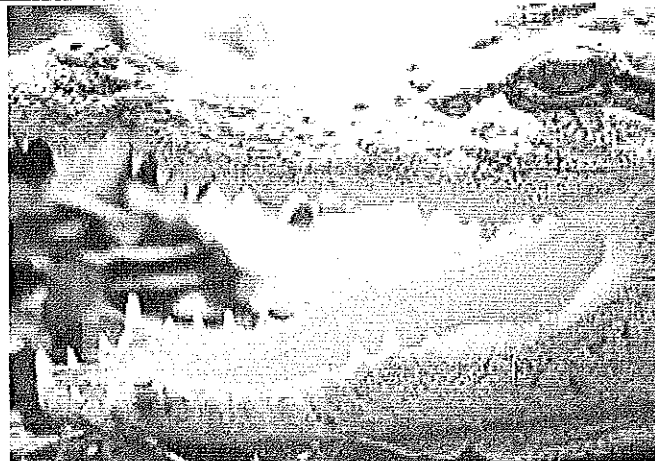
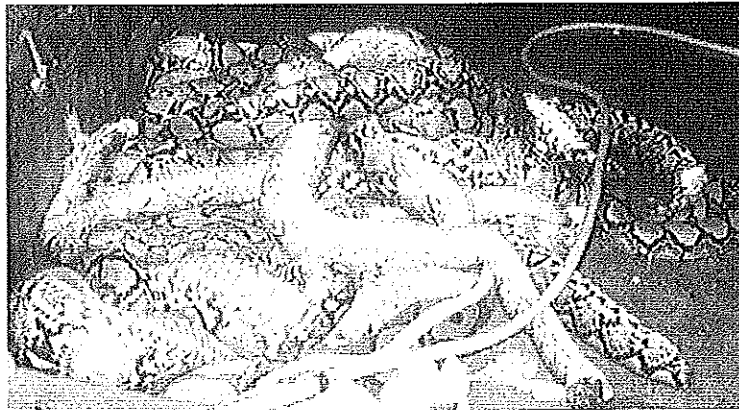


Socialist Republic of Vietnam

**OPERATIONAL MANUAL FOR
INSPECTIONS OF CLOSED-
CYCLE CAPTIVE BREEDING
OPERATIONS:**

CROCODILES & PYTHONS

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TRAFFIC
SOUTHEAST ASIA

Royal Danish Embassy

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Annex 2: Inspection Report

**ROLES & RESPONSIBILITIES, DEFINITIONS
and INSPECTION PROCEDURES
for
CLOSED-CYCLE CAPTIVE BREEDING OPERATIONS
(CROCODILES & PYTHONS)**

DEFINITIONS

Closed-cycle Captive Breeding

Closed-cycle captive breeding is defined as:

"The production of eggs and young animals that results from the exchange of gametes between captive adults in a controlled environment, without the regular requirement for wild-caught animals".

Use of the technical term "gametes" in the above definition conforms to the language used in CITES Resolution Conference 10.16 (Rev). In plain language, the above definition of "closed-cycle captive breeding" simply requires a captive adult female to be fertilized by a captive adult male under managed conditions in captivity.

Closed-cycle captive breeding, as the above definition suggests, is the management and production of animals in captivity where management of the captive stock is conducted in isolation of the wild population. The only relationship between the captive population and the wild resource lies in the occasional need to replace, or augment, captive stock with wild-caught animals to introduce new genetic material into the captive population and avoid any deleterious effects of inbreeding.

The acquisition of additional animals from the wild, by a captive breeding operation, can only be undertaken with the approval of the Forest Protection Department. The CITES Scientific Authority of Viet Nam must first approve the numbers of animals and location from which they would be obtained.

Closed-cycle captive-breeding farms should possess breeding adults as well as featuring all the necessary facilities to:

- i) produce offspring (incubation and nursery facilities); and
- ii) house and raise different age classes (enclosures and food supply).

