

National workshop for the update of the national spill response system of Ghana

Accra, Ghana

12 -14 May 2026

REPORT



NOTE

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Presentation of the GI WACAF Project

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 partnership 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 national system for preparedness and response in case of 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. To prepare and implement these activities, the Project relies on the Project's network of dedicated government and industry focal points. Promoting cooperation amongst all relevant government agencies, oil industry business units and stakeholders both nationally, regionally and internationally is a major objective of the Project during these activities.

GI WACAF operates and delivers activities with contributions from both the IMO and eight oil company members of Ipieca, namely Azule Energy, BP, Chevron, ExxonMobil, Eni, Renaissance Africa Energy Company, Shell, Total Energies.



More information is available on the Project's website: www.giwacaf.net

Executive summary

Title of the event: National workshop for the update of the national spill response system of Ghana

Date of the event: 12 to 14 May 2026

Type of event: National workshop

Number of participants: 21

Venue: EPA Head Offices, Accra, Ghana

Summary:

This National Workshop on Oil Spill Contingency Planning brought together participants representing government agencies, the oil and gas industry, and other national key stakeholders.

The event was hosted by the Environmental Protection Authority of Ghana with the support of the GI WACAF Project as part of its ongoing mission to enhance preparedness and response capabilities in West, Central and Southern African countries, in line with the International Convention on Oil Pollution Preparedness, Response and Cooperation (OPRC 90) and the Protocol on Preparedness, Response and Co-operation to pollution Incidents by Hazardous and Noxious Substances, 2000 (OPRC-HNS Protocol).

The workshop aimed to address priority areas for the update of the current National Oil Spill Contingency Plan following the newly issued Environmental Protection Act 1124 – 2025 and Environmental Protection Regulations - 2025 (L.I. 2509).

The initial technical presentations and plenary discussions (day 1) provided an overview of contingency planning principles, response and monitoring techniques, strategies and response resources, as well as possible response management structures for different types of incidents.

During the second day of the workshop, participants split in working groups to address specific strategies, spill response organizations and management aspects for spills occurring at sea (Ports, shipping and Oil & gas offshore activities), on the shoreline and in freshwater environments (Lake Volta).

Participants were encouraged to critically assess the existing national response system set out in the current NOSCP and related documents and propose updates.

The event concluded with actionable recommendations for strengthening national contingency plans and enhancing collaboration among national entities and industry representatives.

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Introduction

Context of the workshop

Following the newly issued Environmental Protection Act 1124 – 2025 and Environmental Protection Regulations - 2025 (L.I. 2509), the Environmental Protection Authority has engaged in the full review of the National Oil Spill Contingency Plan (NOSCP) and requested the assistance of the GIWACAF Project to carry out an assessment of Ghana national response system and the preparation and facilitation of this activity.

A preliminary assessment of the Ghana response system was carried out prior the workshop in conjunction between the GI WACAF and EPA to identify to potential areas for improvement and to prepare the workshop.

Some of the main areas of improvement identified by this assessment included (not limited):

- The ratification of the OPRC-HNS protocol, Bunker 2001 Convention and other missing instruments.
- the understanding of pollution risks in the country (through the implementation of a comprehensive) risk assessment.
- the clarification of the roles and responsibilities of national stakeholders in the case of incident in terms of response management, the mobilisation and deployment of resources, etc.
- a full review of response organization and management aspects
- the extension of the coverage of the NOSCP to include the Lake Volta and freshwater environments
- The extension of the perimeter of the NOSP to include Hazardous and Noxious substance

For each sector of activity, the preliminary work also allowed to identify the key infrastructures, assets, activities and operators. The table below provides an overview of the incident types and responsible parties for the main sectors of activity.

	Key infrastructures and activities	Incident types
Maritime traffic and Ports	Main ports - Tema - Takoradi	- Shipping incident (collision, fire, grounding, sinking, etc.) - Bunkering incident at Port
Offshore oil / gas industry	- Jubilee field - Tweneboa Enyenra Ntomme Oil Field (TEN) - Offshore Cape Three Point (OCTP) - Pecan Energies	- Diesel spill from FPSO / MODU / supply vessels - Drilling incident (crude / gas / condensate) - Blow-out (rude / gas / condensate) - Subsea leak on well pads, manifolds (crude / gas / condensate)
Onshore and nearshore gas treatment, storage and distribution	- Atuabo Gas Processing Plant - Sanzule gas plant - OCTP and Jubilee field offshore pipelines	- Subsea gas / condensate leak on pipeline - Onshore leak on gas pipeline - Gas / condensate leak at storage facility
Oil refining, storage and transport	- 1x Refinery in Tema - Oil depots - 349km inland pipeline - Road transport of fuel by tanker trucks	- Leak / failure of storage tanks - Road accident involving tanker truck - leak on pipeline - leak during loading / unloading at oil depot
Fuel storage and transport on Lake Volta	- Fuel oil storage and loading at Okosombo (South) and Buipe (North) - Transport by barge on Lake Volta	- Incident on barge (collision, sinking, grounding, etc.) during shipment of fuel on Lake Volta - Incident during loading (at Okosombo) / unloading (Buipe)

Note. HNS incidents were not addressed in the preliminary Study.

Note. Abbreviations used in this document are explained in Annex 6.

Objective of the Workshop

This technical workshop aimed to launch the NOSCP revision process with all national stakeholders involved in preparedness and response activities to HC and HNS incidents.

The specific objectives were to :

- Establish a shared understanding of Ghana's current oil spill preparedness and response framework, including recent regulatory developments and an overview of the risk of HC or HNS incidents in Ghana.
- Discuss and assess possible response options to various oil spill scenarios (offshore, shipping-related, ports, inland and freshwater) through structured, multi-stakeholder Working Groups, including the extension of the coverage to include Lake Volta.
- Review and consolidate the response strategies, incident management arrangements, national response structure and resource mobilisation options, drawing on international good practice and Ghana-specific conditions, considering the various spill scenarios discussed.
- Gather consolidated technical feedback from stakeholders and experts to inform the content and orientation of the revised National Spill Contingency Plan (NSCP).
- Identify preliminary directions for strengthening the national oil spill response system, based on working group outcomes and workshop discussions.

Programme: please see [Annex 2: Programme](#).

Venue: Environmental Protection Authority Head Offices - P. O. Box M.326 - Ministries Accra, Ghana

Participants: please see Annex 4

Activities and presentations

Note. A USB key containing the workshop presentations and other relevant support material was distributed by the GI WACAF coordinator at the end of the workshop.

Day 1 – Technical presentations and discussions in plenary

Opening

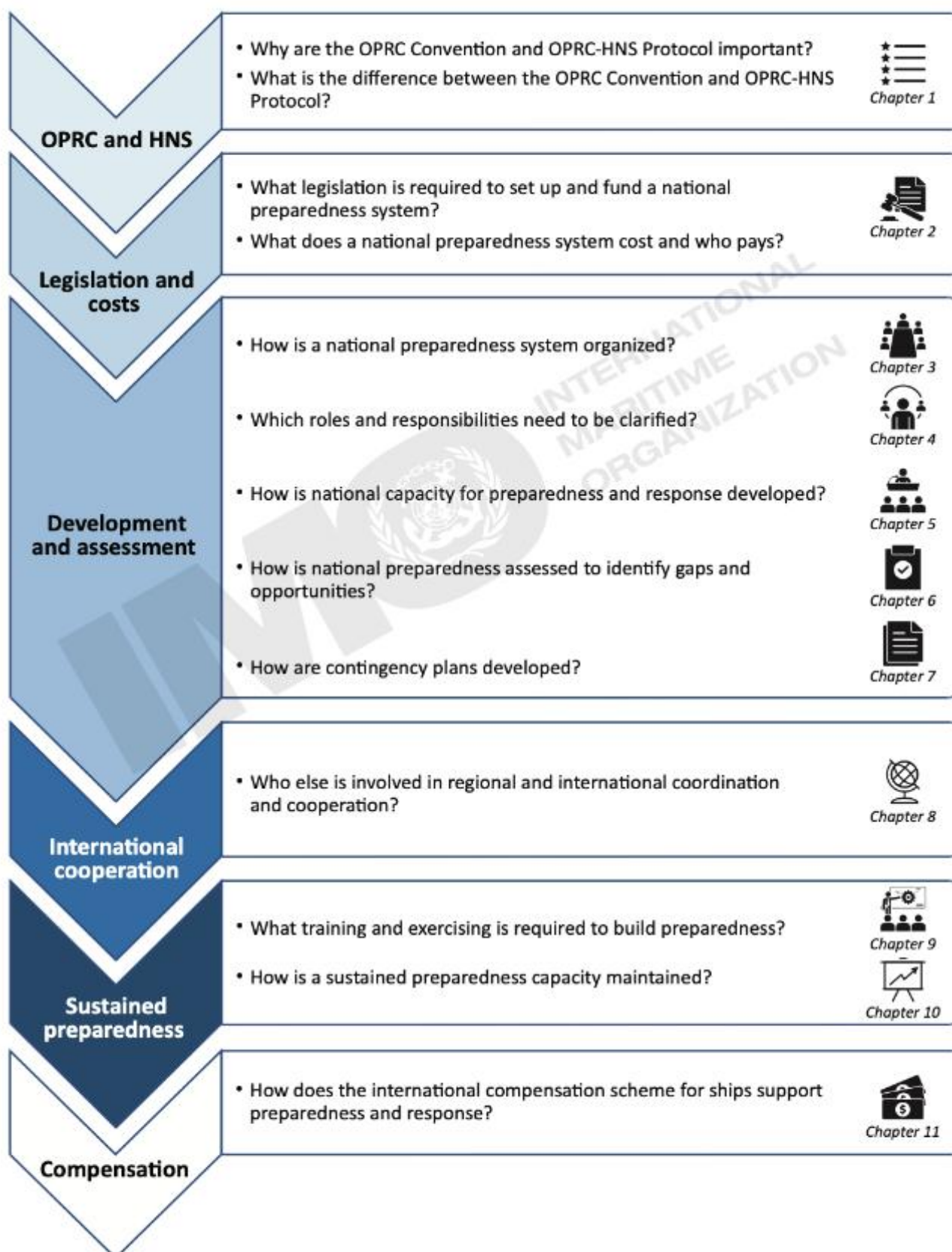
The opening address were given by Professor Nana Ama Browne Klutse, Chief Executive Officer, EPA and Marine Laigle, GI WACAF coordinator (Annex 1: Opening speeches).

