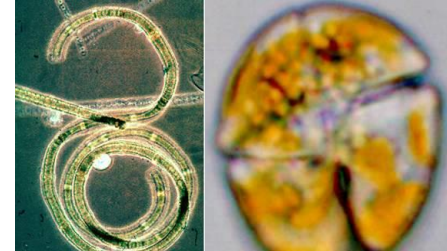
A photograph of a swimmer in a pool, wearing a white swim cap and blue goggles, swimming towards the right. The water is dark and rippled. The background shows a reddish-brown wall or structure.

# **Agenda item 5.4.2 IPHAB-XI**

## **Document IOC/IPHAB-XI/3s**



## Harmful algal events.....

- **Affect almost all IOC Member States**
- **Poison seafood, threatening public health and industries**
- **Kill wild and farmed fish; aquaculture impacts likely to increase with growth of industry**
- **Threaten water supplies from desalinization**
- **Cause economic impacts that are increasing along with increase in occurrences of HABs**







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Harmful Algal Bloom Programme

# **IOC Intergovernmental Panel on Harmful Algal Blooms (IPHAB)**

**Established to assess progress, decide on priorities, and identify funding or funding opportunities for implementation of the IOC HAB Programme**

***Re-elected Chair (2013-2015: Robert Magnien (USA)***

***Re-elected Vice-chair (2013-2015: Gires Usup (Malaysia)***



Intergovernmental Oceanographic Commission of UNESCO

Harmful Algal Bloom Programme

# IOC Intergovernmental Panel on Harmful Algal Blooms (IPHAB)

**The IOC HAB Programme is the ONLY global intergovernmental effort to understand, manage and mitigate the harmful effects of algal blooms.**

**The IOC is clearly the world leader in this field.**



Intergovernmental Oceanographic Commission of UNESCO

Harmful Algal Bloom Programme

# **IOC Intergovernmental Panel on Harmful Algal Blooms (IPHAB)**

**The IOC HAB Programme addresses ALL of the IOC's high level objectives:**

- 1. Healthy Ocean Ecosystems**
- 2. Early Warning for Ocean Hazards**
- 3. Climate Change Adaptation and Mitigation**
- 4. Enhanced Knowledge of Emerging Science**



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# Harmful Algal Bloom Programme

## **IPHAB Activities Occur in Close Partnership With:**

### **Internal**

- **IODE (data)**
- **N-CIRP (research)**
- **GOOS (observations)**

### **External**

- **IAEA (capacity development)**
- **IMO (ballast and invasive species)**
- **SCOR (research)**
- **ICES (regional coop and research)**
- **PICES (regional coop, research and capacity development)**
- **ISSHA (data and networks)**
- **Numerous research institutions (research, observations, capacity development)**



## **Decision IPHAB-XI.1: Scientific Symposium on Harmful Algae and Global Change**

- In cooperation with SCOR, ICES, PICES, GOOS and GEOHAB/GobalHAB, convene an Open Scientific Symposium to:
  - identify where climate change is likely to affect HAB events
  - identify research gaps to improve understanding of changes likely to occur
  - collaborate with other scientific disciplines
  - evaluate new technologies and observing systems
  - develop predictive capabilities and risk assessments





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## Harmful Algal Bloom Programme

### **Decision IPHAB-XI.2: Development of a Global HAB Status Report**

- Initiates process to develop the first-ever Global HAB report
- Utilizes IOC, IODE, OBIS efforts to compile HAB data
- Utilizes expertise in Member States via Regional HAB Groups and IPHAB Task Teams
- Target date for completion: 2015-2016 dependent upon resources and updating of databases





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# Harmful Algal Bloom Programme

