

Incident Management System IMS 300 Training and 3rd Joint Industry and Government Oil Spill Response Exercise

Cape Town, South Africa
4th – 7th November 2019

Global Initiative for Western, Central and Southern Africa

Organised by:



NOTE

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Executive summary

Title of the Workshop: Training on Incident Management System 300 and 3rd Joint Industry and Government Oil spill response exercise

Hosted by: South African Maritime Safety Authority (SAMSA)

Venue and date: Durbanville, Cape Town. Training: from the 4th to the 5th November; Exercise from the 6th to the 7th November.

Type of event: The training, followed by the two-day tabletop exercise, brought together key stakeholders that have been instrumental in the development of the National Oil Spill Contingency Plan as well as representatives from government, agencies, non-government organisations and industry who could be called upon to form an Incident Management Team (IMT) in the event of a major disaster in South African maritime waters.

Number of participants: The participants numbered around 55 for the training and 65 for the following exercise. A list of delegates is attached in Annex 1 of this report.

Supported by: The workshop was supported by the International Maritime Organization (IMO) and IPIECA

Objectives:

A. Training

The aim of the IMS 300 Course is to introduce delegates to a standardized method to efficiently manage incidents or events that are 'expanding' beyond the capabilities of localized resources.

The general objective of the workshop was to work towards the development of an Incident Action Plan (IAP) for a major escalating oil spill incident. The specific objectives of the workshop focused on:

1. how the Command and Management component supports the management of expanding incidents;
2. the incident management process for expanding incidents, as prescribed by the Incident Management System (IMS); and
3. the implementation of the incident management process on a simulated incident.

B. Exercise

Exercise SA19 was a strategic Incident Command exercise designed to test the National Oil Spill Contingency Plan (NOSCP) and resources for South Africa. It was designed to form part of the training experience for Incident Management Team participants by way of confirmation of learning from the IMS 300 training, and to validate the South African response capability and the integration between Government and Industry.

Exercise SA19 brought together several key stakeholders under one command structure to evaluate their capability to deal with a major incident in South Africa, involving an offshore asset and shoreline impact. The exercise comprised of a two-day tabletop simulation based around the Mossel Bay region,



east of Cape Town. The overriding aim of the exercise was not to test to destruction, but to coach constructively and to identify areas that require adjustment and improvement.

Summary: A standard IMS 300 course is designed for management personnel who may be appointed to an Incident Command Centre to assist in the management of an incident. It was very clear that there were many different agencies present that all brought different skillsets and real-life experiences to the group that added to and complimented the overall course delivery and incident management experience.

The course was mainly theory based with interactive sessions and exercises to assist in the learning process. This mixture of activities allowed for dialogue, discussion, enthusiasm and the sharing of knowledge from within the group. The course enabled the delegates to step in and out of the oil spill scenarios which gave a broader appreciation on how the IMS can be applied to all hazards and not just oil spills situations.

The course culminated in a two-day table-top exercise for the participants to assume and practice IMT (Incident management team) roles, implement the process and confirm learning. The exercise was directed toward the process rather than the technical elements of the incident scenario. The focus was not about compiling lots of documentation that formulates the Incident Action Plan (IAP), but more around the understanding of the evolution of the IAP and the activities required to facilitate its development.

During the initial stages of the exercise it was evident that some groups were operating independently, and it took some time for the “rainbow effect”¹ to be normalised. On a couple of occasions this had to be reiterated by the exercise facilitator. On the first day, there seemed to be a lack of a Joint Unified Command, with industry not really playing a part. This was rectified and this then assisted in terms of access to industry sponsored resources.

The delegation of tasks was directed from the Command Group to the relevant teams, and personnel were identified to carry out specific tasks. In some cases, the people identified were not familiar with the task set, but with some coaching they achieved the required result.

It was essential to have roles and responsibilities clearly set out from the outset to prevent both the potential for areas of work to be missed and the possibility for the duplication of tasks. It was evident that the Planning, Logistics and Operations groups needed to liaise more closely to prevent an insular planning approach. This situation was addressed with some intervention and was less evident on day two.

The reaction to the injects was positive and the majority of the information documented. The Command group, specifically the Public Information Officer evaluated the injects as they came in and delegated the various tasks to the relevant groups. In a real situation, information and messages don't

¹ During an IMS people are wearing a jacket with a different colour for each section. The “rainbow” effect means that the different sections get mixed and are collaborating together

always come through one route, so it is essential that the Command group are not bypassed as information from external sources filters into the response centre. During the exercise it was very clear that all groups, when given a situation to respond to, dealt with it diligently with regard to group discussions to find a satisfactory resolution. Inject submission were light as the focus was more on the process and plan for the Next Operational Period.

An Incident Action Plan (IAP) was developed and completed at the end of the second day with input from several groups. What was supplied was detailed, but it was not as comprehensive as had been expected. Credit must go to all those involved in the formulation of what was presented.

The various stages of learning confirmation during the course and the exercise gave a positive indication that the course had been of value to the delegates and that having a wider audience through agency participation gave more depth to the course and learning outcomes.



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Presentation of the GI WACAF Project

Launched in 2006, the Global Initiative for West, Central and Southern Africa (GI WACAF) Project is a collaboration between the International Maritime Organization (IMO) and IPIECA, the global oil and gas industry association for environmental and social issues, to enhance the capacity of partner countries to prepare for and respond to marine oil spills.

The mission is to strengthen the capability for preparedness and response to an oil spill in 22 West, Central and Southern African Countries in accordance with the provisions set out in the International Convention on Oil Pollution Preparedness, Response and Cooperation, 1990 (OPRC 90).

To achieve its mission, the GI WACAF Project organizes and delivers workshops, seminars and exercises, that aim to communicate good practice in all aspects of spill preparedness and response, drawing on expertise and experience from within governments, industry and other organizations working in this specialized field. The Project's activities are supported and facilitated by its network of dedicated government and industry focal points. Promoting cooperation amongst all relevant government agencies, oil industry business units and stakeholders nationally, regionally and internationally is a major objective of the Project.

GI WACAF is supported and funded by IMO and seven oil company members of IPIECA, namely BP, Chevron, ExxonMobil, Eni, Shell, Total and Woodside.



More information is available [on the Project's website.](#)

PART 1 - TRAINING

1. Introduction

South Africa as a coastal state is at risk from shipping activities in its maritime waters including the increased traffic to and from its major ports and increasing oil and gas exploration offshore. This has driven the need for further development of the National Oil Spill Contingency Plan.

In addition to the 2nd Joint Industry and Government Exercise conducted in 2018 in Port Elizabeth, the recent IMS 300 training continued the positive collaboration between South Africa and GI WACAF and enabled knowledge transfer between the interested parties. The purpose of the two days was to focus on the planning aspects of the IMS and how this may be implemented during a major event in South Africa. The following two-day table-top exercise was conducted to confirm the learnings from the previous two days of training and enable the participants to experience the Planning Cycle based on a given realistic scenario.

It was very evident that the participants, representing the key government departments, agencies, authorities, non-government organizations and Industry which would be involved in a response to a major maritime oil spill had the relevant background knowledge and experience to receive maximum benefit of this workshop.

2. Objectives

The general objective of the workshop was to provide an understanding of the evolution steps when developing an Incident Action Plan (IAP) for a major escalating incident for the Next Operational Period².

The specific objectives of the workshop focused on:

1. Give an overview of the evolution of the Incident Command System;
2. Describe what occurs during the Emergency Phase;
3. Describe the process when Transferring Command;
4. Describe the Incident Assessment process;
5. Give an insight in setting Objectives for the next Operational Period;
6. Understand the Planning process;
7. Describe the process for developing and Incident Action Plan; and
8. Gain and understanding for Incident Demobilisation.

² The response is typically divided into operational periods. An Incident Action Plan describes the overall objectives and strategies for managing the response, as well as response tactics, for a set length of time (known as the operational period), which is normally 12- or 24-hours duration. The Incident Action Plan is reviewed and revised during each operational period to reflect current objectives, strategies and response tactics to meet evolving incident conditions.



3. Programme

The workshop duration was two days. The programme is available in Annex 1 and is summarised below:

- *Monday 4th November 2019*
 - Registration
 - Opening ceremony
 - Workshop Introduction
 - GI WACAF Project Introduction
 - Safety Moment
 - IMS Fundamentals
 - IMS Command
 - Incident Assessment

- *Tuesday 5th November 2019*
 - The Planning Process
 - Initial Unified Command Meeting
 - Command & General Staff Meeting
 - Tactics Meeting
 - Resource Management
 - Demobilisation

4. Location, dates, and participants

The workshop was held at the Durbanville Conference building from the 4th – 5th November 2019. In attendance, there were 55 participants from various government agencies and departments.