Session 1: Introduction and objectives

By Marine Laigle, GI WACAF coordinator

Marine Laigle reminded the context and the objective, the previous activities organised in the region and in Ghana with the support of the GIWACAF Project and outlined the methodology to build a robust national oil and hazardous substance spill response system based on the IMO Guide on the implementation of the OPRC Convention and OPRC-HNS Protocol (2020).

The main steps were reminded as follows :



Session 2: Key elements of a national response system

By Romain Chancerel, GI WACAF Consultant

This presentation outlined the main components of a National Oil Spill Response System, covering the legal framework, response and monitoring strategies, organization and management principles, resource planning, and preparedness and governance aspects.

It was reminded that while Ghana has ratified some the key IMO instruments (OPRC 90, MARPOL, CLC 92, FUND 92), other instruments are yet to be ratified including the FUND 2003 (to increase the limit of compensation for a tanker spill), the LLMC Convention (to extend compensation to other types of damages), the salvage Convention, the OPRC-HNS 2010 (to extend the OPRC to HNS incidents) and Bunkers Convention (compensation regime to non-tanker oil spill incidents).

The key provisions of the national Legislations and Regulations were also reminded with particular attention brought to the Environmental Protection Act 1124 – 2025 and Environmental Protection Regulations - 2025 (L.I. 2509), both released in 2025 and placing a central role on EPA to coordinate preparedness and response activities.

The main provisions of the current National Oil Spill Contingency Plan (V.6.0) were also reminded as well as other related documents such as the Inter-Agency Agreement, the national dispersant policy, the Environmental Sensitivity Atlas, etc. It was also suggested that the national response system would benefit from the (re-) development of other documents, such as oil spill waste management guidelines, oiled wildlife management guidelines, shoreline clean-up and aerial surveillance guidelines, etc.

The presentation emphasized the need to have a national incident management structure covering all levels of management from the coordination of intervention teams on the scene of the operations to top-level managers and politics at the ministerial level. It was also reminded that in the case of a major oil & gas incident, the IOC would mobilise their own response systems which will interface with the national response system.

The presentation further emphasized on the central role of the national authorities in the management of information (i.e. in the development of a “Common Operating Picture”), including pre-spill (maps, inventories, plans and procedures, etc) and spill-generated information and documents (incident, weather, impacts, response, etc.).

Session 3: Overview of Ghana national response system

By Larry Kotoe, Environmental Protection Authority / Petroleum Department

The representative from EPA/Petroleum Department, provided an overview of the national response system of Ghana including the provisions of the current National Oil Spill Contingency Plan (NOSCP, V 6.0, 2020) and associated documents, the role and responsibility of national stakeholders from the public and private sectors, the current national response structure and the national training programme.

The presentation also reminded the central role of the Environmental Protection Authority for the coordination of preparedness activities as well as the management of pollution incidents as stated in the Environmental Protection Act 1124 – 2025 and Environmental Protection Regulations - 2025 (L.I. 2509).

The expectations from EPA regarding this workshop and the upcoming work to update the NOSCP were also presented such as the intention to extend the scope of the NOSCP to include Hazardous and Noxious Substances (HNS) and midstream inland activities, e.g. the storage and transport of HC products by trucks or barges on Lake Volta).

Note. EPA indicated that “downstream” activities (e.g. spills occurring at gas stations) would not be included in the scope of the NOSCP.

This session was followed by a Group Picture (Annex 5: Group Picture) and a lunch break

Session 4: Response and monitoring strategies

By Romain Chancerel, GI WACAF Consultant

Building on case studies, this presentation outlined monitoring and response strategies at sea, on the shoreline, inland and freshwater environments. The presentation provided an overview of the main response techniques at sea (mechanical mixing, chemical dispersion, containment & recovery, in-situ burning), as well as protection and clean-up techniques on the shoreline, inland and freshwater environments. The presentation also reminded the importance of oil characteristics and behavior on the definition of response techniques throughout the duration of response operations. The need for a national dispersant policy that enables swift action was highlighted, since crude oil spilled at sea can only be effectively dispersed within a short time window.

The presentation also covered the main monitoring, detection, modelling and tracking and guiding techniques at sea including direct observation and aerial surveillance (using the Bonn Agreement Oil Appearance Code BAOAC to assess spilled volume), remote sensing (satellite imageries), fluorometry (to monitor dispersion effectiveness), GPS (AIS) tracking systems (buoys), drones, infrared cameras, oil behaviour and trajectory modelling tools,

The three main phases of the response on the shoreline and terrestrial environments were also reminded, namely immediate source control and protection; gross recovery and clean-up; and post-spill activities including waste management, environmental monitoring and restoration. The presentation emphasized the central role of authorities for the assessment and monitoring of shoreline contamination and the progress of clean-up operations through the implementation of a robust shoreline/inland Clean-up Assessment Techniques procedure.

Session 5: Incident Management Systems

By Lindsay Page-Jones, GI WACAF Consultant

The consultant reminded the key principles for the implementation of an effective incident management systems, including the definition of the levels of incident (based on the severity of the incident and level of mobilisation required, e.g. “Tier levels”), the designation of national competent authorities (as per the Convention OPRC 90, in Ghana: EPA and other key national authorities – depending on the type and source of the incident) and responsible parties (e.g. Ports, operators, upstream and midstream), response capabilities and resources (equipment, personnel and logistics).

The presentation emphasized on the importance to clarify the respective responsibilities and channels of national stakeholders for alert (verbal) and notification (written), 1st response onsite, the management of initial operations, the escalation of the response, the mobilisation of assistance, overall incident coordination, the management of maritime traffic, fishing ban, circulation, liaison with communities, waste storage, customs, Immigration, crisis management, media management, etc. taking in consideration the type, volume and the origin of the incident.

The presentation further emphasized the different levels necessary in a national response structure, from the response operations on site by the intervention teams all the way to the head of State in the case of a major spill incident. The consultant reminded that the national organization should be in line with the State organisation, the administrative territorial organisation and integrated with the existing national emergency/ disaster organization(s) (i.e. as stated in the NADMO Act.)

The consultant also emphasized that the national response structure should be scalable to adapt to any spill magnitude (from minor to catastrophic spill), flexible to adapt to any spill type of incident & location and modular to adapt to the type of responsible party involved. Competent personnel should be officially designated at the key positions, with clear roles & responsibilities.

This was illustrated by examples of national response organizations set out in other countries including Cameroon, Senegal, South Africa and the United States.

The consultant also stressed that a distinction should be made between the coordination of operations at sea (based on GMA / Ghana Navy structural organization) and of shoreline operations (based on the territorial administrative network: Regions and Districts) or Lake Volta.

The principles of the IMS organization with the 5 key functions: Incident Commander, Planning, Operations, Logistics and Finance, were reminded as possible organization amongst others for the national and regional levels although it might be more adapted at the regional level for the day-to-day management and coordination of response operations. The national overall coordination requires other functions, more focused on supporting, planning sufficiently forward and coordinating the involvement of the different national agencies (rather than the direct command of operations)..

Day 2 – Oil spill scenarios (in plenary and working groups)

The second day of the workshop focused on possible oil spill scenarios developed by the consultant to engage with the different stakeholders on response strategies, national organisation and management aspects.

