Final report

Organisation name:Satucita Foundation

ASAP species:Painted terrapin (Batagur borneoensis)

Project title:Conservation of Painted Terrapin Population in Karang Gading Langkat Timur Laut Wildlife Reserves

Period of project implementation:12/20 – 06/21

1. Brief Executive Summary (max. 300 words)

Painted terrapin (*Batagur bornroensis*) is one of the world’s most critically endagered freshwater turtle species. Historically, they are spread in east coast of Sumatra and Kalimantan in Indonesia. However, due to unsustainable harvesting of eggs that have been practicing by local people who live around nesting sites since long time ago, hunting for adults individual in 90s decade to supply market demand, terrapin wild population is sharply decreased. Even, some populations are locally extinct in east coast of Sumatera. Currently, the evidence is only found in Aceh, North Sumatera (Karang Gading Langkat Timur Laut Wildlife Reserves) and East Kalimantan (Tanjung Puting National Park).

Although this species is protected according to regulation in Indonesia, the terrapin is still facing threats from people who illegally collecting eggs, and natural predation by wild boar (*Sus scrofa*) or lizard. This is also happened in Karang Gading, North Sumatera. Therefore, it is important ot carry out nest patrol during nesting season to save and hatch the eggs.

Team of Satucita Foundation who collaborate with Big Agency of Conservation of Natural Resources (BBKSDA) Province of North Sumatera and helped by community group in Village Jaring Halus conducted nest patrol activities from December 2020 to January 2021. The activity successfully secured 75 eggs of five nests from two nesting beaches in wildlife reserves area. Of those number, 48 eggs of four nests successfully hatched. One nest with 15 eggs failed to hatch due to not fertile. In addition, during nest patrol, five nests had been found empty and eaten by wild boar or lizard.

Currently, the hatchlings are being raised in headstarting pool which specifically built for raising the hatchlings. These hatchlings will be stock for future captive breeding and population recovery. For small population such as in this site, stocking and captive breeding are imporant. .

1. Objectives. Please list your project’s objectives and report progress against each.

1) Saving and incubating the eggs of Painted terrapin found on the nesting beach in Karang Gading Wildlife Reserves. During the nest patrol period, the team has successfully saved, incubated 75 eggs of five nests in temporary hatchery pool. Of this total number, 48 eggs of four nests were successfully hathed, while one nest was totally failed due to not fertile.

2) Produce hatchling of Painted terrapin that will be raised and released in the long term. Of 75 eggs incubated, 48 eggs of four nests were successfully hathed, while one nest was totally failed due to not fertile. Currently, the hatchlings are being raised in the pool which built for breeding in the long term.

1. Outcomes and impacts.
   1. Please describe how your project contributed to the conservation outcome(s) you included in your application.

The project brings significant impact ti Painted terrapin conservation on the site, Karang Gading Wildlife Reserves. Currently, 48 hatchlings are being raised rearing pool facility located inside of Karang Gading Wildlife Reserves since June 10th. Basic morphometric data has been collected since they were born. So, the growth can be measured and obseved in the long term. Since that, the hatchlings are grow well. Monthly measurement are conducted.

After they are transferred to the raising pool, the headstarting and outreach and education to locals will be started immediately. In addition, three nests of five nests saved are handed over by local fishermen to us. It can be an indication of local support and awareness.

* 1. How were your project’s results or successes measured? Please refer back to section B7 in application.

The successful of the project is measured by some indicators: the number of nest found, eggs saved/incubated, and hatchlings resulted by nest patrol, hacthing successful rate. According these indicators and the results achieved by project – 5 nests were incubated, 48 eggs of 75 eggs successfully hatched,the hatching rate is 64 percent - we can say that the project is success. The fourth nest, with 15 eggs, did not hatch due to not fertile, so it has no embryo..

1. Please describe any barriers or challenges you had when implementing this project, and if you were able to overcome these, what you did.

*All project experience barriers and challenges during implementation. Sharing these, and how you managed them, can be extremely helpful for others facing similar situations and can allow future conservation interventions for the species in question to be more effective and efficient. Therefore, please be open and transparent and provide as much detail as you can.*

*Wheather. Strom and rain are not easy to predict. We did not carry out nest patrol when rain fall and heavy storm. In addition to being dangerous for the safety of team members, it will also be difficult to find traces and nest of terrapins on the beach. From December 2020 to January 2021, there were 11 days when we were not able to carry out nest patrol due to heavy rain fall and storm at night. However, when rain fall was not heavy, our team were still able to carry out nest patrol.*

*Capacity of government staff. Nest patrol activity to search for terrapin eggs ont he beach is new activity for most of BBKSDA staff. Even, many of them are never see and know the terrapin egg. Of eight staffs who involved during patrol, only two staffs who had experiences to carry out nest patrol. These two staffs are who had been involved in our nest patrol in 2018/2019. Although these staffs had been trained by us before went to the field, but that was not easy for them to search for the traces and nest. Moreover under the low light situation.*

*Location of nesting beaches. There are two nesting sites around Village Jaring Halus. They are are beach Cemara dan Selotong/Teluk Ara. They are separated by estuary.The distance between that beaches is quite far. It needs about one hour by wooden machine boat to reach one beach from another beach. At an early stage, we only had one boat to drop off our team to each beach, before high tide at night. Then, the boat will pick up them when the low tide. However, it was not effective. Then, we recruit another boat to overcome this obstacle. So, we had one boat for each team, and every team was responsible to monitor one beach.*

*Beach situation. The nesting sites are quite small beach and almost covered by vegetation. Mangrove density on nesting site is also quite high. Hence, we need more time to walk along the beach, searching for female terrapin trace, and find the nest.*

1. Were any components of your project not achieved or not completed? If so, how has this affected the overall impact of the project?

All of components of the project is completed, although facing some challenges, including the delay for finishing headstarting pools, transfer the hatchlings from temporary hatchery to the pool, changing the strategy when carry out nest patrol due to field situation such as wheather, tidals, the distance between nesting beaches. Nevertheless, these are not affecting the final result of the project.

1. What are your next steps or future plans for the ASAP species this project targeted?

*For example, include details if the project will be continuing, long-term needs (funding, resources etc.), and whether the right threats were addressed or additional ones have been identified.*

It is important to know the genetic map of this species from all populations across Indonesia, to implement captive breeding efforts. Therefore, a study of genetic mapping for sample of population in Aceh, North Sumatera, East Kalimantan is important. We have a plan to do this with researcher / experts of Indonesia Institute of Science (LIPI). In addition, rearing the hatchlings for a long term, outreach and education to general public near the habitat in Lankgat is also important to increase public’awarenes on Painted terrapin and another freshwater turtle species.

1. Based on the results of your project, what are your recommendations for conserving your project’s focal ASAP species? These may be general or specific, reflecting the insight you gained since submitting your proposal to ASAP: anything which might help others working to conserve the species, or yourself in future, be more effective.

Based on the results of our project, there are some recommendations for Painted terrapin conservation here and other sites. First, involving local community is always bring positive impact to the project. It will strengthen the community and the species survival. Second, increasing local knowledge and capacity of government staff, not only about terrapin conservation, but freshwater turtles and tortoises in general. Third is captive breeding and stocking. For small wild population such as occurs in Karang Gading Wildife Reserves, captive breeding and stocking will be important for long term survival. Fourth, technical and funding partnership for project sustainability in Langkat is also necessary.