The experts invited to facilitate this workshop were:

- Richard Sims, Preparedness Performance Unit Lead - Lead Facilitator – Ambipar Response
- Zal Rustom, CEO – Facilitator – Ambipar Response

The GI WACAF Secretariat was represented by:

- Emilie Canova, GI WACAF Project Coordinator

5. Activities and proceedings

a. Opening ceremony

The opening ceremony took place on Monday 4th November 2019 at 09.00 and consisted of several introductions and opening speeches. The opening speeches are available in the Annex 3 and 4 of this report.



Deputy Director of the Department of Transport for Marine Safety, Security and Environmental Protection, Terrence Mabuela, welcomed the GI WACAF delegation on behalf of the Department of Transport and the assembled participants. Mr Mabuela gave some background on the ambitions of South Africa related to economic growth and the unlocking of potential opportunities through activities offshore. There was a recognition that these activities pose a significant risk, so there was a need to develop mitigation strategies to protect the coastline and livelihood of those that are reliant on the ocean. One major milestone was the collaboration of all parties in determining and implementing an Incident Management structure to enable a recognised process for managing a major incident in the future. Several aspects of the speech had complete synergy with the course deliverables, and this only confirmed some of the elements that would be analysed in more detail during the IMS course.

The GI WACAF opening remark was delivered by the Project Coordinator, Ms Emilie Canova, and is reproduced in Annex 4.

The group picture taken with additional images are included in Annex 5.



5.2 Proceedings of the event

DAY 1 – 4th November

Introduction of workshop objectives and presentation of the GI WACAF Project

Emilie Canova – GI WACAF Coordinator Project Coordinator

Emilie Canova welcomed all to the event and specifically thanked those from the South African Maritime Safety Authority (SAMSA) for organising and hosting the course. Emilie provided an insight into the GI WACAF activities and achievements since its inception in 2006.

Acknowledgement was given to South Africa for the engagement in the GI WACAF Project and specific reference was made to the 8th GI WACAF Regional Conference held the previous week in Cape Town.

Emphasis on how South Africa had achieved the current preparedness levels was highlighted through an analysis of past workshops from 2015 with the B1 Working Group of Operation Phakisa to the IMS course and exercise programme in 2018.

Final recognition was given to the Government of the Republic of South Africa, in particular the Department of Transport and also to the Department of Environmental Affairs and SAMSA, for their support.

Module 1: Course & Facilitator Introduction

Richard Sims - GI WACAF Consultant

Mr Sims and Mr Rustom introduced themselves and gave an overview of their career backgrounds and experience specifically related to oil spills and incident management.

The opportunity was passed to the participants to share their details including response experience, training and any wider incident management experience. This dialogue certainly assisted in the understanding of the depth of knowledge and general incident management experience of the audience. It also enabled the ability for the instructors to leverage key stakeholders at various stages of the course to promote discussion and interaction amongst the group.

The handouts that had been supplied to the delegates were highlighted, specifically the Ambipar Incident Management handbook, which would aid them during the first session and throughout the course.

The question was posed to the group around safety and had they any experience that they wanted to share. Nothing was forthcoming so a few pre-prepared slides around commuting to and from work were shared with the group to highlight the risks and possible mitigation measures in accident prevention.

The course logistics and agenda were highlighted along with the purpose and objectives for the training workshop. As the course primarily builds on the IMS 100 and 200, the delegates were asked if they had completed the online training. Virtually all the participants had completed the required online training, and this was very evident in the first session which is designed as a confirmation of learning rather than a new subject.

Module 2: IMS Fundamentals Review

Richard Sims and Zal Rustom – GI WACAF Consultants

Mr Sims introduced the session on IMS Fundamentals. He highlighted that this session was a review of the IMS 100 and 200 online course materials that underpin the IMS 300 training. The teams were encouraged to utilise the IMS books provided to assist with the session.

The session was delivered in an interactive way to promote the utilization of the materials given, discussion and teamwork. The method used was “Exercise Double Jeopardy” which consisted of a quiz whereby a panel of questions were produced via a power point application with each panel having an associated value ranging from 100 to 500. Behind each panel was a question on IMS 100 and 200.

The group were split into seven teams and each were given an opportunity to pick a panel and verbally answer the question. If the question was answered correctly then the points were awarded, if not then the question was passed over to the next group until a correct answer was attained.

This session promoted a healthy amount of debate, research and competition between the groups and acted as a good learning opportunity for all. The session was more of a confirmation of knowledge transfer from the online training rather than a totally new insight. Explanations to each question were provided and all the groups were awarded a prize at the end of the session for their efforts.

Module 3: Introduction to Command

Zal Rustom – GI WACAF Consultant

Mr Rustom delivered the Command session focusing on the three types of Command. The benefits and challenges of each structure were discussed.

Within this session, the delegates were asked in their groups to think about the qualities that they thought an Incident Commander should have and these were discussed in plenary with each having slightly different variations of opinion.

A demonstration of incident scalability was delivered through an everyday scenario that the delegates could synergize with. The scenario simplicity showed how a small-scale incident could very quickly become a major event. The utilization of the coloured tabards for specific functions and roles assisted in the understanding of the incident tiered concept and the potential triggers for incident escalation.

The final element was around the understanding of objectives and the appreciation of the other agencies that may be involved in a major disaster and what their focus and priorities could be. The delegates were split into seven groups and were asked to assume the roles of some interested stakeholders and to list where their interest may lie and what their objective might be. Each group reported their findings back in plenary.

Module 4: Incident Assessment

Richard Sims – GI WACAF Consultant

Mr Sims highlighted the importance of getting the Incident Assessment right as this sets the tone for what needs to be achieved and underpins the objectives and the incident direction.

Incident complexity, limitation and constraints were discussed, and examples were given that could have the potential to change the landscape of the incident and derail an effective response. The PEAR concept, a memory aid standing for People, Environment, Assets, Reputation, was introduced to assist in developing incident objectives.



Figure 1. Schematic representation of the “planning P” and the “PEAR”

The emphasis on clear and concise communication was highlighted through a group exercise. Each of team had to draw on a flip chart what they heard via a verbal description from a centralised colleague. Each group heard the same information that was portrayed from the image provided. There was an opportunity for each team to request clarification on the information received with one question per team. The images from each team were shared in plenary. The activity promoted a lot of different approaches and design, but emphasised some key messages around the use of unfamiliar terminology, the need to use some geographical benchmarks such as north and south as a point of reference and orientation, the division and segmentation of an area and the need for the ability to listen and clarify which is vitally important in an incident and the subsequent understanding of situational awareness.

As the teaching moved from the leg of the Planning Cycle, corresponding to the reactive phase, to the loop of the Planning cycle, corresponding to the more protracted cycle of activity, discussions focused on meetings the components of handover and how transfer of command is managed. A video showing a bad example was shown to the delegates as a light heated moment.

DAY 2 – 5th November

Q&A: Clarification of Learning

Richard Sims - GI WACAF Consultant

Mr Sims introduced an interactive Q&A session utilizing a power point application consisting of numbers 1-12 with each panel number having a question around IMS behind it. The questions were

open to the floor to answer as they were unveiled. This assisted in understanding and clarification of the previous days learning and gave the opportunity to reaffirm anything that was not clear.

Module 5: The Planning Process

Richard Sims - GI WACAF Consultant

The Planning Process was a fundamental module and core to the development of the Incident Action Plan (IAP). The module spanned the majority of the second day such was the need to emphasise and focus on the process.

The transition from the leg of the P into the loop of the P was made with the emphasis being placed on the evolution of the IAP, which function is responsible for what task, the commencement of IMT (Incident Management Team), the planning activity and the cycle of meetings that facilitate the IAP development for the Next Operational Period.

The delegates in their teams were coached in how to complete the appropriate wall mounted forms that aid the IAP evolution utilising a scenario not associated with an oil spill. The focus was on the objectives given, the various strategies open to the team and the tactical application. This scenario assisted in broadening the mindset of how the system could be applied for all hazards incident management.

One of the core elements of this module was for the delegates to experience several meetings as part of the IAP preparation. The purpose of the demonstrations was to give all participants an idea of the process and for them to experience first-hand one of the lead positions within the IMT and how the meetings flow in terms of process, information transfer and meeting protocol. All the meetings were scripted, and the delegates took turns in playing one of the key roles in the three separate meetings.

