



# REPORT ON THE REVIEW OF VIETNAM'S WILDLIFE TRADE POLICY



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## Abbreviations

CBD:	Convention on Biodiversity
CITES:	Convention on International Trade in Endangered Species of Wild Fauna and Flora
CHF:	Swiss franc
CRES:	Centre for Natural Resources and Environmental Studies
FPD:	Forest Protection Department
FIPI:	Forest Inventory and Planning Institute
GIAN:	Geneva International Academic Network
GNP:	Gross National Product
GDP:	Gross Domestic Product
GOV:	Vietnam Government or Government of Vietnam
HCMC:	Ho Chi Minh City
HFI:	Human Free Index
IUCN:	The World Conservation Union
IHEID:	University of Geneva's Graduate Institute
NTFPs:	Non-timber forest products
PM:	Prime-Minister
SUFs	Special use forests
UNEP:	United Nations Environment Programme
UNEP-UNCTAD CBTF:	Capacity Building Task Force for Environment, Trade and Development
UNCTAD:	United Nations Conference on Trade and Development
USD/US\$:	United States dollar
VND:	Vietnamese Dong
Exchange rate:	1 US\$ ~ 16.100 VND 1 CHF ~ 13.000 VND

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## **Executive Summary**

The assessment of the environmental, social and economic impacts of Vietnam wildlife trade policy was conducted from April to August 2007. The goal of the assessment is to identify the strengths and weaknesses of the current wildlife trade policy. The assessment focuses on analyzing the consistency, coherence and the completeness of the wildlife trade policy and its impacts. Based on the results of the assessment, practical solutions to improve the current wildlife trade policy will be proposed. The solutions need to harmonize the conservation and use of biodiversity resources. The recommendations include using the sustainable harvesting of wildlife and the legal trade to increase the income of local people and to help the implementation of the national strategy on hunger elimination and poverty eradication as well as other social and economic strategies.

Vietnam is one of the first four countries to voluntarily undertake a wildlife trade policy review. The results and lessons learnt from this review will be shared with the other three countries and with all CITES parties and other interested organisations.

The information given in this report will focus more on the negative impacts and weaknesses of the current policy than on the positive impacts. This will help improve the national wildlife trade policy and its implementation.

The assessment indicates that Vietnam has developed comprehensive system of policies, laws and regulations. The instruments have been revised over time to address the changes in the wildlife trade. The policies were issued in accordance with the international treaties and conventions that Vietnam is a member of, including the Convention on Biological Diversity, CITES, and the Cartagena Protocol.

The current wildlife trade policies have provided the basic backbone for the management of the wildlife trade in the country. Under these policies, Vietnam has achieved many successes such as the effective management of the wildlife trade, and efforts to address the illegal trade. Moreover, the amount of captive breeding and artificial propagation and the number of people involved in the legal trade is increasing rapidly. The increase of the legal trade will mitigate the demand for wild harvesting and increase the income of people involved in the trade. Further, in some areas, captive breeding and artificial propagation have brought significant increases in incomes and jobs and have contributed significantly the local development.

Nevertheless, the implementation of the wildlife trade policy poses lots of challenges as the trade itself is changing over time. In addition, the policy is still in the process of completion therefore some incoherence and inconsistency, with consequent loss of effectiveness, is unavoidable. Policy documents and instruments have been issued over time, creating many layers and side-effects that pose difficulties for implementation.

Some of the policy instruments were prepared in a hurry; hence there are lots of weaknesses and overlaps. There has been a lack of appropriate involvement of all stakeholders such as local harvesting communities and wildlife traders. Furthermore, the list of protected species covered by the policy has not fully addressed the species that are threatened by illegal trade and overexploitation. Some of the wildlife trade terms are used differently in different documents and that causes confusion. The combination of these weaknesses has reduced the effectiveness of the wildlife trade policy.



Wildlife ranching, captive breeding and artificially propagation is often proposed as a tool for economic development, especially for the poor and those in remote areas. However, this development has not yet received adequate support.

Vietnam's wildlife trade policy has not yet met the expectations on it. This may partly result from the impractical measures and inconsistency that exist in the policy. If these shortcomings and other issues are properly addressed and appropriate revisions made then the wildlife trade policy could be an effective tool for wildlife trade management.

Recommendations to solve the existing inconsistencies and to improve the policy are given in the report. The recommendations are made with the aim of harmonizing biodiversity conservation and sustainable use, thus ensuring the survival of wildlife. More importantly, the evaluation and review mechanism are designed to help policy makers to have appropriate up-to-date information on policy implementation and its real effects. Stronger wildlife trade and conservation education are recommended for inclusion in future policy implementation.

## 1. Introduction

As one of the most biodiversity-rich countries in the world, Vietnam has more than 11,400 species of vascular plants; 1,030 mosses; 310 mammals; 840 birds; 296 reptiles; 162 amphibians; over 700 freshwater fish and around 2,000 sea fish. Like other Asian countries, Vietnam has a long history of harvesting and using biodiversity resources.

In recent years, Vietnam becomes an important location in South East Asia for the harvest, use and trade, wild fauna and flora (Government of Vietnam, 2004; Cao L.A. & Nguyen M.H., 2005). It is estimated that each year in Vietnam, around 3,700 to 4,500 tons of wildlife fauna (excluding aquatic species) are used as food, medicine, ornaments, and pets. The use and trade in insects is well developed, with 40 species of Coleopterus and 90 Lepidoptera species being widely traded. In addition, more than 20,000 tons of medicinal plants are used annually (Government of Vietnam, 2004; Nguyen Q.T. *et al.*, 2004).

In addition to the legal trade, the illegal trade poses a serious threat to the survival of many species of wild fauna and flora. The illegal wildlife trade and unsustainable use for the last few decades have placed many species of fauna and flora in danger of extinction. The reduction in many species populations has had negative impacts on the livelihoods of people whose lives depend on such natural resources.

