



**Interim Guinea Current Commission**



**REPORT OF THE  
BILATERAL MEETING ON ALGAL BLOOM INVASION ALONG THE BEACHES  
BETWEEN COTE D'IVOIRE AND GHANA**

**STEPRI, CSIR  
ACCRA, GHANA**

**26-27 JUNE 2012**

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## ACRONYMS

CIAPOL	Centre Ivoirien Antipollution
CRC	Coastal Resources Centre
EPA	Environmental Protection Agency

GCLME	Guinea Current Large Marine Ecosystem Project
GEF	Global Environmental Facility
HAB	Harmful Algal Bloom
IGCC	Interim Guinea Current Commission
NGO	Non Governmental Organization
SAP	Strategic Action Programme
USAID	United States Agency for International Development

## **PREAMBLE**

The green algal bloom infestation in beaches located between Cote d'Ivoire and Ghana has considerable adverse impacts on livelihoods of fishing communities. It has therefore attracted great concern from governments, the general public and the scientific community.

In view of the concerns the adverse impacts of the algal menace was generating, inter-ministerial Technical Committees were settled in both countries to assess the problem and recommend effective measures to mitigate the adverse impacts and eliminate the bloom.

An informal consultation in January 2012 between some delegates (Ghana and Cote d'Ivoire) mentioned the need for a bilateral effort at tackling the menace and to develop a necessary protocol towards addressing the issue.

The proposal on Algal Blooms would provide the 16 countries the science based information required to identify and properly address the root causes of the proliferation of green algal bloom observed in the GCLME region and between Cote d'Ivoire and Ghana in particular.

## 1.0 OPENING CEREMONY

The meeting was opened by **Mr Napoleon Gbolonyo** who introduced **Mr De-Graft Johnson** as the chairperson for the meeting. The chairperson then allowed all the participants to introduce themselves briefly.

The consultant, **Mr Chuck Chaitovitz** in his statement said he was glad to meet both countries to listen to them and receive inputs that would address their needs and the relevant stakeholders that they would identify. Also the meeting was to shape the proposal's log frame and activities. He was pleased to be working with them

**Dr Jaques Abe**, the Officer-in-charge of the IGCC in his statement said he was privileged to welcome all present to the meeting. Also the GCLME Project would complete its activities at the end of the month of June 2012 to become IGCC from the 1<sup>st</sup> of July. He said the first meeting which was organized in February enabled both parties to better know and identify the problem on both countries and from February, up to date fieldwork was carried out with the resulting evidence that would form the basis of the project document. Essentially the meeting would provide food for thought to furnish the project document and design the project on the harmful algal bloom which would be the last activity that the project would organize. The task of the consultant was to finalize collect contributions from countries and develop a bankable project for submission to GEF.

He said that the SAP phase implementation would therefore benefit from this additional funding for the implementation of field activities. He hoped that at the end of the two days, the consultant would have all the information needed to prepare the project proposal.

The Chief Director for the Ministry of Environment, Science and Technology **Madam Salimata Abdul Salam**, in the opening statement on behalf of the Minister welcomed all the participants to the meeting. She reiterated the importance of the meeting as it was to finalize a proposal to send to GEF for funding. She wished the participants a fruitful deliberation and hoped that the objectives of the meeting would be met.

Mr Gbolonyo thanked the consultant, the chairman, the chief director from Ministry of Environment, Science and Technology, all the participants and the support from the IGCC for their participation to this meeting.

## **2. OVERVIEW OF THE ALGAL BLOOM BY MR CHUCK CHAITOVITZ**

Mr Chaitovitz gave a presentation on the overview of the algal bloom including the contribution received from the GCLME Project and the two reports from the countries. This overview was also for the countries to confirm or comment on the findings. He also presented a summary of the recommendation from their reports that he has synthesised. He spoke about Eutrophication and Hypoxia which were conditions that happened when the algae bloomed leading to decreased dissolved oxygen affecting all living marine organisms. From the reports, he didn't get information on hypoxia from the countries but there were information on nitrogen signatures which came from domestic waste water and he would like to see more data on hypoxia/hypoxic conditions. He also stated some success stories which had happened globally when the dissolved oxygen level had been increased due to best environmental practices. But in the US, they haven't achieved such successes after years of working in the Chester bay since the hypoxic conditions were high due to the dead zones being a challenge. He also gave the impacts and sources of the algae and their economic importance, though the menace created was more than the economic importance.