Neonates

Neonates is a technical term used to describe all new-born animals, whether they are produced from eggs (hatchlings) or live born.

ROLES & RESPONSIBILITIES

There are three participants in the industry based on captive breeding of wild animals for commercial purposes in Viet Nam. The CITES Management Authority (dependent on the species involved), the provincial offices of the Forest Protection Department and the private sector involved in farming animals. Each organization has its own role and associated responsibilities.

CITES Management Authority

- Formulate policy and develop legislation on commercial use of wild animals in Viet Nam.
- Register with the CITES Secretariat, commercial captive breeding operations involving Appendix-I species in Viet Nam.
- Coordinate and oversee implementation of commercial captive breeding of CITES-listed species in Viet Nam.
- Order and distribute required numbers of CITES export tags each year. (Approximately 10 percent more tags than the requested number should be ordered in order to avoid purchasing an insufficient number of tags).
- Develop and provide skills training programs in order in order to build technical capacity of provincial FPD offices
- Assume lead role in pursuing punitive action against breaches of the legislation involving illegal trade in CITES-listed species of wild animals in Viet Nam.

Provincial FPD Offices

- Provincial FPD offices, under whose jurisdiction commercial captive breeding operations are located, are responsible for conducting inspections, according to this Operational Manual, of the facilities to ensure that all licensed operations comply with relevant Vietnamese legislation and associated administrative proclamations.
- In the case of operations that process crocodiles skins for export, FPD officials must be present to supervise the slaughter and skinning, and ensure that a non-reusable CITES Export Tag is attached to the distal portion of the tail of each skin. This procedure is only applicable to breeding operations that are approved for export and registered with the CITES Secretariat.
- In September-October each year provincial FPD officials should seek advice from the farm management on the projected numbers of CITES Export Tags that will be required by each farm the following year.

- The provincial FPD office must validate each request by visiting each farm and inspecting the facilities to verify that the quantity of tags requested corresponds to the number of rearing stock available for slaughter and reflects the production capacity of the applicant farm. During the October inspection of registered crocodile farms to assess annual production of hatchlings, provincial FPD officials should verify that the numbers of CITES Export Tags correspond to the animals available for slaughter and the production capacity of the applicant farm.
- The provincial FPD office is then responsible for advising the CITES Management Authority of Viet Nam on the total number of CITES Export Tags that will be required by farms under its jurisdiction by the end of October each year.

Private Sector (Farm Operators)

- Ensure that all records are kept accurate and up-to-date and accurate records are kept of all aspects of the breeding operation.
- Ensure that no animal is slaughtered without the prior approval of the provincial FPD office
- In September-October each year, each breeding operation registered with the CITES Secretariat must advise the local provincial FPD office of the numbers of crocodiles that it expects to slaughter and export skins thereof the following year.

INSPECTION PROCEDURES

Purpose of Inspections

The principal purpose of records and inspections of closed-cycle captive breeding operations, regardless of the species of animal involved, is to ensure that each operation is managed and producing animals in isolation from the wild resource.

Inspections are the principal means by which the FPD is able to ensure that:

- i) a captive breeding farm complies with the requirements of relevant legislation; and
- ii) is capable of producing animals in the quantities that are present on the premises at the time of the inspection.

The Operational Manual and the accompanying Technical Manual are tools to ensure that operations involved in breeding crocodiles and snakes in captivity comply with the definition of closed-cycle captive breeding and the relevant Government legislation.

Government Decree No.11/2002-CP on *Management of Export, Import and Transit of Wild Animals and Plants* is the principal law governing the activities of all captive-breeding farms in Viet Nam. In the case of crocodile farms, the Proclamation by the Director of the Forest Protection Department - Official Letter No.604/KL-BTTN of 9 November 2001 on Processing and Exportation of Farmed Crocodiles, their Skins and Processed Products (Annex1) provides guidance for inspections by provincial FPD officials.

