

National Exercise to test the National Oil Spill Contingency Plan

Amasaman, Ghana
27 - 30 June 2017

Global Initiative for Western, Central and Southern Africa

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Hosted by:

Environment Protection Agency



NOTE

This document has been prepared within the framework of the Global Initiative for West, Central and Southern Africa as a contribution to the implementation of the biennial action envisaged for this Initiative. The designations employed and the presentation of the material in this document do not imply the expression of any opinion whatsoever on the part of the IMO or IPIECA concerning the legal status of any State, Territory, city or area, or of its authorities, or concerning the delimitation of its frontiers or boundaries.

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IMO/IPIECA. 2017. Report of the National Exercise to test the National Oil Spill Contingency Plan in Ghana. 38 Pages.



Executive summary

A national exercise to test the National Oil Spill Contingency Plan was organised at the Environment Protection Agency's Institute of Environmental Studies in Amasaman, Accra-Ghana from Tuesday 27th to Friday 30th June 2017. It gathered the key stakeholders in the National Oil Spill Contingency Plan from different government ministries, agencies and authorities.

The event was hosted by the Environment Protection Agency (EPA) within the framework of the GI WACAF Project. The workshop was supported by the International Maritime Organization (IMO) and IPIECA, the global oil and gas association for environmental and social issues.

Around 53 participants attended the workshop. A list of participants is attached in Annex 2 of this report.

The general objective of the workshop was to exercise and test the National Oil Spill Contingency Plan (NOSCP) and to build on the previous work of improving and developing the country's capacity to respond to oil spills.

The specific objectives of the workshop focused on:

- The provision of training to the relevant national authorities on contingency planning, the use of Incident Management Systems (IMS), Net Environmental Benefit Analysis (NEBA) and Incident Response Communications;
- The testing of the National Oil Spill Contingency Plan of Ghana by means of a table top exercise;
- The reviewing of the lessons learned from this and recent exercises; and
- The provision, to the relevant national authorities, of an insight into how to improve the NOSCP based on the results of the exercise.

In order to address the objectives of the workshop, participants were guided through four days of presentations, working group sessions, discussions and a table top exercise. The main recommendations that came out of the workshop were to:

- Complete the outstanding work identified in the Action Plan as amended by this workshop, working to the agreed revised timetable, with especial attention to:
 - Structure of the Incident Management System;
 - Training for participants in the Incident Management System;
 - Completion of the MoU between the key stakeholders of the NOSCP;
 - Completion of the MoU with regards to operational responsibility;
 - Conclude the inventory of response equipment and availability; and
 - Commence development of an emergency fund for oil spills.
- Complete the draft National Oil Spill Plan and publish it, as soon as possible, recognising that it may be further amended as the country's preparedness develops; and
- Develop a suitable command centre for the co-ordination of such incidents.

The list of recommendations is available on page 11 of this report.

The active participation and the expertise of all delegates as well as the organisation of the workshop with the support of the Environment Protection Agency of Ghana were greatly appreciated and were key to the success of this workshop.



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1. Presentation of the Global Initiative for West, Central and Southern Africa

Launched in 2006, the Global Initiative for West, Central and Southern Africa (GI WACAF Project) is a cooperation 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 countries to prepare for and respond to marine oil spills. A key innovative feature is to emphasise the promotion of public/private partnerships for effective oil spill response.

The mission is to strengthen the national oil spill response capability in 22 West, Central and Southern African countries through the establishment of a local partnership between the oil industry and the authorities in charge of oil spill preparedness and response at national level.

The Project is jointly funded by the IMO and 7 Oil Companies members (BP, Chevron, ENI, ExxonMobil, Shell, TOTAL and Woodside) through IPIECA.



The scope is to organise workshops, training courses, seminars and deployment exercises in collaboration with the national authorities in charge of oil spill response and in partnership with local business units.

The GI WACAF Project is based on an effective management system comprising of six goals of preparedness to prepare for and respond to marine oil spills. These goals cover the requirements of the OPRC 90 Convention:

Goal 1 - Legislation: Promote the ratification of the relevant international Conventions

Goal 2 - Contingency plan: Develop National Contingency Plans for all the countries of the region

Goal 3 - Designation of authority: Obtain clarity on roles and responsibilities of all stakeholders

Goal 4 - Regional agreements: Promote the exchange of information and the provision of mutual assistance for oil spill incidents

Goal 5 - Training: Ensure that training and exercises are delivered in the participating countries on a regular basis

Goal 6 - National capabilities: Support participating countries in developing their own national response system

2. Introduction

Ghana has been an active Member State of the GI WACAF Project since its launch with four national workshops and seven regional activities or meeting having been held in Ghana. The workshop held in June 2017 was in line with the Project's priority actions defined by countries representatives during the 2015 Regional Conference as it aims to improve and finalise the NOSCP.

The first day focused on Incident Management Systems (IMS), Net Environmental Benefit Analysis (NEBA) and incident communications with presentations, classroom exercise and discussions. The following three days were dedicated to a table-top exercise to test the NOSCP, debrief of the exercise and the review and development of the Action Plan.

The participants, representing the key government ministries, agencies and authorities who would be involved in a response to a major maritime oil spill had the right background knowledge and experience to receive maximum benefit of this workshop. A good understanding of oil spill preparedness and response was demonstrated during the activity by many relevant questions asked and the seriousness by which the various issues were considered.

3. Objectives of the workshop

The general objective of the workshop was to exercise and test the National Oil Spill Contingency Plan (NOSCP) and to build on the previous work of improving and developing the country's capacity to respond to oil spills. The specific objectives of the workshop focused on:

- The provision of training to the relevant national authorities on contingency planning, the use of Incident Management Systems (IMS), Net Environmental Benefit Analysis (NEBA) and Incident Response Communications;
- The testing of the National Oil Spill Contingency Plan of Ghana by means of a table top exercise;
- The review of the lessons learned from this and recent exercises; and
- The provision, to the relevant national authorities, of an insight into how to improve the NOSCP based on the results of the exercise.

4. Programme of the Workshop

The workshop was organised over four days, with one day dedicated to training on IMS, NEBA and response communications and three focusing on the table-top exercise, debrief of the exercise and the review and development of the Action Plan. An outline is presented below, and the detailed programme is available in Annex 1.