The Government (GOV) has been aware of the importance of biodiversity values and its potential contribution to national economic development. They have therefore issued a series of regulations on the management and protection of these valuable resources. Since 1994, after becoming a Party to CITES, the GOV have issued many regulations on the harvest and trade of wild fauna and flora in order to facilitate the implementation of the Convention.

The existing policy and legal framework on wildlife trade has created a significant legal framework for wildlife protection, sustainable trade and development. The policy and legal framework have had positive impacts on biodiversity, particularly by preventing of some excess exploitation of endangered wildlife. However, during the development and implementation of the policy and legal framework there have been certain shortcomings of their effective and actual impact one mitigating the illegal trade and harvest. In particular, the regulations on the promotion of wildlife harvesting have not been developed in a synchronous manner and administrative punitive sanctions have not prevented effectively the over-exploitation and illegal trade. In addition, the contributing of the policy on poverty alleviation in remote areas is still too loose.

For these reasons, it is worthwhile to conduct an assessment of the environmental, economic and social impacts of Vietnam's wildlife trade policy. This assessment should reveal the strengths, weaknesses and shortcomings of the policy and propose adjustments, in line with the actual situation of wildlife conservation in Vietnam.

In 2004, at the 13<sup>th</sup> meeting of the Conference of the Parties to CITES, the Parties adopted Decision 13.74 on national wildlife trade policy reviews. The Decision stated that the Secretariat, should "conduct in cooperation with the Parties, a review of their national policies regarding the use of and trade in specimens of CITES-listed species, taking into account economic incentives, production systems, consumption patterns, market access strategies, price structures, certification schemes, CITES-relevant taxation and subsidy schemes, property rights, mechanisms for benefit sharing and reinvestment in conservation, as well as stricter domestic measures that Parties apply or are affected by.

In accordance with Decision 13.74, Vietnam is one of 4 pioneer countries (along with Madagascar, Nicaragua and Uganda) to conduct a voluntary assessment of its policy on wildlife trade. The CITES Secretariat and UNEP provide technical and financial assistance for the activity.

The conservation, economy and social Impacts have been evaluated with the aim of assessing the current wildlife trade policy. The activity also supports the implementation of the national Action Plan on strengthening the management of the wildlife trade towards 2010. The results will play an important role in enhancing the national capacity to review and complete their policies on the wildlife trade.

Due to the limitations of time and financial resources, the assessment has been carried out during just 4 months (from May to July 2007) and focuses on relevant regulations and policies issued after Vietnam joined the Convention. The research and impact assessment of the policies also focuses on hotspots of wildlife harvesting and trade in provinces and cities such as Hanoi, Ho Chi Minh city (HCMC), Quang Ninh, Son La, Ninh Binh, Nghe An, Ha Tinh, An Giang, Kien Giang and Vinh Long including the border posts and airports of Noi Bai, Tan Son Nhat, Mong Cai, Cau Treo, Tri Ton and Sa Xia.

The assessment of national policy on the wildlife trade is just an initial step. In the future the monitoring, research and impact assessment of policies on wildlife trade should be reviewed on a more regular basis and on a larger scale in order to enhance the effectiveness of such policies and assist them in making positive contributions to the conservation of biodiversity and fighting hunger and poverty amongst local people.

### **Brief introduction to CITES**

The Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES or the Convention) was adopted by governments in 1973 with the aim of regulating the international trade in wild animal and plant species to ensure that legal trade is sustainable and illegal trade is prevented or punished.

About 30,000 species are covered by the Convention and they are listed in one of three Appendices, depending on the degree of protection that they require. The vast majority of CITES-listed species (i.e. those listed in Appendices II and III) are not endangered and may be commercially traded. Species identified as endangered (i.e. listed in Appendix I) are generally prohibited from commercial trade but may be traded for non-commercial purposes. Moreover, captive bred or artificially propagated specimens of such species may be treated as specimens of Appendix II and commercially traded. A system of permits and certificates is used to authorize and track both commercial and non-commercial trade in CITES-listed species. It applies to all 'specimens' of those species, that is, live and dead animals and plants as well as their parts and derivatives.

The two principal pre-conditions for issuing a CITES permit are that trade should not be detrimental to the survival of the species concerned and that specimens of those species should be legally acquired. To ensure the credibility of their non-detriment and legal acquisition findings, national Management and Scientific Authorities must act independently of the interests of traders, consumers, pressure groups and others who may seek to influence them.

The States which are party to the Convention contribute to biodiversity conservation through ensuring that any trade which occurs in CITES-listed species is responsibly managed. Conservation is not limited to absolute protection or non-consumptive use. It also includes consumptive use which is sustainable. Economic issues are therefore intrinsic to the Convention and trade measures are essential to achieving its objectives. Social and economic issues play a crucial role in biodiversity conservation. Understanding the relationships among the social, economic and environmental aspects of biodiversity conservation is therefore essential to ensure that the Convention achieves its objectives. It is also critical for 'mainstreaming' biodiversity conservation considerations into a country's broader programmes for development and trade.

## **2. Goal and Objectives**

### **Goal**

To assess national policies on wildlife trade, identifying pending issues and shortcomings; to propose adjustments to current regulations or the development of new policies to replace inappropriate ones in order to implement effectively the national strategies and Action plans on conservation, sustainable development and the Convention.

### **Specific objectives**

- Assess the impacts of current policies on wildlife trade, particularly regulations concerning CITES implementation in order to identify strengths, weaknesses and impacts on conservation and sustainable use of wild fauna and flora;
- Produce recommendations for refining and improving current policies and legislation and combining conservation with poverty reduction and sustainable development;
- Support the implementation of CITES;
- Strengthen the capacity of relevant agencies in the assessment of national wildlife trade policies;
- Enhance the development of National Action Plans on wildlife trade in combination with related environmental and socio-economic issues;
- Share experiences and lessons learned with other CITES Parties on the wildlife trade policy assessment;

## **3. Methods**

### **3.1. Data collection**

#### *Secondary data collection*

All legal frameworks, laws and legal documents on wildlife trade in Vietnam were collected and systematically reviewed. Additional related regulations and documents issued by ministries and local authorities were also collected and reviewed.

