



Remote assistance: Critical review of the Atlas of Strategic Sensitivity Maps of the Shoreline of Liberia

Key findings & recommendations - 3rd issue

November 2021

To the attention of:
Liberia Maritime Authority (LiMA)



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.

SENSITIVITY MAP FOR OIL SPILL RESPONSE

Shoreline of Liberia [680 Km (420 Miles)]

Zero Draft of the Final Report



SUBMITTED TO: LIBERIA MARITIME AUTHORITY



Date: April 21, 2021

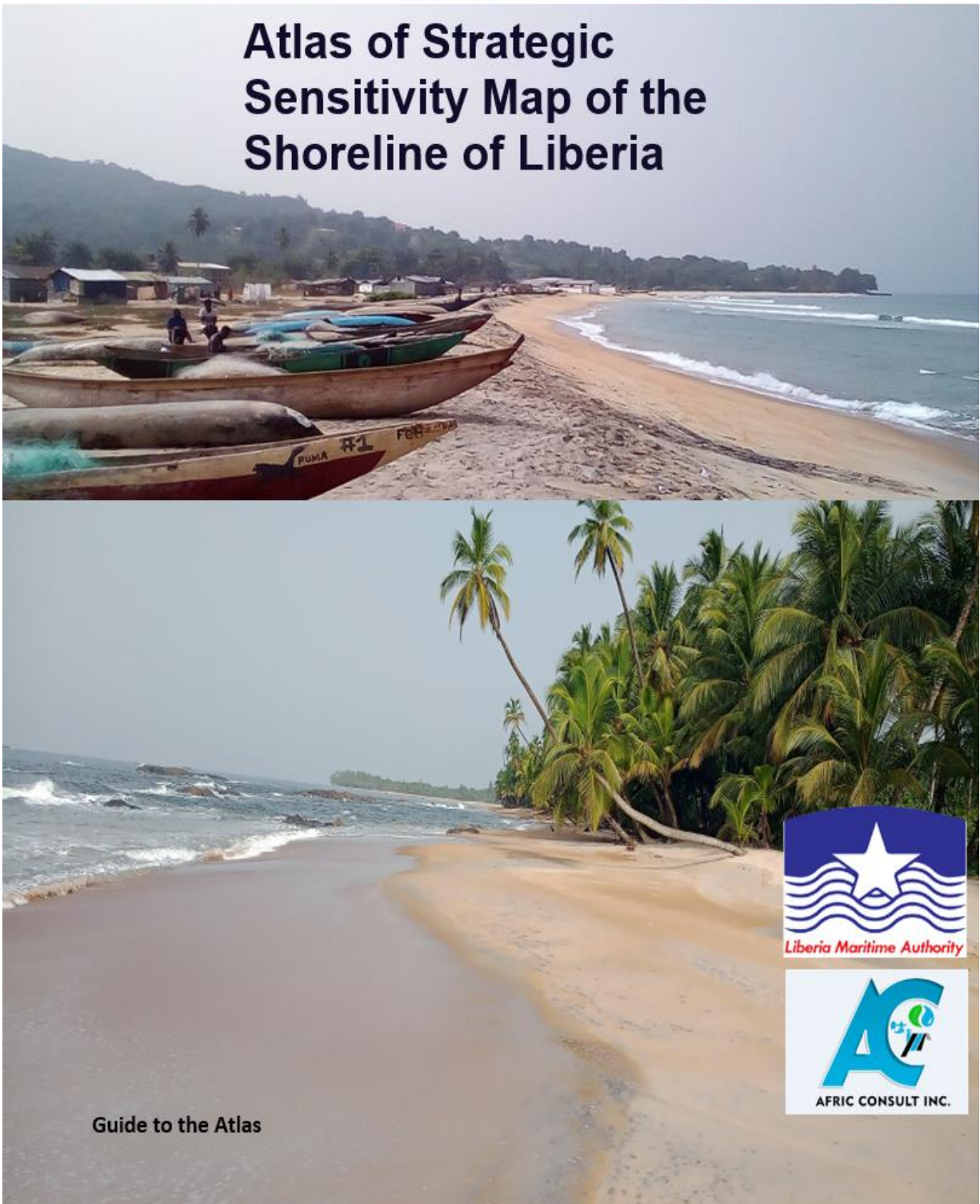
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Atlas of Strategic Sensitivity Map of the Shoreline of Liberia



Guide to the Atlas

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2. Presentation of the GI WACAF Project

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

The mission is to strengthen the 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 organises and delivers workshops, seminars and exercises, that aim to communicate good practice in all aspect 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 seven oil company members of IPIECA, namely BP, Chevron, ExxonMobil, Eni, Shell, TotalEnergies and Woodside.



