

Second Virtual Meeting of the Project Science Team July 13/14, 2021

The second virtual meeting of the Project Science Team (PST) for the project on “Building local warning networks for the detection and human dimension of Ciguatera fish poisoning in Indonesian communities” (hereinafter referred to as Ciguatera) funded by the Ministry of Agriculture, Forestry and Fisheries (MAFF) of Japan, through the Fisheries Agency of Japan (JFA), was held via Zoom videoconference from 15:00 to 17:00 Pacific Daylight Time on July 12, 2021 (July 13, 2021 in the Western Pacific).

1. WELCOME REMARKS, INTRODUCTIONS AND ADOPTION OF THE AGENDA

The meeting was chaired by Dr. Mitsutaku Makino who also led the introductions of the attendees (see *Appendix 1*). The provisional agenda circulated prior to the meeting was adopted, with the modification that former item 5 (Modifications to the project workplan – suggestions from Indonesian colleagues) be moved up to become item 3 (see *Appendix 2*). Dr. Mark Wells served as the rapporteur.



+ Pengbin

Ciguatera project meeting participants at their second virtual meeting on July 13/14, 2021. Top, left to right: Alexander Bychkov, Mitsutaku Makino and Mark Wells; Middle, left to right: Vladimir Kulik, Diasuke Ambe and Naoki Tojo; Bottom, left to right: Suhendar I Sachoemar, Arief Rachman and Charles Trick. Pengbin Wang missing from photo.

2. SUMMARY OF ACTIVITIES SINCE THE 2020 PICES ANNUAL MEETING (PICES-2020)

Dr. Makino gave a brief presentation of past PICES MAFF projects, including the projects on “Development of the prevention systems for harmful organisms’ expansion in the Pacific Rim” (2007–2012), “Marine ecosystem health and human well-being” (2012–2017; MarWeB) and “Building capacity for coastal monitoring by local small-scale fishers (2017–2020; FishGIS), and ending with the current project. He

emphasized the transdisciplinary approach we have taken of co-design, co-production, and co-delivery with the local people, researchers and government. The current FishGIS application design and operation was reviewed and presented as the foundation for the Ciguatera project.

The overall goal for the project—To build the capacity of local small-scale fishers and community members to monitor their coastal ecosystems and fisheries—was revisited, along with the general strategy to **Assess** the state of local ecosystems, to **Detect** the presence of HAB species, and to **Avoid** the transfer of contaminated seafood to the tables of families.

Given the impact that the COVID-19 pandemic has had on the ability to travel and work in communities, project activities since PICES-2020 have been restricted to modifications of the FisGIS application. Dr. Shion Takemura is leading that effort but was unable to attend the meeting. He nevertheless provided the following information:

- a) Support for Operating System (OS) updates by Apple and Google
 - The application will be modified to allow for flexibility in responding to OS updates by Apple and Google.
 - Android 5.1 and IOS 12 or later devices will be supported.
- b) Compliance with ABS (Nagoya Protocol on Access and Benefit-sharing)
 - For the completed FishGIS project, all reported data has been stored on the Japanese server.
 - For the Ciguatera project, reported data will be stored on a server in Indonesia (provided by Google) and then transferred to a server in Japan in real time.
- c) Update to the Ciguatera project
 - A function has been added to map Ciguatera's findings.

3. MODIFICATIONS TO THE PROJECT WORKPLAN – SUGGESTIONS FROM INDONESIAN COLLEAGUES

Drs. Suhendar I Sachoemar and Arief Rachman had submitted a number of suggestions for modifications to the project plan in order to maintain project momentum during the pandemic.

For the **Assess** component, they suggest studying the data and information or reports on research activities that have been carried out by their colleagues in the Kepulauan Seribu (Seribu Islands), Jakarta Bay, Banten Bay and Pelabuhan Ratu or Hurun Bay at Lampung (South Sumatera) to determine additional potential locations for project activities. They will try to pull all these data together from the regions to allow PST working on a publication of *Gambierdiscus* distribution in Indonesian waters. There was some discussion about how much funding is needed for this effort, which they will look into. It is possible that we might use a portion of the funds already transferred to Indonesia in Year 1.

In terms of **Detection**, some of their colleagues have been trained to use the Ciguatera Fish Poisoning (CFP) detection kit produced by the international CFP working group (Monaco, 2018), and may already have some data on the presence of *Gambierdiscus* in the water column and its abundance in other regions (*e.g.*, Kepulauan Seribu (Seribu Island), Jakarta Bay, Banten Bay and Pelabuhan Ratu or other waters previously surveyed like Hurun Bay at Lampung (South Sumatera)).

In terms of **Avoidance** of eating risky fish, there was some discussion about the potential for on-line training (also for the sampling/analyses aspects of the project). The PST recognized that it may be difficult to achieve the project outcomes this way, but were generally open to the idea of considering this option. Developing on-line training modules may help to increase the sustainability of the program after the project finishes. However, the general consensus was to wait and see whether it will be possible to do in-person training in early 2022.

