

Final Evaluation Report

Your Details	
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Project Title	Seahorses: Traditional Medicine, Cultural Values and Trade in Malaysia
Application ID	34121-1
Date of this Report	23rd May 2023

1. Indicate the level of achievement of the project's original objectives and include any relevant comments on factors affecting this.

Objective	Not achieved	Partially achieved	Fully achieved	Comments
1. To determine the supply volume for trade, sales volume, value of seahorses, seahorse trade diversity, size, and source of traded seahorses in Malaysian traditional medicine trade.				A traditional medicine survey was conducted in key states of Kedah, Penang, Perak, Selangor, Negeri Sembilan, Johor, Kelantan, Terengganu, Pahang, and Sabah, with Malay, Chinese, Indian, and other practitioners/traders who were currently selling seahorses and who historically sold them. Some respondents were directly approached at traditional medicine shops while contacts of other respondents were identified through local universities, search engines, and social media platforms. As a result, a total of 458 practitioners/ traders were successfully interviewed.
2. To characterize the patterns of consumption uses of seahorses and underlying motivation (including cultural beliefs) among traditional medicine practitioners/traders, fishers, and the public of different ethnic groups.				Three types of surveys were conducted for Objectives 2 and 3, namely the traditional medicine survey, fisher survey, and online public survey focusing on traditional medicine practitioners/traders, fishers, and members of the public, respectively. Similar methods were used to interview the traditional medicine practitioners/traders to achieve Objective 1. The fisher respondents were approached at fishing jetties/ villages. More fisher contacts were obtained with the assistance of local fisher associations. The online public survey was widely distributed through Facebook, Instagram, Twitter, LinkedIn, and WhatsApp to promote the survey and invite the general public Malaysians to participate. In total, 860 fishers and 637 members of the public were surveyed.
3. To determine the degree of non-consumption uses of seahorses and awareness level of seahorse threats among traditional medicine practitioners/traders, fishers, and the public of different ethnic groups.				

2. Describe the three most important outcomes of your project.

a). Most of the public and fisher respondents in Malaysia do not currently use seahorses in any way, neither for consumption nor non-consumption uses. Existing uses were primarily for health reasons, but these are on the decline as they are expensive, hard to find, and increasing preference for other alternatives. These findings clarified our understanding on the types of seahorses uses and the current extent of those uses locally, which are positive for local seahorse conservation.

b). Interviews with fishers revealed that in addition to trawlers, small scale fishing gears (e.g., gill/drift nets) contribute considerably to seahorse exploitation and these gears make up 63% of fishery operations in Malaysia based on statistics of registered fishing vessels in 2021. Low domestic demand for seahorses would not necessarily reduce fishing pressure on seahorses. In the absence of statistics on seahorse population decline in Malaysia, anecdotes which revealed decreasing catch per unit effort of seahorses in the country could be considered as the best available evidence to initiate immediate mitigation actions.

c). Socio-demographic variables such as ethnicity, education, region, location setting, and occupational background play important roles in shaping the use of seahorse among Malaysians. Understanding and acknowledging cultural-specific resource use is essential in developing resilient solutions to conservation issues; overlooking sociocultural complexities can undermine conservation and outreach efforts.

Our study has provided a clearer understanding on the cultural context of seahorse uses for medicinal and other purposes. In addition, we presented recent seahorse trade information to better understand the current extent of seahorse exploitation both locally and internationally, since the last seahorse trade survey conducted in Malaysia two decades ago. Beyond the objectives, we also discovered additional information on alternative ingredients to seahorses that have similar medicinal properties which could minimise the pressure on the exploitation of seahorses used for traditional medicine.

With all seahorse species listed under the Appendix II of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), Malaysia is required to ensure that its international seahorse trade does not threaten wild populations. Implementation of the listing must be met if pressures on seahorse populations are to be reduced. Current information about the local knowledge, cultural uses, and seahorse trade can assist Malaysia to meet obligations under CITES by providing valuable advice on the best way to implement the listing, and thus promote sustainable seahorse trade. The findings have also demonstrated the need to reinforce existing seahorse trade regulations.

3. Explain any unforeseen difficulties that arose during the project and how these were tackled.

We had planned to carry out all face-to-face surveys in the field. However, due to the COVID-19 travel restrictions, we were only able to conduct part of the surveys on

the ground within Peninsular Malaysia, where our university is based. The rest of the interviews were conducted through phone/video calls which were made possible while working in collaboration with, for example, local fisher associations to get their permission and referrals to a network of fishers who would be willing to participate in this project, reaching out to local universities to identify traditional medicine practitioners, searching for suitable candidates through search engines and social media platforms.