The published data from wildlife trade reports, publications, magazines of Government agencies including from the General Department of Statistics; Forest Protection Department, CITES Management Authority and Scientific Authority, Forestry Department, Department of Collectives and Rural development under MARD, Market management Department, Ministry of Trade and Industry and General Department of Customs and Provincial Forest Protection Departments, Customs Departments and Department of Fishery Exploitation and Protection were all collected and reviewed.

Illegal wildlife trade data used in this report were collected from official documents of the government of Vietnam and published reports from the government and non-State bodies that were officially published. Some data were also generated based upon official records of

wildlife confiscations from 1995 to 2007 by the Forest Protection Department of Vietnam (FPD) and the provincial FPD of Ninh Binh, Ha Tinh, Ha Noi and Ho Chi Minh City. These are the most up-to-date and official data available that could be used for the assessment. Some of the reports and publications could be listed as follows: Cao and Nguyen (2005), Ninh Binh Forest Protection Department (2007), Ha Tinh Forest Protection Department (2007), National Action Plan on strengthening wildlife trade management by 2010 (2004), Forest Protection Department of Vietnam (2007), Do T. *et al.* (2003), Do T. (1997, 2005), Giles *et al.* (2006), Association of nature and environment protection of Vietnam (2004), Nguyen M. H. (2002, 2004), Nguyen & Nguyen (2004), Nguyen *et al.* (2003), Nguyen Tap (2006), Nguyen V. S. (2003), Phan S. (2004), Vu and Mai (2006) and World Bank (2005).

### ***Field survey***

Four field trips were carried out in the Northern (2), central and Southern provinces to collect up-to-date data on wildlife trade, captive breeding and artificial propagation operations, and law enforcement (Map 1). Data on wildlife harvest, costs, pricing, the technical process of harvesting, the structure of demand-supply, consumers, and income derived from wildlife harvesting and production have been collected by visiting households, farms, nurseries, export companies, and traders. Moreover, information on employment and income, factors affecting the economy, society and environment, the expectations of competent agencies, producers and consumers have been also gathered during the visits.

In addition, information and data on the trade, policy implementation, difficulties, and recommendation on wildlife trade regulations have been collected through questionnaires, surveys and direct interviews. The interviewing surveys focused on local wildlife collectors, medicinal plant collectors, hunters, retailer traders, community leaders, law enforcement agencies including the Forest Protection Department, Department of Customs, Provincial Fishery Resources Protection Departments, Economic Police, and Market Control officers of the following provinces Quang Ninh, Vinh Phuc, Hanoi, Ninh Binh, Ha Tinh, HCMC, An Giang, Kien Giang, Vinh Long and Dong Nai.

Data on wildlife confiscations and rescues were collected in the Forest Protection Departments from various provinces such as the Hanoi Zoo, Ho Chi Minh Zoo, Hooc Mon Animal Rescue Center, Soc Son Animal Rescue Center, Endangered Primates Rescue Center - Cuc Phuong National Park, and Cat Tien National Park.

### **3.2. Data analysis**

The situations regarding wildlife trade, the implementation of policies, the exploitation and harvest of wild fauna and flora, the status of the species, and the change in biodiversity in some surveyed areas were analyzed base on available data from secondary sources and field surveys.

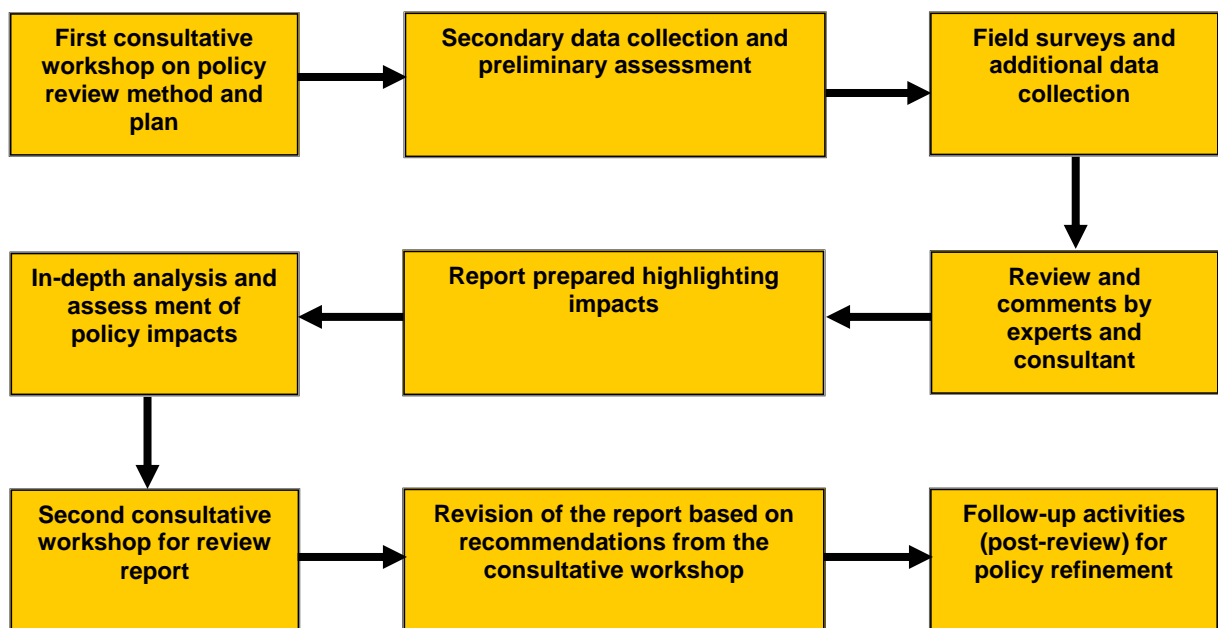
General market chains for wildlife trade are also described through channels of exploitation, transport and consumption of wild fauna and flora.