- Tuesday 27 June 2017
 - Opening ceremony and introduction of the workshop
 - Presentation of the GI WACAF Project
 - Presentation of the GI WACAF Project activities in Ghana
 - Introduction to Ghana's National Oil Spill Contingency Plan, Action Plan and MoUs
 - Introduction to Incident Management Systems (IMS)



- Introduction to Net Environmental Benefit Analysis (NEBA)
- Introduction to Incident Response Communications
- Wednesday 28 June 2017
 - Table-top Exercise to test the National Oil Spill Contingency Plan
 - Initial exercise debrief
- Thursday 29 June 2017
 - Exercise debrief by functional groups (Command, Operations, Planning, Logistics)
- Friday 30 June 2017
 - Exercise debrief by functional groups (Finance, Communications)
 - Review of NOSCP Action Plan
 - Development of Action Plan 2017
 - Conclusions and recommendations
 - Closing ceremony

The original timetable was modified to suit the high level of interaction and participant's engagement during the exercises. The actual sequence of activities can be found in section 6.

5. Location, dates, and participants

The workshop and exercise was held at the Environment Protection Agency's Institute of Environmental Studies in Amasaman-Accra, Ghana from Tuesday 27th to Friday 30th June 2017. 53 participants, representing the key government ministries, agencies and authorities who would be involved in a response to a major maritime oil spill attended the event. The list of participants is attached in Annex 2 of this report.

The expert invited to facilitate this workshop was Mr Joe Small, Director, Gorton Consultancy Limited, with support from the GI WACAF Secretariat in the person of Clement Chazot, GI WACAF Project Manager.

6. Activities and proceedings

6.1. Opening ceremony

The opening ceremony took place on Tuesday, 27 May 2016 at 09.00.

Mr Clément Chazot, GI WACAF Project Manager, delivered the IMO/IPIECA Opening Remarks, reproduced in Annex 3, and highlighted the progress made in the region regarding oil spill preparedness and response, which should continue in order to mitigate the risks related to shipping as well as oil exploration and production activities.

Mr, Ebenezer Appah-Sampong, Deputy Executive Director, EPA, welcomed participants to the workshop and stressed the need to test the national plan by acting cooperatively and with a high degree of coordination. His speech is attached in Annexe 4.

Finally, Mr John Alexis Pwamang, Acting Executive Director, EPA, officially opened the workshop. His speech is attached as Annex 5.



6.2. Proceedings of the National Workshop

DAY 1 Tuesday, 27 June 2017

Session 1: Introduction of the workshop and presentation of the GI WACAF Project

Mr Clément Chazot, GI WACAF Project Manager

The presenter detailed the objectives and the programme of the workshop. A *tour de table* was organised to introduce the participants and understand what institutions were represented in the audience. After that, Mr Chazot presented the scope and goals of the GI WACAF Project since its launch in 2006, highlighting the priority actions for the current biennial. He highlighted the numerous joint activities implemented with the Ghanaian authorities aiming at enhancing the national and regional oil spill preparedness, response and cooperation capabilities.

Session 2: Introduction to GI WACAF project in Ghana

Mr Joe Small, IMO / IPIECA Consultant

Mr Small reviewed the activities of the project, to date, and introduced the eleven activities held by the GI WACAF project in Ghana since the project's inception, the highest number of any country in the project, of which four were national activities whilst the remaining seven were sub-regional and regional activities.

Session 3: Presentation of the National Oil Spill Contingency Plan of Ghana, Action Plan and MoU

Mr Kojo Agbenor-Efunam, Deputy Director, EPA Ghana

Mr Kojo Agbenor-Efunam, introduced the current status of the NOSCP, the Ghanaian's action plan and the MoU with key stakeholders. He also explained the development work carried out by the EPA and identified the need to complete and publish the NOSCP. His presentation can best be summarized as "where we were, where we are and where we are going".

Session 4: Introduction to Incident Management Systems (IMS)

Mr Joe Small, IMO / IPIECA Consultant

Mr Small introduced the concept of Incident Management Systems and explained that a properly implemented and coordinated management system will improve the efficiency and effectiveness of emergency response operations, regardless of the nature of the incident. He stressed that the development and implementation of such systems needed to focus on a system that met the needs of the users, defined the roles and functions of response teams and other resources through a flexible and scalable structure with pre-identified roles, responsibilities, reporting relationships and authorities necessary to manage an incident.



Session 5: Exercise: IMS

Mr Joe Small, IMO / IPIECA Consultant

The participants were split into three groups and asked a number of questions to identify the lead Combat Agency, the composition of the Command functional group and the composition of the Operations, Planning, Logistics and Finance functional groups within Ghana's IMS. The groups were then invited to deliver their results in plenary, followed by a discussion on the answers from the three groups.

DAY 2 Wednesday, 28 June 2017

Session 6: Introduction to Net Environmental Benefit Analysis (NEBA)

Mr Joe Small, IMO / IPIECA Consultant

Mr Small introduced the concept of NEBA, explained the NEBA process and described the use of the concept in practice. He explained that the concept could be used before and during a spill and introduced an overview of the technical tools available to assist in determining the best tactical response. He further explained to the audience that the NEBA process followed well defined step, which can be outlined as follows:

1. **Compile and Evaluate Data:**
 - *Realistic scenarios, (or the actual situation)*
 - *Feasible response options*
 - *Resources at risk*

2. **Predict Outcomes**
 - *Relative Impact Assessment (No Intervention)*
 - *Impact Modification Factors*

3. **Balance Trade-offs**

4. **Select Option(s)**
 - *Cone of response*

In a nutshell, NEBA allows decision makers to select response options which will minimize the impacts of oil spills on people and the environment, through a wide engagement with stakeholders.

Session 7: Introduction to Incident Response Communications

Mr Joe Small, IMO / IPIECA Consultant

Mr Small introduced the subject of communications in the response to an incident and stressed that good communications and the management of communications was vital to the success of the response. He explained the concept of information flow in two dimensions, vertically (or internal) communications within



the response structure and horizontally (or externally) to the media, public and stakeholders. He stressed the need for a communications plan and a media plan during incident response. Ms Angelina Mensah, Head of EPA's Public Affairs Department explained their role during an incident and stressed the need for multi-agency co-operation during any multi-agency response.

Session 8: Exercise: Incident Response Communications

Mr Joe Small, IMO / IPIECA Consultant

The participants were split into three groups and asked a number of questions to identify the type of communications available in a response to an incident in both vertical and horizontal communications. The groups were then invited to deliver their results in plenary, followed by a discussion on the answers from the three groups.

Session 9: Exercise: Table-top Exercise to test NOSCP

Mr Joe Small, IMO / IPIECA Consultant

Mr Small introduced the exercise objectives and explained the rules governing the conduct and play of the exercise. The participants were split into three function groups as follows:

- the Command Group;
- Operations and Planning Group; and
- Logistics and Finance Group.

