International Coral Reef Initiative (ICRI)

Member's Report | 38th General Meeting

9th – 13th September 2024 Jeddah, – Kingdom of Saudi Arabia

Reporting Period: 2023 & 2024

A. Member Information:

- Name of ICRI member: Thailand
- Name of person(s) completing member's report: Thamasak Yeemin
- Position/Title: Lecturer (Ramkhamhaeng University)
- Email: thamasakyeemin@yahoo.com
- Are you a designated ICRI Focal Point: ☒ Yes ☐ No
  - If no, please indicate who you are completing the form on behalf of:
- Which was the last General Meeting you attended:
  - The 36th ICRI General Meeting (online)
  - The 35th ICRI General Meeting (online)
  - The 34th ICRI General Meeting in Townsville, Australia
- Will you be attending the 38th ICRI General Meeting in Jeddah, Kingdom of Saudi Arabia: ☒ Yes ☐ No
- Member social media:
  - Twitter/X: @dmcrth
  - Facebook: DMCRTH; MBRG.RU
  - Instagram: dmcrth

B. Reporting on the implementation of the ICRI Plan of Action 2021-2024: turning the tide for coral reefs. *Your responses will help inform the Secretariat about members' contributions toward the current Plan of Action. You can download the ICRI Plan of Action here: https://icriforum.org/documents/plan-of-action-2021-2024/*

What are the main contributions you, as an ICRI member, have made to the ICRI Plan of Action?

Theme 1 - Preparing for the Future: Promoting Resilient Coral Reefs

Theme 2 - Coral Reef Science and Oceanography: Advancing and Utilizing the Latest Science and Technology

Theme 3 - Local Threat Reduction: Integrating Response Planning Frameworks

Theme 4 - Diversity and Inclusion: Expanding the Coral Reef Community

Answer:

- The use of ecological and socioeconomic indicators for warning and enhancing coral reef resilience is emphasized in Thailand's five-year Coral Reef Management Action Plan (2022–2026). Collaboration is encouraged with international organizations, especially the IOC, UNESCO, ICRI, IMO, and IUCN.

- The Scientific Session B4: Coral Reef Resilience to Climate Change and Human Impacts, organized by Thamasak Yeemin (Thailand), Vo Si Tuan (Vietnam), Takashi Nakamura (Japan), and Jing Zhang (China), was held at the 2nd UN Ocean Decade Regional Conference and 11th WESTPAC International Marine Science Conference on April 23, 2024, Bangkok, Thailand. The session included eighty participants, twenty-one oral presentations, and nine poster presentations. The session's presenters covered a wide range of topics related to coral reef resilience to climate change and human impacts, including the effects of anoxia and hypoxia, extreme environmental circumstances, coral bleaching events, coral diseases, coral recruitment, the ecology of marine invertebrates and reef fishes, and the monitoring, management, restoration, and conservation of coral reefs. Promoting resilience-based management and the sustainable use of marine and coastal resources, community-based biodiversity conservation, and support for the establishment of new MPAs and OECMs are the main strategies for increasing coral reef resilience to changing climates and their human impacts.

- In 2024, there was a significant coral bleaching event in the Andaman Sea and the Gulf of Thailand. The Department of Marine and Coastal Resources and its partner agencies, particularly citizen scientists have been implementing the preparedness and response plan for coral bleaching that was developed by the Working Group on Marine Ecosystem Management of Thailand. During the bleaching period, a number of human activities on coral reefs were restricted or prohibited. There was a brief closure of certain marine protected areas. Shading was also implemented at several reef sites. It was determined which coral reefs were resilient to coral bleaching.

- (ICRI) What are your upcoming priorities for coral reefs?

Answer:

- Establishment and effective management of marine protected areas, Locally Managed Marine Areas (LMMAs) and Other Effective Area-Based Conservation Measures(OECMs) for coral reef management and conservation are important measures for Thailand.

- Programs for socioeconomic and ecological monitoring are constantly being implemented with the use of new technologies. International, national, and local communities use the data from the coral reef monitoring program.