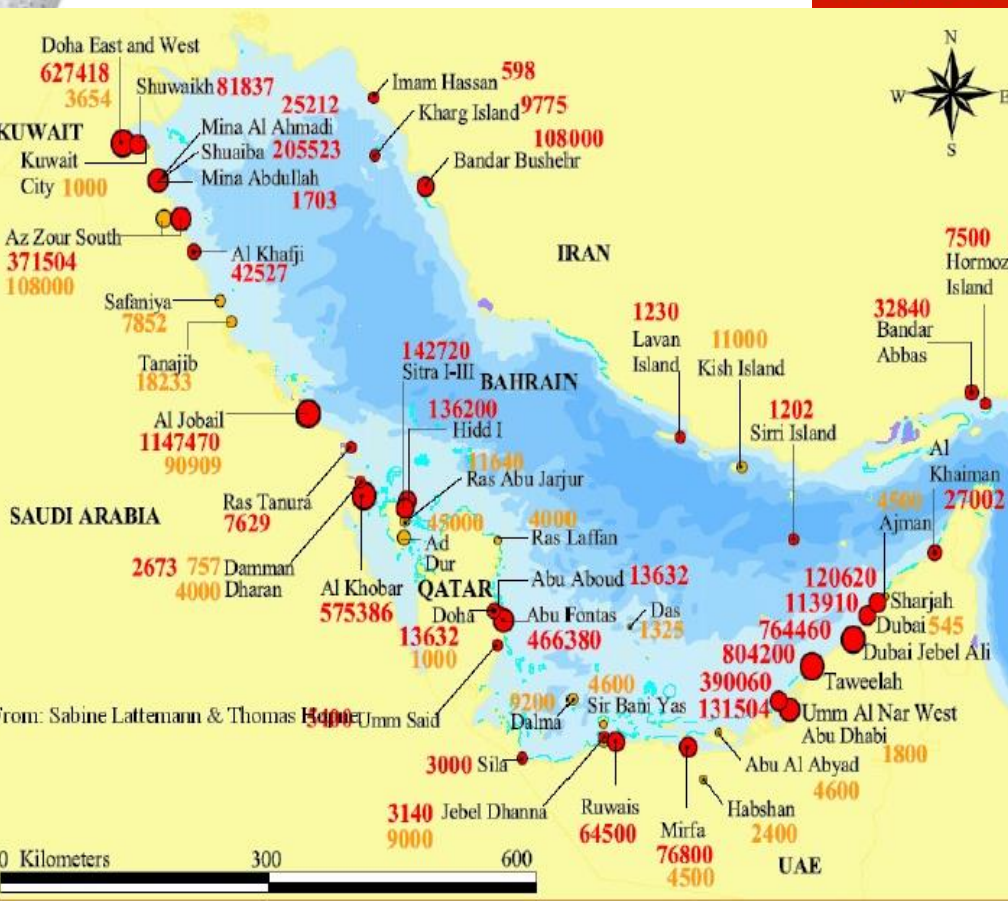
## Decision IPHAB-XI.3: Harmful Algae and Desalination of Seawater

### Why is this important?

arabian  
**Business.com**

Saturday, 28 March 2009 00:48 UAE time

arabian  
**Business.com**  
/PROPE



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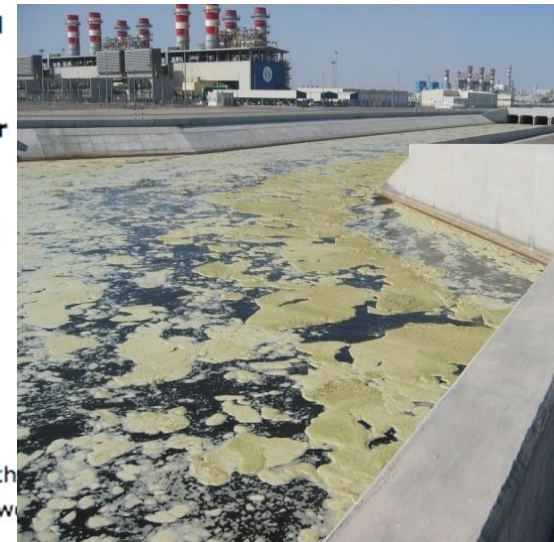
## 'Red tide' forces desalination plant closure

by Andy Sambidge on Monday, 17 November 2008

The Sharjah Electricity and Water Authority (SEWA) has suspended the operation of the new water desalination plant in Khor Khan due to the red tide phenomenon off the coast of Khor Fakkan city.

SEWA added that it has resumed operation of some wells to provide sufficient water to the city until the problem is solved, indicating that the water drainage line as well as the water around the clock.

SEWA has called on consumers to ration water and take required precautionary measures, news agency WAM reported.



