BỘ NÔNG NGHIỆP VÀ PHÁT TRIỂN NÔNG THÔN
CƠ QUAN QUẢN LÝ CITES VIỆT NAM
Ministry of Agriculture and Rural Development of S.R. Viet Nam
VIET NAM CITES MANAGEMENT AUTHORITY

Ha Noi, 30 October 2014

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International Environmental House
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Subject: Review of Significant Trade in specimens of Appendix-II species: Long-tailed Macaques (*Macaca fascicularis*) Breeding and Management in Viet Nam

Dear Mr. David H.W. Morgan:

Regarding the CITES Secretariat's Letter Ref. DHM/ELK dated on 02 June 2014, Subject: Review of Significant Trade in specimens of Appendix-II species [Resolution Conf. 12.8 (Rev. CoP13) paragraph p)], the Viet Nam CITES Management Authority provides information to Secretariat on Long-tailed Macaques (*Macaca fascicularis*) Breeding and Management in Viet Nam as follows:

1. The scientific bases, which have been established that the quantities of Macaca fascicularis exported, were not detrimental to the survival of the species in the wild and were compliance with Article IV, paragraph 2 (a) and 3:

In Viet Nam, there are two sub-species of long-tailed macaques, the *Macaca fascicularis fascicularis* and *Macaca fascicularis condorensis.* The latter is an endemic sub-species that only found in Con Dao island. The former *Macaca fascicularis fascicularis* distributes found from central to south Viet Nam (Thua Thien Hue to Kien Giang Province). Before 1975, this macaque species occupied large area habitat (estimated >5,000Km^2). Since 1975 to now the wild populations have been decreasing because of habitat lost and over hunting. Currently, there are around 30 sub-populations of *M. fascicularis* in the country, in which several populations are well protected and have been recovering in protected areas such as Cat Tien, Ca Mau, Con Dao National Parks, Can Gio Natural Reserve.

In Viet Nam to implement the CITES, the government has issued Decree No. 82/2006/ND-CP of 10 August 2006, on the management of export, import, re-export, introduction from the sea, transit, breeding, rearing and artificial propagation of endangered species of precious and rare wild fauna and flora, and Decree No. 32/2006/ND-CP of 30 March 2006, on the management of endangered, precious, and rare species of forest plants and animals. In which, long-tailed macaques is listed in Group IIB "limitation to exploit from

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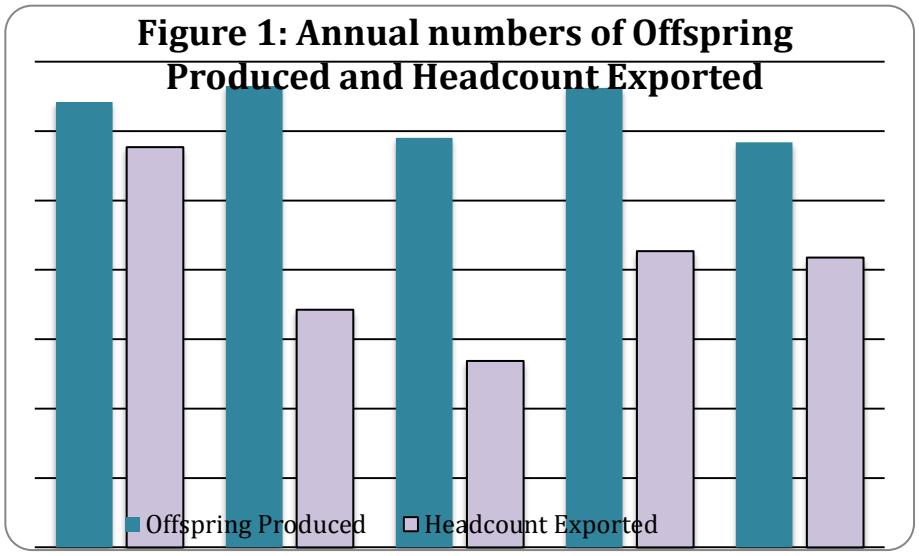
the wild". In other hand, most of current wild long-tailed macaques distribute in Protected Areas, and according to Prime-Decision No 186/2006/QĐ-TTG and 117/2012/QĐ-TTg, the hunting, trapping, trading of long-tailed macaques is prohibited.