Injects were introduced at appropriate times and the participants were encouraged to record their activities, to hold internal briefings within their functional groups, to ensure that communications flowed between the functional groups, to use all facilities normally available and to respond as they would normally. It was stressed that there would be no "live" mobilisation so personnel or resources. The exercise was suspended at 1730hrs.

DAY 3 Thursday 29 June 2017

Session 9: Exercise: Table-top Exercise to test NOSCP (continued)

Mr Joe Small, IMO / IPIECA Consultant

The exercise resumed at 0900hrs with further injects as events continued to unfold. The exercise was terminated at 1300hrs.

Session 10: Exercise: Initial Debrief

Mr Joe Small, IMO / IPIECA Consultant

An initial debrief of all the participants was held on immediately conclusion of the exercise

Session 11: Exercise: Debrief by Functional Groups

Mr Joe Small, IMO / IPIECA Consultant

A fuller debrief was then held by each of the three functional groups. Each group appointed a spokesperson who described the actions of their group, their observations, challenges and suggestions. On conclusion of each presentation, all participants were given the opportunity to ask questions and provide their comments.

DAY 4 Friday, 30 June 2017

Session 12: Review of NOSCP Action Plan - Post Exercise

Mr Joe Small, IMO / IPIECA Consultant, Mr Larry Kotoe, EPA

The Action Plan arising from the 2014 NOSCP workshop was revisited and Mr Larry Kotoe explained the recent developments and status of the Action Plan prior to the commencement of the workshop.

Session 13: Development of Action Plan 2017

Mr Joe Small, IMO / IPIECA Consultant, Mr Larry Kotoe, EPA

The Action Plan was then revisited considering the work carried out within this workshop and the participants went through each item, line by line, adding further comments and agreeing on a revised timeline for completion. The resulting document is reproduced as Annex 6 to the present report.

Session 14: Conclusions and recommendations

All participants

Based on the discussions and the suggestions provided during the four days, a list of recommendations was discussed and agreed by all the participants, and is presented further in the present report.

6.3. Closing ceremony

Mr Chazot thanked the participants for their active participation during the 4 days and highlighted the high level of the discussions and hoped that the workshop and the recommendations approved would help finalise the National Oil Spill Contingency Plan in the near future. He also thanked the key expert for his hard work to make this workshop as useful as possible and highlighted the role of the EPA, in particular Mr Kojo Agbenor-Efunam and Mr Larry Kotoe, for their work in the preparation and delivery of the workshop.

Mr Kojo Agbenor-Efunam, Deputy Director, EPA, thanked the participants for their attendance and work over the four days, reminded the participants of the objectives of the workshop and highlighted the importance of continuing the capacity-building and technical cooperation for the institutions in Ghana.

Mr, Ebenezer Appah-Sampong, Deputy Executive Director, EPA, formally closed the workshop, following which the certificates of attendance and USB of proceedings and support material was distributed to all attendees.

7. Recommendations

In order to finalise the National Contingency Plan, the participants recommended that work on the Action Plan, developed during the workshop of 2014, be completed. This Action Plan contains twenty tasks, of which some have been completed to date, reviewed and updated.

The full Action Plan can be found in Annex 6. However, some of the key recommendations arising from that plan and from this workshop are:

Recommendations	
Action Plan 2017	
1.	Complete the remaining outstanding work identified in the Action Plan, as amended by this workshop, working to the revised timetable, with especial attention to: <ul style="list-style-type: none"> • Structure of the Incident Management System; • Training for participants on, <i>inter alia</i>, the Incident Management System; • Completion of the MoU between the key stakeholders of the NOSCP; • Completion of the MoU with regard to operational responsibility; • Conclude the inventory of response equipment and availability; and • Commence development of an emergency fund for oil spills.
Workshop Recommendations	
2.	Complete the draft National Oil Spill Plan and publish it, as soon as possible, recognising that it may be further amended as the country's preparedness develops
3.	Disseminate the approved NOSCP to all relevant stakeholders
4.	Agree on /develop a suitable command centre for the co-ordination of major pollution incidents.

8. Conclusion

The workshop reached its objectives. Participants were introduced to Incident Management Systems (IMS), Net Environmental Benefit Analysis (NEBA) and Incident Response Communications and the National Oil Spill Contingency Plan was exercised, reviewed and recommendations were made by participants to improve it.

There were a lot of discussions and questions during the different sessions and a high and energetic participation from the participants, showing the level of interest on the different issues.

The EPA will now need to drive the final development of the NOSCP, in collaboration with the other relevant stakeholders.

Annex 1 - Programme



IPIECA

THE GLOBAL OIL AND GAS
INDUSTRY ASSOCIATION
FOR ENVIRONMENTAL
AND SOCIAL ISSUES

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National Exercise to test the National Oil Spill Contingency Plan

Accra, Ghana
27th to 30th June 2017

Global Initiative for Western, Central and Southern Africa

Organised by:
**Environment
Protection Agency**



The Global Initiative for West, Central and Southern Africa

Launched in 2006, the Global Initiative for West, Central and Southern Africa (GI WACAF Project) is a cooperation 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 countries to prepare for and respond to marine oil spills. A key innovative feature is to emphasise the promotion of public/private partnerships for effective oil spill response.

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The scope is to organise workshops, training courses, seminars and deployment exercises in collaboration with the national authorities in charge of oil spill response and in partnership with local business units.

The GI WACAF Project is based on an effective management system comprising of six goals of preparedness to prepare for and respond to marine oil spills. These goals cover the requirements of the OPRC 90 Convention:

Goal 1 - Legislation: Promote the ratification of the relevant international Conventions

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Goal 4 - Regional agreements: Promote the exchange of information and the provision of mutual assistance for oil spill incidents

Goal 5 - Training: Ensure that training and exercises are delivered in the participating countries on a regular basis

Goal 6 - National capabilities: Support participating countries in developing their own national response system

Dates and location

This event will take place at the Environment protection Agency's Training School in Amasaman, Greater Accra, from Tuesday 27th to Friday 30th June 2017.

Workshop Objectives

The general objective of the workshop is to exercise and test the National Oil Spill Contingency Plan (NOSCP) and to build on the previous work of improving and developing the country's capacity to respond to oil spills.

The specific objectives of the workshop will focus on:

1. To provide training to the relevant national authorities on contingency planning, the use of Incident Management Systems (IMS), Net Environmental Benefit Analysis (NEBA) and Incident Response Communications;
2. To test the National Oil Spill Contingency Plan of Ghana by means of a table top exercise;
3. To review the lessons learned from this and recent exercises; and
4. To provide insight to the relevant national authorities on how to improve the NOSCP based on the results of the exercise.