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

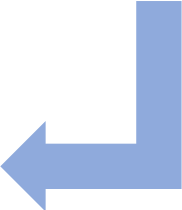
3. Introduction

3.1. Background

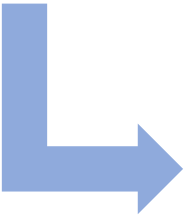
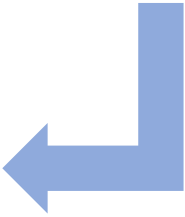
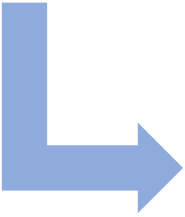
The authorities of Liberia (through the Marine Environmental Protection of the Liberia Maritime Authority) have engaged in the development of coastal oil spill sensitivity atlas and maps (assisted by local consultancy companies). The authorities of Liberia have requested the support of the GI WACAF to review the developed atlas and maps. GI WACAF has worked with ITOPF to carry out this review.

Various documents were exchanged, reminded here under.

3.2. History

DOCUMENTS FROM LIBERIA AUTHORITIES	DOCUMENTS FROM GI WACAF AND ITOPF
<p>- FIRST ISSUE - provided by the authorities in November 2020 ▶ “Zero Draft of The Final <u>Report</u>, Document No. WM/MESM/005/06- 30-20, 44 pages” Developed by West Africa RFID Solutions and Natural Resource Management (WARM INC.) (Liberia)</p>	<p>▶ Report Remote assistance: critical review of the zero draft of the final report “SENSITIVITY MAP FOR OIL SPILL RESPONSE – Shoreline of Liberia” - Key findings and recommendations Version 1.1 – 07 January 2021 Containing: - ITOPF Comments on the Zero Draft of The Final Report, Document No. WM/MESM/005/06-30-20 - GI WACAF comments on the Zero Draft of The Final Report, Document No. WM/MESM/005/06-30-20 File “Liberia_GI WACAF_criticalreview_V1.1.pdf”</p>
<p>Virtual meeting Liberia Authorities – GI WACAF – ITOPF, on 28th January 2021</p>	
<p>- SECOND ISSUE - provided by the authorities in May 2021 ▶ “SENSITIVITY MAP FOR OIL SPILL RESPONSE - Shoreline of Liberia [680 Km (420 Miles)] Zero Draft of the Final <u>Report</u>, 49 pages” Developed by Afric Consulting Inc. (Liberia) ▶ Atlas of Strategic Sensitivity Map of the Shoreline of Liberia, 34 pages (maps only) Developed by Afric Consulting Inc. (Liberia) ▶ Annotated response to GI WACAF’s comments by Liberia authorities</p>	

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	<p>► Report Remote assistance: critical review of the critical review of the Atlas of Strategic Sensitivity Map of the Shoreline of Liberia - Key findings and recommendations Version 21 June 2021 Containing:</p> <ul style="list-style-type: none"> - ITOPF updated comments on reviewed draft - ITOPF answers to feedback of Liberia on the original comments (table) - Reminder of GI WACAF comments on “Zero draft” <p>File “LiberiaSensitivityMap_Review2_ITOPF Comments_GIWACAF.pdf”</p>
<p>- THIRD ISSUE - provided by the authorities in May 2021 ► “SENSITIVITY MAP FOR OIL SPILL RESPONSE - Shoreline of Liberia [680 Km (420 Miles)] Zero Draft of the Final <u>Report</u>, 49 pages” Developed by Afric Consulting Inc. (Liberia)</p> <ul style="list-style-type: none"> - With updated Strategic Sensitivity Map <p>► Atlas of Strategic Sensitivity Map of the Shoreline of Liberia, 27 pages (maps only) Developed by Afric Consulting Inc. (Liberia)</p> <p>► Annotated response to GI WACAF’s comments by Liberia authorities</p> <ul style="list-style-type: none"> - With updated Strategic Sensitivity Map - Without the 7 Strategic sensitivity maps (combining ESI + BIO + SCO-ECO) 	
	<p>The present document ► Report Remote assistance: Critical review of the Atlas of Strategic Sensitivity Maps of the Shoreline of Liberia - Key findings & recommendation 3rd version Date: 18/11/2021 Containing:</p> <ul style="list-style-type: none"> - ITOPF last updated comments on reviewed draft - Reminder of GI WACAF previous comments <p>Provided end of November 2021 File “Liberia Sensitivity Map - ITOPF GI WACAF Comments_20211118.pdf”</p>

3.3. Objective

The key update of the third issue was the production of one strategic “high level” sensitivity map covering all country on one plate.