To catch live long-tailed macaques from the wild (outside Protected Area) for commercial purposes, a Non-detrimental finding is required. However since 2006, Viet Nam has not issued any permit to catch wild specimen for exportation or founder stock purposes. All of sub-populations of this primate species are under protection by Protected area management boards. The quick survey recently shows that there are overpopulation in several habitats such as Can Gio Nature Reserve or Cat Tien and Con Dao National Park, but in the whole landscape this species is still be threaten from human factors. These policies will be maintained for at least next ten years except for a comprehensive survey shows that the whole population are well developed and recovered in comparison with the period 1980.

With the mentioned above reasons, Vietnam CITES MA has only issued permits to export *M. fascicularis* from captive breeding sources. In this context, the export quota to be allotted in following year for registered macaque breeding farms is based on their production rates, as further detailed in Section 5, which are annually evaluated by the Institute of Ecology and Biological Resources (IEBR, one of the four Viet Nam CITES Scientific Authorities), Viet Nam CITES Management Authority and the Provincial Forest Protection Department (PFPD) where the farms in concern are located. Figure 1 gives an example of the case of Nafovanny macaque breeding farm whose numbers of offspring produced from 2009 to 2013 have at all times exceeded the headcount exported.



2. Captive breeding of *M. fascicularis* in Viet Nam and describe measures taken to ensure that there is no detrimental impact on wild population including, but not limited to, the origin of founder stock

There are four legal captive breeding facilities of sub-species *M. f. fascicularis* in Viet Nam. The farms are directly managed and monitored by Provincial Forest Protection Department. The CITES MA of Vietnam only issues permit to export specimen born in captivity from second generation in compliant with CITES resolution 10.16. According to Decree No. 82/2006/ND-CP, all *Macaca fascicularis* breeding facilities must be registered

with, and supervised by the Provincial Forest Protection Department (PFPD) where the facilities are located. These PFPDs also regularly review the facility's census of the *M. fascicularis* stock and records of breeding parameters such as reproduction rates, numbers of offspring produced, mortality rates, animal tagging…, and verify the quantity and origin/source of specimens for each export application of the facilities. Additionally, inter-provincial transportation of *Macaca fascicularis* specimens requires special transport permits issued by the PFPD at the origin and reported to/recorded by the PFPD at the final destination. Exporting and re-exporting *Macaca fascicularis* specimens for commercial purposes also requires documentation that includes: (i) a proposal letter for permit and certificate granting that follows Annex 1 of the Decree 82/2006/ND-CP, and (ii) documents to prove that specimens have a legitimate origin as regulated in the current law (ban to taken wild specimen).

Every changing the quantities of founder stock is recorded and report to local PPD, according to current regulation and policies, the registered facilities can augment their founder stock from several sources i) from their own sources, ii) exchange or import from other facilities in Viet Nam, iii) import from other country range state and from seize cases by enforcement agencies and must be reported to local forest ranger officials to verify the legal sources.

3. Detail of the breeding stock, whether the breeding stock is augmented by wild taken specimen

The breeding stock of four registered facilities in Viet Nam are varies but not sources from wild population in Viet Nam. For example, the Nafovanny company has inherited founder stocks from previous company, which established since 80 decade of last century, with total more than four thousand individuals. During the startup phase, Nafovanny sourced its founder stock, which consisted of 4,007 heads of captive-bred *Macaca fascicularis* from Nafobird. Captive-bred *Macaca fascicularis* were specifically chosen since neither of the joint venture partners had any expertise in the veterinary medicine of this species. The initial veterinarians were only livestock veterinarians, who had only little to no veterinary knowledge in this particular species. The procurement and receipt of the founder stock were duly executed under the governance of the Forest Protection Department. The founder stock was solely utilized in breeding to produce further captive-bred generation for export trade. Nafovanny started to engage in export trade in 1997, 4 years after the establishment of the company. The founder stock has already been retired owing to age and veterinary health reasons.