Sharjah Electricity and Water Authority

## **Decision IPHAB-XI.3: Harmful Algae and Desalination of Seawater**

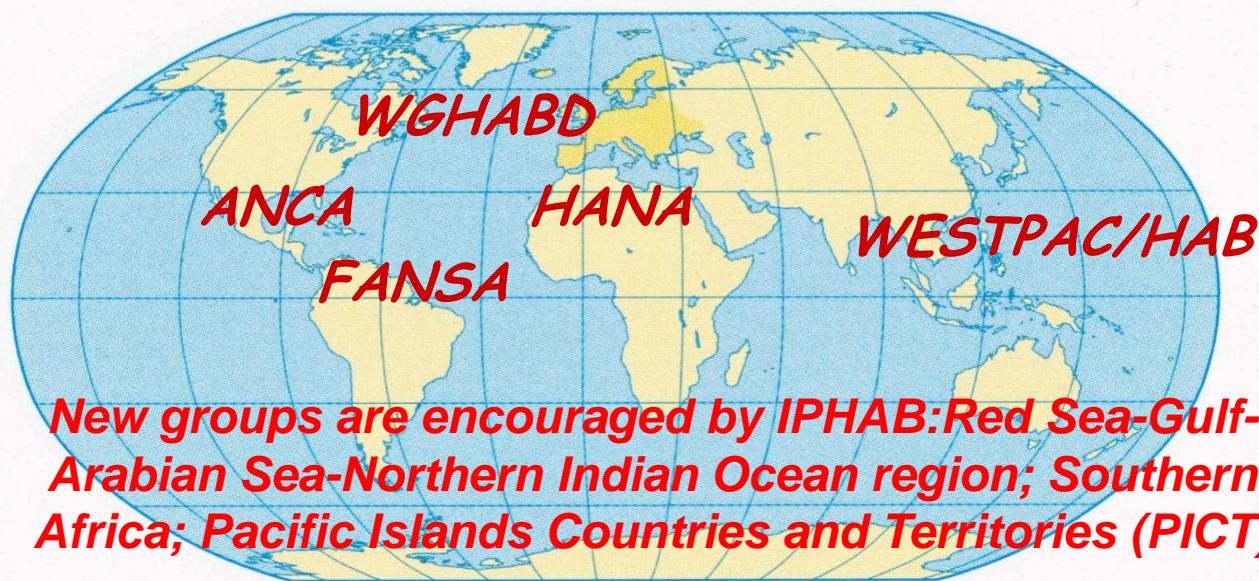
- Efforts initiated in IPHAB-X
- Major meeting with Member State, industry and scientific representatives planned for 2014 in Oman
- Steering committee formed, some funding commitments, more being sought
- Meeting objectives include:
  - state-of-knowledge on impacts of HABs
  - engineering and operational strategies for mitigation
  - production of manual for plant operation and design



## **Decision IPHAB-XI.4: Regional HAB Programme Development**

**Regional HAB Groups are critical to:**

- Enhance opportunities for identification of MS priorities
- Assist in coordination of regional and global research
- Assist in coordination and support of capacity building
- Collect collate and share data





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## Harmful Algal Bloom Programme

**Decision IPHAB-XI.5: Task Team on Biotoxin Monitoring, Management and Regulations**

**Decision IPHAB-XI.6: Task Team on Algal Taxonomy**

**Decision IPHAB-XI.7: Task Team on Harmful Algae and Fish Kills**



## **Recommendation IPHAB-XI.1: HABs in a Changing World: A New Global Approach to HAB Research to Meet Societal Needs**

- GEOHAB Open Sciences Mtg held 24-26 April 2013 to review programme synthesis and future framework as called for by IOC 26<sup>th</sup> Assembly Recommendation
- Framework of global cooperation in HAB research has yielded clear benefits to Member States
- New framework – **GlobalHAB** will build on GEOHAB Science Plan but target updated priorities
- Priorities will be visibly linked to Member State needs





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## Harmful Algal Bloom Programme

# **Recommendation IPHAB-XI.1: HABs in a Changing World: A New Global Approach to HAB Research to Meet Societal Needs**

## **Why is it important for IOC to continue to take the lead in integrating global efforts in HAB research?**

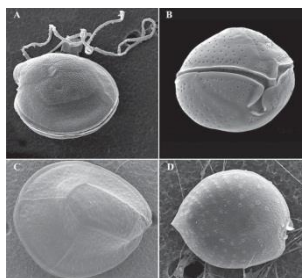
- Most critical knowledge gaps require cooperation and coordination of expertise and resources in budget-limited environment – beyond the reach of individual nations
- As the world leader in HAB management, observations and research, Member States and the HAB community expect continued IOC leadership to protect public health and living resources
- 12 years of investment in building networks, engagement, recognition that work and can be effectively utilized

