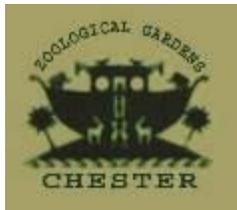


PHILIPPINE FRESHWATER TURTLE CONSERVATION PROGRAM (PFTCP)

2010 Annual Report



By



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Puerto Princesa City, Palawan, Philippines

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PROGRAM TITLE: PHILIPPINE FRESHWATER TURTLE CONSERVATION PROGRAM
(PFTCP)

PROGRAM DURATION: December 2006 - December 2011

PROGRAM SITE: Philippines

PHILIPPINE PROGRAM COOPERATORS:

Department of Environment and Natural Resources (DENR)
Protected Areas and Wildlife Bureau (PAWB)
Palawan Wildlife Rescue and Conservation Center (PWRCC)
Palawan Council for Sustainable Development (PCSD)
Provincial Government of Palawan
City Government of Puerto Princesa
Municipal Governments of Narra, Roxas, Dumarán, and Taytay
Concerned agencies and authorities

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ACRONYMS and ABBREVIATIONS

Barangay	Filipino term for village
CE	Conservation Education
CENRO	Community Environment and Natural Resources Office(r)
CEPA	Conservation des Espèces et des Populations Animales
CI	Conservation International
CRF	Chelonian Research Foundation
DENR	Department of Environment and Natural Resources
EAZA	European Association of Zoos & Aquaria Shellshock Campaign
ELAC	Environmental Legal Assistance Center
IEC	Information Education Campaign
ENRO	Environmental Natural Resources Office
IP	Indigenous People
IUCN	International Union for Conservation of Nature and Natural Resources or World Conservation Union
KFBG	Kadoorie Farm and Botanic Garden
KFI	Katala Foundation, Inc.
KIEBC	Katala Institute for Ecology and Biodiversity Conservation
LGU	Local Government Unit
LPF	Loro Parque Fundación
MOA	Memorandum of Agreement
NCIP	National Commission of Indigenous People
NGO	Non-Governmental Organization
NEZS	North of England Zoological Society
OP	Ocean Park
PASu	Protected Area Superintendent
PAWB	Protected Areas and Wildlife Bureau
PAWVI	Philippine Association of Wildlife Veterinarians Inc.
PCCP	Philippine Cockatoo Conservation Program
PCP	Pawikan Conservation Program
PCSD(S)	Palawan Council for Sustainable Development (Staff)
PENRO	Provincial Environment and Natural Resources Office
PFTCP	Philippine Freshwater Turtle Conservation Program
PNP	Philippine National Police
PO	Peoples Organization
PPDO	Provincial Planning and Development Office
PPSRN	Puerto Princesa Subterranean River National Park
PWRCC	Palawan Wildlife Rescue and Conservation Centre
SEP	Special Environmental Plan
TCF	Turtle Conservation Fund
TFTSG	Tortoise and Freshwater Turtle Specialist Group
TSA	Turtle Survival Alliance
TSEA	TRAFFIC Southeast Asia
USFWS	United States Fish and Wildlife Service
WCSP	Wildlife Conservation Society of the Philippines
WPU	Western Philippines University
ZGAP	Zoologische Gesellschaft für Arten- und Populationsschutz

PHILIPPINE FRESHWATER TURTLE CONSERVATION PROGRAM

Background Information

On 26 December 2006, DENR-PAWB and Katala Foundation Inc. (KFI) entered into a Memorandum of Agreement for the implementation of the “Philippine Freshwater Turtle Conservation Program” (PFTCP). The said program has the following objectives:

1. **Conservation** of Philippine freshwater turtle populations and their habitats, particularly but not restricted to Puerto Princesa City, Narra, Dumaran Island, and Rizal
 - 1.1. Establishment and development of facilities for conservation breeding / captive management / rescue of threatened freshwater turtle species.
 - 1.2. Provision of assistance in identifying areas / habitats of freshwater turtle for priority protection as well as in implementing conservation and protection measures and sustainable development of identified priority areas.
 - 1.3. Provision of assistance in wildlife law enforcement and information dissemination.
 - 1.4. Conduct of experimental soft release of turned-over / donated / confiscated and captive bred freshwater turtles.
2. Conduct of scientific **research** on the biology and management of Philippine freshwater turtles and their habitats, and socio economic frame conditions leading to threats and strategies for conservation, such as, among others studies / researches:
 - 2.1. Research on biology such as but not limited to breeding, population dynamics, feeding ecology, synecology, diseases, threats, taxonomy, captive management, veterinary medical procedures, and behavior, among others.
 - 2.2. Habitat conservation and restoration techniques.
3. **Education** and **capacitating** stakeholders of PFTCP on natural resource management and conservation; rehabilitation/restoration of species habitats, and environmental awareness by:
 - 3.1. Conducting environmental education on the status and threats of Philippine freshwater turtle species for key stakeholders like poachers, buyers, traders, decision makers, law enforcers, in and out of school youth, local communities, academe and local government units, among others;
 - 3.2. Capacitating local communities concerned on turtle conservation, including pre and post release activities for the species in their respective areas;
 - 3.3. Disseminating information on Philippine freshwater turtles and related conservation / protection issues through multi media, including publications and distribution of research outputs/results generated from this undertaking;
 - 3.4. Establishing a Center in Narra, Palawan as venue for biodiversity education and research.