Session 6: “small” spill scenarios – discussed in plenary

The second day of the workshop started in plenary session with the rolling-out of two ‘small’ (Tier 1) scenarios as case studies to set in practice the points presented and discussed during the first day of the workshop. Discussions were articulated around the following questions:

- Define rapid tactics, type & level of resources to engage, duration & geographic extent of operations.
- Who alerts who?
- Who evaluates & confirms the level of incident?
- Who commands on the scene of operations?
- Who is initially in charge of the 1st intervention on site?
- Who secures the site?
- Who is overall in charge?
- Who carries out response operations?
- Who evaluates risks and proposes tactics?
- Who provides resources (personnel + equipment + logistics)?
- Who collects waste?
- Who interfaces with responsible party?
- Who does clean-up assessment surveys?
- Who carries out environmental monitoring?
- Who assessed health risks for local populations?

Scenario 1 (inland): Tanker truck accident occurring at N6 – Accra – Kumasi Road between Konongo and Nabewan, Asante Akim Central District, with 20 m³ of automotive diesel oil spilled on the road and some runoffs into a small stream (figure below)



Scenario 2 (Oil on the shoreline): the second scenario was the oiling of Kpone beach (Tema District) along approximately 1 km. The origin of the spill was not known to trigger discussions on the responsibility of initiating response operations.



The following questions were used (in addition to the initial questions) to engage discussions with the participants:

- Who carries out oiled shoreline surveys? Sampling + Lab.?
- Who proposes clean-up priority areas? Clean-up techniques? Endpoints? Decides?
- Who decides Nbr, location & resources of clean-up worksites?
- Who 'does the job' on site? Supervisors, leaders, workers?
- Who provides response equipment? Sorbent?
- Who provides non-specialized equipment, PPE?
- Who provides Com's equipment?
- Who provides Facilities (staging, IC post, shelter...)?
- Who provides transport land-sea + fuel?
- Who provides catering?

- Who provides medical support?
- Who coordinates waste: transport, storage, tracking, treat? Who 'does'?
- Who manages/ coordinates oiled wildlife?

Session 7: “Intermediate” spill scenarios – discussed in working groups

After the coffee break (at approx. 11:20 am), the participants split into three working groups facilitated by the GIWACAF coordinator and the two GI WACAF consultants

For this session, the objective was to develop the response and monitoring strategies and to determine the responsibility for initial actions (first 24 hours) and the subsequent management operations (few days, weeks).

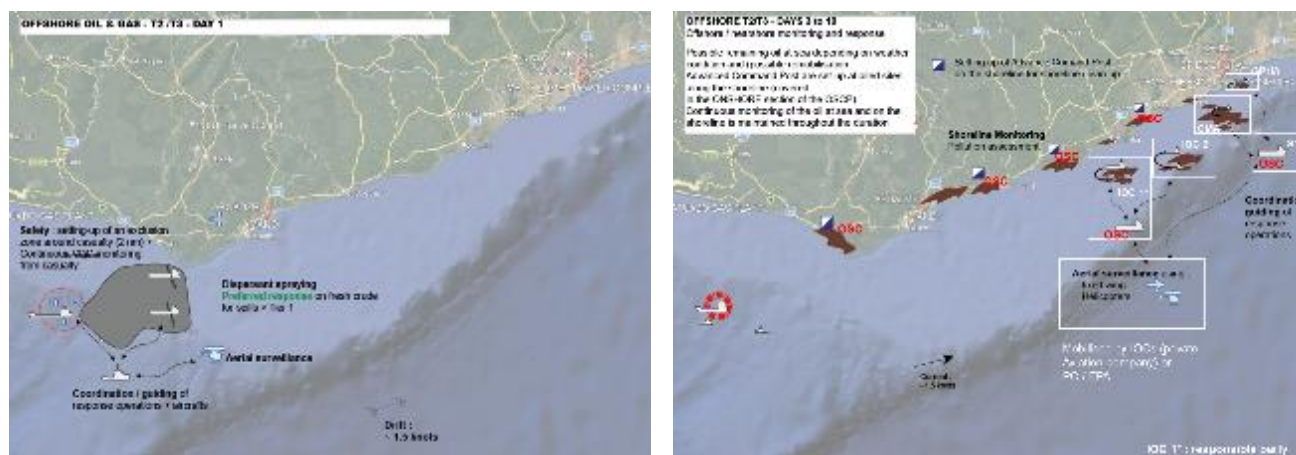
Working group 1: Oil & gas

Facilitator: Romain Chancerel, GI WACAF Consultant

Participants: EPA, ENI, Tullow, Petroleum commission, Minister of Energy, Ghana National Petroleum Corporation (GNPC), Ghana Petroleum Mooring Systems (GPMS), Ministry of Environment, Science and Technology (MEST) and Ghana Navy.

Scenario: Offshore oil spill incident (Intermediate / major): Spill during transshipment from FPSO to export tanker– 35 nautical miles offshore - Light crude oil: estimated 400-500 m3 spilled at sea (according to operator) - IOC has mobilised monitoring and response resources

Possible representations of oil spill extent and resources deployed by the IOC and national response entities initially (left) and during days 3-10 (right) was provided to the group as follows:

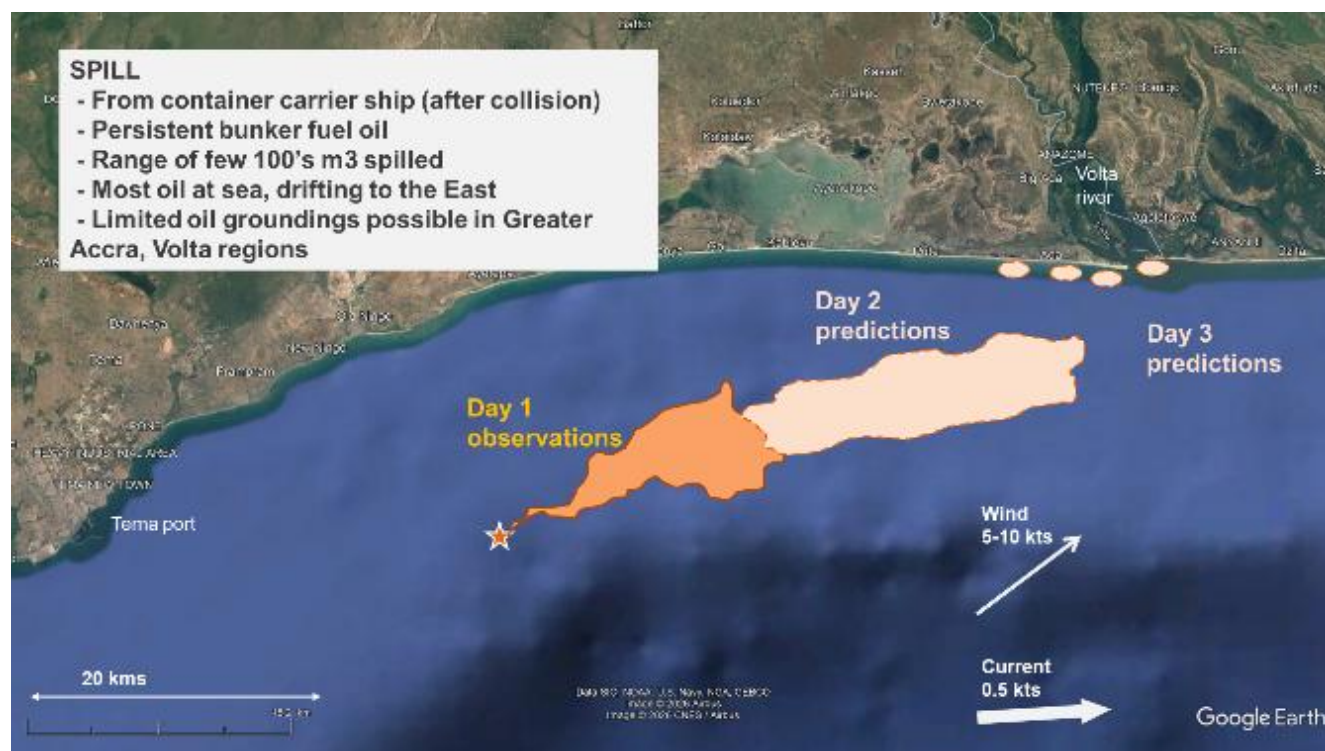


Working group 2: shipping and Ports

Facilitator: Lindsay Page-Jones, GI WACAF consultant

Participants: EPA, Ghana Ports and Harbours Authority (GPHA), Ghana Maritime Authority (GMA), Zeal Environmental Technologies Limited, Zoil Ghana Limited (oil and hazardous waste management company), Wildlife and Human Resources Organisation (WHRO), Ministry of finance.