Frequency and Timing of Inspections

Explanation - Inspections should be timed to determine whether or not a captive breeding operation is actually breeding animals in captivity and not simply serving as a centre for receiving animals collected from the wild or imported illegally. Properly timed inspections will determine whether or not all the necessary life stages of the animal are present in the facilities (e.g. eggs and/or neonates, yearlings, subadults and breeding sized adults).

Inspection Procedure

1. The breeding performance of a farm should be assessed at least twice each year.
2. The ability of a captive-breeding farm to produce animals (whatever the species) from captive breeding can be easily assessed initially by inspecting the facilities and confirming the presence of all life stages (i.e. eggs and/or neonates through to breeding-sized adults).
3. The first inspection is focused on verifying egg production and should be undertaken after egg laying during the incubation period.
 - i) *Crocodylus siamensis* - inspect in late July
 - ii) *Python reticulatus* & *Python molurus* - inspect in late May or early June.
4. The second inspection is concerned with determining the numbers of neonates and assessing hatching success and should take place after the majority of eggs have hatched and the young animals are housed in nursery enclosures.
 - i) *Crocodylus siamensis* in late October
 - ii) *Python reticulatus* & *Python molurus* in late June or early July before juveniles are exported.

Record Keeping

All captive-breeding farms, as a condition of their licence, must maintain some form of record keeping. Accurate and up-to-date records are necessary to assess the management and production capacity of a captive breeding operation.

Records should comprise:

- i) a register of all stock held on the premises; and
- ii) information on the production, husbandry and mortality of eggs and/or neonates (hatchlings).

The stock register should record the numbers of animals present in a farm, including all acquisitions and disposals. Records must also list all acquisitions and disposals. Furthermore, records must be made available, on request, to the CITES Management Authority of Viet Nam or provincial FPD officials during inspections of facilities.

Note - Records may be kept in written form or electronically, according to a format required by the FPD. Computerized records should be backed-up on diskette to ensure that information is not lost in the event of hardware failure. Licensed operations that use electronic record-keeping should be encouraged to maintain duplicate written records as a safeguard against computer failure.

General Rules Regarding Inspections

Explanation - In most situations, it is not feasible (or necessary) to count every animal on a premises. Records should represent an accurate inventory of captive stock. When conducting an inspection, FPD officials should verify that the numbers of animals present on a farm are accounted for in the records. This may require the official(s) conducting the inspection to:

- i) inventory all animals on the premises;
- ii) count samples of different age-classes or the age-class for which there is some doubt (discrepancy) between the recorded numbers and numbers of animals present on the farm; or
- iii) make an informed judgement, on the basis of performing either (i) or (ii) above, that the records are an accurate indication of the farm's production and management.

Inspection Procedure

5. Captive-breeding farms are inspected to ensure that they are being managed independently of the wild population(s), and are producing animals in the quantities stated in its records.

6. When undertaking an inspection, take a notebook, previous reports on the operation and make detailed notes to ensure that the farm is assessed accurately.
7. Effective regulation of a captive-breeding farm requires an assessment of its production capacity, performance and management.
8. When inspecting a captive-breeding farm, never simply examine the farm's records without verifying that the records represent an accurate indicator of production performance and management
9. Examine the Stock Register carefully to ensure that all exports, for which the operation has received CITES Export Permits, are recorded together with the relevant permit number.
10. Upon completion of an inspection, provided the management of the farm (facilities and records) has been determined to be satisfactory, the Senior FPD official should:
 - i) rule a line across the page of each record, and then sign and date above the line; and
 - ii) complete an Inspection Report (see Annex 2) and place it on the relevant file for future reference.

Adult Breeding Animals

Explanation - Adult breeding stock is usually kept as a discrete population in separate enclosures. The number of animals (and the ratio of males to females) in each enclosure is a matter of judgement by each breeding operation, but generally is determined to maximize the annual production of eggs and/or neonates by the female component of the population.