The Planning Section Chief role was played by one of the delegates who was coached through the information displayed on the wall and was also given a detailed explanation on the level of detail that should be discussed in each specific meeting. Each meeting gave a new Planning Section Chief and opportunity to facilitate the process bringing in the players via the predetermined scripts when appropriate.

The final element of the Planning P session was the Planning Meeting which was demonstrated with the delegates role playing the various key positions once again. The instructor played the role of the Planning Section Chief and facilitated the meeting utilising the visual aids displayed on the wall as a final demonstration. Discussions were held around the delivery and the messaging of the IAP to the Operations team and how this should be implemented in the Next Operational Period.

Module 6: Resource Management

Zal Rustom - GI WACAF Consultant

The session introduced the concept of Resource Management, how resources are tracked and the importance of having a robust procurement process. The route of how resources are ordered was highlighted, but there was an acceptance that agencies and governments have their own way of managing resource ordering. Therefore, the emphasis was more on ensuring that a system is in place rather than transferring to the system that was demonstrated.

The last activity was to look at how to set up an operational site and what resources needed to be considered. The delegates came together as one group and, with the aid of laminated floor cards depicting various topographic areas of a shoreline laid out on the floor, the delegates had to determine where certain resources should be best placed based on the beach profile, specifically looking at the hot, warm, cold zones, high water mark, and beach access. Once the group had determined where the resources were to be placed, the instructor then ran through the group analysis and provided feedback.

5.4 Closing Ceremony

All Dignitaries, Participants and Instructors

On behalf of IMO and IPIECA, Emilie Canova and Capt. Ravi Naicker thanked the delegates for their active involvement and distributed to each participant a USB stick compiling all the presentations and supporting documents used during the event and a Nautical Institute accredited certificate of achievement.

6. Recommendations

The following feedback is based on the opinions and observations of the instructors through the duration of the course.

Roles and Responsibilities

The course gave a good grounding in terms of how the process works. To operationalise the learning and make it fit for purpose, there would need to be some further discussion, exercises and workshops to further understand and clarify the lines of authority and communication. **There are many agencies in South Africa that would be involved in a major incident including industry so understanding who would lead in terms of incident management would be advantageous.**

Section Specific Training

The training received during the IMS course gave an overview of the process and a flavour for what various roles are required to do as part of an IMT. To give a better understanding of roles, it would be advantageous to conduct some role specific training to help with the knowledge transfer and improve functionality.

Technical Awareness

For those that would be part of an IMT managing oil spills there would be a need to have a more technical understanding of pollution response in the early stages of an incident and as it evolves. A certain amount of technical knowledge and application could be **gained by attending and IMO 3 OPRC Model Course.**

Course Scope

As the IMS process and system is scalable and can be used for any type of incident, it would be advantageous to introduce, as the teams become more familiar with the mechanics, different scenarios not focusing on oil spill response. This would enable them to be able to deal with an all hazards event beyond their normal remit following a process that is fit for all eventualities.

PART 2 – EXERCISE

1. Introduction

This exercise was the 3rd Joint Government and Industry Exercise organized by the government of South Africa under the Operation Phakisa. Last year, GI WACAF attended as observer the 2nd exercise held in Port Elizabeth in November 2018. Following the 2nd exercise, it was felt that the exercise was necessary and useful, and that more of these types of exercises were needed.

In this context, this workshop was requested by the national administration of South Africa to assist the South African authorities in conducting an IMS 300 training and joint industry government exercise, with a view to test the National Oil Spill Contingency Plan (NOSCP) and further deepen the understanding of the roles and responsibilities of various stakeholders and entities in preparing for and responding to oil spills.

This document provides an overview of the 3rd Joint Government and Industry Exercise held in Durbanville Conference Center, Cape Town, South Africa 6th – 7th November 2019. The exercise was named “SA19”.

2. Objectives

The objectives of the exercise were to:

- Test an offshore oil spill incident scenario
- Test the resultant alert and escalation reporting as per the NOSCP
- Test the establishment of the Incident Management (IM) structure as per the NOSCP
- Test the availability of response assets and effective deployment
- Test the inter co-operational ability of relevant government departments and industry as per the NOSCP
- Confirm the delegates understanding and implementation of the Incident Management System (IMS model)
- Use the Planning P up to compiling an Incident Action Plan (IAP); and
- Preparation of an exercise feedback report with lessons learnt and areas for improvement as to establish KPI's for the next national exercise.

3. Programme

The exercise was conducted over 2 days with day one focusing on the following:

- Briefing using the form 201³

³ The Incident Briefing form (ICS 201) provides the Incident Commander (and the Command and General Staffs) with basic information regarding the incident situation and the resources allocated to the incident.

- Team organisation
- Determining the Objectives and Priorities
- Initial Assessment
- Identifying key resources
- Working through the Planning P process

Day two focused on the following:

- Assessment of ongoing incident
- Identify areas at risk
- Finalising Strategies and Tactics
- Working through the Planning P process
- Development of the IAP
- Press Conference

The focus of the programme was to move through the Planning P process working toward the development of an IAP for the Next Operational Period and not to overwhelm with a multitude of injects and problem statements that would have derailed away from one of the key objectives.

4. Exercise Design Team

The exercise development and delivery team for Exercise SA19 were:

- | | |
|---------------------|----------|
| • Nicole Lomberg | ENI |
| • Ravi Naicker | SAMSA |
| • James Collocott | SAMSA |
| • Clement Chazot | IMO |
| • Julien Favier | GI WACAF |
| • Emilie Canova | GI WACAF |
| • Cedric Michel | Total |
| • Eduard Groenewald | Total |
| • Natasha Thomas | Petro SA |
| • Zal Rustom | Ambipar |
| • Richard Sims | Ambipar |

5. Location, dates, and participants

The exercise took place at the Durbanville Conference Centre on the outskirts of Cape Town on the 6th – 7th November 2019. The list of participants is provided in Annex 1. The majority of the participants came from Government and National agencies involved in oil spill preparedness and response operations, including:

Transnet National Ports Authority	African Marine Solution
Petro SA	South African International Maritime Institute
Dyer Island Conservation Trust	South African Marine Fuels
South African Revenue Service	Xtreme Projects

South African Maritime Safety Authority	SA Navy
Oil Spill Response Limited	Department of Transport
South African Police Service	African Marine Solution
Port of Ngqura	South African International Maritime Institute
Smit Salvage	South African Marine Fuels
Two Oceans Aquarium	Xtreme Projects
Transnet National Ports Authority	SA Navy
Department of Environment, Forestry and Fisheries (E)	Department of Transport
South African Revenue Service	African Marine Solution
South African Maritime Safety Authority	South African International Maritime Institute
Petroleum Agency South Africa	South African Marine Fuels
Smit Salvage	Western Cape Provincial Disaster Management
East Cape Provincial Disaster Management	Department of Mineral Resources & Energy
Drizit	RESOLVE Marine Group
Department of Environment, Forestry and Fisheries(E)	Western Cape Provincial Government
	Southern African Foundation for the Conservation of Coastal Birds

6. Facilitators, Observers and Evaluators

The directing staff were a multi-functional network of people brought together from a number of areas of industry to assist with the flow and running of the exercise. The key role of this team was to manage the input of information into the exercise, advise the Incident Management Team (IMT) on key issues, assist with tasks as and when they were assigned to the group and to monitor progress of the various sub-groups within the Command cell.

The key players within the multi-functional network are identified below:

- Nicole Lomborg – ENI – Evaluator
- Emilie Canova – GI WACAF – Evaluator
- Rupert Bravery – EXXONMOBIL – Evaluator
- Andrew Duffy – NEW AGE – Evaluator
- Jean-Yves Huet – OTRA – Observer
- Giulia Molinar – ENI – Evaluator
- Etienne Du Toit – Western Cape Disaster Management Centre (WCDMC)– Evaluator
- Zal Rustom – AMBIPAR - Facilitator
- Richard Sims – AMBIPAR - Facilitator

7. Exercise Introduction

Opening remarks and a welcome was provided by Mr Terence Mabuella. Key messages were around the ability to work together toward a common goal of the mitigation of a major incident in South African maritime waters.

Richard Sims introduced the exercise and provided a presentation on the following:

- Exercise objectives
- Ground rules
- Exercise play and expectations
- Resource request ordering process
- Starting point
- Things to consider

The appointed Incident Commander was provided with a brief on the scenario in a separate location and this was communicated to the team by the Incident Commander in plenary.