## Recommendation IPHAB-XI. 2: Ciguatera, A Plan for Improved Research and Management

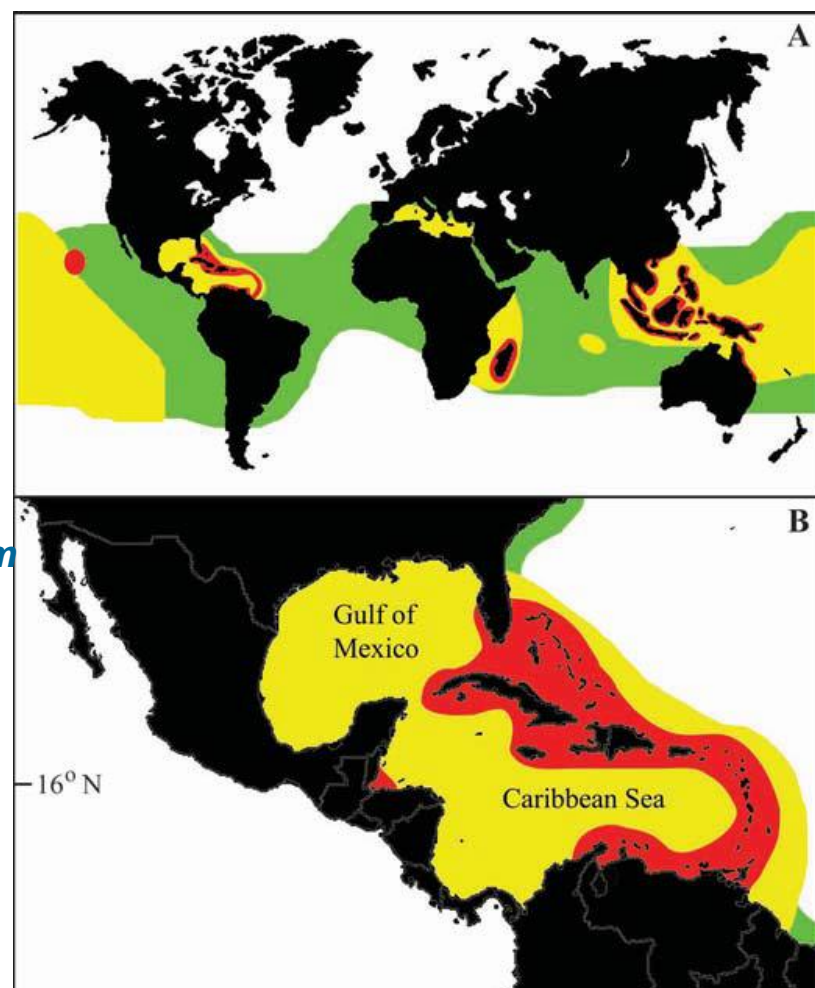
### Why is this important?

- Worldwide distribution
- Most poisonings of all HABs (100's of thousands +)
- Incidence increasing but poorly understood
- Very difficult to detect toxins in food supply
- New research is needed to safeguard public health and support more effective management

*Causative Organism  
Gambierdiscus, a  
benthic HAB*



*From Tester et al*





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## Harmful Algal Bloom Programme

### **Recommendation IPHAB-XI. 2: Ciguatera, A Plan for Improved Research and Management**

- Develop for the first time a coordinated Ciguatera strategy with WHO, FAO, Member States, Regional HAB Groups, IAEA and GlobalHAB
- Improve organism detection
- Improve toxin detection
- Improve epidemiological data collection, reporting and assessments





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# Harmful Algal Bloom Programme

**We need new commitment of resources from more Member States if we are to maintain the same level of activity!**

**You are invited to:**

- **Endorse the IPHAB-XI Recommendations including the Work Plan for 2014-2015**
- **Ensure the necessary Regular Programme funding to allow operation of the HAB Programme core activities**
- **Assist in identifying extra-budgetary resources for implementation of the Programme 2014-2015**



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# Harmful Algal Bloom Programme



***Thank you for your attention***