



EUROPEAN UNION OF AQUARIUM CURATORS

REPORTING FORM

FOR *IN SITU* CONSERVATION PROJECTS FUNDED

1 TITLE OF PROJECT	Safeguarding the Critically Endangered Siamese Crocodile (<i>Crocodylus siamensis</i>) through Combined in situ and ex situ Conservation Measures
2 NAME OF APPLICANT INSTITUTION	Prof. Dr. Thomas Ziegler Cologne Zoo Riehler Straße 173
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DATE OF REPORT:	19.6.2020

WHAT YEAR WAS YOUR PROJECT FUNDED BY EUAC? 2016

3 LOCATION OF PROJECT (REGION & COUNTRY)

Vietnam and Lao PDR

4 PROJECT START AND END DATES:

May 2016 to presumably September 2017

5 PROJECT CO-ORDINATOR, ADDRESS AND INSTITUTIONAL AFFILIATION

(IF DIFFERENT FROM APPLICANT)

6 PROJECT TYPE

(TICK ANY COMPONENTS THAT APPLY)

BIOLOGICAL/ECOLOGICAL RESEARCH

VETERINARY/CONSERVATION MEDICINE

ANIMAL WELFARE

CAPTIVE BREEDING

RE-INTRODUCTION/RE-

STOCKING/TRANSLOCATION

HUMAN-WILDLIFE CONFLICT

EDUCATION/PUBLIC AWARENESS

TRAINING/WORKSHOPS

COMMUNITY-BASED/SOCIAL POLICY

ECOTOURISM/SUSTAINABLE DEVELOPMENT

SUSTAINABLE USE

WARDENING/LAW ENFORCEMENT

PROTECTED AREAS MANAGEMENT

OTHER: _____

7 FOCAL SPECIES (COMMON AND SCIENTIFIC NAME)

Siamese crocodile (*Crocodylus siamensis*)

8 IUCN RED LIST STATUS (OR OTHER THREAT LISTING) OF FOCAL SPECIES

Critically Endangered

CITES YES NO

APPENDIX I

9 PROJECT BACKGROUND

The Siamese Crocodile (*Crocodylus siamensis*) is listed as Critically Endangered by the IUCN Red List because natural populations in its distribution range have been reduced by 80% over the last decades. Historically, this species was widely distributed in mainland Southeast Asia, including Cambodia, Indonesia, Lao PDR, and Vietnam. However, the natural populations in Vietnam have probably been extirpated due to the extremely high hunting pressure. Natural populations in Cambodia, Laos, and Thailand have also become highly fragmented and threatened. Most populations have less than ten individuals and might not be able to survive long into the future.

Our recent surveys near Ban Soc, Bualapha District, Khammouane Province, Lao PRD, identified an unknown, overlooked population of the species which at the same time represented the rediscovery of the Siamese crocodile in Khammouane Province. Similar to populations documented in previous studies, this population contains only few observed individuals. Based on external morphology, respective individuals could be identified as pure Siamese Crocodile. Also interviews with local people revealed the sighted crocodiles to represent remains of a natural population. However, to exclude that sighted animals are escaped farm hybrids, molecular testing of noninvasively collected samples from the site is currently underway.

One of the most cost-effective conservation options for the species would be to restock the diminished wild populations throughout its range or even conduct reintroduction in particular cases in suitable habitat where the species has become extinct in combination with habitat and species conservation measures. In Vietnam, the first population was introduced in Cat Tien National Park in the early 2000s. Breeding has been subsequently documented, which demonstrates initial success of the program. A major challenge for the buildup of restocking/reintroduction efforts is to identify purebred individuals from captive programs in the range countries. This process was carefully implemented in the introduction program in Cat Tien National Park through genetic screening of captive individuals using microsatellite markers and mitochondrial genes. However, the remaining captive colonies in Vietnam and Laos have not been monitored closely to confirm purity of Siamese Crocodile individuals held in the facilities.

10 WAS THE OVERALL PROJECT PURPOSE FULFILLED?

Yes

11 WHAT OBJECTIVES WERE MET?

Documentation of the pure status of the Ban Soc Siamese Crocodile Population in central Laos.