Contact

Clément Chazot, IMO / IPIECA – GI WACAF Project Manager

Tel: +44 (0) 2380 331551 / Cell: +44 (0) 7920 234639

Email: clement.chazot@ipieca.org

Consultant

Joe Small, IMO / IPIECA Consultant

Tel: +44 (0) 1561 320 140 / Cell: +44 (0) 77363 868 96

Email: joe.small@gortonconsultancy.com

Day 1. Tuesday 27th June 2017	
08h30	Arrival and Registration of the participants
	Opening Ceremony
09h00	Opening Ceremony : <ul style="list-style-type: none"> - Welcome Address: <i>Deputy Executive Director, EPA</i> - Opening Remarks: <i>Ag. Executive Director, EPA</i> - Statement by IMO/IPIECA Representative
	Introduction
09h40	Introduction of workshop objectives <i>Mr Clément Chazot, GI WACAF Project Manager, IMO/IPIECA</i> <ul style="list-style-type: none"> - Introduction of the facilitators - Introduction of the participants - Objective of workshop and programme
09h50	Presentation of the GI WACAF Project <i>Mr Clément Chazot, GI WACAF Project Manager, IMO/IPIECA</i>
10h30	Coffee break
	National Oil Spill Contingency Plan (NOSCP)
10h50	Introduction to GIWACAF Project in Ghana <i>Mr Joe Small, IMO/IPIECA Consultant</i>
11h00	Introduction to the status of the NOSCP, Action Plan and MoU <i>Mr. Kojo Agbenor-Efunam, Deputy Director, EPA Ghana</i>
12h00	Lunch Break
	Workshop
13h00	Introduction to Incident Management Systems (IMS) <i>Mr Joe Small, IMO/IPIECA Consultant</i>
13h40	Exercise: IMS <i>Mr Joe Small, IMO/IPIECA Consultant</i>
14h10	Introduction to Net Environmental Benefit Analysis (NEBA) <i>Mr Joe Small, IMO/IPIECA Consultant</i>
15h00	Coffee break
15h30	Introduction to Incident Response Communications <i>Mr Joe Small, IMO/IPIECA Consultant</i>
16h00	Exercise: Incident Response Communications <i>Mr Joe Small, IMO/IPIECA Consultant</i>
17h00	Summary of Day 1 and Planning for Day 2 <i>Mr Joe Small, IMO/IPIECA Consultant</i>
	End of Day 1

Day 2. Wednesday 28 th June 2017	
	Welcome
09h00	Welcome <i>Mr Joe Small, IMO/IPIECA Consultant</i> <ul style="list-style-type: none">- Recap of Day 1- Review of Day 2 timetable
	Exercise
09h10	Exercise Introduction <i>Mr Joe Small, IMO/IPIECA Consultant</i>
09h30	Exercise - Commence Free Play <i>Mr Joe Small, IMO/IPIECA Consultant</i>
12h30	Lunch Break
13h30	Exercise (continued) <i>Mr Joe Small, IMO/IPIECA Consultant</i>
15h00	Coffee Break
15h30	Exercise (continued) <i>Mr Joe Small, IMO/IPIECA Consultant</i>
16h45	Exercise - Cease Free Play & Initial Review <i>Mr Joe Small, IMO/IPIECA Consultant</i>
17h00	Summary of Day 2 and Planning for Day 3 <i>Mr Joe Small, IMO/IPIECA Consultant</i>
	End of Day 2

Day 3. Thursday 29th June 2017	
	Welcome
09h00	Welcome <i>Mr Joe Small, IMO/IPIECA Consultant</i> <ul style="list-style-type: none"> - Recap of Days 1 and 2 - Review of Day 3 timetable
	Exercise Review
09h10	Exercise Phase 1 - Command <i>Mr Joe Small, IMO/IPIECA Consultant</i>
10h30	Coffee break
11h00	Exercise Phase 2 - Operations Section <i>Mr Joe Small, IMO/IPIECA Consultant</i>
12h00	Lunch Break
13h00	Exercise Phase 2 - Operations Section (continued) <i>Mr Joe Small, IMO/IPIECA Consultant</i>
14h00	Exercise Phase 3 - Planning Section <i>Mr Joe Small, IMO/IPIECA Consultant</i>
15h00	Coffee Break
15h30	Exercise Phase 4 - Logistics Section <i>Mr Joe Small, IMO/IPIECA Consultant</i>
17h00	Summary of Day 3 and Planning for Day 4 <i>Mr Joe Small, IMO/IPIECA Consultant</i>
	End of Day 3

Day 4. Friday 30th June 2017	
	Welcome
09h00	Welcome <i>Mr Joe Small, IMO/IPIECA Consultant</i> <ul style="list-style-type: none"> - Recap of Days 1, 2 and 3 - Review of Day 4 timetable
	Exercise Review (Continued)
09h10	Exercise Phase 5 - Finance Section <i>Mr Joe Small, IMO/IPIECA Consultant</i>
10h00	Coffee break
10h30	Exercise Phase 6 - Communications <i>Mr Joe Small, IMO/IPIECA Consultant</i>
12h00	Lunch Break
	Review of NOSCP Action Plan
13h00	Review of NOSCP Action Plan - post Exercise <i>Mr Joe Small, IMO/IPIECA Consultant</i>
14h00	Development of Action Plan 2017 <i>Mr Joe Small, IMO/IPIECA Consultant</i>
15h00	Coffee break
15h30	Development of Action Plan 2017 (continued) <i>Mr Joe Small, IMO/IPIECA Consultant</i>
	Closing ceremony
16h00	Closing Ceremony <ul style="list-style-type: none"> - <i>Deputy Executive Director, EPA</i> - IMO/IPIECA
	End of Day 4 and Workshop

Workshop Facilitator's Profiles

Clément Chazot, IMO/IPIECA – GI WACAF Project Manager

Clément Chazot is the GI WACAF Project Manager. He holds a Master's degree from ISARA-Lyon, an engineering school in agricultural, food and environmental science. After graduating in 2013, Clément worked as Junior Programme Officer with the Regional Marine Pollution Emergency Response Centre for the Mediterranean Sea (REMPEC) for the implementation of various activities in preparedness and response to marine pollution.

In September 2016, Clément took on a new position as GI WACAF Project Manager, and he is responsible for developing the strategy and implementing the activities of the GI WACAF Action Plan, whilst reporting to the GI WACAF Steering Committee. Clément is supported by Mr. Julien Favier, GI WACAF Project Coordinator.

Joe Small, IMO/IPIECA Consultant

Joe is a highly experienced trainer and consultant specialising in Oil and HNS pollution response (at-sea and onshore), marine operations, search and rescue operations and emergency response and management. He has over 40 years' experience in working with oil and chemicals and in responding to oil and HNS pollution incidents.

