

Asian Turtle Program, PO Box 179, Office # 1101, Hacisco Tower, Ngo 107, Nguyen Chi Thanh, Hanoi. Tel: +84(04)37737858  
18<sup>th</sup> August 2009

**Code: 55431**

## **Research and Conservation Action for Tortoises and Freshwater Turtles in Indo-Burma**

### **Social assessment (including Process framework for involuntary restrictions) for CEPF**

#### **1. Project background**

The project was developed based on the existing activities to conserve priority tortoise and freshwater turtle species (TFT) in both Vietnam and Cambodia. The four focal species are the Mangrove Terrapin (*Batagur affinis*), the Vietnamese Pond Turtle (*Mauremys annamensis*) and Indochinese Box Turtles, *Cuora bourreti* and *Cuora picturata*, (formerly *Cuora galbinifrons*). These species were initially selected as high conservation priority based on range restriction, endemism and status as critically endangered. An additional Seven CEPF priority species will also benefit from our research and conservation activities. The activities proposed under this application will increase the current available knowledge on range, distribution, status and threats to these focal species. While local community support for the species' protection will be mobilized through engaging local stakeholders, work with provincial leaders and wildlife protection agencies will promote their conservation from the provincial level. Community patrol activities will also ensure ongoing protection while collecting valuable additional information on the species.

In central Vietnam the project will focus on three endemic and critically endangered TFT species, *Mauremys annamensis*, *Cuora bourreti* and *Cuora picturata* for which very little is known of species distributions, abundance or habitat requirements. Activities since 2004 have comprised rapid interview surveys primarily in Quang Nam and Quang Ngai provinces to identify habitat, with field surveys some field surveys conducted. For *Mauremys annamensis* a local team has been established focused on core habitat in Quang Nam province. The areas in Vietnam on which this project focus's has varying habitat, environment and socio-economics. Ranging from relatively affluent urban area in the lowland coastal region to the western highlands where some of the poorest communities in the country can be found. Many of these remote districts contain diverse indigenous communities, low human population densities and some of the best remaining forest habitat in the country. These forest areas are likely the best remaining habitat for the forest dependant *Cuora bourreti* and *Cuora picturata*. While for *Mauremys annamensis* activities will focus on low lying coastal areas where wetland habitat on which the species depends have been lost or severely degraded and fragmented. Largely due to activities such as agriculture conversion of land and increasingly for development of industrial zones by the large human populations comprising Kinh dominant ethnic group. Few protected areas occur in the believed range of *Mauremys annamensis* increasing the urgency for conservation of this species. To date activities have focused only on Quang Nam and Quang Ngai provinces in Vietnam with the Forest Protection Departments (FPD) introduced to the importance of species, initial rapid interview surveys conducted and community meetings held at two priority areas confirmed in these provinces. made aware of the importance of this species.

In Cambodia the project is actively conserving Indochina's last known population of the Critically Endangered River Terrapin *Batagur affinis* (hereafter referred to as Batagur) in the Sre Ambel and Kaong rivers, south west Cambodia. Activities were first launched in 2000, after the Fisheries Administration (FiA) re-discovered a population of Batagur in the Sre Ambel area of Cambodia's coastal region. Thought to be extinct in Indochina animals were first re-identified in trade networks and subsequent research identified suitable habitat and eventually discovered nesting turtles.

Since 2001, the Fisheries Administration and WCS have worked with communities in the Sre Ambel area to conserve the Batagurs through the implementation of a variety of conservation interventions. These interventions are targeted to protect in-situ populations through guarding nesting beaches and adjoining sections of river throughout the nesting and incubation seasons, and implementing patrols in remaining habitat. These activities are complemented by an ex-situ conservation hatchling centre. The in-situ project activities are based around the two remaining rivers where the animals occur. One team comprised of three conservation personnel work along the Sre Ambel River and another team of four concentrate on the Kaong



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River. The focus of activities is the protection of the *Batagur* nests and during the nesting season the conservation teams attempt to locate all nests along each river. They then construct enclosures around the nests to provide protection against predators.