4. Describe the involvement of local communities and how they have benefited from the project.

This project heavily involved three main stakeholder groups, namely the traditional medicine practitioners/ traders, fishers, and members of the public. Although there were no direct benefits to these groups, their input will be useful in future efforts to raise awareness and build a shared responsibility among communities towards sustainable use of not only seahorses but also other marine resources. Managing the seahorse use for sustainability while considering cultural aspects sets a precedent for the future for how holistic approaches on these uses could promote sustainable seahorse use which are likely to bring broader benefits to threatened marine habitats that are critical for biodiversity, humans, and their livelihoods.

5. Are there any plans to continue this work?

Yes, we will continue engagement work with relevant stakeholder groups and conduct more studies on seahorse use, fisheries, and trade, especially in the state of Sarawak (involved in seahorse trade and where large-scale trawlers also operate), to assist Malaysia to meet obligations under CITES and provide needed advice on implementing the listing.

6. How do you plan to share the results of your work with others?

We currently have two prepared manuscripts titled 'Cultural and socio-demographic drivers shape seahorse uses in Malaysia – way forward for conservation' (currently in review) and 'Quantifying non-target seahorse fisheries and trade in Peninsular Malaysia' that we plan to publish in peer-reviewed journals to be made available to the broader scientific community. We also presented part of the results on the public survey data in the SYNGBIO 2021 international conference on 20th May 2021. In collaboration with Macaranga – A Malaysian Environmental Journalism Site, we had produced a feature article [1] on the project. The article was also posted on other news portal [2, 3,]. Our project was featured on various other media platforms [4, 5, 6, 7, 8]. We had also conducted several public talks, reading sessions, and live sessions. Public engagement was conducted via 'Save Our Seahorses Malaysia' (SOS) Facebook page [9] to disseminate findings from this project, host awareness talks, and outreach materials with infographics on seahorse use and trade.

Links:

<https://www.macaranga.org/to-save-seahorses-culture-matters/>

<https://www.malaysiakini.com/news/587755>

<https://www.sinchew.com.my/?p=3424899>

<https://fb.watch/bmBJ8ySZdL/>

<https://www.freemalaysiatoday.com/category/leisure/2021/08/06/saving-the-cute-little-sharks-of-the-seabed/>

<https://fb.watch/7EAqMcozHs/>

<https://www.bfm.my/podcast/the-bigger-picture/earth-matters/sos-for-seahorses>

<https://www.freemalaysiatoday.com/category/top-lifestyle/2022/03/21/saving-malaysias-seahorses-from-extinction/>

<https://www.facebook.com/saveourseahorse/>

Besides that, we also plan to support the development of a technical report for the Department of Fisheries Malaysia (DOFM) and other relevant agencies on bycatch issues of seahorses to highlight the threats faced and propose feasible recommendations to address these concerns based on inputs from fishers as well as produce infographics for public awareness. We also intend to convey the findings of the project to the public in terms of social media reports, national trade reports for the Ministry of Energy and Natural Resources (KeTSA) and the Royal Malaysian Customs Department (RMCD) to facilitate monitoring and conservation management measures for seahorses and demonstrate the need to reinforce seahorse trade regulations on local and international levels as well as provide vital information for IUCN species assessments for seahorses on a global scale.

7. Looking ahead, what do you feel are the important next steps?

Important next steps include a continued active role in working with stakeholders and local communities to monitor seahorse use, fisheries, and local trade. Another important step is to engage and assist the Ministry of Energy and Natural Resources (KeTSA) as the lead Management and Scientific Authority of country in improving the implementation of seahorse listing in CITES and supporting the implementation and enforcement of seahorse trade regulations.

8. Did you use The Rufford Foundation logo in any materials produced in relation to this project? Did the Foundation receive any publicity during the course of your work?

The Rufford Foundation logo was not used in any materials produced for this project. However, The Rufford Foundation was mentioned as one of the grant providers of this project during presentations and in progress reports. The logo will be used in future educational awareness infographics when the works had been published.

9. Provide a full list of all the members of your team and their role in the project.

Dr Amy Then (Supervisor): Finalise study design, oversee fieldwork, monitor progress, finance management, and provide feedback in reporting.

Dr Adam Lim (Supervisor): Finalise study design, oversee fieldwork, participate in field surveys, and provide feedback in reporting.

Muhammad Ali Syed Hussein (Local Collaborator): Oversee surveys in Sabah and provide logistical support.

Dr Fatimah Abdul Halid (Local Collaborator): Oversee surveys in Sabah and provide logistical support.

Reana Ng (Project Leader): Finalise study design, participate in field surveys, communication and coordination with stakeholders, data analysis, and reporting.

Ainur, Jaynan, Aurelia, Li Jin, Darren, Kosila, Anis, Fateen, Tea, Chin, Norazliana (Enumerators): Disseminate online survey, participate in field surveys, and data entry.

10. Any other comments?