Scenario : Spill from container carrier ship (after collision) - Persistent bunker fuel oil - Range of few 100's m3 spilled - Most oil at sea, drifting to the East - Limited oil groundings possible in Greater Accra, Volta regions



Working group 3: Inland / freshwater incidents

Facilitator: Marine Laigle, GI WACAF coordinator

Participants: EPA, Fishing Commission, NADMO, Volta Revenue Authority (VRA), Wildlife (?), Ghana Ports and Harbours Authority (GPHA), Ghana Maritime Authority (GMA) and the Ministry of Local Government, Chieftaincy and Religious Affairs (MLGRCA)

Scenario: leak at Akosombo terminal during loading operation of diesel on the barge. Oil in the lake (approx. 50- 100 m3 of diesel) caused by a failure of the cargo transfer hose. Oil drifting on Lake Volta to the Northeast.

The extent of initial oil contamination on Lake Volta was provided as follows.



Day 3 – Oil scenarios – Plenary sessions

Session 8: Feedback from the working group:

The group rapporteurs provided general feedback of each working group in plenary session, followed by discussions and exchanges with the rest of the participants and GI WACAF facilitators.

Session 9: “Major” spill scenarios

Following the feedback from the working groups, the consultants rolled out 2 “major” (Tier 3) spill scenarios, including a blow-out scenario from oil & gas installations offshore and spill on lake Volta from a barge.

Blow-out Scenario: Blow-out incident occurring at the well head of IOC offshore installation located approximately 35 nm off the coast of West Ghana, resulting in continuous release of fresh crude at sea, significant shoreline impacts on all four Ghana coastal regions, as well as Togo territorial waters and shoreline.

The main objective of this session was to address the specific challenges related to a blow-out, such as the scale (“Tier 3 spill every day for several days / weeks”) and the organization of response resources “by zone” to respond to the continuous arrival of fresh crude oil at the surface, whereby:

- **Zone 0:** subsea well intervention (including possible subsea dispersant injection), oil surfacing area, with strong evaporation. “No go / no active response” zone and continuous VOC monitoring
- **Zone 1:** fresh “dispersible” crude where chemical dispersion by vessels and aircrafts should be considered as the preferred response techniques
- **Zone 2:** emulsified crude, not dispersible, where containment and recovery should be used using high sea, heavy duty equipment.

- **Zone 3:** highly weathered, residual oil with possible containment and recovery operations using equipment adapted to highly weathered, viscous products.

A possible representation of the extent of the contamination was provided to the participants to guide them during the discussions (below).

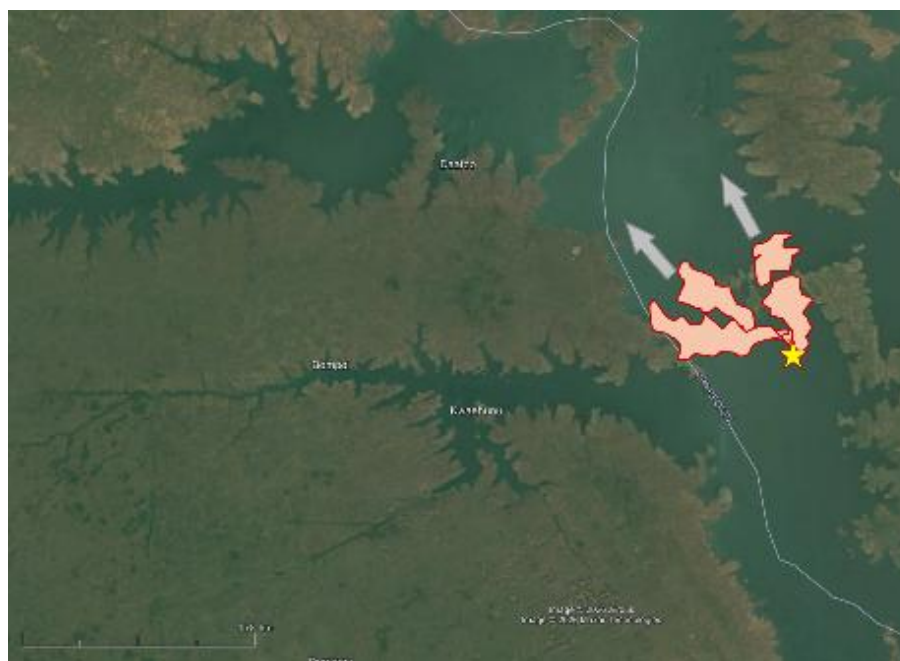


This scenario was designed to consolidate discussions started on the previous days on the national response structure at sea and on the shoreline, the interface between national entities and IOCs' response organization, as well as international cooperation mechanisms (e.g. alert, notification and communication with other countries affected by the spill).

A possible national response structure was proposed and discussed during the session (provided in the key findings section of the report).

Scenario: barge capsizes on lake Volta. Shipping incident on lake Volta resulting full loss of Diesel inventory of a fuel tanker barge in transit from Akosombo to Buiepe. The incident was located at Oti Region – Volta Lake, Ghana with an estimated spill volume of 500-700 m³ and prevailing winds from the South (5 knots).

The pollution affected remote Digya national park, Bon East and Oti regions (see figures below).



This scenario allowed to address specific response strategies for this type of environment and this type of HC product, logistics challenges (difficult / almost impossible land access to certain sections of the shoreline), the interface with remote local communities.

Building on previous day discussions during the rolling out of the “intermediate” scenario on Lake Volta (at Akosombo), this scenario allowed consolidating a possible response organization for this incident at the different level of the management structure (see structure in the key findings section of the report).

Session 10: Feedback from the GI WACAF consultants

The GI WACAF consultants provided their feedback regarding the workshop and identified priority areas for the improvement of the national response system and the upcoming revision process of the NOSCP.

These recommendations are summarised in the “Recommendations from the GI WACAF” section of the report (below).

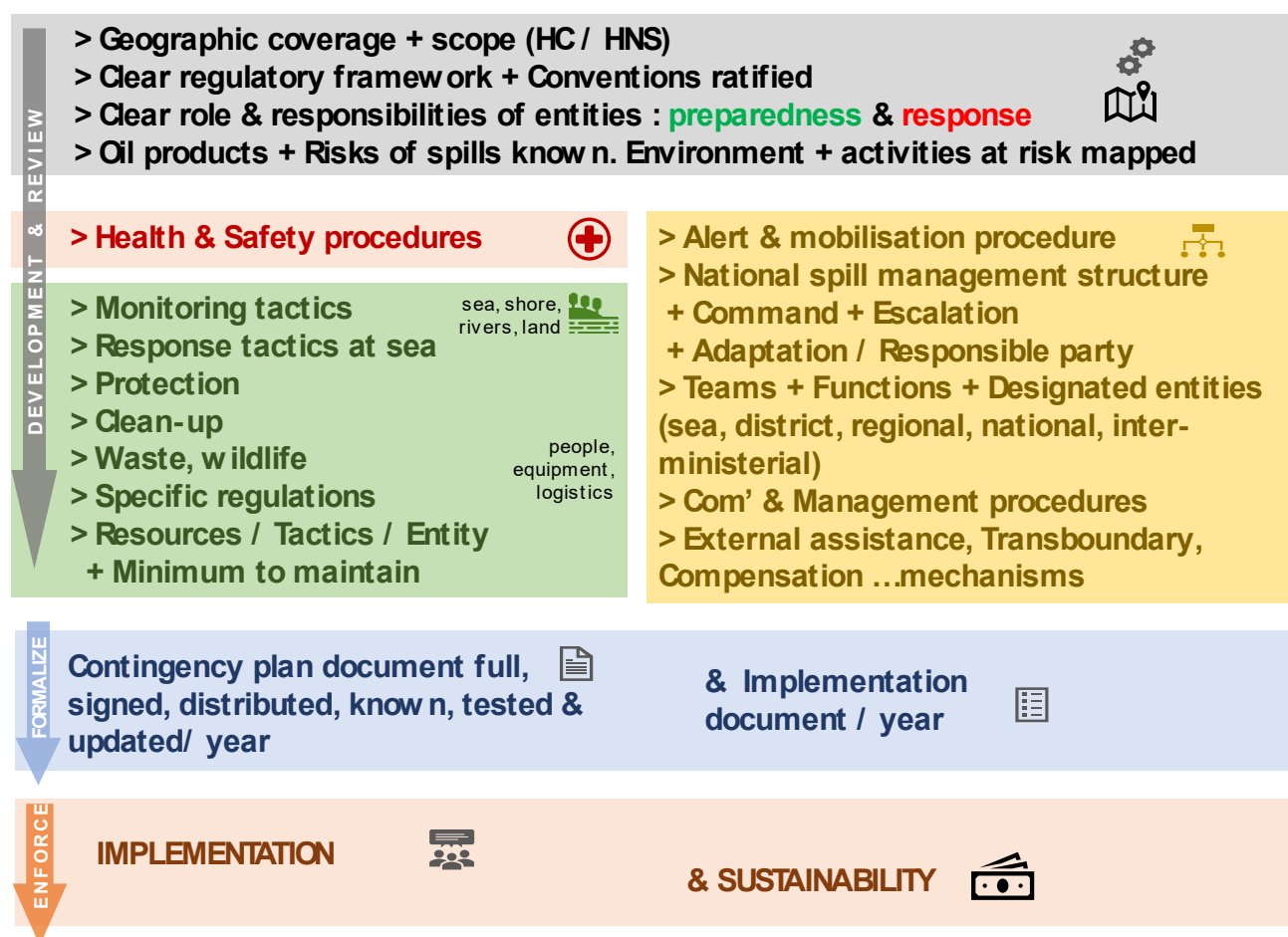
Closing ceremony

Closing remarks were given by George K. K. Diawuoh EPA / Director of Petroleum and Marine Laigle, GI WACAF coordinator (Annex 3).