The countries then made their comments. They all thanked the GCLME, the countries and the consultant for the initiative to help the two countries to fight against the bloom. Dr.Sankare has suggested to the consultant to include a general overview of the Gulf of Guinea before the overview of Ghana and Côte d'Ivoire. He also wanted the consultant to highlight the physical and chemical parameters as well as other parameters since they were also very important. These proposals were supported by Mr Kouame Koffi from Côte d'Ivoire.

Dr Abe said that this was a preliminary finding and that the countries must inform the consultant and the GCLME about the present state of this problem in their countries so that all present would be better informed. The consultant took note of the comments raised and thanked them for their contribution to include the other aspects.

## **3. COUNTRY PRESENTATION (GHANA)**

Mrs Jewel Kudjawo from the Environmental Protection Agency Ghana was the first to make presentation on the history of the occurrence of algal bloom in Western Region of Ghana. When the

bloom first occurred, it was the community concerned that alerted EPA in 1993. At first, they thought it was toxic waste but after researches, it was confirmed to be algae. The bloom stretched from Newtown, at the western border with Côte d'Ivoire to Ekabako in the Nzema East District. In 2011, another investigation was done which showed that two species of the *Enteromorpha* were present. She presented some key findings chlorophyll analysis showed increasing chlorophyll intensity in the westward direction towards New Town, low Phosphate levels in the affected waters and slightly elevated nitrogen levels in areas of high bloom. EPA regularly monitored and had seen that the dynamics of recurrence of the bloom was rather complex and the bloom increased westward. Associated with the occurrence of the algal bloom was the apparent increase in the some snail populations. Although there was significant reduction in fin fish catch within the near shore, there were reports of increase in catch of squids between 2010. It was not clear whether there is any correlation between these events and the alga bloom. In conclusion she raised a number of questions such as what was the limiting factor fuelling the bloom? If there was more than one, do they act synergistically? What were the sources of these limiting factors? What roles do increase in salinity and high temperature play in the bloom among others which one has to address in order to stop this menace?

Ms Hawa Bint Yaqub from the Marine Fisheries Research Department, Fisheries Commission gave the second presentation which focused mainly on the occurrence of the bloom in the Western Region of Ghana and showed the years when they occurred. She said that although the bloom was confined in the Western Region since 1998, last year the algal bloom was seen at the Sakumono beach which was a beach in the Greater Accra Region. Her presentation showed the upwelling nature of the water found in the Western Region and also the catch of fish over the years for the same region and the contribution of fish that was caught from the western region to Ghana annual fish production. Also she showed the occupation of the community, the type of algae, the factors affecting them, the impacts of the bloom, the isotopic nitrogen and its potential sources of the signature isotope nitrogen in the water bodies, the fish poisoning that was gotten from algae and the economic importance of the algae. She concluded on the need to have more research on the alternative uses of the algae and the source of the nutrient loading should be identified and measures put in place to stop it.

Mr George Hutchful from the Coastal Resources Centre (CRC) concluded the Ghana presentations by explaining the impact of the bloom on recreation, tourism, fishing among others. The centre has employed several ways to do their work including the use of the local radio, community representatives

and the district assemblies to explain, educate and sensitize the affected communities. Also the centre publishes annual and bi-annual reports on the work that they have done so far which has also being widely distributed to stakeholders. He said that though the bloom starts from the Aby lagoon which was situated between Ghana and Côte d'Ivoire but there was the need for more investigation to validate it. Also there have been two field visits to the lagoon and the results were ready but there was still the need for more investigation into some of the findings from the two field fields.

After the presentation from Ghana, the floor was opened for comments. The chairman confirmed that previously, it used to be the *Enteromorpha species* but now it is *Ulva clathrata*

The chair also commented that the *Sargassum* invasion was recent in Ghana and also some countries along the Gulf of Guinea and it was not as common as the *Ulva* Invasion and asked if there were occurrences of *Sargassum* invasion in Côte d'Ivoire. Mrs Yaqub reported on the occurrence of the *Ulva* and *Sargassum* species in Ghana and focus on the economic uses of the algae.

Dr Sankare confirmed *Sargassum* invasion in Grand Bassam so the invasion did not occur in Ghana only.

The chairman said that investigation should also be made to find out if the rivers Ankobra and Amazuri were also breeding places for the bloom because the bloom occurs over there but they were not breeding places.