Inspection Procedure

11. Check that the number of breeding enclosures and numbers of adult male and female animals in each enclosure are recorded accurately in the stock register.
12. Count the number of breeding enclosures and assess the number of animals in each enclosure.
13. Check that the numbers, date and source of animals, purchased from other breeding farms, as additional future breeding adults are recorded in stock register.
14. Check that the numbers of immature animals, retained as future breeding stock, are also recorded accurately in the stock register.
15. Count the number of enclosures dedicated to housing future breeding stock and count the number of animals in a sample of enclosures.

Note - When these animals reach breeding size and are incorporated into the breeding population, it is important to ensure that the stock register is amended to reflect increased numbers of breeding adults.

Egg Production

Explanation - The annual production of eggs is directly related to the number of breeding females. Crocodylian eggs are removed from the breeding enclosures and may either be incubated in artificial nest mounds or placed into electronic incubators. Python molurus and Python reticulatus exhibit maternal egg incubation and care. Eggs may be separated from the female and incubated artificially, using methods similar to crocodiles, or simply left with the maternal female to be incubated. It is not practical for python breeding operations to record egg numbers when the maternal female is permitted to incubate the egg clutch.

Inspection Procedure

16. Check the records to ensure that the number of nests, and eggs in each nest, have been recorded. (The number of eggs incubated and the date on which the eggs were removed from the breeding enclosure and artificially incubated must also be recorded).

Note - Except where reproduction is managed intensively and the breeding performance of individual females is monitored, it is very unlikely that all females will breed and produce eggs or neonates each year. When multiple numbers of adult males and females are kept as a social group, never do all females, present in the group, produce eggs. Dominant females suppress the smaller (younger) females from nesting. The clutch size (annual egg production) of crocodiles and snakes born and maintained in captivity is generally less than that reported for the wild equivalent.

17. Check to ensure that the number of nests (egg clutches) produced each year does not exceed the number of breeding females present on the farm.

Note - If the number of nests (egg clutches) exceeds the number of breeding females, it may suggest the operation is receiving juvenile animals from an illegal source.

18. Inspect and check incubation facilities to verify that the facilities have the capacity to house and incubate the recorded numbers of eggs produced. This is particularly impor-

tant if the operation uses electronically controlled incubators.

19. Accept with caution, the egg production records of operations that indicate all adult females in the breeding herd produced large numbers of eggs. The actual number of eggs produced may be deduced by carefully inspecting the incubation facilities and assessing the area for artificial nests and carefully examining the operation's egg production records.
20. Inspect python breeding facilities during the incubation period to determine incubation methods that are used (maternal female or artificial). Count the numbers of incubating females and use Table 1 as a guide to estimate egg numbers.

Production of Neonates (Hatchlings)

Explanation - Eggs incubated successfully produce neonates (hatchlings). High mortality rates will occur if neonates are not managed carefully. Table 1 in the Technical Manual presents the average size of neonates (hatchlings) of the principal species of reptiles bred in captivity in Viet Nam.

Inspection Procedure

21. Examine the farm's records on egg and hatchling production and the records of hatchling mortality to verify that these records are correlated to the number of neonates (hatchlings) recorded in the Stock Register.
22. Inspect and count the number of "nursery" enclosures towards the end of the incubation period (see Table 1 in the Technical Manual for guidance).
23. Determine, from the farm manager (or chief technician) and the farm records, the average number of neonates in each enclosure. Verify by counting the actual number of animals in a sample and multiple the sample mean by the total number of occupied nursery enclosures. (This will establish an estimate of the total number of neonates comprising an annual production).
24. Check that the numbers of hatchling crocodiles present in nursery pens do not exceed the number of eggs that hatched (refer to the farm's egg incubation records). In the case of crocodile and python farms that distribute neonates to satellite facilities for rearing, it will be necessary to inspect all or a sample of these facilities to verify the breeding farm's production records.
25. Accept with caution, records indicating that all, or a high proportion of eggs produced on a farm were hatched successfully and produced neonates. It usually means that the farm in question did not maintain accurate (complete) records of eggs produced (or incubated).