7.1 Exercise scenario

The **Exercise Explorer** is drilling the Exercise-Event oil well South East of Mossel Bay, South Africa.

Progress had been good, and the drill process was without any HSE lost time. Some minor weather features had been present at the start of the programme and there were some delays in completing the final stages of the drill plan.

The well has been drilled successfully and is now drilling the “carbonate target” of the well. The plan is to undertake an elementary flow test on the well before plugging.

It is now spring, and a highly unusual and unseasonably large Atlantic storm is making its way towards the south coast of South Africa. The rig management thought they would have enough time to plug and abandon the well, but unfortunately due to on-going complications down-hole they run out of time and the rig is pushed off location by the storm.

The Exercise Explorer is forced off the well causing an emergency shut down and closure of the BOP including a cut of the drill string. During the closure some damage is done, and the BOP fails to secure the well. Oil and gas flows from the well.

The flowrate of crude oil spilled at seabed is estimated at 40k barrels of oil per day.

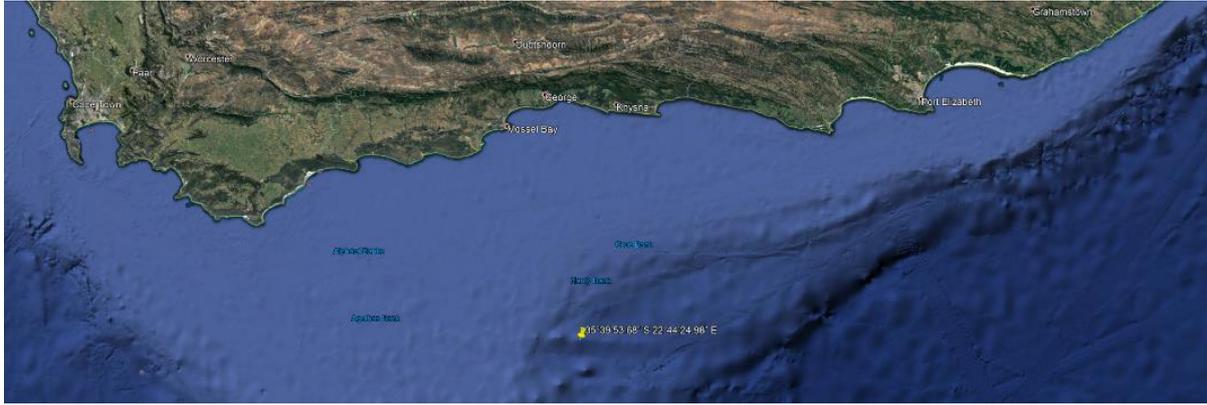


Figure: location of the release point

7.2 Exercise timeline

Communications were provided by way of injects by the incident Simulation Cell on “need” rather than a “have to” basis to help guide the participants, but also to steer the event. A list of the injects developed for the exercise can be found below with the actual injects in Annex 2. The injects utilised were communicated by email through to the Public Information Officer for distribution to the appropriate Sections Chiefs.

The exercise commenced with a brief from the Incident Commander to the Incident Management Team (IMT) providing an update on the situation offshore. There were various milestones that needed to be accomplished and these were based around the series of meetings that contribute to the Planning P process and the activity associated with the meeting preparation that all linked to the IAP development. The Planning Section Chief programmed meeting schedule to meet with the team at the end of each day. There was some condensing of time on the second day to allow enough time for a Press Conference which was conducted as a plenary session.

Day 1

Inject	Time (e)	From	To	Detail
1	0.00	Drilling Supervisor	DCC Drilling Superintendent	Failure of a system
2	0.10	Drilling Supervisor	DCC Drilling Superintendent	Damage report
3	0.50	DCC OIL IMT	Incident Commander	Update on activities
4	1.00	DCC OIL IMT	Incident Commander	Trajectory information
5	1.10	SABC News	Exercise Event Switchboard	Interview request
6	1.40	DCC OIL IMT	Incident Commander	Resource activation
7	2.30	Cape Times	Exercise Event Switchboard	Interview request
8	3.00	DCC OIL IMT	Incident Commander	Resource mobilisation
9	3.10	Department of Transport	Liaison Officer	Briefing
10	3.20	Cape Talk Radio	Liaison Officer	Public concern
11	3.30	Drilling Supervisor	DCC OIL IMT	Status update
12	4.45	Ocean Odyssey Tours	Exercise Event Switchboard	Compensation
13	5.35	Port Elizabeth Fishermen	Exercise Event Switchboard	Contractors

Day 2

Inject	Time (e)	From	To	Detail
14	1.30	Fox News	SAMSA	Information
15	1.30	Department of Environmental Affairs	Liaison Officer	Wildlife protection
16	2.00	Public	Exercise Event Switchboard	Wildlife response
17	2.30	BBC News 24	CMT Communications	Social media
18	2.30	CNN Newsdesk	Exercise Event Office	Protests
19	2.45	ABC News 24	Exercise Event Office	Protests
20	6.00	End Ex	End Ex	End Ex

7.3 Exercise Rules

Clear boundaries were set to enable an element of control and to ensure that the exercise kept within the scope, that milestones were met and the overall objectives were achieved. The rules of the exercise were as follows:

- React to the injects and the situation as if it were real
- Spend no physical money
- Prefix all communications with “Exercise SA19”
- This is a process and a technical exercise
- Ask questions if in doubt.
- Seek truth data from the Facilitators
- Good Housekeeping
- Working breaks and lunch
- DO NOT MAKE ANYTHING UP!!
- If you hear “Safe Guard” stop exercise play; pay attention for instructions.

7.4 Exercise Debrief

A debriefing was organised with the participants at the end of the exercise which allowed them to assess the positive points and opportunities to improve. The following table captures the elements discussed with the participants following the exercise and points collated on the feedback forms that have been analysed as part of the reporting process. Within this section we have included a Training Need Analysis based on the delegates feedback.

Positives	
Exercise Organisation	Exercise Delivery
A good holistic view of other roles and how they link	Thorough prior knowledge on the P process during the training assisted in the exercise play
Collaboration between the Sections	Provided a clear picture of the chain of events
Revisit this type of drill on a regular basis as it was a good learning experience	Application of the IMS process
Opportunity to network and understand another agencies’ remit	Testing of the draft plan
Gaining a good insight as to what each person brings to the team	Roles were clarified within the Sections based on the needs of the incident

Utilisation of the visual information in the meetings	Understanding the parameters of the Span of Control
Safety was of top priority for the delegates	Teams working toward a common objective and goal
Realisation of the resources available to deal with an incident	Information flow improved on the second day
Understanding of the Unified Command approach	Recognition that in a real event would be far more stressful and such exercises assist with increasing confidence and composure when facing real incident pressures.
Cooperation between Government and Industry	Reinforced IMS knowledge and the application of the Planning process
Insight into how to integrate the various incident management systems currently in play	

Continuous Improvement	
Exercise Organisation	Exercise Delivery
Agreements should be in place with all anticipated vendors	The wildlife branch should be separate from the Planning team.
A slightly smaller scenario would have helped with the learning process	Improved modelling inputs with a more realistic scenario
Preference for the agencies to play their actual role rather than alternative roles	Section briefs need to be more comprehensive post the structured meetings
More facilitators on the floor	Teamwork and communications need to improve
Expose others to key roles such as IC	Make the process and terminology relevant to the South African government
More personnel identified to support specific role such as Resource Unit Lead	Ineffective communications gave mixed messages
More of the Government decision makers to be involved	Improve the Command's communication of expectations to the Sections
More Subject Matter Experts to be present i.e. Wildlife	Improve the Command's communication of expectations to the Sections
Utilisation of visual IT to enhance the experience	More use of the Situation update displays for the IMT
Use personnel from specific backgrounds to fit into the roles i.e. Finance	Have a change of positions, sections and roles on the second day to maximise learning
Pre assign roles before the event and have Subject Matter Expert in the correct role	Introduction of some of the South African specific legislation and legal complexities
Have a phased scenario and increase the team size as the incident requires more resource	Provide a hard copy of the scenario to each of the Sections
Utilise a "live operator" in the IMT for realism and data transfer	No laptops to be used during the drill as it was a distraction unless for the purposes of the drill
Reduce the number of personnel and have smaller exercises	Information was at times delayed until the meeting cycle
	The Planning Section Chief needs to hold the teams accountable to meet timelines
	More integration between the Industry and Government for a truly Unified Command
	Need to utilise the National OSCP during these exercises as a point of reference

Training Need Analysis	
IMS 300 Linked Training	Training to Enhance Specific Knowledge
Function and role specific training	Training in IMO Oil Spill, SOPEP and MARPOL
IMS 400 Course	Introduction to Incident Management software
Provincial level exercises are required	Wildlife response awareness training eg surveillance, hazing and deterrent training
Extend the opportunities to other regions	Exercise observers to have an in depth understanding of the ICS process to enable them to be more effective
This type of exercise should be every 6 months	
All exercise participants to have completed the IMS 100 and 200	
Conduct a half day dry run exercise to assist with the actual exercise event	

7.5 Exercise Evaluation

A number of Evaluators were identified to assess and measure the performance of Sections against defined assessment criterion developed specifically for SA 19. The findings below are a consolidated view of a number of the Evaluators and focus on the key high-level objectives set.