Production cost of harvesting, captive breeding, artificial propagation, trade, and administration of the wildlife trade were estimated at the local and household levels to emphasize the economic and social efficiency of wildlife trade, especially captive breeding activities.

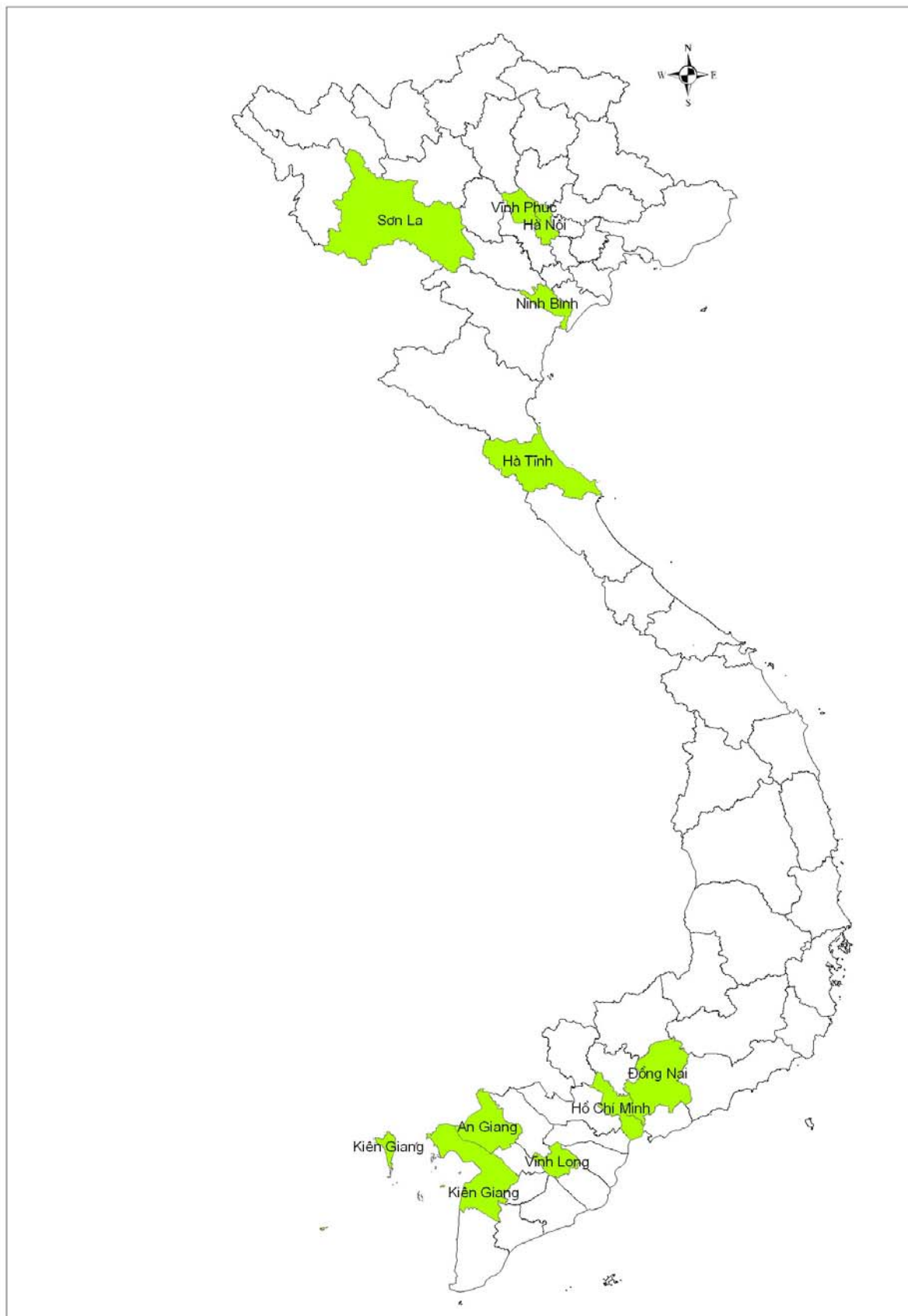
A participatory approach was used during the survey and review processes. Key stakeholders such as law enforcement authorities, local communities, traders, and harvesters were consulted on the identification of the strengths, weaknesses and possible impacts of the policy. This helped the review team to provide suitable recommendations for policy adjustments related to wildlife trade in order to better address the current situation.

The review framework, method and draft report were reviewed and commented on by the National Project Steering Committee, various experts, and participants in the first (March, 2007) and second (October, 2007) consultative workshops and then finalized by the review team.

**Figure 1. Policy Assessment framework**



**Map 1. Field survey sites**





## 4. Result of the assessment

### 4.1. Country profile

#### 4.1.1. Natural Conditions

Vietnam has a total area of 331,688 km<sup>2</sup> and about 3,260 km of coastal line that includes a thousand islands (Map 2). Vietnam has a tropical monsoon climate, with an average annual rainfall of around 2,000 mm, a general humidity level of about 84%, and temperatures that range from 5<sup>0</sup>C in the winter to 37<sup>0</sup>C in the summer (General Department of Statistics, 2005).