Activities proposed here which should be considered for the involuntary restrictions process framework are as follows:

- Establishment of community patrol teams at priority *Mauremys annamensis* habitat
- Community patrols established for *Batagur affinis* river and nesting beaches
- Support the inclusion of CEPF priority species *Cuora galbinifrons*, *Cuora bourreti* and *Cuora picturata* in Vietnam's principal wildlife protection laws.
- Capacity building of local wildlife authorities in central Vietnam.
- Establish a Species Habitat Conservation Area (SHCA) for *Mauremys annamensis*

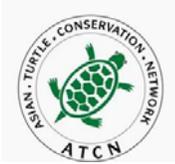
## 2. social and threat analyses

In discussing the safeguards here it should be considered that by definition TFT (and in fact all wildlife) conservation could affect customary use by local communities. This reduction in use is essential in some cases and places if species are to avoid extinction. In Cambodia and Vietnam, assessments show that, due to historically low abundance of TFT, customary use and the value of TFT in society is minimal unless they engage in wildlife trade (which is not classified as customary use). Historically, collection of tortoises and freshwater turtles was a serendipitous bonus in the course of 'core' agricultural or hunter-gatherer activities, and never took on the role of a significant contribution to nutritional well-being, nor a significant cultural aspect.

Additionally the ecosystem services which TFT provide are currently poorly known, although include dispersal of seeds of plants and trees and can in some cases improve the germination of turtle ingested seeds. Their roles as scavengers or decaying animals and other organic pollutants in freshwater ecosystems are important. Some aquatic turtles have also been shown to be important for pest control through feeding on mosquito larvae and schisto-host snails, and through the agitation of substrate in shallow still water bodies providing important circulation of nutrients to increase organic activity in the water which can also increase yields of fish and other aquatic flora and fauna. Although these benefits from conservation of TFT are difficult to quantify in relation to local livelihoods they should be considered as benefits to local communities in general.

Recent interviews have also found a frequent response by interviewees when asked about current TFT abundance compared with the past is generally that historically TFT were common with some subsistence use. However, with the development of economic trade in TFT 10-15 years ago massive collection took place drastically reducing populations to a point where now they are so depleted that collection is low and mostly opportunistic, such collection can be seen as illegal and unsustainable. The situation now is that it is unlikely that many members of the community remain dependant on TFT for either economic or dietary requirements. To ensure that our project activities do not adversely impact local communities socio-economic assessments will be conducted during the initial project phase during interview surveys using questionnaires developed as part of the CEPF activities to assess dependence on TFT. To be completed by early 2011 these will provide a better understanding of the links between TFT use as resources and the socio-economic contribution of turtles to locally livelihoods. Questionnaires will also determine the cultural importance of TFT, particularly for indigenous communities, see separate indigenous people planning framework. This will ensure that possible involuntary restrictions are identified, accounted for and mitigated where necessary.

At sites where community patrols are to be established and in particular at the SHCA location the resource use within the proposed areas to be protected will be determined through detailed information collected from resource users, fishermen, farmers, hunters etc. This information will be used to investigate how possible



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restricted or reduced access to these sites might impact local livelihoods, management plans and local agreements will be sought for these areas and if necessary methods of mitigating loss of livelihoods will be developed.

### **3. Plans for participatory implementation**

In addition to information gathered through local interviews field surveys will also be conducted at key sites to complete assessments on the current status of TFT species at various locations. From this we will be able to assess the degree to which areas and individuals may potential be affected by the project activities. Community meetings will be held in priority areas identified following interview and field surveys to present information to local communities and seek input, support and suggestions on project developments and discuss potential conflicts.

This will be completed before the training of wildlife protection authorities is conducted at the provincial, district or protected area level. Or before community patrols are established in any new areas. In Quang Nam, Quang Ngai, Phu Yen and Binh Dinh provinces meetings have already been held with People's Committee and FPD to discuss activities, similar meetings will be held in all new areas where work will be undertaken.

In Cambodia extensive interviews with local communities in the Sre Ambel area have already shown that Batagur are not targeted by these communities. Rather that they are occasionally caught by local fishermen as by-catch. Several years of education activities implemented by the conservation project mean the vast majority of fishermen are happy to release any live animals that they find in their nets. The Batagur project does restrict exploitation of eggs at nesting beaches, as part of the nest protection activities that are implemented during the nesting season. The collection of turtle eggs is wholly illegal, and in many cases is conducted by immigrants who have moved into the area to participate in economic activities listed in the project background above. As such these activity will have no discernible impact on the livelihoods of local communities.

### **4. Identification of eligible groups for assistance**

For priority areas identified strategies to assist affected communities will be developed where necessary considering site specific variables. If community assistance is required suitable methods will be developed with community participation before any restrictions are applied. Those who have a high level of dependence on forest resource and specifically TFT will be prioritised if their activities are non-commercial and legal. We expect that for the majority of individuals within the local community that livelihoods will not be or minimally impacted through improved protection of TFT from our activities will be minimal. As collection is low level and opportunistic due to the increasing rarity and slow recovery of most TFT species. Local residence dependence on TFT and the eligibility for assistance will be established for the questionnaire and community meetings.