Following 10 years at sea as a Deck Officer he joined HM Coastguard where he specialised in the coordination of Search and Rescue operations before being seconded to the UK Government's Marine Pollution Control Unit (MPCU) where he became the Head of Operations. In this role, he was responsible for managing the UK government's at-sea and salvage response, aerial surveillance and remote sensing programmes. He was also responsible, as the UK On-Scene Commander, for the outcome of over 1,200 pollution incidents each year, including leading the response to several major, high profile events such as the BRAER and SEA EMPRESS.

On returning to the private sector he developed and managed oil and chemical spill response facilities in 11 countries and continued to be involved in high-profile incidents such as the ERIKA and the P-36 semi-submersible. He is currently a consultant to IMO, IPIECA, REMPEC, PERSGA, MEMAC, OSCE, the World Bank and the marine insurance industry. Joe is the author of the IMO's OPRC HNS model courses and has just completed the review and re-write of all the IMO OPRC Oil model courses in a joint project with TRIOX Environmental Emergencies of Canada.

Annex 2 – List of participants

No.	Name	Institution	E-Mail	Contact
1.	Christian Akwaa-Darko	Customs Division of GRA	akwaad@gmail.com	0244644825
2.	Mark Quist	Tema Oil Refinery	mark.quist@torghana.com	0277712040
3.	Samuel Ofosu-Boateng	Volta River Authority	smawuliamuel.ofosu-boateng@vra.com	0246221928
4.	Cdr Stephen Billins Nyam	Ministry of Defence	stevebillins@gmail.com	0244260907
5.	Mawutodzi Abissaith	Information Services Department	abissath@gmail.com	0277414314
6.	G. D. Zaney	Information Services Department	dumegazaney@gmail.com	0277025096
7.	Efua Asiedua Nyaho	EPA, Accra West	eanyaho@gmail.com	0501301644
8.	Seth Foli	Ghana National Petroleum Corporation	s.foli@gnpcghana.com	0503883438
9.	Joseph Antwi Ababio	Ghana Police Service (Marine Police Unit)	antwiababio@yahoo.com	
10.	ASP. Sebastian Kwame Folivie	Ghana Police Service (Marine Police Unit) Western Region	sebkwafolivie@gmail.com	0243637855
11.	Chief Sup. Samuel Basintale Amadu	Ghana Immigration Service	samadu50@yahoo.com	0244437343
12.	Charles Kwaku James	Petroleum Commission	Charles.james@petrocom.gov.gh	0542660602
13.	Ismael C.S Amegah	Petroleum Commission	ishmael.amegah@petrocom.gov.gh	0243138233
14.	Dr. Edith Clark	Head office of the Ghana Health Service	clarke.edith@gmail.com	
15.	Dr. Caesar Nyadedzor	Ghana Health Services	caesar.nyadedzor@ghsmai.com	0243646758
16.	Kojo Agbenor-Efunam	Petroleum Department, EPA	kojo.efunam@gmail.com	0501301381
17.	Mavis Owusu	Petroleum Department, EPA	mavisowusu@epa.gov.gh	0501301566
18.	Samuel Kofi Agbetsiafa	Petroleum Department, EPA	skagbet68@gmail.com	0540878924

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No.	Name	Institution	E-Mail	Contact
19.	Lawrence Kotoe	Petroleum Department, EPA	larrykotoe@gmail.com	0501301567
20.	Godwin Kwesi Asiedu	Petroleum Department, EPA	godwin.asiedu@epa.gov.com	0501301562
21.	Nana Yaa Appiah	Petroleum Department, EPA	nana.appiah@epa.gov.gh	0501301563
22.	Edith Acheampong	Petroleum Department, EPA	edith.akotia@epa.gov.gh	0501301568
23.	Baffour Kofi Dokyi	Petroleum Department, EPA	baffour.dokyi@epa.gov.gh	0501301569
24.	James Kwesi Akussah	Petroleum Department, EPA	jamesletsa@gmail.com	0501301570
25.	Jewel Kudjawu	Natural Resource Department, EPA	jewel.kudjawu@epa.gov.gh	0501301527
26.	Peace Dziedzorm Gbeckor-Kove	Natural Resource Department, EPA	pgkove@gmail.com	0244466284
27.	Veronica Amissah-Aidoo	Legal Department, EPA	Veronica.amissah-aidoo@epa.gov.gh	0207575965
28.	Abena Ayensu	Legal Department, EPA	abena.ayensu@gamil.com	0501301380
29.	Lovelace Sarpong	CCMC Division, EPA	lovelace.sarpong@epa.gov.gh	0249113845
30.	Mawuli Gbekor	GIS Unit, EPA	mawuli.gbekor@epa.gov.gh	0501301458
31.	Angelina Mensah	Public Affairs, EPA		0501301411
32.	Stella Okoh	EPA	stella.okoh@epa.gov.gh	0501301491
33.	George K.K Diawuoh	EPA Western Region	gkkdiawuoh@gmail.com	0501301699
34.	Douglas Asuako - Ferkah Arhinkorah	EPA, Ellembelle District	asuako_doggie@yahoo.com	0243150132 0501301684
35.	Emmanuel Awuni	Ghana Maritime Authority	emmanuel.awuni@ghanamaritime.org	0242129294
36.	Lt Cdr Frank Boateng	Ghana Navy	boatengfrank48@yahoo.com	0243665428

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No.	Name	Institution	E-Mail	Contact
37.	S/Lt Kwame Yelbour	Ghana Navy	deedonking@gmail.com	0556939642
38.	S/Lt Prosper Mawusi Akortsu	Ghana Navy	m.akortsu@yahoo.com	0207296295
39.	Lt (GN) Seth Anthony Dzakpasu	Ghana Navy	sethanthony77@gmail.com	0243373702
40.	Flight Lieutenant Benjamin Yaw Appau	Ghana Air Force	Benjaminappau@yahoo.com	0268010675
41.	Flying Officer Emmanuel Mennyeh Aboagye	Ghana Air Force	Yawmenyeh@yahoo.co.uk	0268090205
42.	Winfred Nomotey Tesia	NADMO	nomotey@gmail.com	0244444350
43.	Fredrick Abrokwa	National Service Personnel, EPA	fredrickabrokwa@yahoo.com	0278253960
44.	Selorm Kwasi Dunyo	National Service Personnel, EPA	selormdunyo@live.co.uk	0246369824
45.	Samson Okwampa Agyeman	National Service Personnel, EPA	okwampasampson@yahoo.com	0554652043
46.	Benjamin Odai Tetteh	National Service Personnel, EPA	bentetteh82@gmail.com	0555103876
47.	Priscilla Nyankson Taylor	National Service Personnel, EPA	esitaylor1920@gmail.com	0274656122
48.	Mary Appah	Internship		0573519260
49.	K. B Danso	Ghana Ports and Harbour Authority	kdanso@ghanaports.net	0244950847
50.	Joseph Koranteng	Ghana National Fire Service	koranteng_joe@yahoo.com	0244615985
51.	Bright Andy Berko	Ghana Ports and Harbour Authority	bberko@ghanaports.net	0244069793
52.	John Joseph Toppoh	Ghana Ports and Harbour Authority	jtoppoh@yahoo.com	0504753908
53.	Alex Appiah-Danquah	Ghana National Fire Service	ecowlexys@gmail.com	0208158351