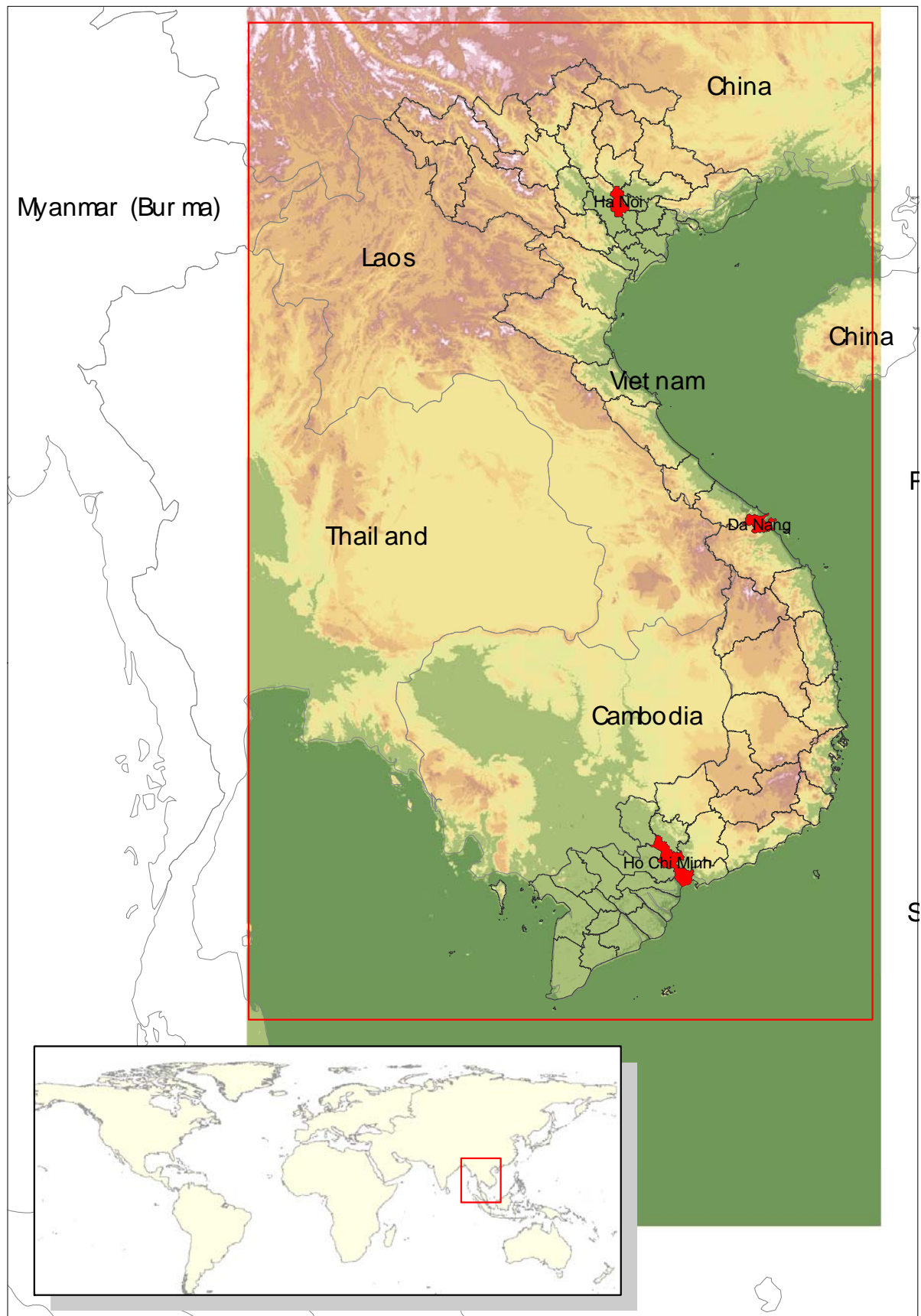
According to the most recent statistical data, Vietnam has 12,616,700 ha of forest land and the forest cover accounts for 37% of this area. Within this area, natural forest occupies 10,283,173 ha and plantations cover 2,333,526 ha (General Department of Statistics, 2005). The annual forest growing stock is 813.3 million m<sup>3</sup>/year (the natural forest growing stock accounts for 95% of the total) and the total volume of natural bamboo is 8.5 billion culms. The total area of unused land is 6.76 million ha. This has great potential for reforestation that would allow to Vietnam to achieve its objective of increasing forest cover up to 42% or 43% by 2010 and 47% by 2020 (MARD, 2005).

Vietnam's biodiversity richness consists of about 20,000 to 30,000 vascular plant species that account for 6.5% of the species in the world (Groombridge, 1992). Vegetation in Vietnam is highly endemic; 33% plant species in the north and about 40% plant species nationwide are believed to be endemic species to the country and the region (Pocs Tamas, 1965). The most up-to-date data show that there are about 11,458 animals, 21,017 plants, 3,000 micro-organisms, 1,030 moss and 826 fungi species have been confirmed as occurring in Vietnam (WB, 2005). And amongst the described plants, there are 6,000 plants used for medical, food, materials and other purposes (Vo V.C. & Tran H., 1999:2001). In addition, Vietnam is believed to be home to 10% of world's wild fauna and flora species. Among these, 28% of the mammals, 10% of the birds, and 21% of the amphibians are endangered (WB, 2005).

The fauna of Vietnam consist not only of the species endemic to the Indochina area but also many species of high economic value. In the 90s, in only the Central province of Vietnam, five new large mammals were discovered and described including the Saola (*Pseudoryx nghetinhensis*), giant muntjak (*Muntiacus vuquangensis*), truongson muntjak (*M. truongsongensis*), Grayshanked douc langur (*Pygathrix cinereus*) and Annamite striped hare (*Nesolagus timminsi*) (Vu V.D. *et al.*, 1993; Nadler *et al.*, 1997; Groves & Schaller, 1998; Pham M.G. *et al.*, 1998; Surridge *et al.*, 1999). During this period, a number of new species including birds, reptiles, fishes, amphibians, and invertebrates (in particular 3 bird species and 6 crab species) were described. Within 10 years (up to 2002) 13 genera and 222 species or sub-species of plants were newly recorded for either the country or the world (WB, 2005).

Nevertheless, biodiversity degradation and deforestation are reaming as critical issues in Vietnam. Large forest areas have been converted to agricultural land, or cut by the timber industry. In addition, illegal wildlife trade such as large mammal and reptile trade have posed lots of difficulties for the wildlife survival, especially endemic and endangered species. Together, these issues have created great difficulties for nature protection as well as management of wildlife trade.