The objective of the present document (3rd comment document from GI WACAF) is to:

- Provide the last comments from ITOPF and GI WACAF regarding this last update; and
- Remind of the previous comments (some remaining to be taken on board by the Liberia authorities)

4. ITOPF comments

4.1. Reminder of previous comments

The former comments of ITOPF are available in the previous documents sent, reminded in the table above. It is noted that many comments were addressed by the Liberia Authorities. However, some comments and suggestions remain applicable to the third version of the report and atlas.

4.2. Last comments

The last comments (on the third issue of report and atlas) are available in the appendices: “Last comments from ITOPF – 09/11/2021”, p.11. These comments outline the work undertaken and progress, as well as needed clarifications (in the report regarding the methodology) and possible improvements regarding the maps.

5. GI WACAF comments

5.1. Reminder of previous comments

GI WACAF has provided overall comments on the report, atlas and mapping project, organized in five topics:

1. Articulation between Liberia’s National Oil Spill Contingency Plan and the Marine Environmental Sensitivity Map (MESM)
2. Current state of development of the project (according to Phases I, II and III as per detailed in p.10-11 of the document No. WM/MESM/005/06-30-20)
3. Cross-reference of the priority areas identified by the study
4. Cooperation with other actors (private sector, neighbouring countries, regional or international organizations) in the collection and/or sharing of coastal sensitivity data
5. Designation of the authority in charge of reviewing the Marine Environmental Sensitivity Map (MESM) and associated process

See “Comments from GI WACAF, reminder – 2nd report June 2021”, p.14

5.2. Last comments

GI WACAF reminds that most of these previous comments are still to be clarified with the Liberia authorities. GI WACAF shares the opinion of the Liberia authorities that the maps and report should be integrated into the National Oil Spill Contingency Plan, OSCP, and that future improvement of the report and atlas should now be undertaken in relation with the National OSCP.

It is also the opinion of GI WACAF that remote assistance has some limits and meeting and working with the Liberia authorities, in the framework of a workshop for example, is the best option to effectively support the authorities.

6. Way forward

GI WACAF, in collaboration with ITOPF, proposes that the next steps are:

- Organisation of a videoconference with the Liberia authorities, ITOPF and GI WACAF, to discuss:
 - The last (present) comments on the maps and the status of the mapping project,
 - The status of the National OSCP development and atlas,
 - Interfaces between the atlas and the NOSCP;
- Possible request of assistance from the Liberia authorities to IMO and the GI WACAF for a workshop on the NOSCP development and integration/ improvement of the sensitivity maps; and
- A possible workshop in Liberia.

7. Appendices

7.1. Last comments from ITOPF – 09/11/2021

7.1.1. Introduction

Following a request made by the authorities of Liberia, GI WACAF agreed to provide support to constructively review and comment the draft document “Zero Draft of The Final Report, Document No. WM/MESM/005/06- 30-20, 44 pages” provided by the authorities in November 2020.

The GI WACAF team was supported during this endeavour by experts from ITOPF, who provided high-level and specific comments in the form of a separate document. The GI WACAF team also reviewed and commented the main document.

Comments drafted by ITOPF and GI WACAF were shared in a written document appended in Annex 1 for ease of reference, and during a virtual meeting on 28th January 2021.

Following this meeting Liberia produced a second draft of its sensitivity map for oil spill response including the first comments. Two documents were shared with GI WACAF and ITOPF for review on 6th May 2021:

- *Atlas of Strategic Sensitivity Map of the Shoreline of Liberia*
- *Annotated response to GI WACAF and ITOPF comments*

The two documents were reviewed, and detailed comments written by ITOPF and GI WACAF were shared in a report, already sent.

A third draft of the sensitivity report and Atlas was shared on 24th October. The two documents have been reviewed by ITOPF and comments are provided in this document.

Disclaimer: the comments and recommendations expressed in this report are those of the experts and consultants and do not necessarily represent the views of IMO or IPIECA.

Objectives

The objectives are to:

- (i) assist policy makers and national authorities, responsible for oil spill preparedness and response in Liberia; and

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(ii) provide the policy makers and national authorities with comments made by experts well versed in the field of oil spill preparedness and response, and oil spill sensitivity mapping, in order to support the policy makers and national authorities during the review process of the sensitivity map.

Next steps

1. Comments and recommendations are shared with national authorities in the form of this written document;
2. GI WACAF sets-up an online meeting with ITOPF and the national authorities to discuss key findings and recommendations of the report; and
3. A workshop is held to finalise the sensitivity maps, in conjunction with developing the NOSCP.

