The Golden Glue: how logistics holds together the Tiered Preparedness and Response model for a global Tier 3 oil spill response provider.

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Introduction

The Tiered Preparedness and Response (TPR) framework is underpinned by the ability to get the right resources to the right place, at the right time. Effective movement of such resources requires robust logistical process, competent logisticians and trusted partners. This paper explores the fundamental necessity of logistics for a global Tier 3 oil spill response organisation and how, ultimately, logistics preparation can help to reduce the impact caused by an oil spill.

The Golden Glue

Tiered Preparedness and Response (TPR) is a model to establish a robust oil spill preparedness and response framework for any given oil spill risk profile (*IPIECA/ IOGP Tiered Preparedness and Response Good Practice Guide, 2015).* The model can be summarised by the mantra of 'right resources, right place, right time', however, this simple statement belies the often-complex mechanics needed to ensure that the capability provisioned has resilience, reliability and rigour.

The TPR model is built around a three-tiered framework allowing appropriate oil spill response resources to be cascaded according to the assessed risk profile *(IPIECA/ IOGP Oil spill risk assessment and response planning for offshore installations, 2013).* The three tiers are used to define how the resources are accessed for small operational releases through to worst-case scenarios. Spill response resources can, therefore, be described as locally available (Tier 1), regionally or nationally available (Tier 2) or internationally available (Tier 3). This paper focuses on the logistical mechanics which enable Tier 3 resources to be swiftly and reliably integrated with Tier 1 and Tier 2 resources to build the capability required to effectively and efficiently mitigate impact.

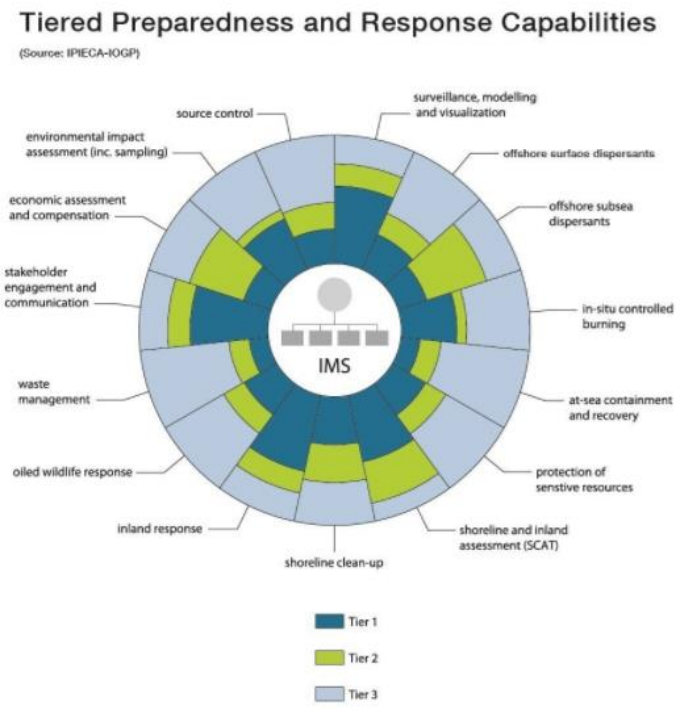

Fig 1. The Tired Preparedness and Response (TPR) capability model, showing 15 response options surrounding the central hub of Incident Management System (IMS).

Oil spill response capability comprises trained response personnel, dedicated oil spill response equipment and 'additional support' (*IPEICA/ IOGP Tiered Preparedness and Response Good Practice Guide, 2015*). This additional support element is often what holds together the response effort and enables the capabilities to be effectively leveraged in the theatre of response. Perhaps the most important aspect of 'additional support' is the logistical capability needed to move the people and equipment to the required location. In this sense, the term logistics is used to describe the movement of spill combatting resources, plus the ongoing supply chains that feed the response effort. These physical resources allow the implementation of the various techniques which make up the responder's toolbox of options to mitigate spill impacts. Logistics, is therefore, considered the 'golden glue' that gives the entire response strategy cohesion.

Curing the golden glue

OSRL and its members depend on Logistics as an enabler to support response efforts anywhere in the world. Maintaining awareness of emergency supply chains, and logistical pathways, enables preparedness measures to be optimised and confidence maintained.

Minimising gaps in response capability is the ultimate aim of an effective response logistics programme. Any incident will generate an initial pulse of activity where locally available resources are activated. This initial phase will often be followed by a lag, where more resources are required, but have yet to be requested. The size of this lag, or gap in available capability, can be minimised through prudent over response, efficient decision making and of course robust logistical links.

