators 1 & 2 installations = 41 – 46 NM

Distance Constanta port – Operator 3 drilling installation = 104 NM

Distance Constanta port – Operator 4 drilling installation = 104 NM

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Present situation

Company	Name of Rig	Distance Constanta Port-offshore location	Time to arrive to location	
			Vessel	Helicopter
			NM	
Operators A & B	7 productive installations	41 – 46	5 hours	30 – 40 minutes
Operators C & D	Ocean 1 Ocean 2	104	10 hours	80 minutes

Pollution

Case 1

Oil. Rec. Vessel located at the quay side onshore	Load the oil. rec. equipment	Sails to:		Total time needed to start oil. rec. ops.
		Operators A & B	Operators 3 & 4	
		5 hours		7 – 8 hours
	2 – 3 hours			
	2 – 3 hours		10 hours	12 – 13 hours

Case 2

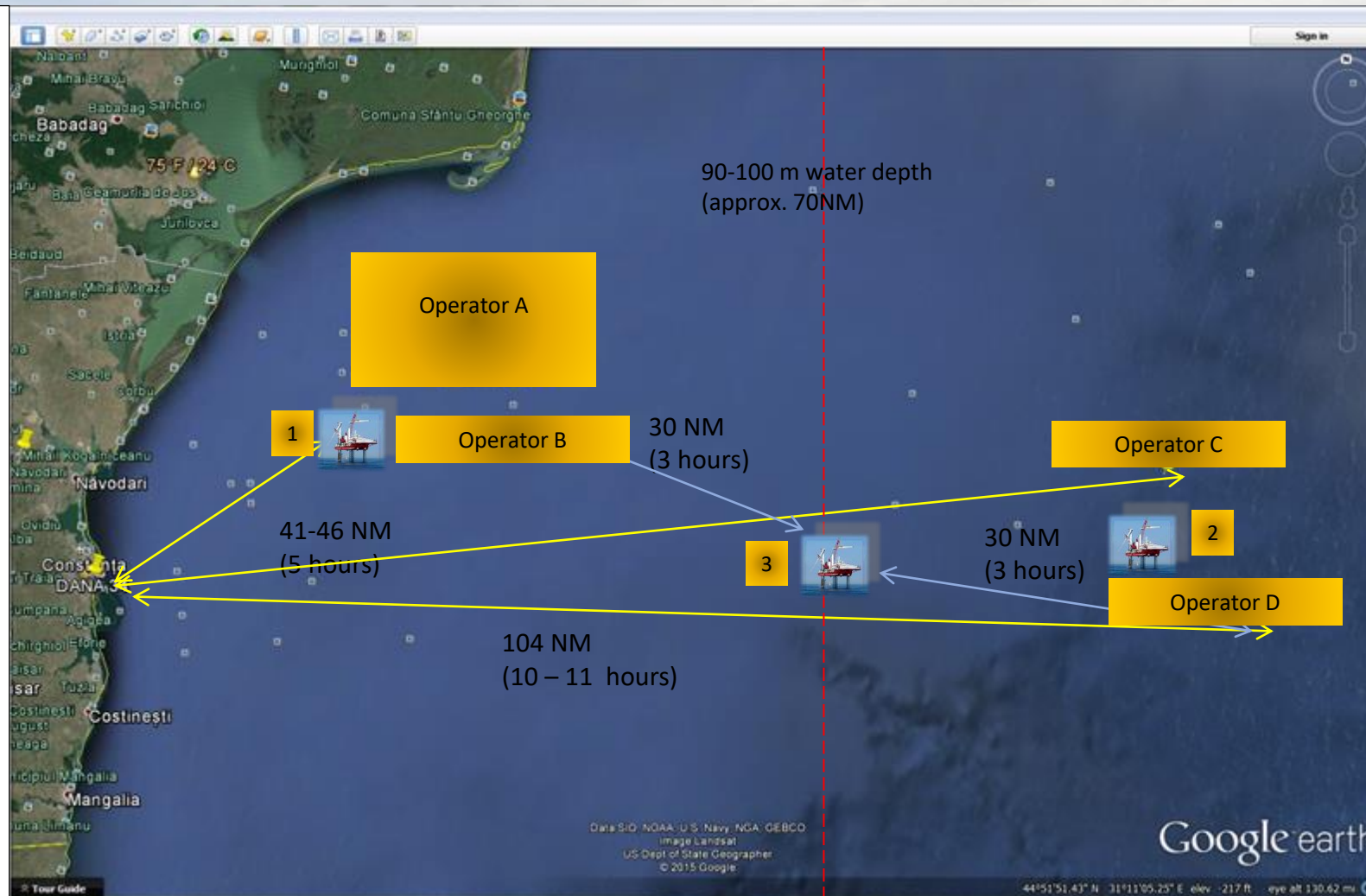
Oil. Rec. Vessel located at:	Sails ashore	Load the oil. rec. equipment	Sails back to:		Total time needed to start oil. rec. ops.
			Operators A & B	Operators C & D	
Operators A & B	5 hours	2 – 3 hours	5 hours		12 – 13 hours
Operators C & D	10 hours	2 – 3 hours		10 hours	22 – 23 hours