Table 1. Total and founder stock of four facilities registered in Vietnam

Breeding facilities	Nafovanny	Huynh Huu Dung	Tan Hoi Dong	Binh Long
Year of establishment	1993	2001	2005	2009
Registered with the PFPD of	Dong Nai	Binh Phuoc	Tay Ninh	Tay Ninh
Total stock (heads)	35438	1536	2339	1410
Of which, parental stock:	12039	1010	742	367
- Male	1621	100	84	157
- Female	10418	910	658	210
Source of founder stock: Captive-bred animals	Bought from 18 Thang Tu Company	Imported from Cambodia	Imported from Laos	Sourced from Huynh Huu Dung

The other facilities got founder stocks from legally imported sources or seized sources in case enforcement agencies can not find a suitable habitat to re-wild or the long-tailed macaque is family with captive condition etc.

4. Annual production for last 5 years

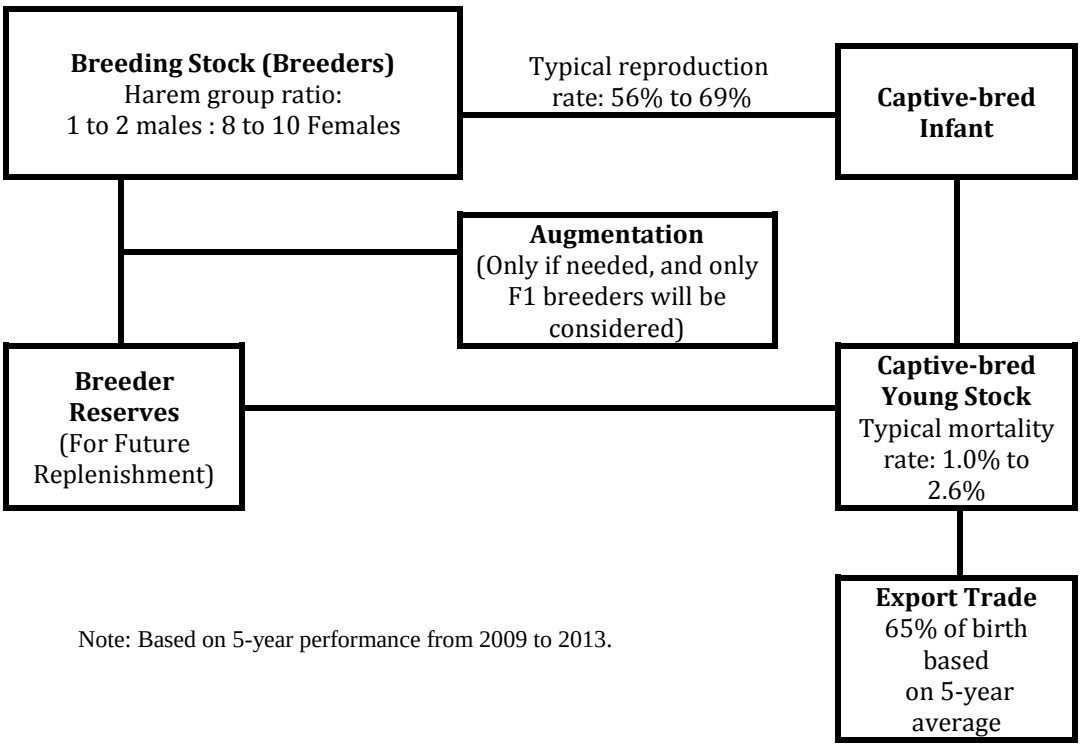
Table 2: Average reproduction of 4 *M. fascicularis* registered facilities in the last 5 ys

Unit: individual

Breeding facilities	Nafovanny	Huynh Huu Dung	Tan Hoi Dong	Binh Long
Average reproduction for last 5 years (offspring/year)	6290	700	500	150

5. Where bred to second generation or beyond, detailed description of the breeding facilities

Contrary to some other nonhuman primate species, the mating of *Macaca fascicularis* is not constrained by seasonality factor. The mating system is similar to the combination of promiscuous and polygamy mating (if hierarchical structure is taken into consideration). Nafovanny adopts harem group breeding, which typically comprise 1 to 2 sexually matured males and 8 to 10 sexually matured females in each group. In general, both male and female reach sexually maturity around 4 to 5 years of age, with the average sexual maturity age of female comes slightly earlier than that of male. In accordance to the IEBR's scientific report (2006) on "Determination of Reproduction Capacity of *Macaca fascicularis* Stock in captivity of the Nafovanny", sexually-matured female is capable of producing offspring between 9 to 13 months, with an annual overall reproduction rate that ranges between 40% to 72% (typically from 56% to 69%). These figures denote that animals of second generation or beyond have been successfully produced in the Farm.