WHAT OBJECTIVES WERE NOT MET?

12 WHAT PROJECT ACTIVITIES WERE UNDERTAKEN?

In a first step, the genetic profile of the newly discovered Siamese crocodile population in Ban Soc, central Laos, was determined, to ensure this is in fact a naturally occurring and pure population of the Siamese Crocodile.

The second and main purpose of the project was to identify purebred individuals of the Siamese Crocodile in in country captive facilities. Captive individuals from zoos and stations in Vietnam were tested (Hanoi Zoo, Hon Me Station and Saigon Zoo in Vietnam). We could also screen some if the individuals kept in the Vientiane Zoo / lao Conservation Trust for Wildlife (LCTW) in Laos.

We could identify pure individuals both in captive facilities in Vietnam and Laos. These individuals now are available for conservation breeding / restocking.

We informed all partners and involved parties about which individuals were purebred, recommended breeding actions and gave advice how best to conduct.

13 WHAT OUTCOMES WERE ACHIEVED DURING THE COURSE OF THE PROJECT?**ARE ANY ONGOING?**

Restocking to be be considered as further conservation measure.

DID ANY EXPECTED OUTCOMES FAIL?

Huge show crocodile facility at LCTW got broken and still must be fixed (Cologne Zoo already donated several thousand Euros on top of the matching funds listed to LCTW to get the facility renovated); after that awareness panels can be inserted there

14 DID LOCAL PEOPLE/COMMUNITIES PARTICIPATE IN THE PROJECT? IF SO, HOW MANY AND WILL CONTINUED CONTACT BE MADE?

Locals from Ban Soc were involved in the project, trained and received salaries for crocodile patrols which finally proved to be successful as another, second population in Khammouane could be discovered.

15 DID THE GOVERNMENT OF THE HOST COUNTRY RECEIVE INFORMATION ON THE PROJECT'S RESULTS?

We have published the research results and informed higher positions about these.

16 HOW DID THE RELATIONSHIP WITH OTHER NGOS WORK? WERE THERE ANY ISSUES?

Cooperation was good and successful.

17 TOTAL PROJECT BUDGET AND EXPENDITURE (IN EUROS)**5000 E**

18 AMOUNT OF MATCHING FUNDS**SPENT:****5000 E Cologne Zoo**

19 AMOUNT SPENT FROM EUAC FUNDS:**5000 E EUAC**

20 EXPENDITURE BREAKDOWN (IN EUROS)

TRAVEL	
SALARIES	
ACCOMMODATION	
EQUIPMENT	4000
COMMUNICATION	1000
MISCELLANEOUS	
TOTAL	

21 PUBLICATIONS PRODUCED AS A RESULT OF THE PROJECT

NGUYEN, T. T., ZIEGLER, T., RAUHAUS, A., NGUYEN, T. Q., TRAN, D. T. A., WAYAKONE, S., LUU, V. Q., VENCES, M. & M. D. LE (2018): Genetic screening of Siamese crocodiles (*Crocodylus siamensis*) in Laos and Vietnam: Identifying purebred individuals for conservation and release programs. Crocodile Specialist Group Newsletter 37(3): 8-14.

SOUVANNASY, P., LUU, V. Q., SOUDTHICHAK, S., WAYAKONE, S., LE, M., NGUYEN, T. Q. & T. ZIEGLER (2018): Evidence of another overlooked Siamese crocodile (*Crocodylus siamensis*) population in Khammouane Province, central Lao PDR. Crocodile Specialist Group Newsletter 37(3): 6-8.

ZIEGLER, T., NGUYEN, T. T., RAUHAUS, A., NGUYEN, T. Q., VENCES, M. & M. D. LE (2018): Molecular analysis of Siamese crocodiles (*Crocodylus siamensis*) in Laos, Vietnam and zoos as basis for conservation breeding and release programmes: Another successful example of the „One Plan Approach“ [in German]. – ZGAP News 34(2): 21-25.