**Map 2. Geographic and location of Vietnam**

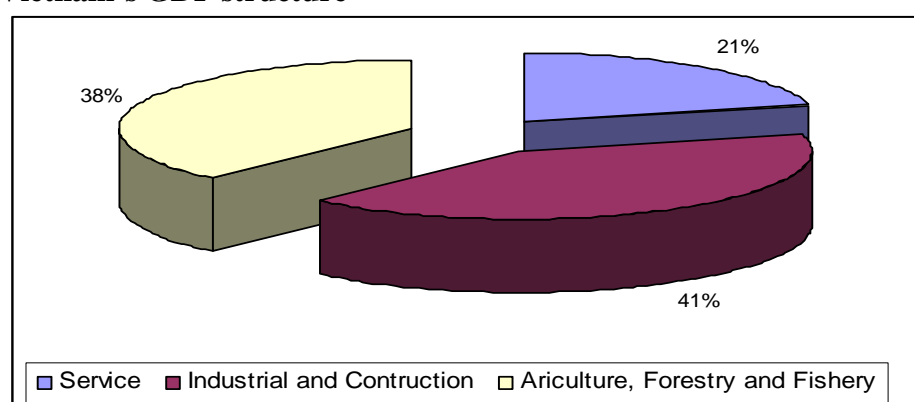


## 4.1.2. Social and Economic Conditions

### General income

During the last few years, particularly early years of the 21<sup>st</sup> century, Vietnam's economy achieved a high growth rate, around 8% annually. Its GDP in 2000 was nearly US\$ 17.5 billion (VND 280,000 billion) and in 2006 was approximately US\$ 26.57 billion (VND 425,135 billion). Accordingly, during the 6 years from 2000 to 2006, Vietnam's GDP increase almost 50%. However, the structure of Vietnam's GDP has revealed that Vietnam still has an agricultural economy and is underdeveloped; agriculture and fisheries account for 38% of the GDP. Around 25 million people depend on forest resources and 8 million people depend on fisheries. In addition, around 12 million people have irregular incomes based on natural resource exploitation and fisheries (WB, 2005).

**Figure 2. Vietnam's GDP structure**



*Source: General Department of Statistics, 2005*

### Population and education

Vietnam is one of most populated countries in the world. Its total population is more than 84 million, the average population density is 254 people per km<sup>2</sup>, and the annual population growth is 1.7%. The number of people with primary education in Vietnam is believed to be equal to the number in developed countries. However, the number of people with higher education and university degrees just meets the level of developing countries (3.5% - 4.5%). In addition, Vietnam shares many cultures and traditions with other countries in South East Asia, particularly the use of natural products as food and traditional medicines. Therefore, a significant amount of wildlife is being used for traditional medicine preparation as well as food throughout the country (Government of Vietnam, 2004).

## 4.1.3. Introduction of wildlife consumption and trade in Vietnam

### a. Legal trade and customary consumption

Exploitation and consumption of wildlife is recognized as traditional custom in Vietnam. The using of wildlife species for food and medicine is also considered as a well know custom in many areas and ethnic groups, hence, hundred species of fauna and flora use daily widely with the country for such purposes. Beside the wildlife trade also plays important role in mobilizing natural resources within the country as well as an important income for local people.

Assessments of wildlife trade in Vietnam showed that 147 terrestrial animal species, 40 coleopteron, 90 butterfly and hundreds of flora species are being consumed and traded as food, medicines and ornaments domestic and internationally to and from Vietnam (Nguyen M.H., 2002; Nguyen Q.T. *et al.*, 2004; Nguyen V.S., 2003; Cao L.A. & Nguyen M.H., 2005).

International wildlife trade in Vietnam began to flourish in the late 80s when the trade is well established with other large markets in Asia, Europe and America. Among of that, legal trade was the most significant part of the flourishing. In addition, the development of legal international wildlife trade brought good opportunities to many local communities to increase their income from natural products. The increase of the international trade, could be seen partly through the annual CITES permits. From 2003 to 2005, there was a total of 3,083 CITES export permits/certificates granted (CITES Vietnam, 2003, 2004, 2005).

**Table 1. Legal trade of wild fauna from 2002 to 2005**

Year	Species	Export		Import		Transit/re-export	
		Unit	Amount	Unit	Amount	Unit	Amount
2002	Mammal	Head	4,602				
	Reptile	Head	17,690			Head	9,143
	Mollusk	Head	75,153			Head	28,650
2003	Mammal	Head	5,770			Head	4,210
	Reptile	Head	29,360			Head	4,110
	Amphibian	Kg	832,503				
	Mollusk	Head	89,300				
	Coral	kg	314,711				
2004	Mammal	Head	6,368	Head	5,985	Head	1,400
	Reptile	Head	21,010				
	Amphibian	Kg	823,066			Kg	
	Mollusk	Head	78,074			Gr	129,500
	Coral	Kg	96,597				
2005	Mammal	Head	7,632	Head	2,004	Head	2,000
	Reptile	Head	19,221	Head	9,508	Head	65,300
	Amphibian	Kg	986,972				
	Mollusk	Gr	147,814	Gr	915	Head	91,600
	Coral	Kg	117,590				
	Ornamental fish	Head	35,030				

*Source: CITES Vietnam, 2007*

The exploitation of and trade in products from other natural resources such as non-timber forest products (NTFPs) and plants increased remarkably as soon as the market was expanded internationally. Large proportion of the NTFPs products are made from the wildlife harvested.

**Table 2. NTFPs exploited in the period 1995-2002**

No.	Product	Unit	Year				
			1995	1996	1997	1998	1999
1	Pine resin	ton	5,350	6,348	6,387	6,776	7,182
2	Cinnamon	ton	7,790	3,658	3,954	2,100	3,166
3	Bamboo	1,000 trees	175,526	104,900	279,364	248,474	321,000
4	Rattan	ton	28,500	25,975	25,639	80,097	65,700
5	Star anise	ton	1,870	6,672	9,896	9,500	5,000

*Source: Department of Statistics, 2005*

The exportation of NTFPs has developed dramatically since 1999. The exportation has largely been done by private enterprises and traditional handicraft villages. Bamboo and rattan products constitute the most important proportion of these exportations. The export also brings significant cash income for traders and local villagers who involved in the trade chain. The trade also shows that East Asian, European and North American countries are the primary destination of the NTFPs export.