Note: Based on 5-year performance from 2009 to 2013.

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Breeding and Production Management

Nafovanny's breeding program is executed under the guidance of Institute of Ecology and Biological Resources. The captive-bred offspring produced in Nafovanny are solely used to support export trade and continual replenishment of breeding stock, as is evidenced by the sustainable capability to cultivate more offspring than those utilized in export trade, as illustrated in Figure 1. Based on numerical analysis of 5-year breeding performance from 2009 to 2013, the total birth count of all 5 years accounted to 31,431 heads, whereas only 20,330 heads were consumed in export trade (65% of birth count). The balance of 11,101 heads (35% of birth count) were retained to meet future breeder replenishment needs, as well as to offset the mortality of young stock which prevailed around 1.0% to 2.6% per annum.

Incapability to Handle Augmentation of Wild-taken Animals

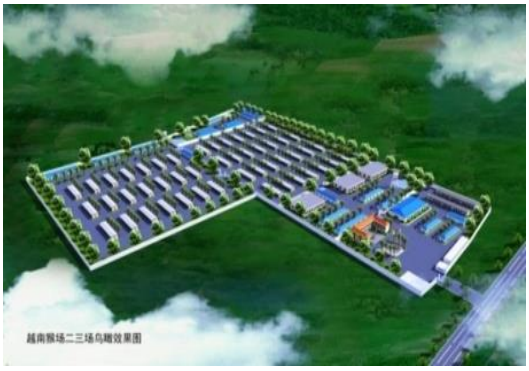
The operation of Nafovanny is not built to handle augmentation from wild-taken animals. The quarantine facilities in Nafovanny are pre-export quarantine catered to handle animals bred internally. There is no other facility capable of providing enough isolation to handle inbound quarantine of wild-taken animals. Housing animals of unknown health status nearby or together with the present inventory may result in overall health risks. The differences in temperament and behavior between wild-taken and captive-bred animals pose difficulties in mixing, while exposures to increasing morbidity and mortality are hardly avoidable. Handling wild-taken animal is a challenge to the veterinary medicine capability in Nafovanny.

Overview of Physical Plant

Farms	Site Area	Group Housing Shed Area	Number of		Total Number of animals (heads)
			Group Housing Sheds	Group Enclosure Pens	
Farm 1	70,888 m^2	12,600 m^2	56	1,050	20,977
Farm 2 & 3	53,810 m^2	11,760 m^2	49	980	14,461
Total	124,698 m^2	24,360 m^2	105	2,030	35,438

Notes: Farm 3 is an extension of Farm 2 (left wing). Information as of 31st July 2014.

Farm 1



Farm 2 & 3

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Group Housing Shed

The typical configuration of group housing shed comprises 20 pens per shed. The pens are configured in 2 rows, i.e. on left and right each consisting of 10 pens. A service corridor is available at the center for access to individual pen, veterinary observation, feeding and cleaning. There are altogether 11 group housing sheds in Farm 1 which are constructed in different configurations ranging from 8 to 24 pens per shed due to geographic constraints. A dual door system (1 each at the pen and shed entrance) is utilized to prevent accidental escape of animal during routine operation. All pens in both farms shares the same physical dimensions of 3m (width) x 4m (depth) x 2m (height measured form the lowest point of ceiling). The front, rear (facing service corridor) and ceiling panels are constructed of stainless steel tubes and/or galvanized mesh wires. The 2 side walls are built of bricks and plastered. The pen floors are finished in concrete and kinked slightly towards the drainage gutter underneath the front panel. Multilevel perches which serve as climbing and resting platforms are mounted on all 4 sides. Automatic water feeding device and separate feed containers for dry pellet feed and fresh produce are standard installations in each pen. The distances between group housing sheds are approximately 5 to 6.5 meters from two sides and 7 to 10 meters from front and rear. The numbers of group housing sheds and pens are provided in Section of Overview of Physical Plant.