#### **4.0 COUNTRY PRESENTATION (COTE D'IVOIRE)**

Dr Sankare gave the first part of the presentation on the general background of the littoral /coast of the GCLME region and also that of Ghana and Côte d'Ivoire. He later discussed the biodiversity of the region, the chemical and physical parameters and the work done at the national level and researches that have been done. He talked about the capture of fish, shell fish and all other products that were obtained from the Aby lagoon. His presentation showed the distribution and occurrence of the algae species in Africa and the four currents that affected the Gulf of Guinea. He said that oil exploration activities might be directly linked with the algal bloom and it would be appropriate for those involved in those activities to also be directly associated in the eradication of the bloom. He also spoke about the proliferation the algae in the Aby lagoon though that was a periodic occurrence and the human nitrogen level that was observed at the field stations caused by human waste. He concluded by recommending plans that

should be implemented at the national level and the bilateral level and suggested that since the algal bloom also occurred in other countries within the GCLME, studies and remediation efforts should not be confined within the two countries but through all the countries of the Gulf of Guinea.

Colonel Dibi presented the second part on the institutional framework. He explained the work that was done under the various departments of the Ministry of Environment and Sustainable Development and Côte d'Ivoire. The ministry of environment has the Ivorian Centre for pollution Monitoring (Centre Ivoirien Antipollution, CIAPOL) which has a monitoring system called National environmental Observation Network (RNO). CIAPOL also monitors the marine and lagoon by regular patrols and fight against pollution of these environments through the development and implementation of the contingency plan called pollumar. They enforced the laws, decrees and agreements enacted or ratified by Côte d'Ivoire on rules for the prevention and fight against pollution from all sources, prevented and reduced pollution and risks to economic activity from industries and agriculture. He also showed the other ministries and other institutions who also worked with the ministry of environment on environmental issues. He concluded on the proposed project's institutional framework at national level being guided by the IGCC which should involve the ministry of environment and sustainable development as the institutional inking with the cabinet who head the Steering Committee and the CIAPOL coordinating the activities of the scientific committee.

The final part of the presentation was done by Mrs Bako from CIAPOL on integrated management of algal bloom on the coasts of Côte d'Ivoire. She said the periodic appearance (July-August) of a green algae, on the part of this coast and the Aby lagoon since 1993, was a major concern for the Ivorian State. The Department in charge of the environment ordered a mission of scientists to investigate in June 2007, the premises. The first investigation found out that the green algae of marine origin belong to the genus *Enteromorpha (Ulva)* whose degradation could lead to physicochemical changes. It appears therefore necessary to effectively investigate the cross-border phenomenon (Ghana - Côte d'Ivoire) in order to know the causes of this algal invasion and assess the impacts on the marine and coastal environment, the health of the population and on the socio-economic activities. Also the control/reduction of algal bloom and awareness of stakeholders on the importance of preserving of the environment are some of the results expected to be achieved through the project.

She enumerated the planned actions such as strengthen the institutional and regulatory framework, study physical and chemical factors, conduct biological macro-algae and bio-ecological studies, define



the minimum area of proliferation of macro-algae, make a map of the study area (remote sensing, etc), Study the socio-economic aspects in relationships with algae, Create a framework of national and bilateral cooperation among others.

After the presentation, to the question given by Ms Yaqub who wanted clarification on whether Côte d'Ivoire has started any research to identify the source of the nutrient loading and the nitrogen and also on the possible economic importance of the algae, Dr Sankare answered that work has started in that direction and sediments had been taken from the Aby lagoon, Grand Bassam and other lagoons and the results were out. With regards to the economic importance of the algae, Ghana and Côte d'Ivoire should decide to either fight the bloom or find the economic importance of the bloom so that they can convince their politicians. Mr Quaison informed that there was an international interest in the utilization of algae. A foreign investor has approached the Ministry on cultivating algae for medicinal purposes and other uses but Ghana was still looking more clarity on this proposal to see other parameters and whether it would help to address the already existing bloom.

The chairman responded that in some countries like Togo and Cote d'Ivoire, there was already algae (*Spirinella*) being produced on commercial basis. Also a control situation of a species, there were several aspects and one could combine the eradication and control of the species and also find alternative uses of that species which could also serve as a control tool.

The consultant advised that the GEF looked out for projects that were replicable and catalytic and would even lead to enterprises. The control and alternative uses as long as it was catalytic and replicable in other regions, can be added.

