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**Sixteenth Session of the IOC-FAO Intergovernmental Panel**

**on Harmful Algal Blooms**

Rome, 27-29 March 2023

Item 4.6.5 of the Provisional Agenda

**PROGRESS REPORT OF THE IOC REGIONAL WORKING GROUP ON HARMFUL ALGAL BLOOMS IN NORTH AFRICA (HANA)**

After the North African Network for Harmful Algal Blooms (HANA) fourth workshop in March 2021, a meeting with Chair, Vice-Chair and countries coordinators (Egypt, Tunisia and Morocco) hosted by Faculty of Science, Alexandria University, was held virtually on 3 June 2021. During this meeting an action plan for future activities has been made in order to implement the workshop recommendations in March.

For the first recommendation; Updated HAB data (events and species) continuously for HAEDAT.

One day training workshop hosted and organized by IOC was held on 8 July 2021. Henrik Enevoldsen demonstrated introduction on the use of HAEDAT. Each coordinator received his/her account information of HAEDAT (username & password).

For the second recommendation; update HANA website. In November 2021, HANA website was updated, all the documents concerning HANA meeting in March were uploaded with the help of Yun Sun. As, the website of IOC was rejuvenated last year and only the staff in the Secretariat have the access no more update was occurred for HANA website.

A summary of HAB occurrence, distribution and events in the HANA region was published in 2021 (Zingone et al., 2021).

No meetings or activities were done regarding HANA during 2022. The data concerning HAB events still insufficient with no information exchanged within HANA countries. In the meantime, individual activities were done at each country. In 2022, an Egyptian monitoring program for harmful algae established along the Egyptian Mediterranean coast (from Alexandria to Port Said) by Alexandria University-Faculty of Science (Alex-Sci), The Academy of Scientific Research and Technology (ASRT) and Egyptian Environmental Affairs Agency (EEAA). The main goal is to document the diversity of harmful species for protection public health and ensuring food safety.

The study of HAB in Morocco waters covered both Atlantic and Mediterranean coasts. The main studied topics in the Atlantic coast concerning the ecology, dynamics and toxicity of harmful dinoflagellates and diatoms; *Ostreopsis, Coolia, Gonyaulax cf spinifera, Amphidinium, Lingulodinium polyedra*, *Protoceratium reticulatum* and *Pseudonitzschia* spp. While in the Mediterranean coast, the distribution of epibenthic dinoflagellates, cysts and the dynamics of HAB species with paralytic and amnesic shellfish poisoning are concerned. The effect of toxins on Mollusca are also studied

On the other hand, there is a cooperation between National Institute of Marine Science and Technology in Tunisia (INSTEM), Moroccan Institute of Fisheries Research (INRH) and

Montpellier University, MARBEC CNRS, IRD, Ifremer, France for studying harmful algae in the southwestern Mediterranean Coast.

The HANA network still has difficult situation due to lack of funds, experience which affect the ability to achieve progress, but we need to maintain HANA, so the following steps are needed to maintain HANA network:

1. Updated HAB data (events and species) for HAEDAT
2. Complete updating HANA website.
3. Organize a virtual meeting during June and September 2023 to follow the update process

**Recommendations for 2024 - 2025:**

1. Organize a virtual meeting during January 2024 to develop a roadmap for the next stage.
2. Perform intra-regional intercalibration of the methods used for HAB studies for all the laboratories of HANA region.
3. Effective knowledge exchange among the different partners of HANA through the website, training courses.
4. Establish Data base for molecular identification of HABs in HANA region (INSTEM, Salammbo, Tunisia)