Exceptions might include professional turtle hunters and traders who are involved in illegal wildlife trade activities. Often professional turtle hunters are non-local but travel to find healthy populations of TFT and harvest them until they are no longer economically viable before moving to new locations. The majority of traders are Kinh ethnic majority who are often better educated, business minded and more informed than local indigenous minorities. They are therefore able to take advantage of wildlife trade opportunities. As such these activities can be considered illegal, unsustainable and destructive.

While activities propose cover a large area (11 Provinces in Vietnam and one in Cambodia), see table 1, at most locations only interview surveys will be conducted these will have no impact on resource access. For *Cuora bourreti* and *Cuora picturata* field surveys will be conducted to confirm the species presence at protected area sites identified through the interviews. Field surveys will not involve direct restrictions meaning no assistance will need providing. For *Cuora* sites only the strengthening of capacity amongst wildlife protection authorities could be considered an indirect restriction. This however will be focused at the



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provincial level and on the mobile enforcement teams and will aim to provide assistance in reducing commercial and illegal trade of turtles.

For *Mauremys annamensis* it is possible that all populations for this species identified fall outside of protected areas, as such community patrols component at a few sites and the Species Habitat Conservation Area (SHCA) will be required for the species to protect habitat and reducing collection of the species. These activities could therefore be considered as restrictions. As *Mauremys annamensis* is a Decree 32 protected species under Vietnamese national law the collection, trade or possession of this species is completely illegal. Eligibility for assistance may only relate to additional resources that our activities may also prevent access to. At present two sites have been identified for *Mauremys annamensis* activities, one in Duy Xuyen and Dien Ban districts in Quang Nam province and Bin Son district in Quang Ngai province, see table 1. It is hoped additional sites will be identified elsewhere which may also warrant community patrols and a location for the SHCA in Quang Ngai province is still to be decided.

Within Quang Ngai province plans are being developed to establish an assurance colony and SHCA for *Mauremys annamensis*. These activities will focus on habitat where strong evidence indicates the species remains in the wild. Awareness and community patrol activities will be undertaken as part of the CEPF while progress will be made towards recognition of a site as a SHCA. The SHCA will be small with a secure semi-wild area to ensure adequate protection while allowing some natural disbursement of turtles from the site. This development will increase local awareness while providing some employment and a focus for TFT conservation in the region.

Local community agreements will be negotiated at the site with access rights for fishing and resource collection using techniques less detrimental to TFT's. During implementation of the project additional sites for possible reintroduction of *Mauremys annamensis* will be identified and guidelines for reintroductions drafted. At present captive breeding success at the Turtle Conservation Centre (TCC) in Cuc Phuong National Park as well as in Europe and America has produced large numbers of this species in captivity, some of which are available for re-introduction. Any reintroduction would involve both FPD and community cooperation for ongoing research and monitoring coordinated by local national teams developed through this CEPF. Discussions have already been held with FPD in Quang Ngai province who support the idea of a captive assurance colony and SHCA. A US Fish and Wildlife Service grant is being sought to support some of these activities and additional opportunities are available. In the long run the SHCA will be modelled on the success of the Turtle Conservation Centre (TCC) in Cuc Phuong National Park, with the Ministry of Agricultural and Rural Development (MARD) gradually taking on more financial support for these activities under FPD management. Initially the assurance colony and SHCA would be dependant on international support from organisations such as the Turtle Survival Alliance (TSA).

Cambodia: The long-term impacts of the *Batagur affinis* projects are the sustainable management of the and only known breeding population of *B.affinis* in IndoBurma. Through this projects local communities will receive significantly higher income through their participation in the projects than through nest exploitation. This coastal zone species will be secure in the long-term by securing and expanding the core area for the species and increasing the local communities understand of the importance of the turtle habitats to their own well-being through increased fishery yields and food security and the link to protection of the habitat's biodiversity will then be a matter of education, provision of alternative livelihoods and, for this legally protected species, a degree of law enforcement.

Further consultation is not required for the Batagur project since interviews conducted by project staff have already demonstrated that local communities do not rely on the exploitation of TFT for their livelihoods. As mentioned above, immigrants into the area might attempt to engage in illegal activities such as Batagur egg collections, but these individuals would not be eligible for assistance from the project.