Annex 3 – Opening remarks from the IMO/IPIECA representative

GI WACAF Project
National Exercise to test the National
Oil Spill Contingency Plan

Accra, Ghana

27 to 30 June 2017

Clément Chazot

Ag. Executive Director of the EPA, Mr John Alexis Pwamang,
Deputy Executive Director of the EPA, Mr Ebenezer Appah-Sampong,
Distinguished Delegates,
Ladies and Gentlemen,

It is both a pleasure and an honour for me to deliver this opening address on behalf of the International Maritime Organization (IMO) and the global oil and gas industry association for environmental and social issues (IPIECA) at this National workshop and exercise to test the National Oil Spill Contingency Plan of Ghana.

I would like to briefly remind you of the roles of these organizations. IPIECA was formed in 1974 following the launch of the United Nations Environment Programme (UNEP). IPIECA is involving both the upstream and downstream oil and gas industry on environmental and social issues. The work of IPIECA is supported by a number of specialized working groups of industry members that address the following areas: Climate & Energy, Environment which includes Oil Spill preparedness, Social and Reporting.

The International Maritime Organization (IMO) is a specialized agency of the United Nations with a global mandate. The mission of IMO is to promote safe, secure, efficient, environmentally sound and sustainable shipping. This is pursued by adopting the highest practicable standards of maritime safety and security, efficiency of navigation and prevention and control of pollution from ships, as well as through consideration of the related legal matters and effective implementation of IMO's instruments with a view to their universal and uniform application.

In an effort to enhance the capacity of countries to prepare for and respond to marine oil spills and ensure the full implementation of international conventions, IMO and IPIECA launched in 1996 the Global Initiative. This joint programme is active at various degrees in different regions of the world, namely the Caspian and Black seas; West, Central and Southern Africa; South-East Asia; and China.

The Global Initiative for West and Central Africa, known as GI WACAF, launched in April 2006, is considered as the flagship programme of the various GI regional initiatives. The project is jointly funded by IMO and seven oil companies through IPIECA. As 2016 marked the 10th Anniversary of the Project and 2017 saw the organisation of its 100th activity, significant progress in improving oil

spill response capability has been achieved in the region. However, there remains much to do as risks change and the expectations for oil spill preparedness continue to be raised.

The Project today covers 22 countries in West and Central Africa. With regard to Ghana, there is a long-standing cooperation between GI WACAF and the Ghanaian Government. This week's workshop will be the twelfth activity organised in this country within the framework of GI WACAF. Notably, Ghana hosted the last GI WACAF Regional Conference, in November 2015. This important biennial event helped provide a basis on which a two-year work programme of activities was established, and which included the present activity.

This week's workshop has several important objectives, namely:

- Provide training on contingency planning and the use of IMS and NEBA;
- Test the National Oil Spill Contingency Plan table through top exercises with elements of IMS and NEBA; and
- Provide insight to relevant national authorities on how to improve the NOSCP based on the results of the exercise

To guide us through the workshop, we have one international expert in the field of oil spill preparedness and response, in the person of Mr Joe Small, IPIECA Consultant. His skills and knowledge, may it be at local or international level, will be highly beneficial. He indeed facilitated the last national GI WACAF workshop to update the National Oil Spill Contingency Plan organised in May 2014 which led to the creation of a road map for improving and updating the Plan.

Contingency planning in Ghana has come a long way. The first officially approved national plan dates back to 1986. This approval was a great step in strengthening the oil spill preparedness in the country and showed commitment to progress in the region in an effort to ensure a fast, efficient and well-coordinated response to oil spill events. However, contingency plans need to be tested and exercised regularly to be proved fully operational. The plan is now in its 5th Version, dating from December 2015, and the present workshop will be a great opportunity to test it, as well as to check the implementation of the road map defined in 2014.

Bearing this in mind, I would like to encourage delegates during the next four days to participate actively, and to support the successful outcome of this workshop to test the National Oil Spill Contingency Plan. It is crucial that all delegates gain a full understanding and knowledge of this document and I strongly encourage to regularly replicate such events to sustain and increase the level of preparedness in Ghana.

In conclusion, I have the pleasure in conveying to all of you the very best wishes of the IMO Secretary-General, Mr. Ki-tack Lim and I wish to express my sincerest thanks to all those involved in the organization of this event and especially to the Environment Protection Agency, as our hosts.

Thank you for your kind attention.



Annex 4 – Welcome speech from the Deputy Executive Director, EPA

NATIONAL EXERCISE TO TEST THE NATIONAL OIL SPILL CONTINGENCY PLAN

WELCOME ADDRESS BY THE DEPUTY EXECUTIVE DIRECTOR, ENVIRONMENTAL PROTECTION AGENCY

INSTITUTE OF ENVIRONMENTAL STUDIES, AMASAMAN -ACCRA

TUESDAY, 27TH JUNE 2017

AG. EXECUTIVE DIRECTOR

GI WACAF PROJECT COORDINATOR AND CONSULTANTS

REPRESENTATIVES OF VARIOUS INSTITUTIONS

MY COLLEAGUES FROM EPA

DISTINGUISHED LADIES AND GENTLEMEN

It is both a pleasure and an honour for me to welcome you to this National Exercise to Test the National Oil Spill Contingency Plan. WE HAVE ALL OUR TESTING Tools ready. Practice, Practice, Practice is our assurance for success

Industry and government share the responsibility to prepare for oil spills. Past and recent incidents remind us of our need to be prepared in the event of a spill. In order to ensure that a response will be managed effectively, preparation for a spill is a responsibility that is shared by both government and industry.