Dr Sankare said that the aim of the project must be clearly defined. Also right from the conception of the project, the two countries should determine whether they would combine both the control/fight against the bloom and alternative uses or not. This is to bring harmony in responses since the priorities of both countries may be different.

Col. Dibi said the project was important to both countries and also to the GCLME and so there should be a common vision so that activities done by both countries would be the same.

Mr Papy Kouame from Côte d'Ivoire commented that the Aby lagoon was part of the Tanoe basin and 76% (2/3) of it was in Ghana. They shouldn't lose focus on the integrated management of the basin and include the affected people in the project proposal.

Mr Hutchful spoke about the four pre conditions that must be in place for a project to succeed using CRC as an example. First was the aim and objectives of the project. The second was training people at the constituency level who would inform/educate or sensitize the local people so that the people would understand what the project was all about. Also they involved the respective governments and finally capacity building of the people who would carry out the project to fruition.

The chairman thanked all the participants for their contribution that would help to produce the bankable project and alleviate the plight of the fisher folk. The consultant agreed with the need for integration, clearly stating the aims and objectives and having the capacity to run.

## **5.0 PRIORITIES DISCUSSION (WALK THROUGH THE QUESTIONNAIRE) BY MR CHUCK CHAITOVITZ**

The consultant walked through the questionnaire with the participants. It had three segments, the priorities, the identification of the stakeholders, the information that they needed and the activities. This had five possible priorities and the objective of the proposal was given. They discussed each priority and also worked on the objectives for each priority. The cost and benefits for each action was also discussed. He suggested that with regards to long term goals such as waste water and sanitation solutions and they ought to find funding.

Participants made suggestions and comments that ought to be in the proposal such as consideration of the catchment area/basin of the lagoon, the integrated management approach, the sources and risk assessment of the socio economic drivers, the sources of the pollution and the impacts of the pollution, the productive uses of the algae, research on effects on the biodiversity within the region.

The chairman said the total basin approach including the northern and southern halves of the basin was important since there may be little point sources which may build up to the nutrient build up that promoted the algal bloom. The communities around the water body have very poor sanitary facilities so human excreta ended in the water.

The consultant said from most reviews from organizations and countries that he had read, the nitrogen isotope attained was within the range for waste water. The chairman wanted the consultant to also think about co-financing strategies. The countries were to present possible sources of funding that could be counted as co-financing since GEF projects dealt with co-financing. The consultant also wanted to know the current rate of co-financing for the phase two of the GCLME project.

Mrs Kudjawo suggested the governments of participating countries as sources of co-financing. The consultant planned to talk to CRC and USAID to know what their interest was on co-financing and hopefully they may be interested in the project.

Dr Abe contributed on the ratio for co-financing according to GEF which was 1:5 ratio and the co-financing could be in the form of cash or kind.

With regards to research gaps, CRC is the main structure responsible for the Ghana side. It would be best to know what the Ivorian counterparts for synergies where necessary.

The chairman said the limitations of the scientists should also be brought to bear (e.g. lack of equipments to make calibration) and that GEF has invested in partnership with NOAA for all large marine ecosystems around the world and so they might be partners for the project.

Ms Yaqub suggested that to solve the issue of knowledge gap, the universities should be invited on board such as those from the nutrition department, Botany and department of oceanography from the University of Ghana so that they make contributions from their vast knowledge.

The consultant stated the importance of the relevant stakeholders from the onset since GEF wants to see that from the beginning and not only at the implementation stage.

Dr Koffi was of the view that the total ecosystem assessment should be included and not only limit it to fish.

From now and September 1, comments could be submitted from the participants. He was interested to see data on hypoxia from the two countries.

The chairman responded that the putrefying smell of the algae suggested that it must have used oxygen but this hadn't been measured yet. Ms Yaqub said data showed that whenever there was a bloom, the

oxygen level goes on the minimal but she didn't have data on the Western region and she would make that available.

Dr Sankare gave an intervention for the inclusion of waste water management not only in the cities but also in the villages, sensitization and building of latrines in the affected places. He also said that sites or areas for extraction of oil, hydro power dams and oil drilling should also be considered since activities may influence the occurrence of bloom.

. In Ghana companies like Manaloo etc involved in separating waste from the nutrients and the biogas whom they could partner with. There was segregation of plastics from waste and companies that recycle plastics and he called for the scope to be widened.