Highlights of Accomplishments in 2010

If not otherwise mentioned our activities in 2010 focused on Palawan.

1. Conservation

1.1. **Captive management.** Since August 2007 the Katala Institute of Ecology and Biodiversity Conservation (KIEBC) in Antipuluan, Narra, Palawan is holding the only range country assurance colony of the critically endangered Philippine Forest Turtle *Siebenrockiella leytensis*. Furthermore, the facilities holds specimens of all other Palawan native freshwater turtle like the Southeast Asian Box Turtle *Cuora amboinensis*, the Asian Leaf Turtle *Cyclemys dentata* and the Malayan Softshell Turtle *Dogania subplana*. As of 31 December 2010, KIEBC holds 31 *S. leytensis*, 33 *C. amboinensis*, 10 *C. dentata*, and 1 *D. subplana*. All were monitored and underwent thorough health inspections on a weekly basis. The most obvious mating activities are those of the Southeast Asian Box Turtle. Males like to mate year around and some of their female partners have already injured necks from the violent mating procedure. This species is known for such violent behavior. The Asian Leaf Turtle and the Philippine Forest Turtle were sporadically observed while exhibiting reproductive behavior. In 2010, a total of 36 eggs and 24 hatchlings of *Cuora amboinensis*, 2 eggs and no hatchlings of *Cyclemys dentata*, and 6 eggs and no hatchlings of *Siebenrockiella leytensis* were produced.

Almost from the very turnover of specimens from PWRCC, the Philippine Forest Turtle turned out to be difficult to manage in captivity. They are stress prone and show high intraspecific aggression, especially among males (Schoppe and Fernando, 2009; Schoppe, 2010). KFI sought advice from the Tortoise and Freshwater Turtles Specialist Group (IUCN/TFTSG) and consequently came up with a proposal to improve the facilities. During the first quarter of 2010, the Turtle Survival Alliance (TSA) and the Turtle Conservation Fund (TCF) approved financial support to improve the husbandry conditions of *S. leytensis* through the establishment of a filter tank system that would among others help to adjust pH to more appropriate values. After consulting several engineers, we decided that the proposed tank filter system in combination with newly designed turtle tanks to hold the turtle individually or in pairs could meet the needs of the species. On May 29, we signed contract with an engineer for the construction after which construction started immediately. During the later part of the construction heavy rain sometimes hampered work but on August 12 the filter tanks and new enclosure were finished and for the first time filled with water. Finally on Aug. 31, all expect three *S. leytensis* that are still under treatment were transferred to the new enclosures. Each of the enclosures has a 2x2m area with water and a 1x1m land area. The pond system is sealed from the environment to avoid ground water intrusion. Each enclosure has an inflow and a drainage pipe through which they are connected to the filter tank system. The filter tank system encompasses four units: a collection tank, a settling tank, a treatment, and a filter tank. The system is designed to prevent contaminated water from washing back into the pools by adding a below ground collecting tank. From there water pumps back to the settling basin that contains plants for biological filtration. From the settling basin water flows to the treatment tank filled with plenty of leaf litter for acidifying. We use leaves of the Talisay tree *Terminalia catappa* that contain several flavonoids, tannins and saponines and are known to lower the pH of aquarium waters. This helps in lowering the pH of the well water that is as high as pH 9. From the treatment tank the water passes through a filter unit and is then gravity fed back to the ponds.

Upon release to the new enclosures, all females were paired with a male, while the remaining males were put in individual cells. Mating was observed immediate after release. The new system improved the water quality significantly but it did of course not solve all health problems in an instant. We still had some incidence of shell rot. We might only know how effective the new system is after one year or two. Definitely it reduced the workload considerably and keeper Angel can manage to clean all turtle enclosures incl. those of the other two species in two days with the assistance of two wildlife wardens only.



Figure 1: The new set of 20 enclosures for *S. leytensis* at the time when turtles were released to them in August 2010 (left). One of the finished enclosures showing pool and land area (right).



Figure 2: Filter tank system showing the different compartments (left). Water quality of the turtle enclosures is measured on a regular basis (right).

1.2. Assistance in identifying areas/habitats for in-situ conservation.

So far the most pristine and largest population of the Philippine Forest Turtle assessed is the one in Tagabinet, near the buffer zone of the Puerto Princesa Subterranean River National Park (PPSRNP). For comparative reasons we would like to find out if populations within the core zone of the park are comparable in size or larger. Accordingly, we request permission for a first reconnaissance surveys from the DENR Protected Area Superintendent of the PPSRNP in October 2010. The matter has to be tackled in the PAMB.

In November we conducted an interview survey and IEC in Sumbiling, Bataraza since we got reports that the Philippine Forest Turtle might occur in the area. Since Sumbiling is also known for rampant wildlife trade, we felt the need to assess the area in order to eventually come up with actions. We could however not confirm the species in the area. Trapping surveys would be needed to do so. Hence, mayor output of the activity was IEC with members of the indigenous people tribe from the area.

All Philippine native freshwater turtle species live in waters of lowland forest areas where habitat alteration in the form of large- or small-scale deforestation, drainage of swamps to give way for agriculture, aquaculture or human settlements are a major threat to their survival. Especially freshwater marsh and swamp areas are of major concern. A very limited number of small patches do remain of these important habitats.

