



Submitted by Yayasan Alam Indonesia Lestari – [www.lini.or.id](http://www.lini.or.id)

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We would like to comment on the petition received by NOAA/NMFS to enact prohibitions of the Endangered Species Act for the Banggai cardinalfish (*Pterapogon kauderni*, hereafter called BCF), including prohibitions on import, export, and all commercial activities for both wild and captive-bred populations in the USA.

Our organisation, Yayasan Alam Indonesia Lestari (LINI), is an Indonesian non-profit conservation organisation that has been working in the Banggai Archipelago (Central Sulawesi) since 2010. The work has been primarily implemented through collaborations with stakeholders at local, national, and international levels, including governments, community groups, fishers' groups, the private sector in fisheries and tourism, and local and international NGOs.

The BCF is a popular marine aquarium fish that has been exploited for overseas markets since the mid-1990s. In 2007, it was listed by the IUCN as Endangered, and was proposed to be listed under CITES Appendix II during CoP 14 in 2007, and also in CoP 17 in 2016. In 2015, NMFS proposed the Banggai cardinalfish to be listed as a threatened species under the Endangered Species Act (ESA).

The unsustainable harvest of the BCF in the past has contributed to declines in wild populations in its natural habitat, and has led to concerns that the species may eventually become locally extinct. In Indonesia, this problem has been addressed through work at the community level since 2010, when we started working with the marine aquarium fishers in the Banggai Archipelago. BCF conservation and preservation actions have been strengthened with the development of Indonesia's Banggai Cardinalfish National Plan of Action (NPOA- 2017-2021). This plan aims to include 1) the collection of data and current information on the BCF populations in their natural habitats, 2) implementation of protection and preservation of the BCF in their natural habitats, 3) sustainable use and trade of BCF, 4) Improvement of human resources capacity to effectively conserve and manage the BCF, and 5) Improvement of conservation governance.

To promote sustainable harvests and to maintain credible conservation management of the BCF, the Indonesian Government has issued management measures that include the requirement of permits to collect, transport and export the species. Furthermore, in 2021, the Government established a site-specific (provincial) harvest quota with a yearly quota of 63,380. The harvest quota was established based on data and information from BCF population and habitat monitoring, as well as from stakeholder consultations (local collectors/fishers, universities and NGOs).

LINI's work has included field surveys to monitor the BCF populations, and training offered to the Banggai communities to help them to understand the need for better management and conservation of the species and its habitat. Additionally, we have provided training in practical skills to establish aquaculture operations for the species.

We collaborated with the Fisheries and Marine Office of Central Sulawesi and local communities of Banggai Island in 2017 to restore BCF habitats through the installation of artificial structures and the development of locally managed marine areas in Banggai Island, to support the implementation of the Banggai Marine Conservation Area. This area subsequently received a national designation from Indonesia's Ministry of Marine Affairs and Fisheries (MMAF) through Ministerial Decree No. 53/2019. The total area of the Banggai MPA is 856,649 hectares covering 3 districts, namely Banggai, Banggai Kepulauan, and Banggai Laut.

In the early years of our work in 2012, we trained marine aquarium fishers in Banggai Island to use best practices in their collection, together with post-harvest techniques to improve survival of captured fishes, conserve BCF habitat, and disincentivize overfishing to compensate for post-harvest mortalities.

From 2017-2019, we participated in a comprehensive BCF population survey of 24 sites with the MMAF, researchers from the Research Centre for Oceanography Indonesia, the University of Tadulako, and the local communities of Bone Baru. From 2020 until this writing, we have continued monthly monitoring of the BCF populations in Bone Baru village – Banggai Island. Recently, we have been obliged to concentrate our monitoring activities only in Bone Baru because of the current travel restrictions imposed due to the COVID 19 pandemic.

In 2017, we helped local stakeholders (including local communities, marine aquarium fishers, and village leaders) to understand the need for the species to be protected under National Law, and this has been fully supported by them. In 2018, the MMAF issued a limited protection status on BCF under Ministerial Decree No. 49/2018, which prohibits BCF harvesting during the peak reproductive times (in February, March, October, and November) in the seas surrounding the Banggai Islands.

In 2018, a community-based BCF aquaculture initiative was set up in Bone Baru village- Banggai Island, with financial support from the MMAF, and technical support from us. Prior to this development, we trained local communities from Bone Baru at the LINI Aquaculture and Training Centre (LATC), located in Les village, North Bali. At the LATC we have been able to successfully breed this species since 2015. The centre has also been providing low-technology aquaculture training programs for wider audiences including university students, coastal communities, government staff and the private sector.

As a conservation organisation that has been working with the species and with numerous stakeholders in Indonesia, particularly the local communities, MMAF and local Government of Banggai Archipelago, we assert that there has been steady progress in improvement of management and conservation of this species. Local communities in the Banggai Archipelago have increased their commitment to conserve the species; exemplified by their active participation to restore the species' habitat, and their compliance with regulations and policies concerning management and conservation.

As we have demonstrated, the fishers and communities of the Banggai Archipelago, along with the provincial and national Governments, have taken proactive measures to conserve and manage the BCF, with the aim of achieving sustainable wild harvests in tandem with capacity building for local aquaculture operations for the species. The petition under consideration would undermine years of investment in this effort for

the conservation of the species by us and our colleagues. We therefore do not support the ESA petition.

The status of the BCF in terms of the conservation of its wild populations has now improved significantly, because of improved management at the source. In addition, quality captive-bred BCF are now also available for the aquarium trade, and in our opinion, it is important for us all to continue the current work that promotes the conservation, management and sustainable trade in BCF, particularly as it demonstrates that community-based conservation can be successful.

Recent papers on BCF can be accessed from:

<https://cites.org/sites/default/files/eng/com/ac/31/Docs/E-AC31-31-R1.pdf>

<https://cites.org/sites/default/files/eng/com/ac/31/sum/E-AC31-ExSum-02-R1.pdf>

<https://cites.org/sites/default/files/eng/com/ac/30/E-AC30-21-02.pdf>

[file:///E:/2021%20-](file:///E:/2021%20-%20Banggai%20cardinalfish/Population_trends_of_Banggai_cardinalfish_in_the_Banggai%20Islands.pdf)

[%20Banggai%20cardinalfish/Population\\_trends\\_of\\_Banggai\\_cardinalfish\\_in\\_the\\_Banggai%20Islands.pdf](file:///E:/2021%20-%20Banggai%20cardinalfish/Population_trends_of_Banggai_cardinalfish_in_the_Banggai%20Islands.pdf)

[https://www.researchgate.net/publication/344564630\\_BANGGAI\\_CARDINALFISH\\_Pterapogon\\_kauderni\\_AND\\_THE\\_ATTEMPT\\_FOR\\_THE\\_INCLUSION\\_OF\\_CITES\\_APPENDIX\\_II](https://www.researchgate.net/publication/344564630_BANGGAI_CARDINALFISH_Pterapogon_kauderni_AND_THE_ATTEMPT_FOR_THE_INCLUSION_OF_CITES_APPENDIX_II)