4. BUDGET SITUATION OF FY 2020 AND FY 2021

Dr. Alexander Bychkov gave a summary of the budget status. The PST is waiting to learn if we are able to keep and use the carryover portion of Year 1 budget. The extra funds would go towards travel as appropriate. This would be convenient given that the cost of travel has grown substantially as a consequence of the pandemic.

5. PROJECT DESIGN MATRIX

Dr. Naoki Tojo presented the Project Design Matrix (PDM) that he and Dr. Takemura have been developing from input provided by the PST since the first meeting. The PDM provides an overall framework of the project and serves also as a tool for evaluating its progress. Each of the categories in the PDM in turn are to have a Plan of Operation (PO) with specific activities. These PO are based on:

- Obtaining insights to the on-site situation in Indonesia from Drs. Sachoemar and Rachman.
- Aligning plans of the Indonesian counterparts participating in the project with the overall framework.
- Listing and sharing the key hypothesis by PICES experts with the Indonesian counterparts to help design and maintain the surveys and monitoring activities.
- Listing specific needed inputs with consensus by the decision makers.
- Especially important, confirming all efforts/outcomes by PICES experts for not only their own studies but also the contributions for Indonesian locals (capacity development and international cooperation).

Although the current project plans account for many of these aspects, the great benefit of the PDM is that it provides a detailed framework on which to chart progress. Dr. Tojo's suggestion was to consider the insights provided by Dr. Sachoemar and Dr. Rachman at the meeting, and to then focus on developing the key hypotheses, specifying the list of inputs, and to develop the management model and dissemination flow of research findings and the transfer of technologies.

This was the initial presentation of the PDM and PO to the group, and Dr. Tojo made a compelling argument that this shift in our organizational approach was needed to provide a better overview of the project components and intended outcomes, even if it does not result in altering our immediate project plans. The key will be to have multiple options so that PST can be adaptable as conditions change.

The approach discussed is to build capacities through co-working with the local people, researchers and government in Indonesia and through the available dissemination system, with direct communication to local stakeholders. For the project activities:

- Members of the target organization will be trained in the scientific/technical fields;
- PICES and Indonesian experts will enhance capacity of local disseminating personnel (young/assistant officers);
- Locals will have guidance from the officers and occasionally from PICES experts;
- Locals and the community officer will be encouraged as a group to attend the seminars and report their contributions (*e.g.*, photos).

Dr. Tojo raised the possibility of bringing Indonesian community leaders to Japan to observe how similar cooperatives are working, and their benefits for the stakeholders.

Dr. Sachoemar felt there was great support in Indonesia for the project and expressed his willingness to undertake the necessary tasks outlined in the PDM, but he will need to evaluate what is possible given the current pandemic conditions. Dr. Rachman also was in full agreement that a PO is needed and has to be established soon to help the Indonesian counterparts start developing a strategy from their side. Dr. Tojo will begin with a draft PO to share with the team that incorporates Dr. Sachoemar's and Dr. Rachman's suggestions for how we might progress under continued pandemic conditions.

6. OTHER BUSINESS

Dr. Rachman noted that CFP is not yet a major problem in Indonesia, and that there are more problems from other HAB species. HAB species have become one of the major research directions in the Federal research budget, and with the drive to increase mariculture production there is strong support for all HAB research in Indonesia. Dr. Pengbin Wang is involved in a new project that includes Indonesia, and he will look at what linkages make sense and perhaps incorporate them in the PDM.

Dr. Charles Trick brought up the issue of research ethics and the need to evaluate how we may get approval for the research. This will include approval from the community members to conduct the study. He will look into how we should proceed about getting this ethics approval to protect the community members and enable the research findings to be published. We also will need to have agreement on responsibilities and expectations of community members participating in the project (essentially, they sign onto the PDM).

The final task was to decide the next meeting near the end of August to maintain momentum in the planning. In the meantime, we will work offline though email to refine the PDM and PO to be finalized by the next meeting.

Appendix 1

Second Project Science Team meeting participants

Members

Daisuke Ambe (Japan, representing TCODE)
Alexander Bychkov (PICES, *ex officio*)
Vladimir Kulik (Russia, representing MONITOR)
Mitsutaku Makino (Co-Chair; Japan, representing HD)
Naoki Tojo (Japan, representing FIS)
Charles Trick (Canada, representing MEQ)
Pengbin Wang (China)
Mark Wells (Co-Chair; USA, representing MEQ)

Other

Arief Rachman (LIPI, Indonesia)
Suhendar I Sachoemar (BPPT, Indonesia)

Appendix 2

Second Project Science Team meeting agenda

Monday, July 12, 2021 (PDT)

1. Welcome remarks, introductions and adoption of agenda
2. Brief summary of activities since the 2020 PICES Annual Meeting
3. Modifications to the project workplan – suggestions from Indonesian colleagues
4. Budget situation of FY 2020 and FY 2021
5. Project Design Matrix
6. Other business