1.3. **Wildlife law enforcement and information dissemination.**

In mid February one of our staff at the *S. leytensis* pilot site for in situ conservation (Tagabinet) contributed significantly to the apprehension of two foreigners illegally collecting insects within the premises of a nationally protected area. During the apprehension and the process of filing the needed documents for the case it was realized that park rangers, police and barangay officials were all not well enough informed and equipped to conduct such operation. As a result, Katala Foundation and PCSDS identified the need for paralegal refresher training for law enforcers assigned at or near the Park. After a series of meetings, a refresher course for apprehending officers was undertaken from May 24 to 26 at Barangay Cabayugan. The training was attended by a total of 53 participants of which 10 were from Barangay Tagabinet including our Community Organizer Dina Ibanez and her husband, tribal leaders, barangay officials and barangay police. The training was jointly organized by CENRO-PASu/Park Management, Palawan NGO Network Inc. (PNNI), PCSDS and KFI. KFI contributed also technically and financially through its BACOCO project, and all lecturers and trainers were free of charge. It is inspiring to note that just after the completion of the training, some of the participants (park rangers and police) successfully conducted confiscation operations and apprehended a suspect to an illegal timber poaching.



Figure 3: PFTCP Director lecturing on commonly traded wildlife and its conservation status (left). Community organizer Dina Ibanez reported on the insect case which was discussed as case study (right).



Figure 4: Working groups identifying weaknesses and discussing how to improve the flow of information regarding illegal wildlife matters.



Figure 5: PPSRNP PASu Bactol and his working group had identified lack of communication and man power as main weaknesses in apprehending illegal park intruders (left). Participants conducted a role play in which they had to apprehend wildlife traders (right).



Figure 6: Group picture with participants and organizers.

As part of a PCSDS campaign to disseminate information on wildlife laws, PFTCP Director Schoppe was invited as speaker about wildlife trade in training forwarders and carriers and for the City Information Office and Bantay Puerto Office August 2 and Sept. 14, 2010, respectively.

Wildlife confiscation and seizure records are annually compiled from concerned offices in Palawan (PCSDS, PWRCC, PENRO, City ENRO, PCG, PNP etc.), and from the DENR-PAWB. For Palawan, there are two confiscations that involved freshwater turtles in 2010. One of them involved 1166 turtles that were confiscated from Barangay Binga, San Vicente on May 27 and that were turned over to PWRCC on May 28, 2010. This constitutes the probably largest confiscation of freshwater turtles ever realized in the Philippines. KFI had been requested to inventory the specimens. The survey revealed a total of 74 *S. leytensis*, 89 *C. dentata*, and 993 live and 10 dead *C. amboinensis*. All dehydrated, malnourished and with shell rot as signs for poor husbandry conditions at the holding facility. On 9 July, 2010, PCSDS had filed a case versus Antonio Jallorina Yu and Danilo Teddy Arganosa Gozo with IS No. IV-08- INV10G-0450 involving the violation of Sec. 27(f) of RA 9147 for possessing freshwater turtles in San Vicente. There was an order from Prosecutor's Office directing the complainant to submit the affidavit of witness/es linking the respondents to the commission of the offense. PCSDS had moved for the extension of time to file additional affidavit of witness/es considering that it was given only 10 days to submit the same. Decision was pending as of December 2010.

The second confiscation, involved only one juvenile Philippine Forest Turtle confiscated at the port of Puerto Princesa City by staff of the City Environmental Natural Resources Office (City ENRO) and the Port Authority on 15 April 2010. The turtle was finally turned over from the City ENRO to PWRCC on 14 May 2010. KFI identified the individual as member of the population that we study since 2008 in Tagabinet, Puerto Princesa City. The animal has an individual marking inflicted by KFI as part of our long-term population study. Unfortunately, the turtle died some two weeks after turn over.

We also collected information on registered turtles holders ("Certificates of Wildlife Registration") and turtle breeders with special reference to *S. leytensis* from PCSDS, DENR Regional Offices and the DENR-PAWB. Nobody is currently registered as breeder of *S. leytensis* nor has anybody ever bred the species in captivity. It is interesting to note though that at least 39 individuals / entities keep *S. leytensis* outside Palawan. Based on official records, they keep some 389 individuals; that is an average of 10 per registered keeper. Minimum number of registered turtle is 1 and the maximum is as high as 53 individuals by a private person in Region V followed by a private person with 41 individuals in Region II. All of these must have been collected without permit and left Palawan illegally. We assume that the estimated number of unreported / not registered specimens is much higher.

2. Research

2.1. Research on biology, ecology, diseases, threats, captive management, veterinary medical procedures etc

Population size assessment of the Philippine Forest Turtle. Since 2008, KFI conducts long term population surveys of the Philippine Forest Turtle *S. leytensis* at three sites in Palawan. The sites differ in as much that in one site the habitat is still relatively pristine, on the other site exploitation through local consumption is rampant, while the

third site is exploited for the pet trade. These surveys are conducted for a total of five years in the hope of assessing population trends and determining if populations are stable over time. To keep external variables stable, the surveys are done at the same time of the year that is in February / March. The population sizes can only be estimated once mark-recapture data from all surveys (2008-2012) are available. The 2010 fieldwork under this project entitled “*Siebenrockiella leytensis* over time – are populations stable?” had been finished by April 2010. During 2010 sampling, we collected 77, 33 and 13 *S. leytensis* in Site I, II and III, respectively (Schoppe and Acosta, 2010). An interim report covering activities from January to July 2010 was submitted to the funding agency and partners on July 30, 2010. The 2010 fieldwork was funded by TCF/CI and IDEA Wild had contributed equipment. Renewal application was submitted to IDEA Wild in October 2010.