Note - Most crocodile farms experience high egg mortality during the incubation process and produce relatively few neonates. Seventy percent (70%) hatching success is regarded as exceptionally good management. Most operations in Viet Nam succeed in producing neonates from approximately thirty percent (30%) of the total number of eggs that are incubated.

Satellite Farms

Explanation - Satellite farms are small family-based enterprises that are associated with commercial captive-breeding operations. Captive-bred animals, usually neonates, are distributed, under contract, among a network of participating satellite farms in the vicinity of the breeding farm. These satellite farms are an integral element of the captive breeding operations that employ this approach to the commercial production of animals. As a consequence, satellite farms must be subject to scrutiny and audit by the FPD, as part of the inspection and assessment of the nucleus breeding operation upon which these household farms are dependent.

Inspection Procedure

26. Determine whether or not the captive breeding operation contracts satellite farms to raise neonates. If so, determine how many satellite farms are used.
27. Ensure, by examining the Stock Register, that the names of all satellite farms are recorded together with the number of neonates that have been distributed to each household farm.
28. Visit each satellite farm, associated with the breeding operation, and ensure that each is using Form 2 Records of Annual Hatchling Mortality.
29. Confirm, by counting, that the number of hatchlings held by each satellite farm accord to the numbers of animals distributed by the breeding operation.

Note - In the event that inspections of satellite farms detect discrepancies in the numbers of animals held against the number of animals reported by the breeding operation as having been distributed, the captive breeding operation should be held accountable and appropriate action taken by the provincial FPD office.

Rearing Stock

Explanation - With the exception of snake farms that produce neonates for live export; rearing stock

greater than one year of age generally comprises the majority of animals present on a captive-breeding farm. This stock may be housed in separate enclosures according to age classes or, more often, according to size classes (uniformly sized animals are less likely to assert dominance that suppresses the ability of smaller animals to obtain adequate food supplies).

Inspection Procedure

30. Count the number of enclosures housing the rearing stock.
31. Consult the farm's stock register to determine the recorded number of rearing stock conforms to the total number of animals present on the premises and housed in the rearing enclosures.

Note - The total number of rearing stock can be estimated by counting the number of animals in a sample of rearing enclosures and multiplying the sample mean by the total number of rearing enclosures.

Food Supplies

Explanation - The maintenance of wild animals in captivity requires the operation to have a reliable supply of suitable food. The size of the operation and the total numbers of animals present determine the type and quantity of food required.

Inspection Procedure

32. Inspect and evaluate the farm facilities for preparing and storing food. Are the quantities and types of food adequate to meet the requirements of the numbers of different sized animals on the premises?

Note - An assessment of food supplies is an important element of inspections of a captive breeding operation as it enables the FPD to confirm that an operation is capable of maintaining and growing the animal(s) that are reported in the Stock Register and/or seen during an inspection.

Production, Marking & Storage of Products

Explanation - Crocodile breeding farms that produce captive-bred crocodiles for export of skins are not permitted to kill and skin any animal before obtaining a permit from the Provincial FPD office responsible for regulating the farm. FPD officials must be satisfied that the animals for which a killing and skinning permit has been requested have been produced by the applicant farm.

Furthermore, FPD officials must be present and supervise the killing and skinning operation. In the case of skins destined for export, FPD officials are required to attach a CITES Export tag through one of the large scutes at the distal end of the tail. This procedure should only be applied to breeding operations that have been approved for export and registered with the CITES Secretariat.

Inspection Procedure

33. The rearing stock for which permission has been sought to slaughter must be inspected and the numbers verified by inspecting the enclosures identified by the manager/chief technician and counting (or estimating) the number of animals in each.
34. Examine the Stock Register to ensure that all acquisitions and/or disposals (sales and exports) are recorded accurately.

Note - All exports of skins and/or live animals must be recorded in the Stock Register. The export permit number together with information on the species, numbers, the names and addresses of recipients must be recorded. FPD officials must confirm that this information agrees with official FPD records.