To assist with the analysis a colour coding system was utilised to determine the level of attainment, however it is important to read the observations and comments in full.

	Well Addressed
	Satisfactory
	Unsatisfactory
	Not Addressed
	Not Tested

Exercise Objective	Observations and Comments	Attainment
Establish an Incident Command Post to effectively manage a Joint Industry and Government Response	At the beginning of the exercise, it was a little chaotic in terms of understanding each other's roles and responsibilities. As time went on this improved and this improvement was further emphasised with a change of Incident Commander for the second day.	
	Though the emphasis was on a Unified Command, this was initially not very evident and was more biased toward the Government with minimal inclusion of Industry. That affected the initial strategic direction in terms of resource support. This was rectified part way through the exercise which then assisted with the support that the Government were seeking.	
	On the first day there was a distinct lack of objectives. It was left to the Facilitator of the Command team to heavily	

	<p>Information management within the IMT room was generally of a good standard and improved as the exercise progressed. As the situation changed the Incident Commander or Public Information Officer provided timely updates in plenary. Situation Unit Lead was very effective in information gathering and in the updating the status board. The Operations team utilised the various forms to good effect when preparing for the meetings, but it took time for the inclusiveness to take shape whereby key players were brought in to assist.</p> <p>There was some confusion at times during the meetings on who should attend, what information should be displayed and the actual purpose. At times, it started to evolve into a committee meeting with the potential to go off track which needed to be managed, but time keeping was generally on point. There is a need to stick to the meeting agenda as at times this was not always evident, but the overall process did improve with minimal intervention on the second day. Both of the Planning Section Chiefs did well in managing the meetings.</p> <p>All the forms that were required in terms of the process and the Incident Action Plan development were readily available to the teams and managed effectively by the Documentation Lead. There was some visibility of the procurement process being followed with the completion of the Resource Request forms. The progress toward the Incident Action Plan was well managed by the Planning Section and a comprehensive plan was provided at the end of the second day with all the key components completed. The Incident Commander had oversight of the Incident Action Plan development, and the Deputy focused on the current activities which was an effective way of sharing responsibilities.</p>	<div style="background-color: #f4a460; height: 15px; width: 100%;"></div> <div style="background-color: #00b050; height: 15px; width: 100%;"></div>
<p>Test the mobilisation of response resources in support of field Operations</p>	<p>There was no evidence of the notification of the relevant authorities as per the requirement in the National Plan. This was however discussed in the Command and General Staff meeting and clarified that it had been carried out in some manner, but no evidence was provided. Due to a number of the authorities being present that would be notified, there may have been an oversight due to the exercise artificiality and the presence of those authorities.</p> <p>It took some time for Command to determine the Tier level with regard to the scenario given and it involved a significant amount of dialogue before a decision was made. The Tiered approach in South Africa include 7 levels, whereas international good practice usually refer to 3 and this difference can create confusion.</p> <p>There was a lack of technical expertise within the IMT to support the procurement of specialised equipment. As this was not a technical exercise, but more around process this was not a major barrier, but would need to</p>	<div style="background-color: #808080; height: 15px; width: 100%;"></div> <div style="background-color: #f4a460; height: 15px; width: 100%;"></div> <div style="background-color: #f4a460; height: 15px; width: 100%;"></div>

	<p>be addressed in the event of an actual incident especially when it came to procuring specialised resources.</p> <p>The only contractor interface observed was with OSRL as the Tier 3 provider to the O&G industry. This was done internally to the exercise rather than externally through the industry representative to the Duty Manager at OSRL. To truly test the process and the plan, calls should have been made to assist with the understanding and remit of those contractors that would be involved in an incident. There were a number of agencies present during the exercise who would be involved frontline which may have driven this reluctance to call outside of the IMT.</p> <p>As the exercise moved through the cycles, the collaboration and the process of determining resources improved and this was partly down to Industry playing a greater part, thus giving access to their resources through their Tier 3 provider.</p> <p>Time was taken to interrogate some of the regularity and legal implications of some of the decisions around the strategies chosen for dealing with the spill. Some of the Subject Matter Experts provided useful insights as part of the overall planning process. There was a recognition of the wildlife expertise within in the IMT and they were utilised to good effect in terms of planning the wildlife response element of the Incident Action Plan.</p>	<p style="background-color: #cccccc; height: 15px; margin-bottom: 5px;"></p> <p style="background-color: #008000; height: 15px; margin-bottom: 5px;"></p> <p style="background-color: #008000; height: 15px; margin-bottom: 5px;"></p> <p style="background-color: #008000; height: 15px; margin-bottom: 5px;"></p>
<p>Test the response of the various agencies that they meet their obligations under the National Oil Spill Contingency Plan and framework</p>	<p>At the beginning of the exercise there was not any clear definition of the Unified Command and collaboration in the true sense was absent. This was rectified during the exercise as it compromised the ability in terms of resource mobilisation of specific specialised equipment.</p> <p>There was evidence that the various agencies played in their sphere of expertise when required specifically around the principles of P.E.A.R. Safety was made paramount and consideration for personnel was always at the forefront when determining the management of the incident.</p> <p>A number of key stakeholders within the NOSCP were present at the drill and fully participated in meeting their obligations as part of the national response framework. One of the drivers was to test the wildlife response and the obligations of that branch of Planning. There was evidence of full commitment by that team in developing a robust set of measures to protect the wildlife to the extent that the feedback was that they should be a separate entity. Plans were developed and formed part of the IAP.</p> <p>The media press conference was managed very professionally by the Public Information Officer to the extent that he answered virtually all of the questions</p>	<p style="background-color: #008000; height: 15px; margin-bottom: 5px;"></p> <p style="background-color: #ffff00; height: 15px; margin-bottom: 5px;"></p>

	<p>posed by the assembled media. Ordinarily the Public Information Officer in this situation facilitates the process with the replies coming from the panel.</p> <p>All the agencies played their part in the development of a credible response, even though the scenario may not have been specific or tested their area of expertise. Future scenarios may need to test more of the agencies' specific realistic role.</p>	
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8. Recommendations

The following recommendations are based on the evaluation of the exercise and from the feedback from the participants. The information in this section identifies key areas where clarification is required to maximise performance, and also potential training needs to enhance an individuals or groups knowledge and skill base.

Recommendations	Measures
Conduct further smaller scale exercises involving both Industry and Government to test the varying command models	Annual or two-yearly exercises with varying scenarios.
Clarify roles and responsibilities within all groups to prevent uncertainty and assumption	Develop a more operational task and job analysis matrix or aide memoire setting out clear boundaries for parameters of work for each group, sub group and role
Continual clarification and familiarisation training on the IMS forms and process.	Group training and small-scale exercising with 1/2 day section specific training prior to any major exercises
When more familiar, investigate a system to make the IMS process more efficient	Use a technology-based system for the completion of forms and information sharing
For key personnel, to receive training on oil spill matters	Attend specific training courses for their field of work within the oil spill command network
Conduct an incremental build exercise to meet a cascading event	Develop an exercise scenario that requires an increase in resourcing response overtime based on a growing situation
Identify the correct skillset to meet the requirements of the event	Develop an organisation chart prior to the exercise to ensure the correct positioning of personnel
Conduct exercises that test small elements of the National Plan	Regular monthly tests to increase the level of awareness of the process and who is involved
Develop personnel in core areas of incident management and technical capability	Exposure to real incidents at Operational and IMT level
Live test of industry in terms of the mobilisation of equipment across international boundaries	Mobilise Tier 3 equipment through an industry partner to determine efficiency and gaps in process
Investigate the ratification of strategies that are not approved eg in-situ burning	Follow the process of how to gain approval of a strategy that may not be currently permitted

9. Conclusion

This was the third major exercise to be run where Government and Industry personnel with varying degrees of knowledge and expertise were brought together and given a number of issues and problems to deal with.