As regulatory Agency, we have ensured that industry prepare and maintain their oil spill contingency plans in order to respond effectively to spills that might emanate from their activities. However, oil spill preparedness and response cannot be left alone in the hands of the industry. State institutions must also organize themselves in a well-coordinated manner to assist industry in an event of a spill. That is why national oil spill contingency plans are prepared and are critical for coastal nations, whether they are involved in oil and gas exploration and production or not. The development and continuous improvement of a National Oil Spill Contingency Plan is the corner stone of a fast, efficient and well-coordinated response to oil spill events. Contingency plans also need to be tested, exercised and reviewed regularly to be proved as fully operational.

In the event of a spill, to achieve the highest level of response effectiveness, all involved parties have to act cooperatively and with a high degree of coordination. The true vehicle for that effectiveness, cooperation and coordination has always been a National Oil Spill Contingency Plan and our capacity to consistently test and practice. We would need to have people dedicated to working and improving the NOSCP.

I would therefore like to welcome you and urge us to take advantage of the opportunity to test the plan. We are thankful for your continuous support to the Agency in preparedness and response towards oil spills.

Thank you.

Annex 5 – Welcome speech from Acting Executive Director, EPA

NATIONAL EXERCISE TO TEST THE NATIONAL OIL SPILL CONTINGENCY PLAN

OPENING REMARKS BY THE AG. EXECUTIVE DIRECTOR, ENVIRONMENTAL PROTECTION AGENCY

INSTITUTE OF ENVIRONMENTAL STUDIES, AMASAMAN - ACCRA

TUESDAY, 27TH JUNE 2017

REPRESENTATIVES OF GI WACAF PROJECT

RESOURCE PERSONS

INVITED GUESTS

DISTINGUISHED LADIES AND GENTLEMEN

The usefulness of petroleum to mankind over the years cannot be underscored in our modern way of living. Though we have and do talk about alternative energy sources, none of these energy sources have mature enough to totally replace petroleum. That is, for the foreseeable future, we would have to depend on oil and gas. However, important as petroleum is to mankind its exploitation and use are not without problems.

The Gulf of Guinea has also become an important area for petroleum exploration and production activities with its associated density of marine traffic, especially oil tankers, including petroleum installations and facilities. These developments present a risk of marine pollution from blowouts, collisions, stranding and other marine accidents.

Such pollution can threaten amenity beaches, the tourist industry, sea birds, marine life in the inter-tidal zones, coastal installations and fisheries with subsequent loss of revenue and livelihoods.

Furthermore, even a small oil spill on the inland waterways, such as the Lake Volta or its tributaries, or leakage from oil pipelines may cause serious threat to wildlife, the local fishing and water supplies.

History reminds as of the catastrophic nature of oil spills when they do happen, such as the horrific incident of the *Deepwater Horizon*, which occurred in the Gulf of Mexico in 2010. Before the *Deepwater Horizon* incident, there were such major spills such as Amoco Cadiz (1978), Irenes

Serenade (1980), EXXON Valdez (1989), ERIKA (1999) and Prestige (2002), which had huge impact on the countries affected by these incidents.

Ghana, as a signatory to the Oil Spill Response and Oil Pollution Preparedness Response and Cooperation (OPRC) Convention and a party to the Abidjan Convention is obliged to undertake a number of activities. These include putting in place a number of measures:

1. An effective oil spill contingency plan;
2. Cooperate to provide assistance to other parties to the convention in case of oil spill accidents;
3. Ensure that oil pollution incidents are reported to the competent authority and the International Maritime Organisation, as appropriate; and
4. Develop national preparedness capability to deal with oil spill incidents.

I would like to acknowledge the support of the International Maritime Organization (IMO) in the development of conventions, guidelines and capacity building to prevent, reduce or respond to emergencies. As a country, we have benefited from such assistance to develop capacity in oil spill contingency planning and the development of coastal sensitivity map.

Thus, under auspices of the IMO Ghana developed its National Oil Spill Contingency Plan in the later part of the 1980s and Environmental Sensitivity Map for the Coastal Area of Ghana in digital format with the financial assistance from the Fund for Danish Consultancy Services administered by, United Nations Operations Services (UNOPS).

Distinguished Ladies and Gentlemen; over the years the EPA through collaborative effort of its stakeholders such as the GI WACAF initiative by IMO and IPIECA has benefited and achieved a lot in terms of oil spill preparedness set out in the NOSCP. We have developed the policy on dispersant use, guidelines on the importation of dispersants, guidelines on management of oily waste and the environmental sensitivity atlas of the coastal area of Ghana.

The EPA, as the Designated National Authority Contingency responsible for executing the National Oil Spill Plan (NOSCP), has held a continuous stakeholder consultation meetings, trainings and exercises in order to keep personnel and the contingency organization in a state of readiness, with the last equipment exercise held in March 2017.

It is therefore my hope that during this period of the training workshop you will contribute to the review of the NOSCP taking into account the national and international developments, and also help the country to be in a state of readiness to meet any challenge in the event of pollution incidents by oil, hazardous and noxious substances.

Thank you

Annex 6 – Action Plan

Action Plan deriving from 2014 Workshop, as amended by 2017 Workshop

The workshop, in plenary, agreed the following revisions to the 2014 Action Plan:

Number	Task	Outcome	Responsible Party	Agreed Due date	Current (June 2017) Status	Revised Target Date (if required)
1	Create and establish a national steering Committee	Creation of an effective governance body responsible for the effective improvement and implementation of the NOSCP	EPA	End of June, 2014	The National Oil Spill Contingency Plan Steering Committee was formed and inaugurated on July 25, 2014. Completed	Completed
2	Create and establish Working Groups for the national steering committee	Have technically competent groups to support the revision and development of the NOSCP	Steering Committee	End of August, 2014	The National Oil Spill Contingency Plan working group was formed and inaugurated on October 31, 2016. Need to populate the working groups and identify key participants, considering staff turnover. Need to provide further training to the identified personnel. Consider any changes to the organization following this workshop. EPA to write to stakeholders requesting re-nominations of personnel.	End of 2017

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3	Sign a Memorandum of Understanding (MoU) between EPA, GMA, PC, NADMO in regards to cooperation and areas of responsibility in relation to the NOSCP	Recognising the legal mandates of the agencies this MoU will establish a framework of cooperation	EPA	End of October, 2014	<p>Memorandum of Understanding (MoU) signed on March 31, 2016 between EPA and the other member institutions represented on the working group in regard to cooperation and areas of responsibility in relation to the NOSCP.</p> <p>MOU now expanded to capture all relevant institutions. Need to complete all signatories. Some institutions awaiting Board approval, once their Boards are mandated.</p> <p>Need to consider the issues that are delaying institutions from signing, may need to revise MOU to remove/re-draft text.</p> <p>EPA ready to make presentations to individual stakeholders.</p>	End of 2017
4	Sign an MoU between EPA, GMA, GPHA, and Ghana Armed Forces in regards to operational responsibility in relation to the NOSCP	An effective operational response and coordination in the case of a major incident	EPA	End of July, 2014	<p>Memorandum of Understanding (MoU) signed on March 31, 2016 between EPA and other member institutions represented on the working group with regards to cooperation and areas of responsibility in relation to the NOSCP.</p> <p>Need to complete all signatories.</p> <p>Need to consider the issues that are delaying institutions from signing, may need to revise MOU to remove/re-draft text.</p>	End of Q3, 2017