According to the chairman, there need to be the repair of the sewage pipeline in Tema that has broken down so that the spillage of the sewage at Tema would be solved. Also in Accra, all the sewage was dumped directly at the beach.

Important stakeholders were also identified such as the district assemblies, universities, water resources commission, national canoe fishermen association, prefectures as found in Cote d'Ivoire among others.

Dr Koffi suggested for the study area to be ecologically mapped.

Ms Yaqub said both countries should present data on average discharge in their portion of the lagoon. The Ghanaian team promised to meet to further deliberate on the issue to provide more inputs in the project proposal.

## **6.0 PROPOSED COMPONENTS OF THE PROPOSAL AND LOG FRAME BY MR CHUCK CHAITOVITZ**

The second day started with a brief recap of the activities from the previous day. The participants made inputs into brief summary presented by the consultant. The consultant gave a presentation on the questionnaire and the process for the proposal including the deadline (September 1, 2012) for submission to GEF secretariat for review for the GEF council meeting. He discussed the various proposed components of the proposal and also the log frame. He explained the activities on the log frame. He also

spoke about bi-lateral strategies that could be deployed. All the comments and interventions received were incorporated into the final overview of activities for the first day. This presentation had priorities which the consultant went through with all the participants.

Mr Didi suggested that the timeline should be done very well taking into account the pattern of rainfall and dry season so as to collect data. Dr Sankare suggested that mechanical ways to collect the algal bloom should be looked into and having an alternative livelihood programme as a measure to help the fishermen. The chairman said in Ghana, because most of the fishermen in the western region were not indigenes of the land, it would be difficult for them to acquire land to farm when one wanted to introduce farming as an alternative livelihood programme.

## **7.0 DISCUSSIONS AND THE WAY FORWARD BY MR CHAITOVITZ**

Concerning this segment, there was a debate about the origin of the bloom. Mr Dibi said in Aby lagoon, the bloom was not too dominant and so it should be made to cover all water bodies close to the lagoon and not only localize it to the Aby lagoon. There was therefore the need to have research to pin point the source of the bloom and also the people around the lagoon cannot produce that amount of waste.

Ms Yaqub said from researches done by CRC, the bloom starts from the Aby lagoon during the dry season but due to direction of the wind and currents, it was blown from the lagoon to other places. The chair confirmed that CRC said the source of the bloom came from the Aby lagoon in the dry season and the nutrient came from the lagoon. Mr Hutchful said this phenomenon happens during the dry season and then in the wet season, it would be washed out.

The participants asked for clarity where needed on the various outputs of the priorities and its components.

The consultant asked for the participants to suggest specific targets.

Dr Abe said since the project document was still being developed, so one shouldn't worry much about the specific details. It could be added on later.

The consultant presented a revised version of the log frame after working over it during the lunch time highlighting all the portions where the changes have been made. The final deadline for the initial

process was changed from the 31<sup>st</sup> of July to the 5<sup>th</sup> of August so that the countries could have enough time to deliberate over the issues

## **8.0 CLOSING CEREMONY**

The consultant appreciated the contribution and comments from the countries and was excited about the progress of the meeting. The next key steps were discussed thoroughly. He would submit the reviewed log frame to the countries and though there was about a month to conclude on this, he hoped that the proposal would be ready for the GEF council meeting. The GEF was very interested in the phase two of the GCLME Project

In the closing remarks by the chair, he thanked all the participants for a good work done and was pleased by the turn out of the meeting and within the next month, all the targets and deadline would be met.

Dr Abe congratulated the consultant for walking them through the elements of the project identification form and now the consultant has the elements to finalise it. He also congratulated the two countries, the interpreters and also to the secretariat for the logistical support. He urged the countries to respect the time frame.