Key findings & feedback from participants

Contingency planning process

The figure below is a reminder of the contingency planning process that was presented by the GI WACAF consultants during the workshop.



Structure & content of the NOSCP document

While the general structure of the NOSCP which makes a distinction between preparedness and response is relevant and should be kept in the updated document, this distinction should also be clear in the various sections and content of the document.

Note. A full review of the NOSCP document as well as a proposed structure of N(O)SCP to consider for the revision process was provided by the GI WACAF to EPA in in separate documents following the workshop.

Alert, notification and mobilisation

The alert and notification procedure was discussed during the working group sessions for the different types and location of incidents. The table below summarizes the outcomes of these discussions which should be taken into consideration (and further discussed) during the revision process.

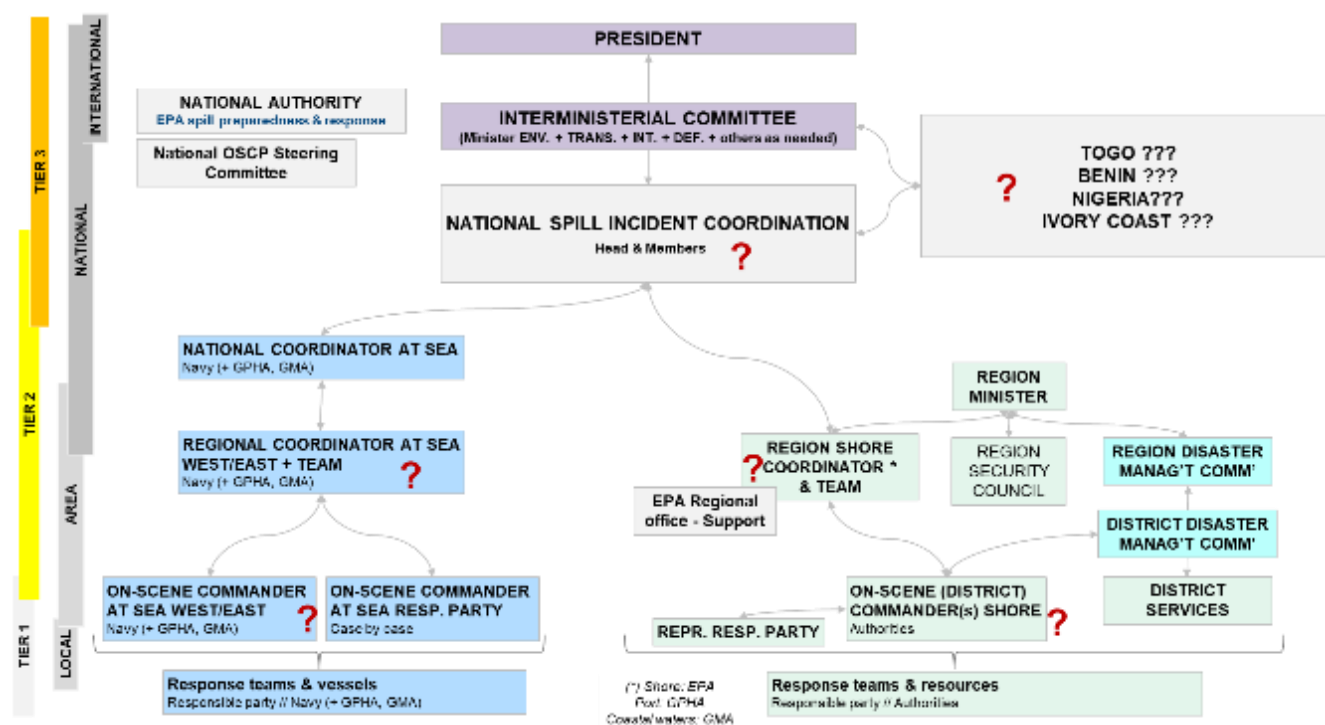
	Shipping at sea	Oil & gas (offshore)	Inland (depots / refinery / pipeline)	Inland road traffic	Freshwater (Lake Volta)
Alert (within* 2 hours) (by email / phone, VHF, etc.)	Captain => MRCC	IOC => MRCC (GMA) + EPA + PC	Midstream operator => GNFS (+ EPA ?)	Witness / truck driver => GNFS	VLTC => (GMA (MRCC?) / GNFS / EPA? / Ghana Navy / VRA)
Notification (within* 24 hours) (POLREP / formal)	MRCC => GMA + EPA + Navy + Airforce	IOC => MRCC (GMA) + EPA + PC	GNFS => EPA / District services	GNFS => EPA / District services => RSC (?)	VLTC => Ghana Navy
Assessment (helicopters, modelling, etc.)	GMA, Air Force, EPA	IOC + EPA + PC	Operator + GNFS ? EPA + Air Forces ?	N/A	VLTC + GMA + EPA + District Ser
Mobilisation at sea / Volta Lake	GMA, GPHA (+IOCs?)	IOC 1 + IOC 2	N/A	N/A	VLTC + GMA
Mobilisation shoreline	District Services + EPA (support / SCAT)	IOC + District services + EPA (support / SCAT)	Operator + District services + EPA (support / SCAT)	GNFS + District Services + EPA (support / SCAT)	VLTC + EPA + Waste management Cpy +

National response organisation

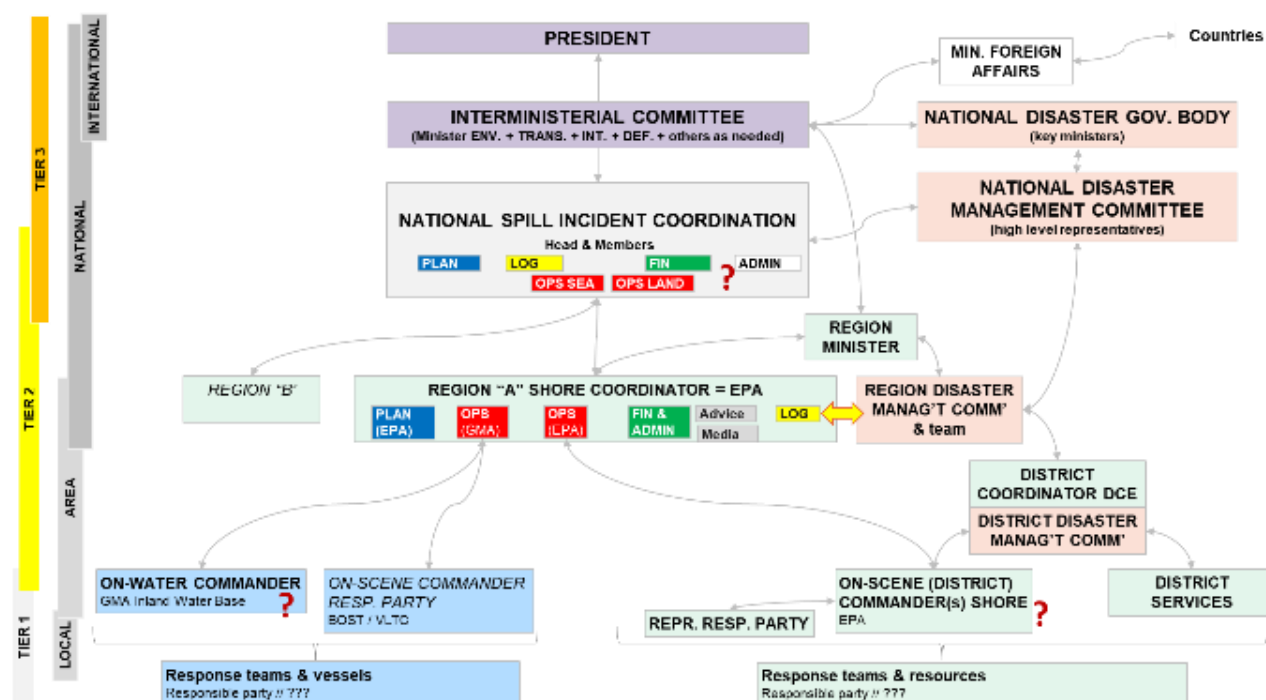
The national response organisation should be reviewed with a clear distinction to be made between response at sea and response on land / on the shoreline.