7.1.2. Liberia Sensitivity Map – ITOPF review comments

The largest development in the third draft of the sensitivity map atlas is the refinement of the main sensitivity map on page three. The map now shows where the most vulnerable areas are based on shoreline type, socio-economic areas, and biodiversity. Medium and high priority areas have been identified on the map for each of the three categories. Low priority areas have also been identified for shoreline type. However, it is unclear how this classification has been made. It is recommended that the criteria are stated regarding the classification of the priority levels (low, medium, high) for each sensitivity category. The criteria would help to explain why certain areas are most vulnerable during an oil spill. For example, this could be in the form of a table in the Methodology section. An example of such table is given below.

Sensitivity	Low	Medium	High
Shoreline Type			
Socio-Economic			
Biodiversity			

TABLE 1: EXAMPLE OF A TABLE THAT COULD CLEARLY STATE THE CRITERIA USED TO GRADE THE LEVEL OF SENSITIVITY OF EACH SENSITIVITY CATEGORY.

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The criteria/classification of the priority areas should correspond well with information provided on the three types of resources in Liberia.

It is noted that several of our previous comments regarding the sensitivity map report still stand, such as:

- Reference errors found within the document
- Stating oil burial depths – this can vary depending on several factors.
- Mentioning freshwater marshes – can these be impacted by oil spills? The sensitivity map should be focused on coastal features only.

Finally, potential oil pollution sources have been identified; however, high risk areas have not been identified on a map. This may be useful, especially when developing the NOSCP. It is recommended that an additional map is included within the report showing the high-risk areas for potential oil pollution based on the identified sources.

7.1.3. Conclusion and further recommendations

The sensitivity map has greatly improved. It can now be used to quickly identify the highest priority areas during an oil spill (or threat of). There are still some features on the maps that can be made clearer, however, ITOPF's main recommendation is that the methodology behind the classification of the priority areas is given.

7.2. Comments from GI WACAF, reminder – 2nd report June 2021

First, GI WACAF would like to congratulate the national authorities for this excellent step towards the development of a comprehensive and efficient national system for preparedness and response, as per detailed in Article 6 of the OPRC 90 Convention.

Further to comments already made by ITOPF, which are detailed and comprehensive, the GI WACAF team would like to draw the attention of the national authorities and policy makers towards these specific aspects:

1. Articulation between Liberia's National Oil Spill Contingency Plan and the Marine Environmental Sensitivity Map (MESM)

In many cases, sensitivity maps are developed in order to complement a National Oil Spill Contingency Plan. Sensitivity maps are key annexes of the NOSCP and allow for a visualisation of environmental and economic sensitivities in countries in order for the authorities to make decisions and decide which areas are to be protected in priority in case of an oil spill.

As per the communicated document, the articulation between Liberia's NOSCP and MESM is not crystal clear for the reviewer and should be explained in greater details, particularly on how the findings of the MESM will be taken into account and integrated into Liberia's oil spill response strategies, which should be disclosed in the NOSCP.

2. Current state of development of the project (according to Phases I, II and III as per detailed in p.10-11 of the document No. WM/MESM/005/06-30-20)

On pages 10 and 11, the three project management phases are well explained and detailed. However, it is not clear for the reviewer if these phases are actually completed or not, and if the document No. WM/MESM/005/06-30-20 is indeed the final draft as per detailed in "Phase III". More particularly, it should be interesting to understand if the "Validation of the first draft through a stakeholder interactive forum to be organized by the employer" has been completed already.

3. Cross-reference of the priority areas identified by the study

On page 42, the authors identify four (4) priority areas that are most sensitive in terms of their socio-economic activities and shoreline types, and four (4) key biodiversity priority areas.

These are key findings of the study and provide interesting and important information. However, to go a step further and make the most of these findings, it could be interesting to conduct a cross-reference and determine if the hot spots / priority areas identified under the

three categories (socio-economic activities, shoreline types, biodiversity) may cover the same coastal zones. The said zones would then be the most important areas to be protected.

4. Cooperation with other actors (private sector, neighbouring countries, regional or international organizations) in the collection and/or sharing of coastal sensitivity data

Other actors, such as the private sector (oil and gas, extractive industries), neighbouring countries, or even international organizations working on the said matter (the Abidjan Convention for example) may possess and/or collect coastal sensitivity data. A cooperation with such actors could save national authorities time and efforts and allow for synergies, and should be explored in more details.

5. Designation of the authority in charge of reviewing the Marine Environmental Sensitivity Map (MESM) and associated process

Coastal zones are very dynamic environments and are subjects to different pressures, from human activities and the environment. It is therefore key to make sure that the sensitivity map is updated regularly to reflect these changes. As such, it is recommended to designate clearly the authority that will be in charge of reviewing and updating the final product on a regular basis. A clear validation and sharing process for the then updated documents should also be identified.