- Resilient coral reefs and underwater pinnacles are intensively explored and their management strategies are properly implemented.

- The sustainable use of coral reefs for fishing and tourism was emphasized in light of the global climate change crisis.

- Coral reef restorations, both passive and active, that emphasize novel approaches, low costs, and large-scale implementation are emphasized.

C. Reporting on the Restoration of Coral Reefs *(Target 2 GBF/Action Point 3 Coral Reef Breakthrough)*

- (ICRI) Are you able to estimate the total area (km^2) of coral reef under active restoration and the total area you consider to be 'restored', as a result of your organisation/country's in 2023?
    - Total area under active restoration in 2023: 0.20 km^2
    - Total area considered to be restored in 2023: 0.24 km^2

- (ICRI) If available, please provide further information on the total area considered to be restored, and under active restoration for the total period of the restoration programme, including the timeframe:

Answer:

The 20-Year Marine and Coastal Resources Action Plan (2017 – 2036) of Department of Marine and Coastal Resources (DMCR), Thailand:

- Build and install artificial reefs
- *2022-2026: 150 locations*
- *2027-2031: 225 locations*
- *2032-2036: 300 locations*

- Restoring natural coral reefs
- *2022-2026: 2,880,000 coral fragments*
- *2027-2031: 4,320,000 coral fragments*
- *2032-2036: 5,760,000 coral fragments*

- (ICRI) For the purpose of the above, please provide definitions for how your programme/organisation/country considers coral reefs to be:
    - A) Under active restoration
    - B) Restored

Answer:

Under active Restoration:

Restored:

Does your country have any restoration policies or regulations?

Many locations have outdated and insufficient regulations for coral reef restoration, resulting in inadequate oversight of restoration efforts. In addition, the absence, limitations, or differences among regulations between countries prevents the development and implementation of effective regional coral reef conservation strategies.

- (ICRI) Please describe the restoration policies or regulations (if any) that are in place in your country.

Answer:

- *The 5 Years Coral Reef Management Action Plan 2022 - 2026*
- *National Adaptation Plan (NAP) 2023*
- *National Biodiversity Strategies and Action Plan (NBSAP) 2023-2027*
- *Coral Reef Restoration Plan 2010*
- *Reef Rehabilitation Manual: Coral Transplantation 2019*

D. The Global Coral Reef Monitoring Network (GCRMN)

The production of future GCRMN reports, both at the regional and global level, relies on the ongoing support of data contributors who are willing to share their coral reef monitoring data for this purpose. As such, from 2024 to 2026, the GCRMN will undertake the rigorous process of developing the **Status of Coral Reefs of the World: 2025** global report, including an extensive data collation process.

Do you have data to contribute to the upcoming GCRMN global report?

- Please provide the contact information for the data providers to allow for the GCRMN data collation team to request data and discuss the process of data contribution.

  Please add further contacts as needed.

Answer:

Contact Name: Thamasak Yeemin
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Contact Name: Makamas Sutthacheep
Organisation: Marine Biodiversity Research Group, Ramkhamhaeng University
Email Address: msutthacheep@yahoo.com

Contact Name: Ukkrit Satapoomin
Organisation: Department of Marine and Coastal Resources
Email Address: ukkrit@yahoo.com

E. Capacity Building & Communications

Have you found the ICRI #ForCoral Webinar Series useful?

Through 2024, ICRI has hosted multiple webinars that aim to share knowledge and foster collaboration across critical topics concerning the conservation, protection, and restoration of coral reefs. These webinars form the #For Coral webinar series, and topics include the 4th Global Bleaching Event, impacts of land-based sources of pollution and National Biodiversity Strategies and Action Plans.

The full list of webinars and recordings can be found here: https://icriforum.org/forcoral-webinar-series/

- (ICRI) Did you attend any of the series' webinars, and if so which topics have you found the most useful and engaging? If you did not attend the webinars, please explain why, and how what we could have done better.