Home range and seasonality. Proposals to assess the home range and seasonality of *S. leytensis* were submitted in November and December 2010, respectively.

Ecological studies. Diverlie Acosta – research assistant and education officer under PFTCP - and her team submitted a proposal entitled “Habitat Characteristics of and Ecological Interactions Among Sympatric Freshwater Turtles in Palawan, Philippines” to the Conservation Leadership Programme in November 2010.

Pet market surveys. We conduct quarterly surveys of the large pet markets in Manila such as Arranque, Tiendesitas, and Cartimar. Of focal interest is the critically endangered, Palawan endemic Philippine Forest Turtle.

Arranque Market has a live poultry and pet section at the basement along Alonzo Street, corner C.M. Recto Ave., Manila. The Arranque Market has 58 shops dealing with live poultry and pets. Typical shop area size is 1x2 m. Five shops usually offer turtles. The market is just two blocks away from Ongpin Street, the main street of Chinatown. In the fish section of the wet market, the Chinese softshell turtle *Pelodiscus sinensis* is regularly sold for PHP150.00/kg. Likewise some small Chinese restaurants in the area offer softshell dishes.

Tiendesitas is a shopping complex located at Ortigas Ave., corner C5 Road, Pasig. The pet section has 29 shops, which mostly deal with live dogs, dog accessories or offer dog grooming services. Only one shop deals exclusively with non-traditional pets such as scorpions, tarantulas, amphibians, and reptiles. Ark Aylon Zoo (<http://arkavilonzoo.weebly.com/index.html>) has a separate building, but is located within the Tiendesitas compound. It is primarily a mini-zoo, but it also has a pet shop section. Five out of the 30 shops in Tiendesitas usually offer turtles/tortoises for sale.

The Cartimar Complex is the largest pet market and is located between Gil Puyat Ave. and Libertad Ave., Pasay City. The Cartimar Complex is composed of Cartimar Pet Center under the management of Ernesto Oppen, Inc. with 103 pet shops, Felimarc Pet Center with 13 pet shops, and additional 10 shops along A. Luna Street. Five to 12 out of 126 shops usually offer turtles/tortoises for sale.

In 2010, surveys were conducted in March/April, July and November. Each time we were able to locate Philippine native freshwater turtles (Tab. 3). It has to be expected that many more are not displayed or even traded on an order-basis. The least in demand is the Asian Leaf Turtle *C. dentata*, the most abundant in trade is *C. amboinensis* and the most expensive is *S. leytensis*. The price per individual of *S. leytensis* was about PHP 500.00 during the first half of the year and between PHP2,500.00 and 4,000.00 during the second half of the year.

Table 3: Abundance of openly displayed Philippine native freshwater turtles at pet markets in Manila in 2010.

Species	IUCN status	March/April 2010	Jul-10	Nov-10	Total
<i>Cyclemys dentata</i>	N/T	2	2	1	5
<i>Cuora amboinensis</i>	VU	151	Ca. 88	Ca. 100	>339
<i>Siebenrockiella leytensis</i>	CR	4	13	2	19



Figure 7: The critically endangered *Siebenrockiella leytensis* openly displayed or shown upon request in Manila’s pet markets in 2010.

Survey of local markets, trade and exit points. Initial surveys of local so-called “wet” markets where meat, fish, vegetables and fruits are sold revealed that wildlife – unlike few years ago – is rarely sold in those markets nowadays. To gather information on collection and or trade activity we conducted interviews with farmers, wildlife hunters, barangay officials, youth and other community members instead. In 2010, we had targeted eight municipalities (Aborlan, Puerto Princesa, Roxas, San Vicente, Dumarán, Araceli, Taytay and El Nido). In two municipalities (Araceli and Aborlan) we could not confirm the occurrence of the Philippine Forest Turtle. In the remaining six municipalities we found collection/trade activity of the Philippine Forest Turtle and other freshwater turtles. Collection is conducted with the purpose of own consumption, and/or local trade / barter.



Figure 8: Carapace of *S. leytensis* that was just slaughtered by a resident from Taytay and converted into “Pagong adobo sa gata” a common local recipe to cook turtle meat.



Figure 9: Incidentally caught freshwater turtles waiting for a buyer.

In at least three municipalities (El Nido, Taytay and San Vicente) we found indication of commercial turtle trade: collection of the Philippine Forest Turtle *S. leytensis*, the Southeast Asian Box Turtle *Cuora amboinensis* and the Asian Leaf Turtle *Cyclemys dentata* with destinations outside Palawan, most probably East Asia.



Figure 10: Bamboo-fenced turtle cage in Taytay (left). Close-up of some of the hundreds freshwater turtles within the cage (right).



