

**Wednesday May 8, 2019. A Roundtable Discussion at ICTC11**



**“Risk Management of cyanobacterial blooms  
and cyanotoxins: contributions of the ICTC community”**

Proposal: After almost 40 years and 11 international conferences, the ICTC community can claim significant impact on advancing our understanding of cyanobacteria, their dominance in water supplies and their bioactive compounds, especially the potent cyanotoxins. ICTC has made it this far with no formal organization, or direction, other than to provide a platform for presenting research on cyanobacteria and their toxins, and a venue for furthering personal contacts.

The HAB field, especially FHABs, has now reached a point where the topic has expanded globally enough that there is competition for it's audience unless ICTC takes some next steps. This makes now, a good time to reflect and discuss what we would like to accomplish going forward, for example how to encourage, present and acknowledge current and new researchers to succeed in not only filling in existing knowledge gaps, e.g. bioactive cyanopeptides, but to address the unknowns in the field. We believe there is a special need to include using the accumulating body of knowledge to develop and perfect applied methods, policies and training programs that manage and mitigate cyanobacterial harmful algae blooms. To that goal, we propose a discussion of the following topics, followed by a report summarizing the views arising from the Roundtable session.

Positively-rated topics arising from the Roundtable would be used as a guide for future ICTCs and possible further actions.

Our topics include, but are not limited to:

**1. FUTURE PROMOTION OF APPLIED AND APPLICABLE SCIENCE AND TECHNOLOGY VIA ICTC SERIES.**

Fundamental research has been presented and promoted via the ICTC series, however practical problems in risk management exist at an international scale. Applied expertise and experience, are available within the ICTC community, with considerable potential for technology transfer and collaborative ventures. This expertise is desirable at all levels of water use; municipal, industrial and recreational. A holistic approach to management and mitigation is preferable to much of the current promoted methods that are often one sided and short term. ICTCs collective body of science would promote long term success that ensures reduced risk and optimum use of our water supplies.

**2. WHETHER TO CONTINUE AS AN UNAFFILIATED ICTC SERIES, OR TO BUILD THE ICTCs INTO A NEW SOCIETY?** If the ICTC series was held under the auspices of a constituted scientific society, then possible policy changes and new actions could be actively proposed by the membership, considered and approved (or not) by the

Society. Should ICTC promote such a move? Complimentary to such a move is the recognition that the risk management, and mitigation of FHABs is a much different approach than that of marine HABs. If there is an agreed need, then should we move to establish an international society for the risk management of cyanobacteria and cyanotoxins-within or separate from a CyanoHAB society? This could include a focus on methods, programs and policies on applied topics plus educational and training programs. It would need to compliment and receive support from groups like NALMS, AWWARF, EPA, water industry and like-minded groups internationally. Most national and international phycological societies and federations do not focus on cyanobacterial blooms and toxins and their management. Although ISSHA and its journal *Harmful Algae* have been around for some years, they were organized originally to include only marine HABs and only later invited cyanobacteria and their toxins to be among their interests. In reality the management and mitigation approaches for marine HABs means that ISSHA's focus will remain primarily on marine microalgae and marine habitats.

3. FUTURE ICTCs. Based on the above item 1 and 2 what additions and/or changes could be done to future ICTCs to accomplish those goals? Keep in mind that if additional actions were to occur, such as management and mitigation training workshops etc., then some structure is usually necessary to co-ordinate, give credibility (and fund to some degree) the actions. Elsewhere, these things are carried out by an over-arching scientific society whose members pay an annual membership fee.

4. PUBLICATIONS. Only at ICTC1 and 2 have conference proceedings been published in book format. Should future ICTCs task the publication of it's proceedings? At ICTC11 delegates are encouraged to submit manuscripts for subsequent publication in several journals. These journals include some of the relatively new open access journals. These commercial enterprises clearly wish to receive the manuscripts from conferences such as ICTC11. Would it be preferred in the future to publish conference papers in an edited book form OR to direct papers to an edited journal of a relevant scientific society?

\*\*\*\*Note: Please use open space to add comments or topics addressed in the oral discussion or not included above. They will be incorporated into the Roundtable summary document.

\*\*Please include your name and affiliation.

Respectfully submitted  
Wayne Carmichael  
Geoffrey Codd