Positioning the emergency logistic support hub

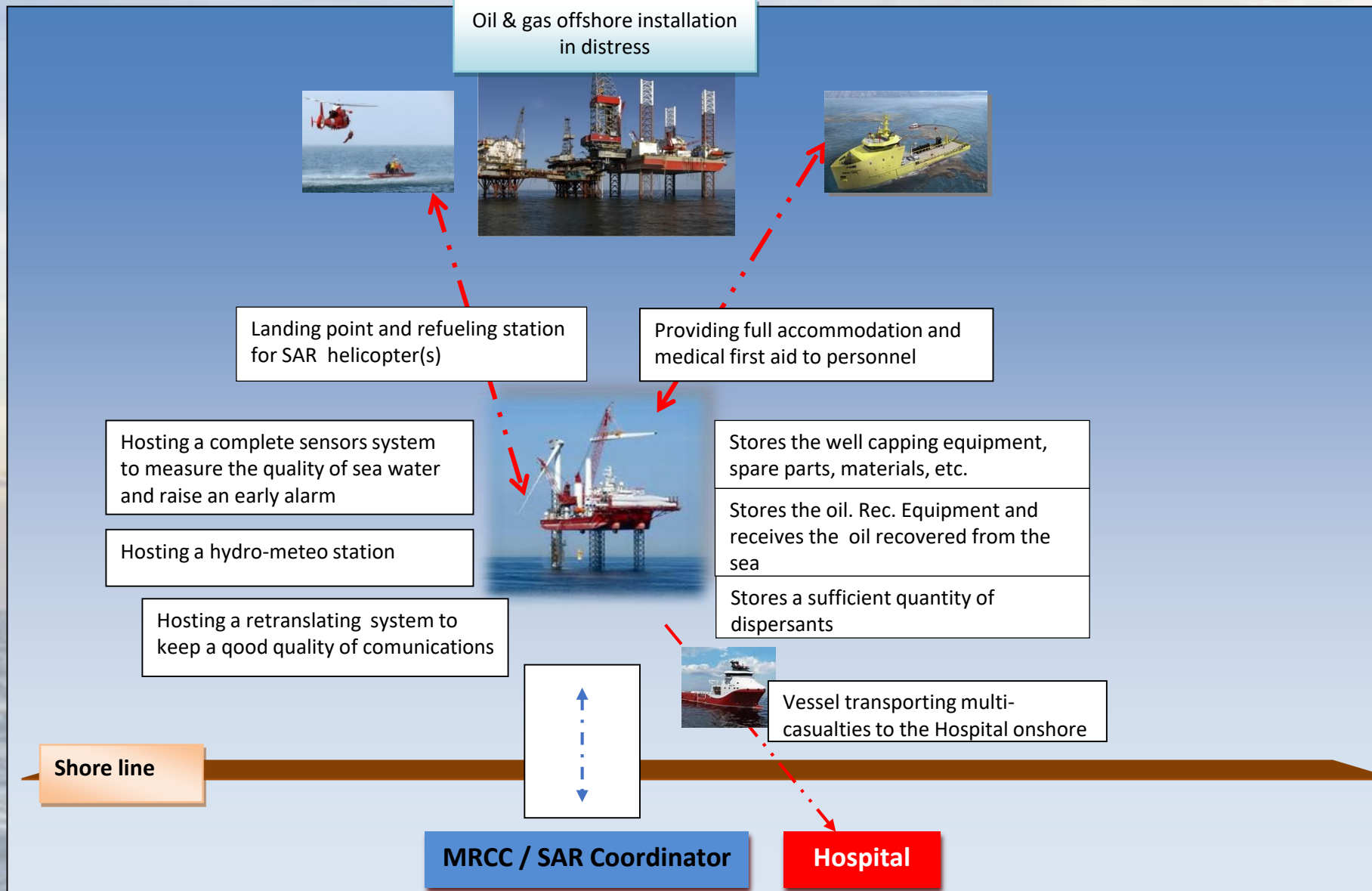
1 – support platform located close to a single non-productive installation or a group of productive installations