The following figures present possible national response structures discussed during the working group sessions for major spill incidents occurring at sea (top figure) and on Lake Volta (bottom), both with impacts on the shoreline.

Possible response organization for a major incident occurring at sea with impact on the shoreline:



Possible response organization for a major incident on Lake Volta with impact on the shoreline :

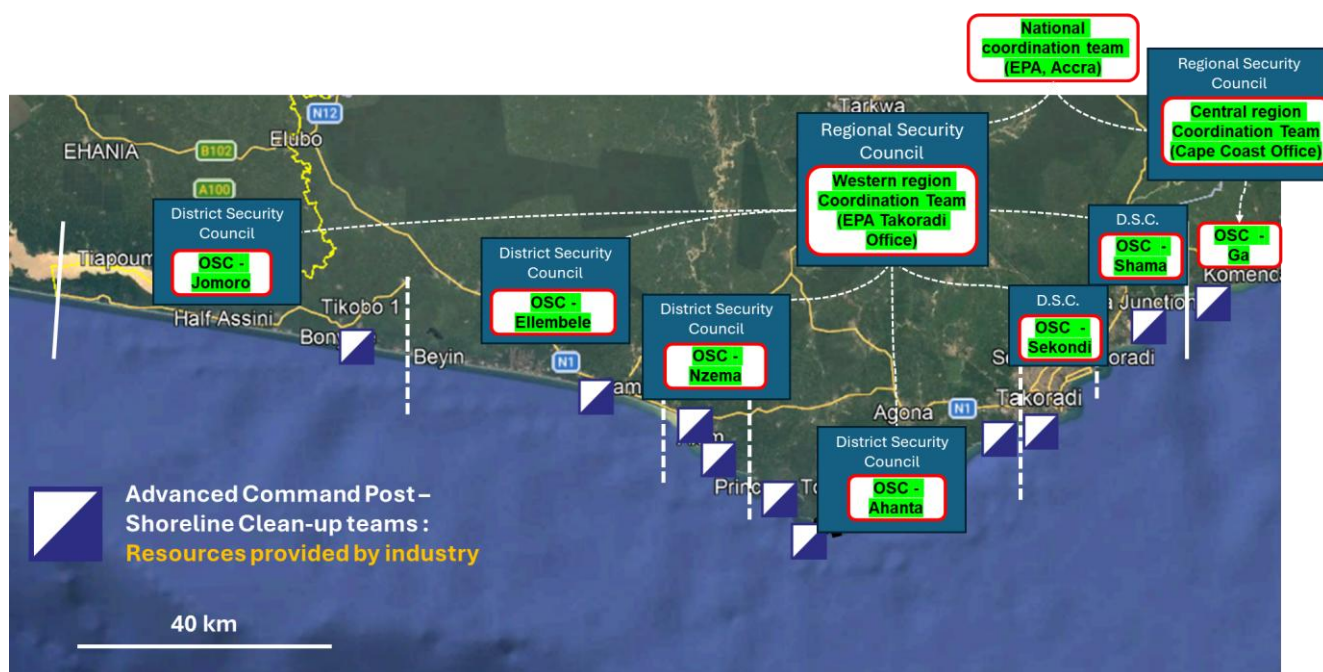


Response coordination at the different levels of the management system

The discussions during the workshop emphasized on the lack of clarity on the role and responsibility of the various stakeholders at the different levels of the management structure, including:

- The inter-ministerial coordination during a major spill incident, in particular for the support to the national coordination team and crisis management aspects.
- At the national level: the central role of the EPA (as per the provision of the EPA Act) was reinstated but it was not clear who takes charge of the key positions with the national coordination team for the different types of incidents.
- Interfaces/ synergies with other national entities, e.g. (1) interface with the structure set out by the responsible party to respond to the incident, or e.g. (2) the National Disaster Management structure (supporting impacted communities?).
- Coordination at sea: no clear organization of monitoring and response operations at sea for oil and gas or shipping incidents was identified during the workshop. In particular, the respective role of GMA and Navy should be clarified.
- Coordination on the shoreline: it was proposed that local response structure should follow the territorial administrative framework (Region / District/ Municipalities) but roles and responsibilities among local administrations should be clarified.

The figure below presents a possible representation of shoreline response organization for a spill affecting the Western and Central regions, whereby an On-Scene Commander is in charge of coordinating response operations at the district level and reports to the regional coordination teams (which in turns reports to the national coordination team)



Response capabilities

The workshop allowed to identify some gaps in terms of response capabilities and on the overall role and responsibilities of the responsible party for the mobilisation of response resources for major spill incidents.

Recommendations

This section captures the key recommendations from participants captured during the workshop, and recommendations from the GI WACAF team.

RECOMMENDATIONS FROM PARTICIPANTS

Recommendations to the key competent ministries (in charge of Environment, in charge of Transport & Maritime Affairs, in charge of Petroleum activities)

- Support the efforts of the respective services in charge of HC & HNS spill preparedness and acknowledge the extension of the coverage of the NSCP to include terrestrial and freshwaters environments as well as HNS (and rename the document from NOSCP to NSCP).
- Ensure the timely ratification of the relevant conventions and their transposition in national laws (OPRC HNS 2000, HNS 2010, Bunker 2001, LLMC 96, SUPPLEMENTARY FUND).
- Ensure sufficient human, financial, technical, logistical resources are allocated to oil & HNS spill preparedness in Ghana for the key national agencies. And designate officially the persons (or positions) in charge of oil spill preparedness and specifically of producing a reviewed NSCP.
- Ensure a capacity building programs are developed
 - General capacity building for Ghana, based on the updated organisation, functions at national & regional levels, and entities/ positions officially designated
 - Specific program, within EPA/ Petroleum department to set-up minimum knowledge regarding oil & HNS spill, and regarding contingency planning.
- Ensure a “NSCP implementation document” is defined, with a yearly program of activities, indicators, timelines, responsibilities and budget. for an effective implementation of the reviewed NSCP in collaboration with the industry.
- Encourage a real and effective technical collaboration between the different ministries, agencies and administrations for the full review & update of the NSCP and effective preparedness.
- Ensure the NSCP is fully reviewed and approved before end of 2027, and roles and responsibilities are clearly defined at local, regional and national levels.
- Set-up an effective inter-ministerial collaboration for preparedness, and for response.
- Develop the collaboration with neighbouring countries.

Recommendations to the Environmental Protection Agency (EPA), Ghana Maritime Authority, and other key technical stakeholders for oil spill preparedness & response in Ghana

- Core team to produce an update of the NSCP and working groups to be clarified.
- Build capabilities & secure human resources or oil/ HNS spill preparedness and response.
- Collaborate technically with the other key agencies.
- Set-up a working process for the NSCP update
- Understanding and mapping of risks on the whole national territory.
- Define realistic response tactics at sea onshore and inland.
- Review dispersant use policy.
- Define a real & operational response organisation, covering all types/ magnitudes, locations of possible HNS/ oil spills and specifically:
 - Clarify command on site
 - Support & coordination at regional level

- Functions needed?
 - Designated entities/ positions?
- Support & coordination at national level
 - Functions needed?
 - Designated entities/ positions?
- Note. Avoid copying/ pasting of IMS general guidelines.
- NSCP documents to be fully updated
- Review sensitivity maps (realistic & practical...)
- Define minimum requirements for ports, O&G industry offshore, terminals, oil / HNS handling facilities.

Recommendations to the O&G industry in Ghana

- Continue to exchange and collaborate with authorities....
- Support the update process of the NSCP (provision of information, maps, inventories, response organisations interfaces, etc.).

Recommendations to the GI WACAF

- Continue to support technically the preparedness effort in Ghana.

RECOMMENDATIONS FROM THE GI WACAF TEAM

General considerations

- Consider renaming the National Oil Spill Contingency Plan (NOSCP) into National Spill Contingency Plan (NSCP) to account the integration of HNS in the scope.
- Ensure compliance with IMO Conventions and Protocols, national legislation and Regulations and international best practices in the field of preparedness and response to pollution incidents.

Governance

- Designate personnel in charge of the update of the NSCP amongst EPA and other relevant national entities.
- Review document control for the NSCP and associated document (who is in charge? with whom? update frequency? etc.).
- Clarify the role of the NSCP Steering Committee and Working Groups.
- Investigate the possibility to set up a sustainable funding mechanism for preparedness and response activities.
- Review the glossary and abbreviation to ensure consistency with national legislations and regulations.

