

Seagrass meadow and green turtle in Cambodia

PICH SEREYWATH and HEP SOKHANNARO

Department of Fisheries, # 186 Norodom Blvd, P.O.Box 582, Phnom Penh, Cambodia.

Tel: (855) 12 303 255/11 957 884, Fax: (855) 23 219 256

Email: maric@online.com.kh

(Bibliographic citation: Sereyath, P. & H. Sokhannaro. 2003. *Seagrass Meadow and Green turtle in Cambodia*

ABSTRACT

Green turtle (*Chelonia mydas*) have been reported as an abundant species among five species of sea turtles in Cambodia's sea. Green turtle have been known as plant eaters. Mainly a few species of seagrass in Cambodia, four large seagrass meadows have been selected as demonstration sites in two provinces and one municipality. KKSG1 and KKSG2 were selected in Koh Kong province, KAMPSG1 in Kampot Province, and KEPSG1 in Kep Municipality. So far, there is no confident information that have been mentioned about seagrass species and specific seagrass species which are the most favored species for green turtle even some survey had been conducted. Because the process of the survey did not continue, feeding ground zoning for sea turtles have not been set up yet. To address this issue, survey on seagrass species conducted in 2002 in KAMPSG1 and KEPSG1 by using three methods are 1. to interview with local people who are living around seagrass area, 2. seagrass net, and 3. mapping seagrass areas, in order to find out seagrass species and feeding ground for green turtle. As a result, eight species of seagrass found in the area, in which two of them are dominated species, are *Enhalus acoroides* and *Thalassia hemprichii*. Whereas from interview indicated that green turtle mostly found in Kep municipality and Kampot province, particularly in areas that is reach of *T. hemprichii*. Although, there is no quantities information on feeding ground and specific seagrass species for green turtle are strongly aware yet. However, future plan has been made to conduct more survey in other zones in order to get fully satisfied information on favored seagrass species and their location for green turtle. It is expected that, clear result from the future activities will be useful to set up feeding ground for sea turtle, particularly green turtle. Therefore, many activities need to be done in the coming future for the sack of protecting and conserving sea turtle population as well as their feeding ground in Cambodia Water and also in the Southeast Asia. But fund for activities is seeking from concerned agencies and NGOs.

KEYWORDS: seagrass meadow, green turtle,

INTRODUCTION

The Kingdom of Cambodia has 435 Km coastline, locates in the Gulf of Thailand, and extends between the Thai's border in the West and the Vietnam's border in the South. The Exclusive Economic Zone (EEZ) of the country is the area from the shore 200 nautical miles off shore covering 55,660 Km² (Smith, J, 2001).

Along the coastline, there are many natural resources such as beaches, mangrove forest, coral reef and seagrass beds which served as feeding grounds, spawning ground and habitats for marine lives.

Among these, seagrass beds are one of the main sources that play very important role in ensuring sustainability coastal resources and other endangered marine animals, particularly sea turtle population, moreover, also provides feeding ground and nutrient-rich habitat for divers and range of fauna and flora (Mckenzie, L. J. & Campbell, S. J. 2002).

According to Try (2002), it has been reported that there are five species of marine turtle in Cambodian sea, in which green turtle is the abundant species mostly encountered in seagrass areas and often accidentally caught by fishermen with the stingray hook line, surrounding net, trawling net and scomberomorus gill net (Try et al., 2002).

However, there has no the report that significantly indicated about information on relating to preferred /dominant of seagrass species in specific areas as a major feeding ground for sea turtles, particularly green turtle.

But, based on the report of research by DOF (2002), which indicates that there are four sites of seagrass beds, namely KKSG1, KKSG2, KAMPSG1 and KEPSG1. They are the biggest meadow in the Cambodia waters. The first two sites (KKSG1 and KKSG2) are located in Koh Kong province, and the second one (KAMPSG1) in Kampot province and the third site in

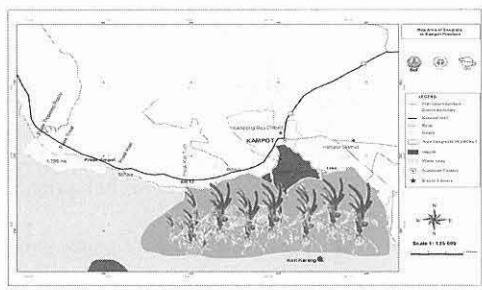


Figure 2. Seagrass area in Kampong province

among all of areas where the underwater research has been conducted. However, information related to the specific feeding ground and specific species of seagrass for green turtle has not been completely obtained yet because local people have not known clearly about individual name of those seagrass even in Khmer. Clearly, many kind species of seagrasses were called the same name in Khmer as Smao Samut.

Even though, at least two more areas (Preak Ampil and Preak Kdat) were reported where green turtle encountered as well.