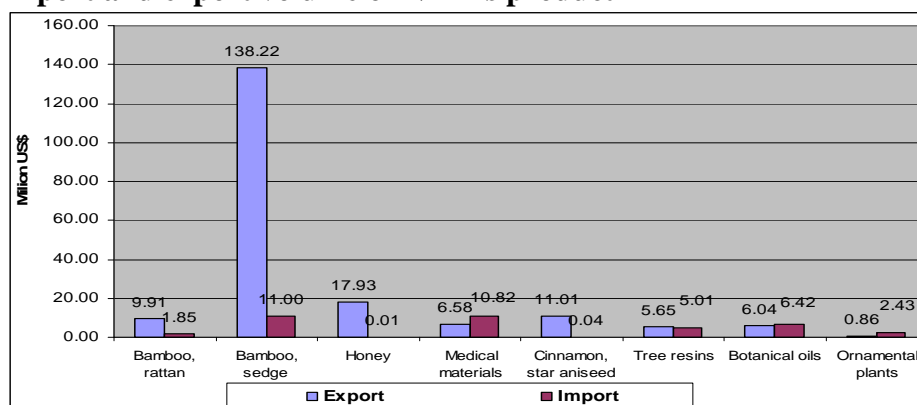
**Table 3. Total benefit from the exportation of rattan and bamboo products**

No.	Market	Year (million US\$)				
		1999	2000	2001	2002	2003
1	Australia	0,38	0,78	0,88	1,43	2,45
2	Belgium	0,92	2,42	2,43	2,77	4,08
3	Canada	0,11	0,46	0,72	2,17	1,74
4	France	2,88	5,30	5,06	6,22	7,38
5	Germany	2,54	4,72	4,62	7,95	11,62
6	Italia	1,62	1,89	2,69	3,71	4,93
7	Japan	8,41	13,00	16,30	27,58	21,78
8	Russia	0,98	0,68	1,25	1,23	1,35
9	South Korea	4,41	5,85	5,58	4,42	2,58
10	Spain	1,69	2,39	3,23	3,80	5,25
11	Sweden	0,70	1,23	1,26	1,58	1,30
12	Taiwan	13,71	11,89	13,65	10,24	9,62
13	The Netherlands	1,43	1,29	1,72	3,26	4,88
14	United Kingdom	0,94	2,71	2,67	3,92	6,117
15	United State of America	0,53	1,69	2,52	4,60	7,00
<b>Total</b>		<b>53,06</b>	<b>68,55</b>	<b>74,96</b>	<b>91,53</b>	<b>106,42</b>

Source: Phan Sinh, 2004

The total volume of rattan and bamboo products exported in 2003 was double the volume exported in 1999. The market for the product also increased from 74 to 94 countries and regions. The rising export volume of and benefits from NTFPs have brought many advantages. It has increased the income of, and brought more work opportunities to, local people and contributes a significant proportion to the country's GDP and development rate. Besides the export, Vietnam is also play as important import country for raw material of NTFPs from neighboring countries. The importation likely show that the consumption and export of NTFPs have exceed the domestic supply therefore a significant volume of material are needed from other source.

**Figure 3. Import and export volume of NTFPs product**



Source: General Department of Custom, 2005

## Seahorse harvest and trade

There are 7 species of seahorse of the *Hippocampus* genus distributed in Vietnamese water, and all these species are listed in Appendix II of CITES. Seahorses have been caught and used historically for traditional medicine preparation and for export in most of the coastal areas of Vietnam. The harvest and trade also provide some income and employment for local communities in the coastal area. Recently, a survey of seahorse harvest and trade estimated that there were about 6.5 tons of dried seahorses, equal to 2,275,000 individuals, that were wild-caught (targeted catch and by-catch) annually in the five coastal provinces of Khanh Hoa, Binh Thuan, Bac Lieu, Ca Mau and Kien Giang (Giles *et al.*, 2005).

Seahorses are caught and traded both for the domestic market and for export. The export trade is mainly conducted by middle men, rarely by fishermen or from local market (Giles *et al.*, 2005). Seahorses are generally exported as dried products for traditional Chinese medicine, however, a relatively small number of live specimens are exported for ornamental purposes (CITES Vietnam, 2005). The total value (internationally and domestically) of the seahorse trade in Vietnam is estimated to be about US\$ 170,000 - 962,000 per year (Giles *et al.*, 2005). Nevertheless, seahorse harvest and export has not become a common job in coastal areas. Currently, there are only a small number of fishermen in some particular areas such as Southern Central and Southern most provinces are involved in seahorse harvest and trade.