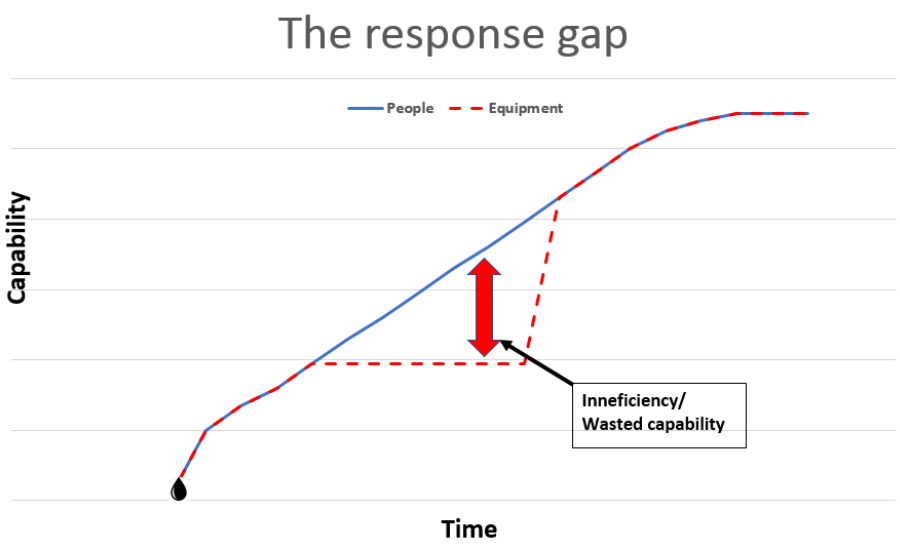

Fig 2. The response gap, showing a period of inefficiency whilst equipment resources are in transit

This is where the TPR model and logistics resources come to the fore, through using the TPR wheel to recognise capabilities various levels of requirements can be prepared for. As an example, a worst-case spill scenario may require multiple offshore recovery packages, however it is inefficient to have these on location at all times. Through using the TPR wheel planning can be carried out to ensure that an appropriate amount of response equipment can be stored locally with tier 2 or 3 levels of equipment on standby to fill in any gaps. The on-scene requirements will be set by the local circumstances identified during the planning process.

By ensuring that plans are in place and that personnel are aware of the required processes this inefficiency can be minimised as the required resources to mitigate the impact of the spill can be provided in the quickest conceivable way.

It is also worth noting that this gap in response is not limited to logistical resources. Other factors that could create the gap are the non-availability of vessels or lack of waste storage, however as with logistics, exercising and pre-planning can be used to identify and mitigate any issue causing a gap in the response.

Logistical Readiness

As a global Tier 3 oil spill response provider, OSRL maintains a core in-house logistical capability. Specialist logistical competence is paramount to OSRL's response readiness and is overseen by a dedicated Logistics Manager globally, with regional focal points maintaining an awareness of the local picture. To ensure that legal export and import requirements are met, Logistics Managers and Leads are tuned into updates from the relevant Governments and international trade bodies to ensure that any changes are anticipated and absorbed into procedures prior to their implementation.

Competence assurance is achieved, in part through an internal exercise programme which integrates with member organisations to maximise realism and continual improvement is driven through the application of the 'plan, do check act' philosophy.

Logistical Processes

OSRL have developed standard logistics procedures which work to safeguard high standards wherever a spill should occur. These procedures are supported using an asset management system that ensures equipment can be mobilised as quickly and efficiently as possible with all the required paperwork to accompany shipments.

As further enablers, and to integrate better with members, OSRL have produced Logistics Planning Guides for all service offerings; providing member company logistics teams with a real picture of what they could expect during a response and setting out the roles and responsibilities of OSRL as a Tier 3 provider and of the member company.

Collaboration

OSRL partners with dedicated logistics providers, to facilitate easy access to the aviation charter market and to maintain multiple options when moving both people and equipment. Assurance of these suppliers is carried out using both no-notice drills and planned exercises to ensure that the capability that would be required in a major response is available around the world on a 24/7 basis. Additionally, regular communication allows for any variations in the global market to be monitored for changes in availability.

Resilience and Readiness

As response readiness is a key deliverable of a Tier 3 provider it is essential that suitable processes in place to deal with a worst-case scenario. One of OSRL's key tests of this are the so-called 'Major Mobilisation' exercises, which simulate the mobilisation of 50% of the OSRL global resources, using real world market conditions. This worst-case scenario test is conducted annually in addition to multiple smaller exercises to test against the full spectrum of events that could call on these resources.

Conclusion

A key facet of any successful preparedness programme is a strong logistical framework which considers appropriate rules, regulations and potential barriers that may impede movement of resources. Full integration of Tier 3 response service providers into plans is essential for response success and should therefore be routinely tested to ensure that all parties are as prepared as possible for any scenario so that the glue that binds the full toolbox of capabilities together is a strong as possible.

References:

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