4. 3. IMPACT TO SEAGRASS BED AND GREEN TURTLE

From the survey result, there are several factors that may be causing negative impacts on seagrass beds by anthropogenic influences such as mangrove deforestation, stingray hook line, and fishing practices, in which only engine-pushed net and trawling fishing are the most dangerous activities on seagrass destruction. In addition, this illegal is not only caused degradation of diversity in the seagrass area, also reduced sea turtle population, particularly green turtle during their migration for feeding ground. Fishermen added that they found many green turtles in the past but now its number has been decreased after trawling fishing have been operated in these seagrass areas.

DISCUSSION

According to the survey/research in KAMPSG1 and KEPSG1 on percentage cover of seagrass composition and its relation to green turtle, even the study was randomly conducted in accordance with real situation at the survey/research sites, the result shows that eight species of seagrass beds have been found, of which two species are dominant species and many green turtle have been generally occurred in these two sites, especially in Phnom Dong, Preak Ampil and Preak Kdat areas.

Furthermore, it is expected that there are more than ten species of seagrasses have been presenting along the coastal area in Cambodia Water if other two (KKSG1 and KKSG2) in Koh Kong province will be completely conducted survey/research in the future. Clearly, based on Nelson (1999), it is mentioned that there are nine species of seagrass that have been found along coastline.

With this regards, there is also a hope that more number of feeding ground and preferred species of seagrass for green turtle as well as other sea turtles will be found in Koh Kong water.

Thus, we hope that some of seagrass areas in this research site and others resulting from future research will be proposed to be protecting site, in order to ensure sustainability of marine fisheries resources, as specific feeding ground for sea turtles, particularly green turtle.

CONCLUSION

The research on seagrass beds in Cambodia might be able to say that this is a good initiative to set up any plan for future to prevent these seagrass beds from such crucial destruction through more closed collaboration with local communities and other government agencies even some cooperation have been done.

With this regards, such idea will also contribute indirectly to manage and conserve green turtle as well as other turtle species, because of seagrass beds are the main habitat for marine animals and other endangered species, particularly feeding ground for green turtle. So, if these activities still continuously will be operated in the seagrass sites, the number of green turtle will be declined in the Cambodia waters.

Hopefully, this information from this seagrass beds survey/research will be useful for local or regional management and conservation program on sea turtles, other seagrass meadow and marine endangered species as well.

RECOMMENDATION AND SUGGESTION

To ensure sustainability of our sea turtles, other marine natural resources as well as their natural habitat and feeding ground, emergent co-management and cooperation need to be implemented with friendly thinking in order to solve this matter, especially cooperatively eliminate any illegal action that may be caused danger seagrass beds and green turtle. Furthermore, public awareness campaigns and extension programs on the importance of our existing resources should be immediately disseminated to all levels.

In this connection, more research is needed on the feeding ground or areas which could be suitable for setting up to be protected zones for protecting and conserving sea turtles and their habitat in the future.

ACKNOWLEDGEMENT

The author wishes to express our sincere thank to Mr. Ing Try, Deputy Director of the Department of Fishery for his advised, commands and corrects this manuscript. And the author also would to express deep thank to all colleagues in Marine Working Group who has provide command and try all their bests to joint in the survey lead to completely success.

REFERENCES

- DoF. 2002.** Natural Resource Management in Cambodia: Coral Reef and Seagrass Management, Department of Fisheries, Cambodia.
- DoF. 2002.** Report on Review of National data/information for Seagrass in Cambodia, Department of Fisheries, Cambodia.
- Longdy, V. & H. Sokhannaro. 2002.** Threats to sea turtle along coastal area in Cambodia Department of Fisheries, Cambodia.- Report of international workshop on sea turtle research and survey. Proceeding of sea turtle research, biology and conservation in Cambodia (Draft).
- McKenzie, L. J & Campbell, S. J. 2002.** Manual for Community [citizen] Monitoring of Seagrass Habitat, Department of Primary Industries Queensland, Northern Fisheries Centre, PO Box 5396, Cairns Qld 4870.
- Nelson, V. 1999.** Draft Coastal Profile: Volume 1. The Coastal Zone of Cambodia: Current Status and Threats. Phnom Penh, MoE & Danida.
- Short, F. *et al.*, 2001.** Seagrassnet.-Manual for Scientific Monitoring of Seagrass Habitat. Marine Plant Ecology Group, QDPI, Northern Fisheries Centre, Cairns, Australia
- Smith, J. 2001.** Biodiversity, The life of Cambodia.- Cambodia's Biodiversity Status Report-2001. Pp. 244.
- Try, I. *et al.*, 2003b.** The current status of sea turtles conservation and management in Cambodia. Draft proceeding of a training/workshop on sea turtles research, biology and conservation in Cambodia. Pp. 20-25.
- Try, I. *et al.*, 2002.** Sea Turtle Research and Survey in Cambodia.- Report of international workshop on sea turtle research and survey. Proceeding of sea turtle research, biology and conservation in Cambodia (Draft).