Figure 11: Bamboo-fenced turtle cage in San Vicente (left). Keeper feeding the approximately 1000 turtles with cashew (right)

We have also surveyed some trade exit points such as air and sea ports. Our team has surveyed two ports in Manila on February 2 and 4, 2010 respectively. Manila South port is primarily a cargo port except #15 which is the port of the passenger ferry “Super Ferry”. There is no route to and from Palawan. Manila North port has 6 ports. The last port (#2) is called Isla Puting Bato where Palawan RORO vessels (Coron and Liminangkong or El Nido) dock. During the time of the survey, no vessel was scheduled to arrive or depart. We had interviewed DENR personnel assigned at the port and they only mention one incident where they intercepted a boat with two sea turtles. They explained that they usually just contact PAWB for resolution. We also learned that the RORO shipping line owners must have connections that protect them from getting inspected if they carry contrabands. This might be true also for air freight as we were informed from a source in Davao City, Mindanao that it is easy to transport wildlife from one airport to another as long as one has the right connections.

Internet trade. The trade of the Philippine Forest Turtle and other highly priced turtles and tortoises has more and more shifted to the internet. A common practice is that announcements for sale will not be published for more than 10-14 days to avoid getting traced. Philippine web sites that regularly offer the Philippine Forest Turtle and other freshwater turtles (as well as anything else) are www.sulit.com.ph and www.philippinepetfinder.com.

In July 2010, we also learned that some 20 *S. leytensis* individuals that were declared captive bred were offered with papers for sale at Euro 675.00/ind. in Europe. This is of special interest since the species has so far never been bred in captivity and the Philippines has never issued a CITES export permit for captive bred specimens. Our research led to a company called Animals Source Group (www.animalsourcegroup.com) with branches in the US, Czech Republic, New Zealand and Peru. According to the webpage, Animal Source Group is a multi-national organization, dealing primarily with captive animal facilities such as zoological parks, safari parks, and recreational parks that manage various species of exotic animals. The Group thrives because of a highly motivated, creative and enthusiastic group of specialists with expertise in many aspects of wildlife biology, and zoo management.



Figure 12: *S. leytensis* juvenile that is sold through Animal Source Group.

We have reported the major findings of our surveys, especially if illegal activities are concerned to the authorities such as the DENR-PAWB in Manila and the PCSDS in Palawan. A special meeting with PAWB had been arranged for and was realized on 18 November 2010. During the meeting that was headed by PAWB Assistant Director Dr. A. Manila, Dr. Schoppe reported on activities under the PFTCP with special reference to illegal trade.

Captive management. We have visited various facilities in Manila where *S. leytensis* is kept such as Aylon Zoo, Wildlife in Need, and Subic Safari. The latter had actually approached us for advice on the husbandry of the 30 individuals of *S. leytensis* they are keeping. All facilities had experienced health problems and fatalities confirming the difficulty of captive management of the species.



Figure 13: Juvenile *S. leytensis* in display area of Aylon Zoo (left). Diverlie Acosta showing staff of Wildlife in Need how to clean wounds caused by shell rot.

We have published a report on health issues based on our experience in the assurance colony in the Katala Institute for Ecology and Biodiversity Conservation (Schoppe and Fernando, 2009). We have also developed a husbandry protocol for *S. leytensis* that was published in the Turtle Survival Alliance (Schoppe, 2010).

3. Education and capacitating stakeholders

3.1. Environmental education

Two major projects on environmental education toward the Philippine Forest Turtle were/are conducted with the following objectives:

- A. BACOCO – Conservation of the Philippine Forest Turtle *Siebenrockiella leytensis* in Palawan (Jan. 2010 - Sept. 2011):
 - i. Conservation of the Philippine Forest Turtle Populations in Central and Northern Palawan.
 - ii. Strengthening law enforcement to reduce collection and trade of the Philippine Forest Turtle.
- B. In situ conservation of the Philippine Forest Turtle *Siebenrockiella leytensis* through information education (Jan. – Dec. 2010):
 - i. To raise awareness among local communities, especially among tribal members that exploit the Philippine Forest Turtle for food, about the importance of protecting the species and its habitat.

Prior to the actual implementation, a number of educational materials for lecture and distribution to the target groups had been developed:

- Backpacks with turtle print
- Bookmarks featuring *S. leytensis*
- Calendars featuring the life cycle of the Philippine Forest Turtle
- Colouring sheets for Asian Leaf Turtle
- Colouring sheets for the Malayan Softshell Turtle
- Colouring sheets for the Philippine Forest Turtle
- Colouring sheets for the Southeast Asian Box Turtle
- Cotton bags with turtle print
- Face printing matrix for all 6 Philippine species
- Face towels with turtle print
- Philippine Forest Turtle lecture flipchart
- Share a place to live tarpaulin
- Tarpaulins with colouring guideline for the 4 turtle species
- T-shirts with turtle print

To assess level of awareness and the effectivity of our method and conservation message we conducted pre and post project surveys in the pilot site and in a control site without project interventions. Under the two projects, a total of 161 IEC interventions have been conducted. This is an average of 13.4 per month. A total of 8,712 people were reached in total (Tab. 4).

Table 4: Total and average number of IEC interventions conducted and audience reached.

	No of IEC	No of audience	Project
Total Jan.-Dec. 2010	66.0	6,746.0	Bacoco
Average per month	5.5	562.2	Bacoco
Average per activity		103.7	Bacoco
Total Jan.-Dec. 2010	95.0	1,966.0	In-situ
Average per month	7.9	163.8	In-situ
Average per activity		20.7	In-situ
Total both projects	161.0	8,712.0	both
average per month both projects	13.4	726.0	both
Average per activity both projects		62.2	both

IEC interventions comprised school visits and lectures, community visits and focused group discussions, house-to-house visits and lectures and discussion during barangay and municipal sessions in eight target municipalities (Aborlan, Puerto Princesa City, Roxas, San Vicente, Dumarán, Araceli, Taytay and El Nido).