The main aim of the exercise was not to test, but to clarify and evaluate systems and procedures while coaching at a simulated incident pace.

Exercise SA19 gave the opportunity for people to interact and learn from their colleagues, practice their roles within the Command structure, identify the areas that require clarification and exposure to a number of problems and issues when dealing with a major incident.

All the participants approached the exercise with great enthusiasm, professionalism and for some an air of uncertainty, yet without exception everyone came away having gained new skills and enhanced their existing knowledge base.

Having spent time reviewing the exercise paperwork that was generated during the exercise period, the assessors input and the participants evaluation forms, the exercise design team is confident that the objectives that were set by the organisers have been achieved. The vast majority of exercise objectives were met, although as always there is room for improvement as detailed in this report.

The detailed comments in the report should be read in the context that this was a highly successful exercise and an extremely useful learning curve for all parties involved, both in the development, delivery and participation. Credit has been given for the good points, but reports such as these understandably must focus on matters which need improvement, with constructive recommendations as how any suggested improvements might be achieved and measured. Many of the recommendations were made by the exercise participants, who have already recognised areas for development, improvement and clarification.

Many of the issues raised, both during and post exercise would have been resolved as the teams progressed through the incident, moving from the notification/emergency phase to the project management phase of the response.

Annex 1 – Programme

Day 1. Monday 04 November 2019 - IMS 300 Training	
08h30-08h55	Arrival and Registration of the participants
	Opening Ceremony
09:00 – 10:00	Opening Ceremony <ul style="list-style-type: none"> - Safety Briefing - South African authorities and GI WACAF Welcoming Addresses (<i>Department of Transport and Emilie Canova</i>) - Course and Delegate Introduction / Safety Moment (<i>Richard Sims and Zal Rustom</i>)
10:00 - 10:30	Coffee break and group photo
	IMS 300 Training
10:30 – 12:30	Introduction to IMS IMS Fundamentals <ul style="list-style-type: none"> - Interactive Q&A knowledge development exercise <i>Richard Sims and Zal Rustom</i>
12:30 – 13:30	Lunch Break
13:30 – 15:00	IMS Command <ul style="list-style-type: none"> - Objectives exercise <i>Richard Sims and Zal Rustom</i>
15:00 – 15:30	Coffee break
15:30 – 17:00	Incident Assessment <ul style="list-style-type: none"> - Communications exercise <i>Richard Sims and Zal Rustom</i>
	End of day 1

Day 2. Tuesday 05 November 2019 – IMS 300 Training	
	IMS 300 Training (continued)
09:00 – 10:30	Planning Process (the planning P) <i>Richard Sims and Zal Rustom</i>
10:30 – 11:00	Coffee Break
	Planning Process (the planning P) <i>Richard Sims and Zal Rustom</i>
12:30 – 13:30	Lunch Break
13:30 – 15:00	Planning process (the planning P) - Objectives strategies and tactics exercise <i>Richard Sims and Zal Rustom</i>
15:00 – 15:30	Coffee Break
15:30 – 16:30	Resource Management - Site set-up exercise <i>Richard Sims and Zal Rustom</i>
	End of day 2

Annex 2 – List of participants (training)

No.	Name	Entity	Email Address	Phone #
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Annex 3 – List of participants (exercise)

Family Name	Name	Title	Designation	Organisation	Contact Detail		
					Tel no.	Mobile no.	Email
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Clarke	Shirleen	Ms.	Manager: Marine Safety	TNPA: Transnet National Ports Authority			

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Annex 4 - Opening speech from Mr Chueu Terence Mabuela

Operation Phakisa was launched in 2014 as a Presidential Initiative to unlock the economic potential of South Africa's ocean economy. Our focus area was offshore oil and gas exploration with the goal of drilling 30 wells in the next 10 years and this come with it negative risks associated with offshore drilling, such as an oil spill, precipitated the establishment of the Incident Management Structure for offshore oil and gas and shipping by the Ocean Economy Ministers in 2016, with the Director – General: Transport establishing the Incident Management Organization [IMOrg] consisting of various organizations such as the Department of Transport (DoT), Department of Environment, Forestry & Fisheries (DEFF), South African Maritime Safety Authority (SAMSA), Department of Minerals and Energy, Transnet National Ports Authority (TNPA), Petroleum Agency South Africa, Petro SA, Oil Spill Response Limited [OSRL], OPASA, Strategic Fuel Fund (SFF), South African Police Service (SAPS), National, Provincial and Local Disaster Management Centres, oil spill responders and service providers, environmental organisations such as the Southern African Foundation for the Conservation of Coastal Birds (SANCCOB), amongst others.

The operationalization of the Incident Management Organisation [IMOrg] represented a huge milestone in the maritime industry, pioneering a closer collaboration between government and the industry to work together in preparedness and response to implement the Incident Management System [IMS] as a new model for oil spill response. Building capacity and technical expertise remains a priority for the IMOrg, having approached the GI WACAF project for assistance, with the support of the IMO and IPIECA. GI WACAF appointed two consultants from Ambipar Consulting to deliver the IMS Training 300 [over 50 people trained have been trained] and IMS Exercise. The Department of Transport [Focal Point] would like to appreciate the continuous support it receives from GI WACAF and continue to build a long-lasting relationship.

Preparedness is a continuous responsibility, South Africa as a maritime nation government had to adopt new global practice and implement the Incident Management System [IMS], as industry had already adopted it, to speak with one voice during an incident. In closing, we would like to acknowledge our sponsors for venue and refreshments this week, AMSOL and Resolve Marine Group and thank them for sponsoring the event [round of applause]. On that note, ladies and gentlemen, please enjoy the Exercise.

Annex 5 - Opening speech from Emilie Canova GI WACAF Project Coordinator

Captain Ravi Naicker, Senior Manager : Navigation, Security & Environment, South African Maritime Safety Authority (SAMSA), South Africa

Distinguished delegates,

Ladies and Gentlemen,

It is an honour for me to deliver this opening speech on behalf of the International Maritime Organization (IMO) and IPIECA, the global oil and gas association for advancing environmental and social performance. I would like to welcome all of you to this Incident Management System (IMS) 300 training, organised under the framework of the Global Initiative for West, Central and Southern Africa (GI WACAF).

The GI WACAF project was established in 2006 (Sorry for those of who attended last week conference, this will be a little bit repetitive!) and aims in strengthening the capacity of countries to prepare for and respond to oil spills through the promotion of public-private cooperation. Today it covers 22 countries in West, Central and Southern Africa. Since its inception, significant progress has been made in improving spill response capabilities by raising awareness through national and regional workshops and training.

I would like here to acknowledge the engagement of South Africa in the GI WACAF Project, which was highlighted last week during the 8th GI WACAF Regional Conference organised here, in Cape Town. I take the opportunity to thank once again the Department of Transport and SAMSA for having supported its organisation.

Among others, the main objectives the Regional conference (that is taking place every 2 years), are to:

- address the challenges of oil spill preparedness and response within the region;
- review the progress achieved since the last regional conference and
- determine priority actions for the coming biennium 2020-2021 to enhance oil spill preparedness and response in the Region.

Supporting the organisation of national exercises and the implementation of IMS were precisely 2 recommendations made for the next biennium.

This training and the following 3rd Joint Industry-Government national exercise this week are thus a continuity of our joint efforts. Indeed, since last 2 conferences in 2015 and 2017, South Africa has taken many steps to enhance oil spill response preparedness and response:

- First of all, in June 2015, the B1 Working Group of Operation Phakisa and GI WACAF undertook a collaborative national workshop focusing upon establishing an IMS for South Africa.
- Following the success of this event, South Africa formally became a full participating member of the Project in February 2016;
- A second joint activity was then organised in 2016 on the revision of the National Oil Spill Contingency Plan and the development of a national legislation related to OPRC 90.
- An IMS 300 training in March 2018 followed by a joint government industry exercise in port Elizabeth in December 2018.

During the upcoming four days, we will focus on the IMS. First from a theoretical point of view during 2 days of training, then by putting it into practice during the planned joint government industry exercise. IMS, as you know, improves the efficiency, effectiveness and management of emergency response operations for both governments and industry alike. Consequently, it is a key element in minimizing environmental and socio-economic impacts of oil spills, a common objective we all pursue. We will thus build upon the advancements already achieved by the Government of South Africa under its initiative Phakisa, and consolidate the knowledge acquired in recent years.