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					EPA ready to make presentations to individual stakeholders.	
5	Revise the IMS within the NOSCP	Create an effective response system appropriate to Ghana's needs	Steering Committee	End of August, 2014	IMS revised on February 21, 2016 and included in the current NOSCP* Consider any revision, based on this workshop, and state clearly in the NOSCP	End of Q3, 2017 NOSCP to be issued, published and gazetted by end 2017
6	Identify agencies to lead/ participate in each IMS cell	To make the IMS effective	Steering Committee	End of August, 2014	This has been agreed and included in the signed MOU among stakeholder institutions. Consider any revision, based on this workshop, and state clearly in the NOSCP	End of Q3, 2017 NOSCP to be issued, published and gazetted by end 2017
7	Develop two area plans - West and East naval commands. To cover Ghana coastline and inland waterways	To strengthen operational efficiency	EPA	End of August, 2014	Not implemented The NOSCP is a strategic plan, these are "operational plans" (SOPs) and will describe how to respond, etc.	Draft to be ready by March 2018 Work to commence on completion of this workshop.
8	Reassess the reporting and alerting systems within the NOSCP	To strengthen operational efficiency	Steering Committee	End of August, 2014	This has been agreed and included in the signed MOU among stakeholder institutions.	As soon as possible.

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					<p>Revise to include the VTMS capabilities and consider how to interact with other potential command centres.</p> <p>Any technical difficulties to be addressed as soon as possible.</p>	
9a	Update of inventory of equipment available within Ghana	Gain an understanding of equipment available	EPA	End of June, 2014	<p>Implementation started in 2015.</p> <p>Gathering information on equipment available in country and applying this with a GIS/database.</p> <p>PC have gathered information on IOC's emergency response assets and will share with EPA.</p>	End Q3, 2017
9b	Establish audit and inspection of equipment available in Ghana	Ensure available equipment is correctly maintained and ready for application	EPA / Steering Committee	End of July, 2014	<p>The ToR for the operations working group under the NOSCP include the development of guidelines/procedures/checklist for auditing and inspection of equipment available in Ghana and those belonging to third party organizations with a valid agreement to provide equipment to the nation, eg. OSRL.</p> <p>Two stage process: differentiate between inspection (review) and auditing of equipment (with potential consequences), in line with the relevant permit conditions.</p>	<p>Physical auditing of equipment will commence in 2018.</p> <p>To complete initial round of inspections/auditing by end Q2, 2018.</p> <p>Thence, routine annual reviews.</p>

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					EPA to develop suitably experienced working group staff with knowledge and relevant audit guidelines.	
10	Commence development of an emergency fund for oil spill	Establish available financial resource for oil spill preparedness and response	MESTI / MOFEP	End of August, 2014	Discussions commenced in 2016 with a meeting with operators and some government institutions on the issue. A presentation was also made to GNPC management and a meeting with the Ministry of Finance. A proposal is currently being put together to consolidate the ideas and comments received during the consultation process.	Proposal to be finalized by December 2017.
11	Sign an MoU between industry and government regarding mutual aid and assistance	Agree on how industry can support government capability	EPA / Steering Committee	End of December 2014	Not yet implemented Consider how best this might be implemented, with reference to the approach by other countries, in the same position and include both personnel and equipment.	June 2018
12	Develop a programme of training for the Ghana response organisations	To strengthen operational efficiency	Steering Committee	End of September 2014	Each working group under the plan has clear areas of focus and thus, represents the training requirements envisaged in the plan. We are currently consolidating that with budget to be packaged in the proposal for funding over a 5-year period	December 2017

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					Key to establish a national capability and develop local capacity.	
13	Develop a programme of technical training for Steering Committee Working Groups	To strengthen operational efficiency	Steering Committee	End of October 2014	Each working group under the plan has clear areas of focus and thus, represents the training requirements envisaged in the plan. We are currently consolidating that with budget to be packaged in the proposal for funding over a 5-year period. Key to establish a national capability and develop local capacity.	December 2017
14a	Update current sensitivity maps to include new structures (identify high risk areas - including population centres)	Identify areas of risk and aid response operations	EPA	September 2015	Field work along the entire coastline of Ghana was completed in 2016. A consultant is currently working with the EPA team to update the maps with support from the Norwegian Oil for Development Programme.	End Q3, 2018
14b	Develop sensitivity maps for Volta lake	Identify areas of risk and aid response operations	EPA	December, 2016	Not implemented. Include in 14a (above). Programme split into offshore and internal waters.	End Q3, 2018
15	Develop a programme of exercises (for example: to include table top, communication, and deployment)	To strengthen operational efficiency	Steering Committee	End of September 2014	Implemented through the Marendia Project in 2016. Also implemented through Exercise Obangame Express that was conducted in March 2016 and March 2017 respectively.	Major exercise (with ENI) is planned for March 2018 (TBC) with equipment deployment.

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					<p>Need to build on previous exercises. Consider addressing this through the review of training requirements.</p> <p>Consider organizing an Oil Spill Conference in Ghana. Maybe to approach the Abidjan Convention.</p>	
16	Conduct a national tabletop exercise	To test operational preparedness	Steering Committee	June, 2015	<p>Implemented through the Marenda project in 2016</p> <p>Consider addressing this through the review of training requirements.</p>	Ongoing programme.
17	Develop a bilateral agreement with our neighbours (Cote d' Ivoire and Togo)	To strengthen preparedness	Steering Committee	End of 2015	<p>The process was unofficially initiated in February 2017 through the Marenda Project. The discussion considered a multilateral agreement between Togo, Ghana and Cote d'Ivoire in areas of equipment sharing and dispersant use.</p> <p>This process of engagement will continue.</p> <p>Consider utilizing GI WACAF trans-boundary working group during the Regional Conference (CDI – November 2017)</p>	2018
18	Update of the NOSCP	To conclude review of the NOSCP	Steering Committee	End of December, 2014	Last review was in 2015, but yet to be published.	End of 2017

Annex 7 – Workshop Photograph



THE GLOBAL OIL AND GAS
INDUSTRY ASSOCIATION
FOR ENVIRONMENTAL
AND SOCIAL ISSUES



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