Annex 1

Forest Protection Department Proclamation (Official Letter No.604/KL-BTTN of 9 November 2001) on Processing and Exportation of Farmed Crocodiles, their Skins and Processed Products.

- i) Before killing, and skinning farmed crocodiles, each registered farm must have a permit from the Forest Protection Department of Ministry of Agriculture and Rural Development. Permits can be obtained by applying in writing to the provincial Forest Protection Department, stating precisely the species, number, size and age of farmed crocodiles to be killed and skinned.
- ii) The above permits must be accompanied by CITES export tags in numbers equivalent to the number of farmed crocodiles to be killed and skinned.
- iii) Provincial Forest Protection Department officers must supervise the killing, skinning and will be responsible for ensuring that tag is attached to each skin in the region of the end of the tail.
- iv) In September-October each year, each crocodile farm, registered with the CITES Secretariat, must advise the number of crocodiles to be killed and skinned during the following calendar year to the Forest Protection Department.
- v) Officers of the provincial Forest Protection Department must inspect each farm requesting CITES export tags to verify that the quantities requested represent animals produced by the farm. On the basis of the requested number of tags being verified by FPD provincial officials, the CITES Management Authority of Viet Nam will purchase the required number of CITES export tags.
- vi) The exportation of live farmed crocodiles or processed products of crocodile must have an export permit from the CITES Management Authority of Viet Nam on which is stated precisely the names and addresses of the exporter and recipient. Each export permit must also state precisely the species, number, size, weight, type of product, as well as (in the case of skins) the number of each CITES export tag number. The validity of the above export permit must not exceed six months period.
- vii) At the end of each calendar year the CITES Management Authority of Viet Nam will destroy all unused CITES export tags.
- viii) Each farm owner will be charged a fee for each CITES export tag used, that is equivalent to the cost charged by the CITES Secretariat to the CITES Management Authority of Viet Nam.
- ix) To be eligible for registration with the CITES Secretariat, a licensed crocodile farm owners

must keep detailed and accurate records of:

- a) The species, age, sex and number of farmed crocodile or stock;
 - b) The names and addresses of recipients of live crocodile that are sold;
 - c) The number of crocodiles that die each year in addition to animals for which permission has been obtained to be killed and skinned;
 - d) The number of crocodiles and skin products sold to other farms or exported;
 - e) The names and addresses of the buyers of crocodiles and skinned product.
- x) These regulations comply with:
- Decision 46/2001/QD-TTg, dated 04 April 2001 by the Prime Minister on Management of Imports and Exports of Commodities and Goods from 2001 to 2005;
 - Circular 62/2001/TT-BNN, dated 05 June 2001 by the Ministry of Agriculture and Rural Development, stipulating guideline on implementation of Decision 46/2001/QD-TTg, dated 04 April 2001 by the Prime Minister; and
 - Convention on International Trade in Endangered Species of Wild Fauna and Flora.
- xi) The CITES Management Authority of Vietnam - the Forest Protection Department of the Ministry of Agriculture and Rural Development - requests provincial Forest Protection Departments and crocodile registered captive breeding farm owners to implement these regulations. The CITES Management Authority of Vietnam refuses to permit killing, skinning and exports of crocodile products, in case those actions were undertaken in violation to this proclamation.

Annex 2

INSPECTION REPORT

Name of Captive Breeding Operation

Province

Date of Inspection

	Previous Inspection	Present inspection	Difference +/-
Number of Breeding Males
Number of Breeding Females
Number of Future Breeders
Number of Eggs
Number of Neonates
Number of Yearlings
Number of Rearing Stock
Number of Animals Sold/Exported.....
Number of Skins Sold/Exported

