



NDF WORKSHOP  
**WG 7 – Reptiles and Amphibians**  
**CASE STUDY 6 SUMMARY**  
***Cuora amboinensis***  
Country – Malaysia  
Original language – English

## **THE SOUTHEAST ASIAN BOX TURTLE *CUORA AMBOINENSIS* IN MALAYSIA**

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The Southeast Asian Box Turtle *Cuora amboinensis* is a widely distributed freshwater turtle native to Southeast Asia. The species occurs in natural and man-made wetlands. The global and national conservation status of the species is “Vulnerable”. From 1998-2004 export has been managed through a quota system with the purpose of population management and sustainable use. Malaysia used to be after Indonesia the second most important source of specimens to the international market, mainly to supply East Asian tonic food and TCM markets, but also European, Japanese and USA pet markets. In 2005, the CITES Managed Authority banned export.

TRAFFIC Southeast Asia (SEA) proposes a NDF methodology using criteria that were assessed during fieldwork in 2006: legislation and enforcement; trade levels; extent of illegal trade; reproduction biology; composition of wild populations and individuals in trade; abundance in an exploited man-made habitat; and abundance in harvest. Results show that the species is not covered by Malaysian State and consequently also not by federal legislation. All specimens are wild caught, year around and disregarding size but large individuals are preferred. Main local users are indigenous people and Thai along northern border towns who use the species for food, and ethnic Chinese who mainly use the species in religious ceremonies. Export is only regulated through CITES regulations, and awareness and law enforcement is rather weak, and illegal international trade a major issue. There are three main export routes with final destinations in China (70%) and Singapore (30%). Despite export ban since 2005, 19.5% of people in the possession of the species, supply the export market. Among 38 traders, 60.5% export, and only the remainder supply the local market. Most or all individuals for the international market are sourced out from Peninsular Malaysia only. The slow reproductive rate of the species makes it very vulnerable for exploitation and at the same time makes captive breeding an unfeasible endeavour, which is therefore not practiced in the country. Individuals encountered in the wild and in trade were measured and means calculated. These data may serve as baseline data for further comparative studies. Since larger size classes are targeted for the large-scale consumption trade a smaller mean size of individuals in trade compare to the mean size in the wild may be related to over-exploitation of larger size classes. A survey to assess the abundance of the species in an exploited man-made habitat revealed an estimated density of 0.82 ind./ha. These data may serve as baseline data. Generally, if off-take is sustainable population density will be lower but stable. The encountered low density cannot possibly be sustainable but indicates over-exploitation. The population was composed of 79.2% immature versus 20.8% mature

individuals; sex ratio was M1:F1.5. The size-frequency distribution of the population is not normally distributed indicating most probably over-exploitation. To determine the abundance in harvest a 38-day lasting harvest survey was conducted at two middlemen in Selangor. Results indicate that one middleman can trade a conservative mean of 1823.7 individual/year. If catch per unit effort (CPUE) can be sustained over the years, exploitation might be sustainable, if CPUE decreases over the years, over-exploitation is taking place. Ninety-eight percent of the catch of those traders was composed of larger individuals; sex ratio was 1M:1.6F. Such dominance of adults and females in harvest should be closely monitored for potential over-exploitation. The assessment of the harvest impact on the species all over the country indicate that populations are over-exploited or even locally extinct in every State, especially around trade centres and near cities.

Major problems found in the elaboration of the NDF are the lack of past density / population size data to compare present results with; the enormous amount of illegally traded individuals and the long chain of people involved in the illegal business. In the absence of quantitative data on local populations of the Southeast Asian Box Turtle criteria that might indicate changes in the local abundance that should be assessed on a regular basis are recommended.