Group Housing Sheds

Front Panel View of Group Housing Pen

Pre-export Quarantine Building

Animals selected for export trade are housed in pre-export quarantine rooms, where they are screened, examined and treated prior to dispatch. The typical dimensions of pre-export quarantine room are 3.5m (width) x 22m (depth) and 3m (height). The rooms are furnished with ceramic tiles on all 4 sides, terrazzo floorings, glass panels or glass tiles to provide natural lighting, and forced air intake and exhaust systems. Each room has a capacity to hold up to 30 to 66 animals either in pair-housed or individual cages. The cages are constructed of stainless or galvanized steel. All cages are equipped with automatic water feeding device, feed materials are supplied to the animals either through feed container or by placing directly on cage floor (after cage cleaning). There are 3 pre-export quarantine buildings each in Farm 1 and Farm 2, providing pre-export quarantine capacities of 1,442 heads and 1,188 heads, respectively.

Hospital and Maternity Buildings

Animals which warrant veterinary treatment in isolation are transferred to hospitals or maternity buildings. Hospitals are used to house animals under general treatment and pre- and post-surgical cares. Maternity buildings are specifically used to house maternal females (only those require pre-or post-delivery treatments), females together with their un-weaned infants (either one or both under veterinary attention), and weanlings pending veterinary health examinations. Animals in hospital and maternity buildings are housed either individually or in pair, with respect to veterinary judgments and circumstantial needs. Typical hospital rooms are furnished with ceramic tiles on all 4 sides, terrazzo or polished concrete floorings, and mechanical ventilation systems. Hospital and maternity cages are built of stainless or galvanized steel and equipped with automatic water feeding systems. Feed materials are provided in accordance to veterinary discretion and are placed on cage floor (after cage cleaning). The hospitals and maternity buildings are divided into sub-sections or areas to house animals in accordance to signs of sickness and/or treatment needs. Examination, minor procedure and surgical facilities are available in the hospitals. Drug dispensaries are located within the vicinity of hospitals and maternity buildings. In Farm 1, there are 2 hospitals and 1 maternity building, which provide a total of 640 hospital cage spaces and 120 maternity cage spaces. In Farm 2, there are altogether 2 hospitals and 4 maternity buildings, which provide a total of 728 hospital cage spaces and 1,320 maternity spaces.

Hospital Rooms (BX2)

Pre-surgical Procedure Area (Inside Hospital)

Housing Density

Animals are housed in group housing pens in respect to age, body size and category. In general, the group housing pens for young stocks and breeding reserves have capacities to

house between 10 to 30 animals per pen. Breeding pens have capacities to house up to approximately 12 animals, i.e. harem groups comprising 1 to 2 matured males and 8 to 10

matured females. Housing groups of mother with un-weaned infant often contain up to 8 to 10 mother-infant pairs.

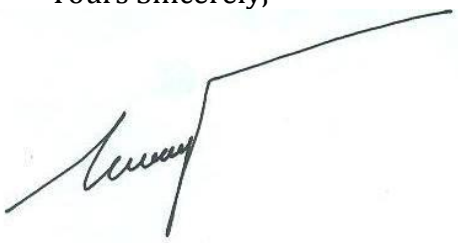
6. The measures to distinguish between specimen of wild and captive sources to ensure that exports of wild specimens are not mis-declared as specimen bred or produced in captivity.

The key measurement to distinguish between specimen of wild and captive sources is monitoring mechanism. Local Forest Protection Department assign one or more staff to control the input and output products of registered farms. Any fluctuation in number of parent's stock, mortality, new born or productive will be recorded by farm owners and double checked by local ranger officers. In other hand every shipment before transporting out of breeding farm require permit from local Forest Protection Department, they responsibility to verify the legal source of *M. fascicularis*

The main method applied in Vietnam is using of neck tags together with monitoring by local forest rangers to avoid unusual increasing of products. The number of monkey in each cases have been marked by tags (letter and number code) with certain heads and characteristic in record book which are monthly approved by local ranger with signature and stamp to ensure that the farm owner can not use captive breeding facilities to laundry the wild taken monkeys.

We hope that the information presented above meet the requirement made by Secretariat and Animal Committee. If you need any further information and clarification, please feel free contact us. The Viet Nam CITES Management Authority strong suggests that the CITES Secretariat and Animal Committee eliminating *Macaca fascicularis* in Viet Nam from the Review of Significant Trade in specimens of Appendix-II Species. We would like to re-confirm that since 2006, Viet Nam has not issued any permit to wild specimen for exportation as well as in future, we will also not allow for export of wild specimen.

Yours Sincerely,



Do Quang Tung
Director

Cc.: Chair of the Animal Committee

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