Preparedness

- Consider ratifying SUPPLEMENTARY FUND 2003, BUNKERS 2001, LLMC 96, HNS Prot 2010, HNS 2010 and ensuring the correct transposition of these conventions in the national laws.
- Consider setting up sectorial working groups (e.g. oil & gas, shipping and port, midstream activities and trans-sectorial working groups) with designated personnel, a scope of work, and a budget for the implementation of a work programme.
- Define the key HNS and HC representative spill scenarios to ensure that the national response system is adjusted to pollution risks in Ghana. Note: the current NOSCP states that this risk assessment should be carried out every 10 years (as per NOSCP 2020). This assessment should

be carried out in addition to continuous risk tracking by EPA in conjunction with the respective operators and relevant national authorities.

- Update / review of the Environmental Sensitivity atlas to ensure it is in line with the IMO / Ipieca Guidelines and include tactical maps for the implementation of protection and clean-up techniques at priority sites identified along the shoreline.
- Ensure the setting up of adequate resources by the responsible parties, consider including minimum requirements and the development of Tiered response capabilities.
- Ensure the regular testing of the NSCP through exercises.
- Consider the development of shoreline clean-up assessment guidelines and build capacity amongst designated members national response structure (EPA and other entities) for the consistent monitoring of clean-up operations on the shoreline / inland.
- Consider the development of aerial surveillance guidelines and build capacity amongst designated members of the national response structure (including, EPA, GMA, GPHA and other entities) to ensure consistency for the quantification of oil spill at sea.
- Consider development bi-lateral (e.g. Ghana / Togo) or multi-lateral (e.g. CI / Ghana / Togo / Nigeria) assistance mechanisms for the consistent and standardised formulation of offers and requests of assistance.

Incident management and organization

- Develop of a clear national response structure at all levels of the management based on the discussions during the various sessions.
- clarify the role of Ghana Maritime Authorities and Ghana Navy in the coordination of response operations at sea.
- Consider setting-up Emergency Fund (Note. National emergency fund set-out by NADMO Act 2016).
- Clarify the interface of the national response structure with the operators at the different levels of oil spill response operations.
- Develop specific job ticket in the national IMT for key positions identified in the national response structures.
- Clarify alert and notification procedure (including reporting requirements, timeline, content of notification documents, etc.)

Annex 1: Opening speeches

Professor Nana Ama Browne Klutse, Chief Executive Officer, EPA

Distinguished Participants, Consultants from GI WACAF, Invited Guests, Ladies and Gentlemen, On behalf of the Environmental Protection Authority, I warmly welcome you all to this important workshop on the review of Ghana's National Oil Spill Contingency Plan (NOSCP).

I wish to particularly welcome our consultants from the Global Initiative for West, Central and Southern Africa (GI WACAF) joining us from France and the United Kingdom and thank them for their continued technical support towards strengthening Ghana's oil spill preparedness and response systems.

As Ghana's petroleum and maritime sectors continue to grow, with increasing offshore petroleum activities, marine and freshwater transportation, and the onset of oil and gas activities within Ghana's onshore basin, it is important that our national oil spill preparedness and response framework remains current, effective, coordinated and responsive to emerging risks. This workshop therefore provides an important platform for stakeholders to contribute their expertise and experiences towards reviewing and strengthening the existing National Oil Spill Contingency Plan, while also broadening its scope to adequately address spill preparedness and response for onshore petroleum operations.

I am pleased with the broad participation from institutions whose collaboration is critical to ensuring an effective national response system.

I encourage all participants to actively contribute to the discussions to ensure a successful and practical review process.

I wish you fruitful deliberations and a successful workshop.

Thank you.

Marine Laigle, GI WACAF Project Coordinator, IMO

Excellencies,

Distinguished representatives of the Government of Ghana,

Dear colleagues from the Environmental Protection Authority,

Dear public agencies and Dear partners from industry,

Good morning,

It is a real pleasure to welcome you today to this national workshop on the update of Ghana's National Oil Spill Contingency Plan.

First of all, I would like to sincerely thank the Environmental Protection Authority for hosting this workshop and for their strong commitment to strengthening oil spill preparedness and response in Ghana. I would also like to thank all of you for your presence and active participation in this important process.

For those who may not be familiar with it, GI WACAF is a partnership between the International Maritime Organization and IPIECA, working with 22 countries in West, Central and Southern Africa to enhance preparedness and response to marine oil spills.

Our objective is simple: to support countries in building effective, coordinated and sustainable national systems, in line with international good practice and conventions such as OPRC 90. But

beyond technical guidance, the project is really about partnership and cooperation — bringing together authorities, industry and experts to work collectively on shared challenges.

Ghana is a key country in the region. With its dynamic maritime sector, major ports such as Tema and Takoradi, and a well-established offshore oil and gas industry, the country plays a central role in the regional energy landscape.

This also means that Ghana faces a diverse range of oil spill risks — from offshore production, to shipping activities, to inland transport systems such as Lake Volta.

At the same time, the sector continues to evolve, with ongoing developments in offshore production and infrastructure, which make preparedness even more critical.

This is why the work we are starting today is so important.

This workshop marks the official launch of the revision of Ghana's National Oil Spill Contingency Plan — a key framework that will guide how the country prepares for and responds to oil spill incidents in the years to come.

The current plan has provided a basis, but today, there is a clear opportunity to:

- align it with the updated regulatory framework,*
- integrate lessons learned and new risks,*
- and strengthen coordination across all stakeholders.*

This is exactly where the GI WACAF Project comes in.

- As a partnership between IMO and IPIECA, our role is to support countries like Ghana in strengthening their national systems — not by bringing ready-made solutions, but by facilitating collaboration, sharing experience, and supporting locally adapted approaches.*
- Because ultimately, a contingency plan is not just a document. It is a shared understanding of how institutions, industry and partners work together in case of an incident.*

Over the coming days, we will work together to:

- build a common understanding of the current system,*
- explore realistic oil spill scenarios — from offshore to inland,*
- review response strategies and organizational arrangements,*
- and most importantly, gather your inputs to guide the revision of the plan.*

This process is intentionally practical and participatory.

Your experience — from operations, regulation, emergency response or environmental management — is essential to ensure that the future plan is not only technically sound, but also fully operational and adapted to Ghana's reality.

Before concluding, I would like to highlight one key message:

In a context where oil and gas activities continue to develop, preparedness is not optional — it is essential.

Effective oil spill preparedness is not only about plans or procedures. It is about coordination, clarity of roles, and trust between stakeholders. And this is exactly what we are building together through this process. On behalf of GI WACAF, IMO and IPIECA, I wish you all a very productive workshop.

Thank you very much for your attention,

Annex 2: Programme

Tuesday, 12 May 2026	
08:45 – 09:15	Arrival and registration of participants
09:00 – 09:30	Opening ceremony - Welcoming address - Marine Laigle, GI WACAF Project Coordinator - Opening speech – EPA
09:30 – 10:00	Break – Group picture
10:00 – 10:30	Introduction and Objectives - Marine Laigle, GI WACAF • Presentation of GI WACAF and previous activities in the country / region • Reminder of the key objectives of the workshop • Key elements of a national preparedness and response system + round table
10:30 – 11:00	General introduction, scope and expectations – EPA • Overview of national context, 2025 Regulations / Legislation • Expectations for the update of the NOSCP • Preparatory work before the workshop (Framework document / RETOS assessment) • Specific objectives of the workshop
11:00 – 11:45	Response strategies, implementation tactics, and resources - Romain Chancerel, RCL • Offshore, shoreline, inland and freshwater • Types of oil, behavior in Ghana environment(s) Response, monitoring and environmental monitoring aspects
11:45 – 12:45	Incident Management System and organization – Lindsay Page-Jones, Cedre • Reminder of the key functions at the different levels of the response continuum • Existing national organization and Possible improvements
12:45 – 13:00	Working session: briefing and allocation of participants in Working Groups – Marine Laigle, GI WACAF Project Coordinator Objectives, rules, expected outputs, designation of reporters for each working group
13:00 – 14:00	Lunch
14 :00 – 15 :30	WG: Minor spill at sea, onshore and inland Facilitated discussion in plenary session between stakeholders
15 :30 – 15:45	Coffee break
15 :45– 16 :45	WG: Minor spill at sea, onshore and inland (continued) Facilitated discussion in plenary session between stakeholders
16 :45 – 17 :15	WG wrapping-up session – Romain Chancerel, RCL & Lindsay Page-Jones, Cedre
17 :15	End day 1