The training and the following exercise will be facilitated by two consultants who are experts in the field of oil spill preparedness and response, namely Richard Sims and Zal Rustom from Ambipar.

I would like to encourage you to participate actively during the training and interact with the experts as much as possible. Given your respective areas of responsibility, you all play a significant role in the national preparedness and response system, as well as in advancing your country's interests and obligations in preparing for and responding to oil spills, and this week is a perfect opportunity to do so.

Before ending my speech, I would like to thank the Government of the Republic of South Africa and in particular, the Department for Transport, for organising this. I would also like to convey a special note of appreciation to Mr. Metse Ralephenya, GI WACAF Focal Point, and Mr. Terrence Mabuella, from the Ministry of Transport, and to Captain Ravi Naicker and James Collocott from SAMSA for their support in organising this activity and liaising with the Department of Environmental Affairs, amongst others.

Thank you for your kind attention, and I wish you all a successful workshop and I look forward to the forthcoming discussions over the coming four days. Thank you.

Annex 7 – Inject List

Serial	Time	Event/ Inject
2	Day 1 0:10E	From: Day Drilling Supervisor To: DCC OIL Drilling Superintendent
		<p>The DP system Pulled us back over the location at speed. It overshot while it tried to compensate for our manual drive off. During the manoeuvre the lower riser package must have impacted something. One of the MRT's parted and the entire riser jumped. There was a massive bang at the moonpool.</p> <p>It is evident we have damaged our hydraulic package and potentially done some damage to the lower section of our BOP.</p> <p>We have moved all of our navigation systems into manual and the DP has been fully disengaged. We are still holding position off the well.</p> <p>The storm is intensifying and the OIM is going to sound the General Alarm to account for everyone.</p>

Scenario Note		
		<p>The crew muster can be accelerated in time to avoid a twenty minute quiet period in the event injects. However, if the Controllers need to intervene to stimulate the initial assessments, a short pause can be made to the inject progress.</p> <p>A statement shall be fed in to DCC OIL to confirm all persons safe and accounted for.</p>

Serial	Time	Event/ Inject
3	Day 1 0:50E	From: DCC OIL IMT (Simulated) To: Incident Commander
		<p><i>DCC OIL provides update on activities and assets being mobilised.</i></p> <p><i>DCC OIL provides codes to access ARGOS website to track the drifting buoys (this will be for test purposes only as the buoys will remain in DCC OIL offices).</i></p>

Serial	Time	Event/ Inject
4	Day 1 1:00E	From: DCC OIL IMT (Simulated) To: Incident Commander
		<i>DCC OIL provides computer modelling output for Day 1 and predictions up to day 5</i>

Serial	Time	Event/ Inject
5	Day 1 1:10E	From: SABC News To: Exercise-Event Switchboard
		<p>We hear you have had an emergency on your rig in the Southern Ocean. Has there been an oil spill? Is anyone hurt?</p> <p>Is this another rig failure like the West Atlas and the Deepwater Horizon? Rigs are unsafe, aren't they?</p> <p>Can we get an interview with someone in command?</p>

Serial	Time	Event/ Inject
6	Day 1 1:40E	From: DCC OIL IMT To: Incident Commander
		<p>Well response</p> <ul style="list-style-type: none"> · Activation of OSRL for mobilization of well response devices · ROV survey will be performed as soon as the RIG will be able to reach the well location · Capping stack <ul style="list-style-type: none"> ○ Capping stack in Saldanha is available. ○ DCC EXPLORATION is looking for a suitable vessel to load & transport it (working with a broker). ○ DCC EXPLORATION will revert ASAP with a plan & ETA. · Subsea Injection Dispersant kit (SSDI) <ul style="list-style-type: none"> ○ SSDI in Norway is available. ○ HQ is assisting DCC EXPLORATION to mobilize it in South Africa. ○ DCC EXPLORATION is looking for a suitable vessel for its installation & to perform the subsea injection (working with broker). <p>Oil Spill Response</p> <ul style="list-style-type: none"> ☑ Slick Monitoring <ul style="list-style-type: none"> ○ One ARGOS buoy has been sent at the front edge of the slick – Details sent in another email ○ Aerial survey by helicopter is being organized – Trained aerial observers available in DCC

		<p>EXPLORATION</p> <ul style="list-style-type: none"> ○ DCC EXPLORATION activated “Spill Watch” service in HQ to get modelling predictions + acquisition of satellite images <ul style="list-style-type: none"> · Surface response ○ 2 vessels on the block initiated dispersant spraying operations (5 m3 of dispersant on each vessel) ○ Use of broker to source additional vessels in the area + OSRL activation to equip them with dispersant ramps ○ No containment & recovery operations due to metocean conditions ○ No in-situ burning operation <ul style="list-style-type: none"> · Aerial dispersant spraying ○ Activation of OSRL to get an aircraft ASAP – Waiting for more details (ETA, etc.) <ul style="list-style-type: none"> · Shoreline response ○ Not engaged – Activation will depend on the modelling results <ul style="list-style-type: none"> · Oiled wildlife ○ Not engaged – Activation will depend on the modelling results
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Serial	Time	Event/ Inject
7	Day 1 2:30E	From: Cape Times To: Exercise-Event Switchboard
		<p>People are talking about an incident offshore; do you have any facts for our online news?</p> <p>Can we have a picture of your drillship. There is talk that the rig was battered by the storm and dragged off the well. Who do we talk to for updates?</p> <p>Can we get an interview with someone senior so we can add it to our web site?</p>

Serial	Time	Event/ Inject
8	Day 1 3:00E	From: DCC OIL IMT To: Incident Commander
		<p>Well response</p> <ul style="list-style-type: none"> · Activation of OSRL for mobilization of well response devices · ROV survey will be performed as soon as the RIG will be able to reach the well location – Expected to be done at the end of the day as the weather will be better. · Capping stack ○ Capping stack in Saldanha is available.

	<ul style="list-style-type: none">○ DCC EXPLORER is looking for a suitable vessel to load & transport it (working with a broker) – Identification of one vessel in Angola working for DCC Explorer Angola.○ DCC EXPLORER will revert ASAP with a plan & ETA. Preparation for capping stack in Saldanha ongoing.○ A 2nd capping stack is being sourced as a back-up. Other capping stack identified in Angola – Coming with the installation vessel identified<ul style="list-style-type: none">· Subsea Injection Dispersant kit (SSDI)○ SSDI in Norway is available.○ HQ is assisting DCC EXPLORER to mobilize it in South Africa. Logistics chain activated with HQ.○ DCC EXPLORER is looking for a suitable vessel for its installation & to perform the subsea injection (working with broker). Vessel identified in Angola.○ Will be mobilized as one back-up options for the capping stack <p>Oil Spill Response</p> <ul style="list-style-type: none">· Slick Monitoring○ One ARGOS buoy has been sent at the front edge of the slick – Details sent in another email. Activation OK – Signal received on website.○ Aerial survey by helicopter is being organized – Trained aerial observers available in DCC EXPLORER – 1st flight planned in the afternoon.○ DCC EXPLORER activated “Spill Watch” service in HQ to get modelling predictions + acquisition of satellite images – Done. Updated information will be available every 6 hours.<ul style="list-style-type: none">· Surface response○ 2 vessels on the block initiated dispersant spraying operations (5 m³ of dispersant on each vessel). Operation ongoing – No more dispersant onsite at the end of the day. Discussing with OSRL to access dispersant from CPT○ Use of broker to source additional vessels in the area + OSRL activation to equip them with dispersant ramps. 3 vessels identified.○ No containment & recovery operations due to metocean conditions○ No in-situ burning operation<ul style="list-style-type: none">· Aerial dispersant spraying○ Activation of OSRL to get an aircraft ASAP – Waiting for more details (ETA, etc.). Aircraft from UK will be ready in the next 3 hours and then, fly directly to SA (customs to be informed to ease arrival process)
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		<ul style="list-style-type: none"> · Shoreline response <ul style="list-style-type: none"> ○ Not engaged – Activation will depend on the modelling results. Onshore response plan activated as there is a risk of coastlines impact. · Oiled wildlife <ul style="list-style-type: none"> ○ Not engaged – Activation will depend on the modelling results. Oiled wildlife response plan activated as there is a risk of coastlines impact.
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Serial	Time	Event/ Inject
9	Day 1 3:10E	From: Department of Transport To: Liaison Officer
		<p>The Minister is asking about costs associated with the Exercise Explorer oil spill.</p> <p>Please prepare a briefing giving anticipated costs and burn rate in relation to the incident and requires a projected cost analysis based on a 5 day operation so he can deliver to the stakeholders</p>