Figure 14: Lectures at Elementary (left) and High School (right) at Dumaran Island.



Figure 15: IEC with barangay officials at Barangay Mauyon, Puerto Princesa City.



Figure 16: Lectures at Elementary School in Mauyon, PPC.



Figure 17: Elementary students from Mauyon (left) and Bacungan (right).



Figure 18: Lecture to Elementary students from Bacungan.



Figure 19: Elementary students from Langogan (left) and Lucbuan (right) during lecture.



Figure 20: Without a megaphone lectures would be impossible at most schools. Here Elementary students from Lucbuan (left) and Tolariquen (right) during lecture.



Figure 21: Lectures with barangay officials (left) and High School students at Barangay Caramay, Roxas.



Figure 22: Lectures with students from the Magara Craftsmen High School in Roxas.



Figure 23: Interactive lectures with students from Barangay Mendoza, Roxas: left High School and right Elementary School.



Figure 24: Lectures with elementary students from San Jose, Roxas (left) and High School in Barangay San Juan, Aborlan.



Figure 25: High School students (left) and faculty (right) from the San Juan National High School in Aborlan.

In addition to the above mentioned IEC activities, the regular celebration of “World Turtle Day” in the Philippines was initiated. In collaboration with the Western Philippines University we celebrated World Turtle Day on July 1, 2010. For the celebration 18 high schools and colleges were invited. The theme of the activity was “Philippine Turtles – Sino sila?” The celebration started with registration, an opening program and messages by WPU officials and an inspirational message by KFI. It was

followed by introductory lectures to Philippine marine turtles and to Philippine freshwater turtles. Lectures were followed by a Quiz Bee among participating 2nd and 3rd year High school students. Another activity was the Impromptu interpretation of a poster “Share a place to live” that had been developed under the BACOCO project which features the habitat and role of in the ecosystem of the Philippine Forest Turtle. This was followed by games, questions and answers, scrabble, relays etc. As a parallel activity a painting contest for college level students was conducted wherein students were supposed to produce a painting related to the theme. Outputs were judged by invited guest from DENR-PENRO, PSCDS, Tubbataha Management Office, PWRCC and WWF Palawan. The celebration ended with the awarding ceremony, closing remarks and picture-taking.



Figure 26: Registration of participants during World Turtle Day (left). DENR provided bookmarks and posters as additional give-a-ways.



Figure 27: Word Turtle Day Celebration at the Western Philippines University with welcome message by WPU Administrator Prof. Rose Bundal (left). Team members while discussing possible answers during the quiz Bee (right)



Figure 28: Prior to the impromptu interpretation competing students were given 15 min time to absorb the content of the tarpaulin (left), after which participants presented their interpretation separately and one after the other (right).



Figure 29: The impromptu interpretation and the painting contest were judged by a board of judges composed of various governmental and non-governmental organizations.



Figure 30: Trophies were given to 1st, 2nd and 3rd prize winning team during Quiz Bee.

3.2. Capacitating local communities concerned on turtle conservation, including pre and post release activities

PWRCC had requested the assistance of PFTCP in the management of the confiscated turtles that had been turned over to PWRCC in May 2010. Conditions and health of the turtles that had been confiscated was closely monitored by KFI and

PWRCC. After more than one month of quarantine most of the turtle were found to be stable and ready for release to the wild. Upon request by the OIC Director Dr. Glenn Rebong and Chief Officer of the ECAN-Policy Research Division John Pontillas from PCSDS, KFI has surveyed potential release sites for the three different turtle species in July 2010. We were looking for sites that are away from major settlement to avoid collection and road kills and with relatively intact habitat. On August 1, the first batch of *C. amboinensis* were released on the 70ha leased-property of South Sea Exclusive (<http://www.southsea-exclusive.com>) in Santa Lucia, Puerto Princesa City. Here the turtles are off the public and safe from exploitation and road kills. The limited number of natural wet lands in the area however did only allow the release of some 300 individuals. On the same day, we released 50 *C. dentata* in a lowland forest stream in Barangay Irawan, Puerto Princesa City. The turtles had been individually notched prior to release to allow identification if eventually recaptured. The release event on August 1 was headed by KFI and PWRCC, and PCSDS staff and their children (PCSDS Wildlife Safer Kiddie Club). Prior to release Sabine gave an introduction to freshwater turtles, threats and the background of the release.



Figure 31: Truck with turtles that were turned over to PWRCC (left). Close up of some of the confiscated turtle (right).



Figure 32: PFTCP Director Sabine was requested to identify and inventory the turtles. Dr. Rebong of PWRCC did health check up (left). Some turtles had arrived dead (right).



Figure 33: Law enforcement officers and legal council members were taught basic identification characteristics of the Philippine Forest Turtle (left). Philippine Forest Turtles in tank at PWRCC after inventory and first health check (right).



Figure 34: Sabine taking standard measurement of the 74 confiscated *S. leytensis* (left). Most were found to have shell rot as a sign of stress and or poor husbandry (right).



Figure 35: 500 *Cuora amboinensis* were released in Santa Lucia. Each of the many conservationists who joined carried some of the turtle to the release site.



Figure 36: Staff of PCSDS were introduced to the notching system by Diverlie (second to the left) and then helped in notching *C. dentata* prior to release.