**Table 1. Information on provinces and protected areas to be visited during survey activities.**



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Province	Location	Status, Protected area (PA), non-PA, PA to be established	Indigenous populations use the area	Restrictions to natural resource use or only research
<b>Vietnam</b>				
Thua Thien Hue	Bac Ma National Park	PA	Believed, additional information required	No restriction, research only
	Sao La Nature Reserve	PA	Believed, additional information required	No restriction, research only
Da Nang	Son Tra Nature Reserve	PA	Not expected	No restriction, research only
	Ba Na-Nui Chua	PA	Believed, additional information required	No restriction, research only
Quang Nam	Ngoc Linh Nature Reserve	PA	Believed, additional information required	No restriction, research only
	Phu Ninh Nature Reserve	PA	Not expected	No restriction, research only
	Song Thanh Nature Reserve	PA	Ka Tu, Gietrieng and Muong ethnic minorities	No restriction, research only
	Duy Xuyen and Dien Ban districts	Non-PA	No ethnic minorities	Yes community patrols
Quang Ngai	Cao Moun Cultural Historical site	Non-PA	Hre ethnic minority	No restriction, research only
	Bin Son District	Non-PA	No ethnic minorities	Yes community patrols
Kon Tum	Chu Mom Ray National Park	PA	Gia Rai, Muong, Xe Dang, Thai, Ro-mam, Ha Lang and Brau ethnic groups	No restriction, research only
	Ngoc Linh Nature Reserve	PA	Xe Dang, De and Trieng De ethnic groups	No restriction, research only
Binh Dinh	Nui Ba Nature Reserve	PA	Kinh ethnic group, non-	No restriction, research only



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			minority	
	An Toan Nature Reserve	PA	Ba Na and Hre ethnic group	
Gai Lai	A Yun Pa Nature Reserve	PA	Believed, additional information required	No restriction, research only
	Bac Plei Ku Nature Reserve	PA	Ba Na ethnic group	No restriction, research only
	Chu Prong Nature Reserve	PA	Ede (originally in area), Nung and San Chi ethnic group	No restriction, research only
	Kon Cha Rang Nature Reserve	PA	Ba Na and Kinh ethnic groups	No restriction, research only
	Kon Ka Kinh National Park	PA	Ba Na ethnic group	No restriction, research only
Binh Dinh	An Toan Nature Reserve	PA	Believed, additional information required	No restriction, research only
Phu Yen	Deo Ca Hon Nua Cultural and Historical Site	PA	Not expected	No restriction, research only
	Krong Trai Nature Reserve	PA	Ede ethnic group	No restriction, research only
Dak Lak	Chu Hoa Nature Reserve	PA	Believed, additional information required	No restriction, research only
	Chu Yanh Sin National Park	PA	Mnong and Ede ethnic groups	No restriction, research only
	Dak Mang Nature Reserve	PA	Believed, additional information required	No restriction, research only
	Ea So Nature Reserve	PA	Believed, additional information required	No restriction, research only
	Ho Lak Lake Cultural and	PA	Mnong ethnic group	No restriction, research only



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	Historical Site			
	Nam Ca Nature Reserve	PA	Believed, additional information required	No restriction, research only
	Nam Nung Nature Reserve	PA	Mnong Ethnic group	No restriction, research only
	Ta Dung Nature Reserve	PA	Unk, but expected	No restriction, research only
	Trap Kso proposed Nature Reserve	PA	Believed, additional information required	No restriction, research only
	Yok Don National Park	PA	Yes, Unk	No restriction, research only
Khanh Hoa	Hon Ba Nature Reserve	PA	Needs researching	No restriction, research only
Cambodia				
Koh Kong	Sre Ambel	Non-PA	No ethnic minorities	Yes, community patrols and nest beach protection

Note: information from Birdlife Sourcebook of existing and proposed protected areas in Vietnam second addition

### 5. planned measures to mitigate impacts and assist affected groups

During interview and field surveys no activities will be undertaken that impact local livelihoods until community consultations have been undertaken in areas with affected people identified. Alternative income generating schemes will be considered to provide comparable or greater alternative incomes to TFT collection if necessary to meet worldbank safeguards. Due to the rarity of many TFT this is likely to be at a low level or for only a few individuals within the community. Options will include hiring local villagers as community rangers, involvement in existing and planned head-starting activities or provision of agricultural support in exchange for no-hunting agreements and other forms of alternative livelihood support. Communities meetings will engage communities in discussions to ensure that alternative livelihoods and compensations are beneficial to all stakeholders. Within central Vietnam a British government Darwin award scoping mission is scheduled for October 2009 part of which will assess the MAP for potential alternative livelihood developments and maybe extended to the *Cuora* project to investigate options for alternative local livelihood possibilities. For the Batagur local communities are already involved in nest beach protection and employed with the head-starting facility which provide direct incentives for TFT conservation greater than any income lost through reduced access to these turtles as a resource.

Where individuals are identified as high risk of being affected by our activities alternative income strategies will be investigated with their participation. During and after project implementation meetings will be held to discuss the project and how it affects them.