Serial	Time	Event/ Inject
10	Day 1 3:20E	From: Cape Talk Radio To: Liaison Officer
		<p>We heard about the oil spill and drilling rig incident. Do you have someone available for an interview so we can get something prepared for the afternoon news.</p> <p>People say the incident is escalating and it could be a week before you can get it under control. They also say there is a gas cloud in addition to the oil slick, it sounds really dangerous, was anyone hurt?</p>

Serial	Time	Event/ Inject
11	Day 1 3:30E	From: Day Drilling Supervisor To: DCC OIL IMT
		<p>We really do have a problem! The ROV has discovered what the LMRP hung up on; it was the Kill line on the BOP. We're not sure how it happened, but the flange, inside the lower inner kill fail safe is busted. Mud and hydrocarbons are streaming out of the leak. Oil is confirmed on the water, you can smell it around the drill ship, but we can't see a slick because of the storm and poor visibility.</p>

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Serial	Time	Event/ Inject
12	Day 1 4:45E	<p>From: Ocean Odyssey Tours, Knysna To: Exercise-Event Switchboard</p> <p>What's going on? One of my whale watching tours has had to be cancelled because of the storms. Then, when I called the authorities to check when the weather would improve I was told the weather is nothing compared to the oil spill.</p> <p>Is this true? If I have to cancel more tours, where do I go for compensation.</p>

Serial	Time	Event/ Inject
13	Day 1 5:35E	<p>From: Port Elizabeth Fishermen (spokesman) To: Exercise-Event Switchboard</p> <p>We hear you have a problem offshore. Are you hiring for help. If so, we would like you to include us.</p> <p>We have sixteen fishing boats, all with crew and all know the waters and the coastline.</p>

		Scenario Note
		<p>End of Day One</p> <p>Day one will be closed out when the assessors and directors are comfortable that all critical objectives have been met and the participants have brought themselves to a point where a handover could take place.</p>

	Time	Support Inject
	Day 2 0:00E	<p>The storm has made landfall and abated, however; there is a steady South West wind blowing which is driving the oil slick towards the coast. A large swell is running making boat work marginal. The wind, seas and tide have a resultant of around 3 knots towards the NE of the rig location. The rig has moved back to location to attempt securing the partially flowing well, however they report a replacement ROV (remotely operated</p>

		<p>vehicle) robot arm is required to isolation of the BOP valve and flange.</p> <p>Seas and swell are still making conditions tough, but an OSV (Offshore Supply Vessel) with a large ROV has been requested to assist with the securing of the well.</p> <p>South westerly winds are dominating and the rig reports a large oil slick trailing off and heading towards the coastline between Plettenberg Bay and St Francis Bay.</p> <p>The Tsitsikamma MPA protects healthy intertidal and subtidal habitats and their associated marine communities and species, including high proportions of endemic invertebrate and fish species.</p> <p>The area also supports many bird species.</p> <p>The flow of oil is estimated at around 42 000 bbls per day.</p> <p>The slick is clearly visible from the sky and the attention of the media has been fixed on the situation.</p> <p>The correct robotic arm for the ROV can only be sourced in the Netherlands.</p> <p>All fishing activity in the area is currently suspended.</p> <p>Public outrage is rampant. Fisheries are demanding compensation for lost activity.</p>
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		Scenario Note
		<p><u>Impacted and at risk species include:</u> Cape cormorants, terns, kelp gulls and oystercatchers. Cow calf pairs of southern right whales (they nurse their calves and prepare for the migration down to their Antarctic feeding grounds)</p> <p>Fishing efforts in the area includes demersal trawl, mid-water trawl, demersal long-line and large pelagic long-line.</p>

	Time	Support Inject
	1:25E	<p>First Overflight image may be made available to the Cape Town response. [Issue Document = EX-overflight-01.pdf]</p>

Serial	Time	Event/ Inject
14	Day 2 1:30E	<p>From: Fox News To: SAMSA</p> <p>What can you tell us about your oil rig crisis in South Africa? Who was responsible? Are you going to file a claim against the oil company? How much oil will be spilt? Do you think this will be bigger than the Macondo spill?</p>

Serial	Time	Event/ Inject
15	Day 2 1:30E	<p>From: Department of Environmental Affairs To: Liaison Officer</p> <p>I am representing Minister Creecy's office. The Minister is asking about the wildlife response plans and details on what resources you are using to protect the wildlife currently at risk from the oil spill.</p> <p>Please can we have some evidence of your actions.</p>

Serial	Time	Event/ Inject
16	Day 2 2:00E	<p>From: Member of Public To: Exercise-Event ERT/ Switchboard</p> <p>I've been walking my dog on the Eastern part of Oyster Bay.</p> <p>On the later part of the walk I managed to collect two oiled birds that look like a Yellow-nosed Albatross and a Crowned Cormorant.</p> <p>One of the other dog walkers said you were responsible for the oil. Well, you've now got blood on your hands too.</p> <p>What are you doing about this?</p>

Serial	Time	Event/ Inject
17	Day 2 2:30E	<p>From: BBC News 24 To: CMT Communications</p> <p>We have had news of activity on Facebook and Twitter asking French to rally against Exercise-Event. The Facebook site says that France has always had a good reputation on the World Stage until now. It claims Exercise-Event has damaged the reputation of</p>

		France for everyone. There are calls on the Social Networks to march on Exercise-Event's headquarters and demand an apology. Do you have any comment?
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	Time	Support Inject
	2:30E	Second BBC Website news release may be made available to all locations. [Issue Document = EX-BBCNews-02.pdf]

Serial	Time	Event/ Inject				
18	Day 2 2:30E	<table border="1" style="width: 100%; background-color: yellow;"> <tr> <td style="width: 15%;">From:</td> <td>CNN Newsdesk</td> </tr> <tr> <td>To:</td> <td>Exercise-Event Office</td> </tr> </table> <p>Our reporter in Cape Town is telling us of a large tourist group forming in protest to your drilling activities. Initial reports say it is being led by "Greenpeace Africa". They claim the oil is heading to the Garden Route National Park.</p> <p>Do you have any comment?</p>	From:	CNN Newsdesk	To:	Exercise-Event Office
From:	CNN Newsdesk					
To:	Exercise-Event Office					

Serial	Time	Event/ Inject				
19	Day 2 2:45E	<table border="1" style="width: 100%; background-color: yellow;"> <tr> <td style="width: 15%;">From:</td> <td>ABC News 24</td> </tr> <tr> <td>To:</td> <td>Exercise-Event Office</td> </tr> </table> <p>We have news of Anti-drilling protesters gathering in Cape Town. We have been told that you will be drilling offshore again. The activists claim Exercise-Event has demonstrated that it's drilling skills are inadequate and the company should cease its offshore program immediately.</p> <p>Will the wave of mistrust in South Africa cause you to reconsider the offshore project?</p>	From:	ABC News 24	To:	Exercise-Event Office
From:	ABC News 24					
To:	Exercise-Event Office					

Serial	Time	Event/ Inject				
20	Day 2 2:55E	<table border="1" style="width: 100%; background-color: yellow;"> <tr> <td style="width: 15%;">From:</td> <td>Local fishermen</td> </tr> <tr> <td>To:</td> <td>Switchboard</td> </tr> </table> <p>It is time for Exercise-Event to start talking.</p> <p>Who's doing what, who's in charge and what's the situation regarding compensation claims?</p>	From:	Local fishermen	To:	Switchboard
From:	Local fishermen					
To:	Switchboard					

Annex 8 - Pictures



*Incident Management System IMS 300
Cape Town, South Africa, 4th – 7th November 2019*



Annex 9 - Reference Material

1. IPIECA/IOGP Joint Industry Project technical documentation - For free

All Good Practice Guides can be found on the following page:

<http://www.oilspillresponseproject.org/>

2. ITOPF's Technical Information Papers (TIPs) – For free

All TIPs can be found on the following page:

<http://www.itopf.com/knowledge-resources/documents-guides/technical-information-papers/>

3. IOPC Funds documentation – For free

All IOPC Funds documentation can be found online on the following link:

<http://www.iopcfunds.org/publications/iopc-funds-publications/>

4. IMO Published Documentation

All IMO documentation can be purchased from the following link:

<http://www.imo.org/en/Publications/Distributors/Pages/default.aspx>