Figure 37: Diverlie and Sabine taking morphological data and notching *S. leytensis* prior to the release.

On 5 August 2010, *S. leytensis* were released without the involvement of the public to keep the release site unknown and protected. We selected a remote site that is difficult to access. We only involved the local community and encouraged them to monitor and protect the released turtles. We wish we could have equipped some of the released turtles with transmitters to monitor their well being but since this was an unexpected even, we could not allocate funds in the short time.



Figure 38: It took us half day to reach the release site and several rivers had to be crossed.



Figure 39: Once the Land Rovers could not go any further, turtles were riding a carabao sledge and people were walking to the final destination.



Figure 40: Group picture with PCSDS and KFI staff and community members from near the release site (left). Released Philippine Forest Turtle *S. leytensis* (right).

The remaining *C. dentata* and *C. amboinensis* were released in Barangay Magarawag, Puerto Princesa City and in the Barangay Dumarao, Roxas, respectively on 15 August 2010. Dumarao holds one of the few remaining freshwater marshes in Palawan. We had to ask permission from the village officials and community members prior to release. Some of the community members were worried that the turtles might finish all the water spinach (*Kangkong*) that grows in the area and that is harvest by the people. We promised that in case of a serious conflict we would catch the turtles again and transfer to another site. Most of the people were favourable to the release and proud that their area qualified. Especially barangay officials were very supportive. During the last quarter of 2010 we conducted a monitoring trip to assess the situation in the marsh area in Dumarao. Residents reported that the turtles significantly reduced the *Kangkong* in the area, nevertheless residents and turtles still peacefully share the place to live.



Figure 41: Release site of *C. dentata* (left). Once we had arrived in Dumarao with the cars, turtles were distributed among crates and carried for some 30min to the marsh areas (right).



Figure 42: Marsh areas in Dumarao. The release was assisted by barangay officials and community members.

3.3. Information dissemination through multimedia incl. publications and distribution of research outputs/results generated

Press releases. In January a reporter from the Philippine Daily Inquirer.net conducted a series of interviews with KFI management and staff about the PCCP and PFTCP. Before reporting on the turtle confiscation and trade in the National Channel of Jessica Soho at GMA 7 on June 5, reporters had consulted assistance regarding species identification from KFI.

Publications. A number of publications about turtles and the activities under the PFTCP have been published in 2010:

Diesmos, A.C., J. Buskirk, and S. Schoppe, *accepted*. *Siebenrockiella leytensis* (Taylor, 1920) – Philippine Forest Turtle. In: Rhodin, A.G.J., Pritchard, P.C.H., van Dijk, P.P., Saumure, R.A., Buhlmann, K.A., Iverson, J.B., and Mittermeier, R.A. (Eds.). Conservation Biology of Freshwater Turtles and Tortoises: A Compilation Project of the IUCN/SSC Tortoise and Freshwater Turtle Specialist Group. Chelonian Research Monographs No. 5, xx-xx, <http://www.iucn-tftsg.org/cbft/>.

- Schoppe, S., 2010. Die kleinste Südostasiatische Scharnierschildkröte (*Cuora amboinensis*). *Marginata*, 26(1): 40-45.
- Schoppe, S., 2010. Husbandry guideline for the Philippine Forest Turtle, *Siebenrockiella leytensis* (Taylor, 1920). Turtle Survival Alliance, p. 86-89.
- Schoppe, S. and I. Das, *accepted*. *Cuora amboinensis* (Daudin, 1802) Southeast Asian Box Turtle. In: Rhodin, A.G.J., Pritchard, P.C.H., van Dijk, P.P., Saumure, R.A., Buhlmann, K.A., Iverson, J.B., and Mittermeier, R.A. (Eds.). Conservation Biology of Freshwater Turtles and Tortoises: A Compilation Project of the IUCN/SSC Tortoise and Freshwater Turtle Specialist Group. Chelonian Research Monographs No. 5, xx-xx, <http://www.iucn-tfts.org/cbft/>
- Schoppe, S., J. Matillano, M. Cervancia and D. Acosta, 2010. Conservation needs of the critically endangered Philippine Forest Turtle *Siebenrockiella leytensis* (Taylor, 1920) in Palawan. *Chelonian Conservation Biology* 9(2): 145-153.

In November 2010, the PFTCP Director received invitation as Philippine representative to attend the Conservation of Asian Tortoises & Freshwater Turtles Workshop to be held from Feb 21-24 2011 in Singapore. Equally, we were invited to the 2nd Cuora workshop in Gangkou, China in May 2011 to talk about the status of *Cuora amboinensis* in Malaysia, Indonesia and the Philippines. We will report on this during the 2011 annual report.

Reports. Highlights of the said program since its early stages after the signing of the MOA are integrated in the technical progress reports of the Philippine Cockatoo Conservation Program (PCCP) of Katala Foundation Inc. Starting 2007, annual reports for PFTCP are produced and accessible at our website (www.philippinecockatoo.org). Regular accomplishment reports are also produced for the various project components under PFTCP.