Answer:

- Yes, all webinars are most useful:

- *Recent coral response events and the need for integrated response planning*
- *How to apply coral reef connectivity models to reef management*
- *The impacts of land-based sources of pollution on coral reefs*
- *Integrating coral reefs into NBSAPs*
- *The status of the fourth global bleaching event and the role of the global coral reef community*
- *MPA finance: First steps for marine managers*

- (ICRI) Do you have any suggestions or request for topics that you wish for ICRI to host as part of this series? If you have a specific topic in mind, and would like to host a webinar, please indicate below.

Answer:

Have you found the ICRI communications useful?

- (ICRI) Do you find the ICRI Monthly Round of News Useful? If yes, what do you like about it and how would you suggest improving ICRI's communications?

Answer:

- Yes. Information and resources are very useful.

F. Kunming-Montreal Global Biodiversity Framework

ICRI has continually supported the Convention on Biological Diversity and the Post-2020 process, developing a recommendation for coral reef indicators to be included in the Global Biodiversity Framework and supporting Parties during the negotiation process. Following the Framework's adoption in 2022, ICRI's support now aims to support parties in implementing the framework, especially through National Biodiversity Strategies and Action Plans (NBSAPS) and the Marine and Coastal Work Programme.

In 2024, ICRI released **A Guide for Integrating Coral Reefs and Associated Ecosystems into National Biodiversity Strategies and Action Plans** to support coral reef countries to integrate coral reefs and associated ecosystems into their NBSAPs.

- (ICRI) Did you use read, use, and/or apply the Guide on integrating coral reefs and associated ecosystems into National Biodiversity Strategies and Action Plans (NBSAPs) useful? *Where possible, indicate specific elements that were useful or alternatively provide information if you did not find the guide useful.*

Answer:

- Yes.
- Information concerning the NBSAP implementation and coral reef integration was useful.

- (ICRI) Did you revise your current National Biodiversity Strategies and Action Plans (NBSAP) to include coral reefs? ***N.B.*** *if you are not a country representative, are you working with national focal points to help update their NBSAPs? Please provide further details.*

Answer:

- Yes.
- Coral reefs are included in several targets of NBSAP, such as
  - *Reduce the loss of important marine biodiversity areas.*
  - *Conserve, protect and restore biodiversity by preserving and increasing protected areas and OECMs.*
  - *Mitigating the impacts of climate change and pollution on biodiversity loss and increasing blue spaces for biodiversity restoration.*

- *Promote and facilitate the bioeconomy and ecosystem services to improve people's livelihoods and incomes.*
- *Promote sustainable practices in the production and service sectors of fisheries, and tourism for the sustainable use of biodiversity.*

- (ICRI) How are you planning to implement the Kunming-Montreal Global Biodiversity Framework? Please list the target(s) and decisions that your work attributes to.

Answer:

- We focus on Targets 1, 2, 3, 7, 8, 11, 14, 20, and 21.

G. Upcoming events

Please tick the most any events that you will be, or are planning to attend:

☐ September 10th – 24th: 79th Session of the UN General Assembly (UNGA 79)

☐ September 23rd – 26th: GEF International Waters Conference

☐ October 13th – 18th: 7th International Marine Conservation Congress (IMCC7)

☒ October 21st – November 1st: CBD COP16

☐ November 4th – 8th: 77th Annual meeting of the Gulf and Caribbean Fisheries Institute (GCFI77)

☐ December 10th – 12th: The International Mangrove Conservation and Restoration Conference

☒ December 9th – 13th: Reef Futures

☒ June 9th – 13th 2025: United Nations Ocean Conference

☒ October 9th – 15th 2025: IUCN World Conservation Congress

☒ Other

Please list any upcoming regional / international events relevant to ICRI that your organisation plans to attend:

Answer:

- October 28th – 30th 2024: Asian Marine Biology Symposium

H. Publications. Please list relevant publications / reports you have released recently (+ add a link if possible)

Publication	URL
Yeemin, T., Sutthacheep, M., Pengsakun, S., Klinthong, W., Chamchoy, C., & Suebpala, W. (2024). Quantifying blue carbon stocks in interconnected seagrass, coral reef, and sandy coastline ecosystems in the Western Gulf of Thailand. Frontiers in Marine Science, 11, 1297286.	https://www.frontiersin.org/journals/marine-science/articles/10.3389/fmars.2024. 1297286/full
Yeemin, T., Chaithanavisut, N., Aunkhongthong, W., Chamchoy, C., Pengsakun, S., Klinthong, W., Limpichat, J., Chuabsak, P., Sutthacheep, M. (2024) Survival and growth rate of coral micro-fragments for coral reef restoration in Chonburi Province, the Upper Gulf of Thailand. Ramkhamhaeng International Journal of Science and Technology 7(1): 38-48	https://ph02.tci-thaijo.org/index.php/RIST/article/view/252599/170521
Pattarach, K., Surachat, K., Liu, S. L., & Mayakun, J. (2024). Water depth outweighs reef condition in shaping non-geniculate coralline algae-associated microbial communities in coral reefs: A case study from Thailand. Heliyon, 10(3).	https://www.cell.com/heliyon/fulltext/S2405-8440(24)01517-2
Sutthacheep, M., Jungrak, L., Sangsawang, L., Pengsakun, S., Klinthong, W., Karnpakob, P., Limpichat, J., Noikotr, K., Yeemin, T. (2024) Macroinfauna communities from coral reefs and an underwater pinnacle in Trat and Rayong Provinces, the Eastern Gulf of Thailand. Ramkhamhaeng International Journal of Science and Technology, 7(1):49-62	https://ph02.tci-thaijo.org/index.php/RIST/article/view/252598/170522
Fiesinger, A., Held, C., Schmidt, A. L., Putchim, L., Melzner, F., & Wall, M. (2023). Dominance of the coral *Pocillopora acuta* around Phuket Island in the Andaman Sea, Thailand. Ecology and Evolution, 13(11), e10724.	https://onlinelibrary.wiley.com/doi/pdfdirect/10.1002/ece3.10724
Fiesinger, A., Held, C., Melzner, F., Putchim, L., Reusch, T. B., Schmidt, A. L., & Wall, M. (2023). Population genetic differentiation of the ubiquitous brooding coral *Pocillopora acuta* along Phuket Island reefs in the Andaman Sea, Thailand. BMC Ecology and Evolution, 23(1): 42.	https://link.springer.com/article/10.1186/s12862-023-02153-7
Titioatchasai, J., Surachat, K., Kim, J. H., & Mayakun, J. (2023). Diversity of microbial communities associated with epilithic macroalgae in different coral reef conditions and damselfish territories of the Gulf of Thailand. Journal of Marine Science and Engineering, 11(3): 514.	https://www.mdpi.com/2077-1312/11/3/514
Sutthacheep, M., Chaithanavisut, N., Sangsawang, L., Pengsakun, S. Klinthong, W., Aunkongthong, W., Limpichat, J., Yeemin, T. (2023). Growth rates of coral micro-fragments from a coral restoration project at Koh Larn, Chonburi Province, Thailand. Ramkhamhaeng International Journal of Science and Technology, 6(1): 30-40.	https://ph02.tci-thaijo.org/index.php/RIST/article/view/249301/168774
Sangpaiboon, P., & Kongjandtre, N. (2023). Growth and Survival Rate of Three Transplanted Coral Taxa (*Acropora robusta*, *Pocillopora damicornis* and *Platygyra daedalea*)	https://scijournal.buu.ac.th/index.php/sci/article/view/4439