Comments

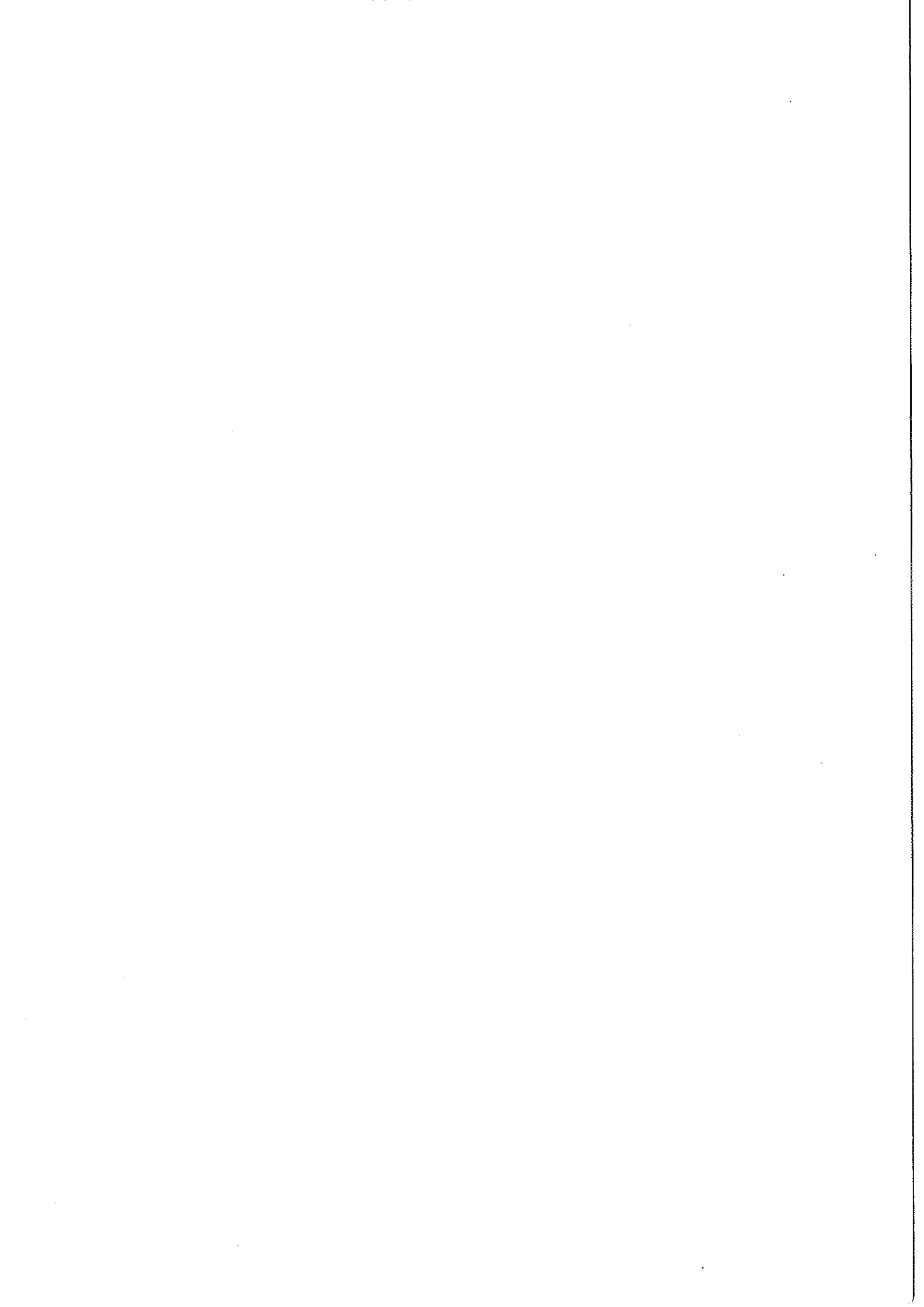
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INSPECTION RESULT Satisfactory

Unsatisfactory

.....
 Name of Inspecting Officer(s)

.....
 Signature(s)



TRAFFIC, the wildlife trade monitoring network, works to ensure that trade in wild plants and animals is not a threat to the conservation of nature. It has offices covering most parts of the world and works in close co-operation with the Secretariat of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)

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