- Schoppe, S., 2010. In-situ conservation of the Philippine Forest Turtle *Siebenrockiella leytensis* through information education. Interim report Oct. 2009 to June 2010. Katala Foundation Inc., Philippine Freshwater Turtle Conservation Program, Puerto Princesa City, Palawan, Philippines, 32 pp.
- Schoppe, S., 2010. Philippine Freshwater Turtle Conservation Program (PFTCP): 2009 Annual Report. Katala Foundation Inc., PFTCP, Puerto Princesa City, Palawan, Philippines, 20 pp.
- Schoppe, S. and D. Acosta, 2010. TCF- 0166. *Siebenrockiella leytensis* over time – Are populations stable? Technical and financial interim report. Katala Foundation Inc., Philippine Freshwater Turtle Conservation Program, Puerto Princesa City, Palawan, Philippines, 20 pp.
- Schoppe S. and D. Acosta, 2010. Husbandry of *Siebenrockiella leytensis* (Taylor, 1920) in its only range country assurance colony. Final Report to TSA/TCF. Katala Foundation Inc., Philippine Freshwater Turtle Conservation Program, Puerto Princesa City, Palawan, Philippines, 16 pp.
- Schoppe S. and D. Acosta, 2010. BACOCO – Conservation of the Philippine Forest Turtle *Siebenrockiella leytensis* in Palawan. Performance and financial status report to USFWS. Katala Foundation Inc., Philippine Freshwater Turtle Conservation Program, Puerto Princesa City, Palawan, Philippines, 52 pp.

3.4. PFTCP Work Plan 2011

The workplan of the program for 2011 was submitted and discussed during the November meeting with PAWB Assistant Director Dr. Manila. Please find below for your reference.

Objectives/Activities	Month 1	Mo 2	Mo 3	Mo 4	Mo 5	Mo 6	Mo 7	Mo 8	Mo 9	Mo 10	Mo 11	Mo 12
	Jan 11	Feb 11	Mar 11	Apr 11	May 11	June 11	Jul 11	Aug 11	Sept 11	Oct 11	Nov 11	Dec 11
Assess the home range of the Philippine Forest Turtle (approval of proposal pending)												
Assessment of intra-specific behaviour and diurnal rhythm of the Philippine Forest Turtle (approval of proposal pending)												
Revise and (re-)submit proposal to assess habitat preferences of the Southeast Asian Box Turtle in selected sites in Palawan, Mindanao, Leyte and Samar.												
Monitor wildlife / turtle trade and exit points in Central and Northern Palawan												
Monitor wildlife / turtle pet markets in Manila												
Education and capacitating stakeholders of PFTCP on natural resource management and conservation; rehabilitation/restoration of species habitats, and environmental awareness by:												
Conducting environmental education on the status and threats of Philippine freshwater turtle species for key stakeholders in PCCP project sites.												
Celebrate Bakoko (Turtle) Day in Tagabinet, Puerto Princesa City												
Celebrate World Turtle Day and 2011 year of the turtle												
Conducting environmental education on the status and threats of Philippine Forest Turtle along range sites in Palawan.												
Compile wildlife confiscation reports												
Establishment of wildlife trade task forces, check points												
Attend international conference on freshwater turtle trade in Southeast Asia												
Attend national scientific fora and disseminate information on the status of Philippine freshwater turtles with special reference to Palawan												
Publish scientific paper(s) on research conducted												
Integration of PFTCP activities at the Katala Institute of Ecology and Biodiversity Conservation (KIEBC) in Narra, Palawan as venue for biodiversity education and research.												
Renew PFTCP MOA with DENR-PAWB												

Objectives/Activities	Month 1	Mo 2	Mo 3	Mo 4	Mo 5	Mo 6	Mo 7	Mo 8	Mo 9	Mo 10	Mo 11	Mo 12
	Jan 10	Feb 10	Mar 10	Apr 10	May 10	June 10	Jul 10	Aug 10	Sept 10	Oct 10	Nov 10	Dec 10
Education and capacitating stakeholders of PFTCP on natural resource management and conservation; rehabilitation/restoration of species habitats, and environmental awareness by:												
• Develop freshwater turtle IEC materials												
• Conducting environmental education on the status and threats of Philippine freshwater turtle species for key stakeholders in PCCP project sites.												
• Celebrate Bakoko (Turtle) Day in Tagabine												
• Celebrate World Turtle Day												
• Conducting environmental education on the status and threats of Philippine Forest Turtle along range sites in Palawan.												
• Compile wildlife confiscation reports												
• Establishment of wildlife trade task forces												
• Establishment of wildlife trade check points												
• Monitor wildlife / turtle trade and exit points in Central and Northern Palawan												
• Monitor wildlife / turtle pet markets in Manila												
• Attend national scientific fora and disseminate information on the status of Philippine freshwater turtles with special reference to Palawan												
• Publish scientific paper(s) on research conducted under PFTCP.												
• Integration of PFTCP activities at the Katala Institute of Ecology and Biodiversity Conservation (KIEBC) in Narra, Palawan as venue for biodiversity education and research.												

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- Loro Parque Fundacion (LPF),
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- Conservation des Espèces et des Populations Animales (CEPA),
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Ministry of Natural Resources and Environmental Conservation



- Rice is important food
- Kahal is pest
- Su-yan eats kahal
- Let's protect the Su-yan!



- Water cycle
- Source of food, medicines and livelihood
- Habitat and shelter
- Prevents erosions
- Let's protect our forests!



- Source of food
- Seed dispersal
- Natural reforestation
- Let's protect Su-yan and other wildlife!



- Water supply
- Important habitat
- Su-yan is a part of a food chain
- Let's protect our rivers and watershed!