2 – support platform shared by two non-productive installations

3 – support platform shared by more than two offshore installations



Schematic – logistic hub's multiple roles





SAR mission by air

The benefit of having a logistic support platform is even more visible in case of a multi-casualties SAR mission by air.

Deep waters means long distance from shore. Long distance means more fuel. More fuel means less personnel to save and transport ashore.

In multi-casualty situations, when more flights are needed, the time to go back ashore, refuel and come back to the incident site is between:

90 – 110 minutes – for an incident occurring at one of the offshore productive installations

190 minutes – for an incident occurring at one of the offshore deep waters installations

Compare this when you need to fly maximum **5 – 10** minutes from the incident site to the logistic support platform and back...



Storing place for various equipment and materials required in an emergency response

Such equipment and materials might be:

- Well capping equipment
- Drilling mud weighting materials / drilling mud
- Various other equipment / materials / spare parts
- Dispersants

The decision of what and how much can be stored on the logistic support platform is decided by the Operator upon an evaluation of the potential hazards associated with all phases of the operations



Provide full accommodation and first aid facilities for personnel

The platform is a place of safety for all people rescued from the scene.

They can receive professional first aid / first medical treatment from the medical staff
onboard and then be sent by boat to the hospital onshore



Hosting a hydro-meteo station

Transmitting the weather/ sea state conditions in real time to MRCC and SAR Coordinator*

** The SAR Coordinator can embark the platform and coordinate the SAR mission, including keeping a direct contact with the AirForce base onshore.*

Hosting a communications retranslating station

Ensuring higher quality of communications during any emergency situation. It can play also the role of back-up should the radio-comms. station of the asset in distress becomes unusable

Hosting a complete system of sea-water quality measuring sensors

Continuously measuring of the sea water quality and trigger an early alarm when a pollution is detected, thus creating the premises of an earlier response and containment of the oil spill



Cost considerations

Such a logistic support platform can be shared by 2 or more operators.

One option could be the location of a complete ERRV vessel on stand-by position next to the support platform, ready to sail whenever needed. The operators can keep a normal stand-by vessel equipped for people rescue next to their operating units.

The logistic support platform doesn't have to be fully manned. A safe manning crew will be sufficient. When an alarm is triggered, the necessary additional personnel can embark the platform with the first helicopter(s) flying offshore.



Final considerations

It is final responsibility of the Operator to implement or not such a concept.

This should come after a deep risk based analysis of the impact a major accident could have, corroborated with the existing means and time of response.

Everybody is reluctant to increase the costs. We need to pay though the right tribute to SAFETY. Small increase in costs can save lives and the environment.



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Thank you!



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