on Coral Reefs in Eastern Thailand. Burapha Science Journal, 605-628.	
Yeemin, T., Chaithanavisut, N., Sutthacheep, M., Pengsakun, S., Klinthong, W. Chamchoy, C., Aunkhongthong, W. (2023) Growth and survival of coral micro-fragment in Chonburi Province, the Upper Gulf of Thailand. Ramkhamhaeng International Journal of Science and Technology, 6(3): 31-44.	https://ph02.tci-thaijo.org/index.php/RIST/article/view/251904/170129
Papan, S., Preedanon, S., Saengkaewsuk, S., Klaysuban, A., Kobmoo, N., Pengsakun, S., ... & Sakayaroj, J. (2023). Genetic diversity of culturable fungi associated with scleractinian corals in the Gulf of Thailand. Botanica Marina, 66(4), 309-318.	https://www.degruyter.com/document/doi/10.1515/bot-2023-graphabs4/html
Sutthacheep, M., Sangsawang, L., Jungrak, L. Pengsakun, S., Klinthong, W., Karnpakob, P. Yeemin, T. (2023) Meiofaunal communities in coral reefs and an underwater pinnacle in Trat and Rayong Provinces, the Eastern Gulf of Thailand. Ramkhamhaeng International Journal of Science and Technology, 6(2):59-70.	https://ph02.tci-thaijo.org/index.php/RIST/article/view/250592 /169394
Meenapha, A., Mantrachitra, V. (2023) The species and abundance of coral reef fish at Yao islands, Phang Nga province, Thailand. Ramkhamhaeng International Journal of Science and Technology, 6(1): 12-21.	https://ph02.tci-thaijo.org/index.php/RIST/article/view/247643
Tahsin, K. T., Sangmanee, N., Chamchoy, C., Phoaduang, S., Yeemin, T., & Winijkul, E. (2023). Coral feeding behavior on microplastics. In Microplastic Occurrence, Fate, Impact, and Remediation (pp. 65-86). Cham: Springer Nature Switzerland.	https://link.springer.com/chapter/10.1007/978-3-031-36351-1_3
Yeemin, T., Sutthacheep, M., Chamchoy, C., Nakajima, Y., Sakai, K., Pengsakun, S., Klinthong, W., Jungrak, L., Aunkhongthong, W. (2023) Assessing genetic diversity and connectivity of the dominant massive coral *Porites lutea* in the Gulf of Thailand. Ramkhamhaeng International Journal of Science and Technology 6(2): 45-58	https://ph02.tci-thaijo.org/index.php/RIST/article/view/250568
Dummee, V., Sma-air, S., Chooklin, S., Chanmethakul, T., & Ritchie, R. J. (2023). Photosynthesis and photosynthetic electron transport in the soft coral *Sarcophyton* spp. ScienceAsia, 49(2).	https://www.scienceasia.org/2023.49.n2/scias49_266.pdf
Jain, T., Buapet, P., Ying, L., & Yucharoen, M. (2023). Differing responses of three Scleractinian corals from Phuket coast in the Andaman Sea to experimental warming and hypoxia. Journal of Marine Science and Engineering, 11(2), 403.	https://www.mdpi.com/2077-1312/11/2/403

I. ICRI Member Feedback. What do you find most valuable about being a member of ICRI as well as completing the ICRI member reports? If you have any ideas to improve the Member Reports, please list below:

Answer:

- ICRI is a crucial network for managing and conducting research on coral reefs. Members can access extensive information through the ICRI member reports.

J. Contact information & member information. (Note that this information will be posted on the ICRI website on your member page: https://icriforum.org/members/).

Please use the table below to provide us updates to your member's focal points as well as the blank cells to indicate changes to information (please add more rows, as needed):

Focal Point 1:	
Name:	*Mr. Ukkrit Satapoomin*
Title/Organisation:	*Director, Marine Resources Conservation Division/ Department of Marine and Coastal Resources (DMCR)*
Email:	*ukkrit@yahoo.com*
Focal Point 2:	
Name:	*Dr. Thamasak Yeemin*
Title/Organisation:	*Lecturer, Ramkhamhaeng University*
Email:	*thamasakyeemin@yahoo.com*
Focal Point 3:	
Name:	*Dr. Makamas Sutthacheep*
Title/Organisation:	*Lecturer, Ramkhamhaeng University*
Email:	*msutthacheep@yahoo.com*
Member page updates:	
Section	*Update*

Thank you very much for sharing your valuable experiences and information with ICRI. Members reports, meeting outputs and resources will be uploaded to: https://icriforum.org/events/38th-icri-general-meeting/