Wednesday, 13 May			
08:30 – 09:00	Arrival and registration of participants		
09:00 – 09:30	Recap and Q&A on the previous day's sessions - <i>Marine Laigle, GI WACAF</i>		
09:30 – 11:00	WG 1: Oil & gas <i>Facilitated discussion between stakeholders</i>	WG 2: Shipping <i>Facilitated discussion between stakeholders</i>	WG 3: Inland / Lake <i>Facilitated discussion between stakeholders</i>
11:00 – 11:30	Coffee break		
11:30 – 13:00	WG 1: Oil & gas <i>Facilitated discussion between stakeholders</i>	WG 2: Shipping <i>Facilitated discussion between stakeholders</i>	WG 3: Inland / Lake <i>Facilitated discussion between stakeholders</i>
13:00 – 14:00	Lunch		
14:00 – 15:30	WG 1: Oil & gas <i>Facilitated discussion between stakeholders</i>	WG 2: Shipping <i>Facilitated discussion between stakeholders</i>	WG 3: Inland / Lake <i>Facilitated discussion between stakeholders</i>
15:30 – 15:45	Coffee break		
15:45 – 16:45	WG 1: Oil & gas <i>Facilitated discussion between stakeholders</i>	WG 2: Shipping <i>Facilitated discussion between stakeholders</i>	WG 3: Inland / Lake <i>Facilitated discussion between stakeholders</i>
16 :45 – 17 :15	WG wrapping-up session – <i>Romain Chancerel, RCL & Lindsay Page-Jones, Cedre</i>		
17:15	End of day 2		

Thursday, 14 May 2026	
08:30 - 09:00	Arrival and registration of participants
09:00 – 09:30	Feedback session - <i>Marine Laigle, GI WACAF / Romain Chancerel, RCL / Lindsay Page-Jones, Cedre</i> • Wrap up on work done one day 1 and 2 • Feedback from the working groups WG1 + discussion
10:15 – 10 :45	Coffee break
	Feedback session (to continue) - <i>Marine Laigle, GI WACAF / Romain Chancerel, RCL / Lindsay Page-Jones, Cedre</i> • Feedbacks from the working groups WG2 & WG3 • + discussions
12 :45 – 14:00	Lunch
14:00 – 16:00	Feedback session - <i>Marine Laigle, GI WACAF / Romain Chancerel, RCL / Lindsay Page-Jones, Cedre</i> • Feedbacks from the Consultants - Strategy, tactics and engagement of resources – <i>Romain Chancerel, RCL</i> - Incident organisation and management principles – <i>Lindsay Page-Jones, Cedre</i>
16:00 – 16:15	Coffee break
16:15 – 16:45	Workshop wrap-up session – Possible NOSCP improvements – <i>Romain Chancerel and Lindsay Page-Jones, Cedre</i>
16:45 – 17:00	Closing ceremony
17:00	End day 3 – End of the workshop

Annex 3: Closing Remarks

George K. K. Diawuoh, Director of Petroleum, EPA

All too soon, the three days of this intensive workshop have come to an end. I would like to take this opportunity to sincerely thank the following institutions and stakeholders for their efforts and contributions:

- GI-WACAF
- RLC Consult/Cedre
- Management of EPA
- All Stakeholders

After three days of fruitful discussions, the key takeaways are as follows:

We have been able to identify and discuss the key elements to be considered in the revised National Oil Spill Contingency Plan (NOSCP). We have agreed to expand the scope of the Plan to include:

- Inland Freshwater environments
- Hazardous and Noxious Substances (HNS)
- District and Regional levels

We have developed a proposed workflow that incorporates Oil and Gas installations, Ports, and Inland Water systems. Mystery spills should also be clearly incorporated into the workflow to support effective response actions.

The roles and responsibilities of the various institutions identified in the proposed workflow should be clearly defined to improve coordination among stakeholders.

The proposed workflow will be cleaned up and shared with stakeholders for further review.

The revised Plan will be completed in collaboration with GI-WACAF. It is also the view of the EPA that the revised document should be validated by stakeholders in Ghana at a convenient date.

Notwithstanding the above, the EPA must also undertake the following actions:

- Update the national inventory of response equipment. Letters will be sent to stakeholders requesting information, which will later be followed by validation visits.
- Review and update the dispersant use policy in consultation with stakeholders later.
- Explore ways to link Ghana's Plan with those of neighbouring countries to facilitate the management of transboundary incidents.
- Funding for operation of the Plan
- Update the coastal sensitivity map

Once again, I thank you all for your cooperation and active participation.

Thank you for listening to me.

Marine Laigle, GI WACAF Project Coordinator, IMO

*Excellencies,
Distinguished representatives of the Government of Ghana,
Dear colleagues from the Environmental Protection Authority,
Dear partners from industry and participating institutions,
Dear participants,*

As we come to the end of this workshop, I would first like to sincerely thank all of you for your active participation, your openness during discussions, and your strong engagement throughout the week. One of the major achievements of this workshop has been the ability to bring together such a wide range of stakeholders involved in oil spill preparedness and response in Ghana. And this was essential. Because effective oil spill preparedness cannot rely on one institution alone.

While the Environmental Protection Authority plays a leading role in coordination, preparedness and response to oil spills is by nature a collective responsibility, requiring close cooperation between authorities, operational agencies, industry, ports, maritime actors and many other partners. Throughout this week, we worked together to better clarify the respective roles and responsibilities of each institution in the event of an oil spill incident. These discussions allowed us to start building a clearer national organizational structure for response management, which will form one of the key foundations for the revision of Ghana's National Oil Spill Contingency Plan.

This is an important step forward. Because ultimately, a contingency plan is not only a technical document — it is a practical coordination framework that defines how institutions work together during an emergency.

Now, the next phase of the process is in your hands. The drafting of the revised National Oil Spill Contingency Plan will now need to continue, building on the discussions, recommendations and organizational arrangements identified during this workshop.

On behalf of GI WACAF, IMO and IPIECA, I would like to reassure you that we remain fully available to continue supporting Ghana throughout this process. We would be very pleased to return and provide further technical support once a draft version of the plan has been prepared, so that all stakeholders can once again come together to review it collectively and continue strengthening the national system.

In the same spirit, GI WACAF would also encourage the Ghanaian authorities to progressively broaden this reflection beyond oil spills alone, and to also consider preparedness for HNS incidents — Hazardous and Noxious Substances. As maritime transport and offshore activities continue to evolve, preparedness for chemical and HNS spills is becoming increasingly important worldwide.

This is also reflected in the OPRC-HNS Protocol, which Ghana has not yet ratified. More broadly, it is important that the revision of the National Contingency Plan is accompanied by a wider assessment of the international IMO liability and compensation conventions that are not yet ratified by Ghana. These conventions play a critical role in ensuring that countries

have access to appropriate compensation mechanisms and legal protection in the event of a major incident.

In particular, we are referring to:

- the Supplementary Fund Protocol 2003,*
- the Bunker Convention 2001,*
- the LLMC Protocol 1996,*
- and of course, the 2010 HNS Convention.*

Strengthening preparedness is not only about operational response capacities. It is also about ensuring that the legal and compensation framework is robust enough to protect the country, affected communities and the environment in the event of pollution incidents.

Before concluding, I would once again like to express our sincere appreciation to the Environmental Protection Authority for its leadership, commitment and cooperation in organizing this workshop.

I would also like to thank all participating institutions and partners for the constructive spirit that characterized our discussions throughout the week.

We truly believe that the work initiated here represents an important milestone toward a stronger, more coordinated and more resilient oil spill preparedness and response system in Ghana.

On behalf of GI WACAF, IMO and IPIECA, I wish you all safe travels and look forward to continuing this collaboration in the months ahead.

Thank you very much.

Annex 4: List and contact of participants

ID	Name	Organization	Job title	Gender	Nationality	Email address
1	Sony-Love Amarboye OKO	Ghana Maritime Authority	Deputy Director ESS	Male	Ghanaian	sony-love.amarboye@ghanamaritime.gov.gh
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Annex 5: Group Picture



Annex 6 : Abbreviations

Acronym	Definition
ACP	Advanced Command Post
ADIOS	Automated Data Inquiry for Oil Spills
BAOAC	Bonn Agreement Oil Appearance Code
COP	Common Operating Picture
cSt	Centistokes
EEZ	Exclusive Economic Zone
EP	Exploration / Production
GI WACAF	Global Initiative for Western, Central and Southern Africa
GPS	Global Positioning System
H&S	Health and Safety
HFO	Heavy Fuel Oil
HSE	Health, Safety and Environment
IAP	Incident Action Plan
IMO	International Maritime Organisation
IMS	Incident Management System
IMT	Incident Management Team
IPIECA	International Petroleum Environmental Conservation Association
ITOPF	International Tanker Owners Pollution Federation
kt	knot
MDO	Marine diesel oil
MGO	Marine Gas Oil
NOSCP	National Oil Spill Contingency Plan of the Republic of Ghana
NSCP	National Spill Contingency Plan of the Republic of Ghana
NSCP-SC	NSCP Steering Committee
NSCP-WG	NSCP Working Groups
NEBA	Net Environmental Benefit Analysis
OIM	Offshore Installation Manager
OSC	On Scene Commander
OSCP	Oil Spill Contingency Plan
PPE	Personal Protection Equipment
SCAT	Shoreline Cleanup and Assessment Technique
SOPEP	Shipboard Marine Pollution Emergency Plans
UNEP	United Nations Environmental Programme