## OPENING CEREMONY

### BILATERAL MEETING ON ALGAL BLOOM INVASION ALONG THE BEACHES LOCATED BETWEEN COTE D'IVOIRE AND GHANA

26<sup>th</sup> JUNE, 2012

08:00	❖	Registration of participants
09:00	❖	Opening remarks by Mr Napoleon Gbolonyo, Administrative Officer
09:10	❖	Statement by Mr. Chuck Chaitovitz Principal, Global Environment & Technology Foundation
09:20	❖	Statement by Dr. Jacques Abe, Officer in Charge IGCC/GCLME
09:30	❖	Opening statement by Madam Salimata Abdul Salam , Chief Director, Ministry of Environment, Science and Technology
09:50	❖	Group Photograph
10:00	❖	Refreshments



## PROGRAMME OF THE WORKSHOP ON ALGAL BLOOM

**ACCRA, GHANA, 26-27 JUNE 2012**

<b>Time</b>	<b>26 JUNE 2012</b>	<b>27 JUNE 2012</b>
09 : 00 – 10 : 00	Opening Ceremony	Walk through the questionnaire and Inputs from countries
10 : 00- 10 :30	Refreshments	Coffee break
10 :30– 11 : 30	Overview on Algal Bloom (consultant)	Walk through the questionnaire and Inputs from countries
11 : 30 – 13 : 00	Country presentation (Ghana)	Presentation of Proposed components of the proposal and Log Frame
13 : 00 – 14 : 00	Lunch	Lunch
14 : 00 – 16 : 00	Country presentation (Cote d'Ivoire)	Discussions and The way forward
16 : 00 – 16 : 30	Coffee break	Coffee break
16h 30 – 17h 30	Priorities discussions	Wrap up and next step



## LIST OF PARTICIPANTS

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**STATEMENT BY THE OFFICER –IN- CHARGE OF THE UNIDO/IGCC/GCLME PROJECT**

Mme Salimata Abdul Salam, Chef Directrice, Ministère de l'Environnement, de la Science et la technologie du Ghana

Mr. Le consultant, Mr. Chuck

Chers Experts Nationaux

Chers participants

Au nom du Secrétariat Intérimaire du Courant de Guinée, j'ai l'insigne honneur de vous souhaiter la bienvenue à Accra

Le Projet du GEMCG comme vous la savez doute termine ses activités a la fin du mois de Juin 2012 pour devenir ICG a partir du 1<sup>er</sup> Juillet. Votre réunion de concertation et de conception du projet sur les efflorescences algales constitue la dernière activité que nous organisons

La première réunion à Abidjan en date de février a permis aux deux parties de mieux se connaître et d'identifier les interlocuteurs de part et d'autre

De février jusqu'à ce jour des travaux de terrain ont été exécutés avec des résultats probants qui vont constituer la base du document de projet

Pour l'essentiel, vous allez fournir matière à réflexion pour meubler le document de projet. La tâche du consultant qui est habitué aux présentations des projets bancables du FM est de finaliser

Le seconde phase de mise en œuvre du PAS bénéficiera donc de ce complément de finance pour la mise en œuvre des activités de terrain

Sur ce je vous souhaite encore une fois bonne arrive Accra et surtout de fructueuses délibérations

**OPENING SPEECH BY MADAM SALIMATA ADBUL SALAM, NATIONAL DIRECTOR, MINISTRY OF  
ENVIRONMENT, SCIENCE AND TECHNOLOGY GHANA, AT THE 2<sup>ND</sup> BILATERAL ALGAL BLOOM MEETING  
(26-27 JUNE, 2012)**

Mr. Chairman,

Officer-in-Charge GCLME Project,

Distinguished Participants,

Distinguished Ladies and Gentlemen,

It is a privilege and an honour to give this opening speech on behalf of the Hon. Minister for Environment, Science and Technology.

I wish to welcome all of you especially our brothers and sisters from Cote d'Ivoire.

You are welcome. Akwaaba!

For the last ten years, Algal bloom has been a major transboundary environmental issue for Ghana and Cote d'Ivoire and this was also identified in the GCLME Transboundary Diagnostic Analysis (TDA), 2006.

Our fishermen in the western region look on helplessly each season from December to March, as "green-green" as it is known among them, takes over the water making it impossible to catch fish. We have received countless complains and petitions over the years asking government to do something about.

It was with great relief that we received the initiative from the IGCC to address it as bilateral issue. A national committee was formed and they produced a report as a first step towards the bilateral arrangement.

Mr. Chairman, In view of the adverse impacts of the Algal bloom menace we have gathered here today, to finalise a proposal to be submitted to GEF for funding towards addressing the issue.

We are glad that we have come this far.

I hope that you will find this 2-day meeting very fruitful. The Ministers of Environment of the two countries will be looking forward to the results of your deliberations.

On behalf of the Hon. Minister of Environment, Science and Technology of Ghana, Honorable Sherry Ayittey, I officially declare this meeting duly open and I wish you all fruitful discussions.

Thank you