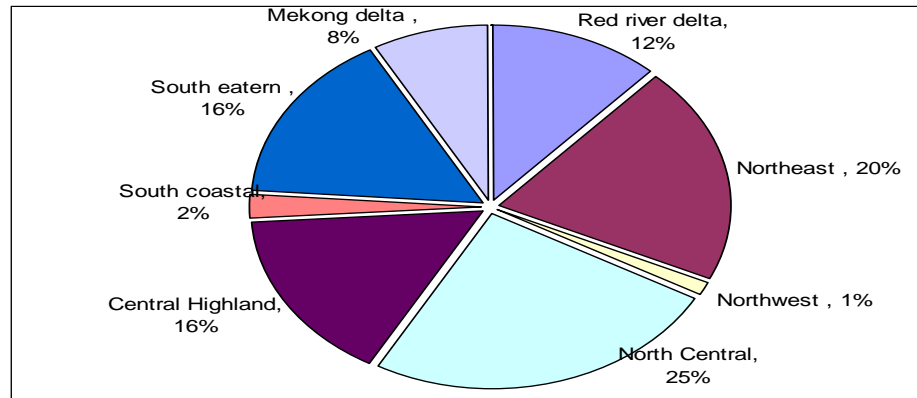
### **b. Illegal wildlife trade**

Besides the customary use and legal trade, illegal wildlife trade is also well recorded and documented through Vietnam. In addition, the expansion of market and acceleration of price have contributed an important boost for the development of illegal wildlife trade. Recently, illegal wildlife trade was indentified as one of the most important factor that make the population of some species such as cats (*Felidae* spp.), bears (*Ursus* spp.), pangolins (*Manis* spp.) amphibians, reptiles, orchids (*Paphiopedilum* spp.), agarwood (*Aquilaria* spp.) and some other endemic plants reduce significantly as the result of illegal trade and over exploitation (Nguyen M.H., 2004; Cao L.A. & Nguyen M.H., 2005). In addition, illegal trade on ornament plant and insect such as butterfly are also posed a serious threat to many species of orchid and rare insect of the country (Nguyen Q.T. *et al.*, 2003). As the result number of illegal trade and violations of wildlife trade is recorded dramatically high in many province and regions of Vietnam.

From 1996 to March 2007 there were 14,758 cases involving wildlife hunting and trade violations were indentified and prosecuted and about 635 tons of wildlife with a total of 181,670 individuals (animals) was confiscated. The data showed an increasing trend in the number of wildlife violations, from 1,469 cases in 2000 to 1,880 cases in 2002. In addition, the North-East and Central North and Southern provinces were also identified as am important illegal wildlife trade hotspots (Cao L.A & Nguyen M.H., 2005).

According to estimation, the quantity of wildlife provided for Vietnam Market is about 3,400 tons and over 1 million heads per year. In which, the quantity of captive breeding, illegal exploitation and import accounts for 70%, 18% and 12% respectively (Do *et al.*, 2003).

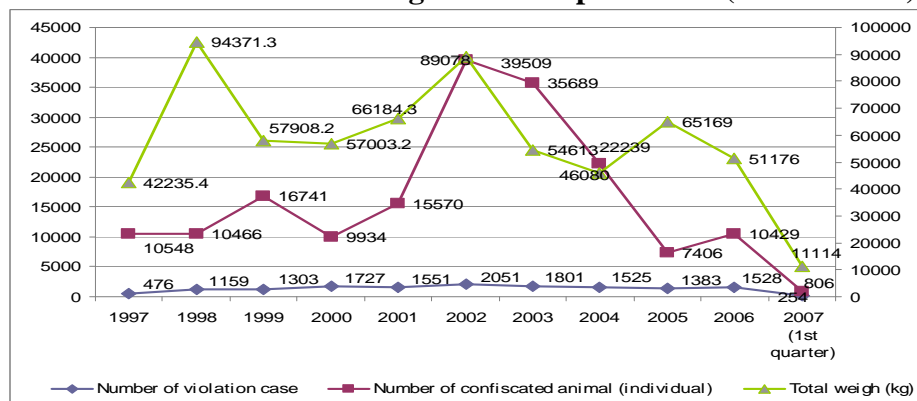
**Figure 4. Number of illegal wildlife trade case**



Source: Cao L.A. and Nguyen M. H., 2005

According to the assessment of the Government, law enforcement has controlled from 5 to 10% of the total illegal wildlife trade (Government of Vietnam, 2004). However, it is difficult to confirm such figure as the illegal trade is always the most difficult task. Nevertheless, it seems that the incidence of illegal trade decreased dramatically from 2005. This could have resulted from a variety of reasons such as the increasing effectiveness of law enforcement or the potential commercial extinction of certain resources after long period of overexploitation or a possibility of increased competition from produced specimens coming from captive breeding and artificial propagation operations.

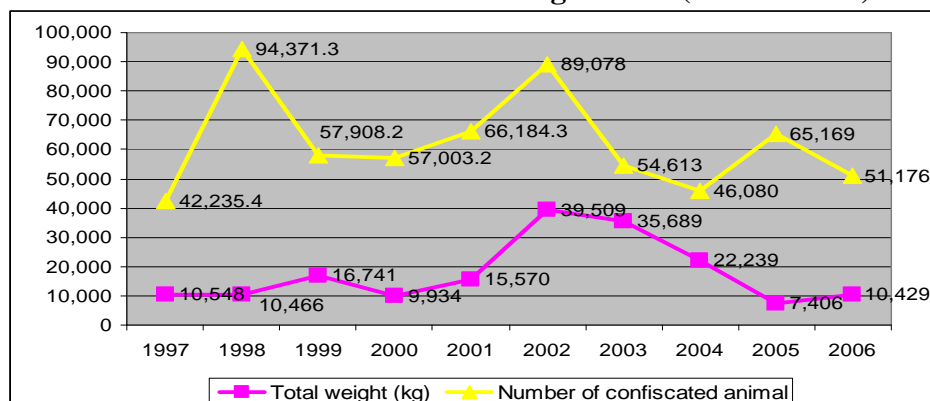
**Figure 5. Violations in wild fauna management and protection (1997- 3/2007)**



Source: The Forest Protection Department, 2007

The synthesized data in whole country over the years shows that the trend of violations increased from 1999 to 2002. However, the violations decreased in the number of cases and confiscation quantity. This change might be the result of many factors: body agencies tied investigation and control; interest rate from illegal trade was no longer high due to market share competition from captive breeding and propagation activities; the domestic source of wildlife and those from neighboring counties declined.

**Figure 6. The confiscation of wild animal from illegal trade (1997 to 2006)**



Source: Cao and Nguyen, 2005

### The illegal wildlife trade in some hotspots

Illegal wildlife trade mainly occurs in areas, including the area adjacent harvesting zone, the key points in transferring activities such as border gates. The areas located on the main transportation routes or consumption areas such as big cities or assembly areas for exporting are also places where the illegal wildlife consumption and trade mostly occur. In the Northern provinces, Ha Tinh, Ninh Binh, Quang Ninh and Hanoi have been identified as key consumption and trading sites. In the South, illegal trade and consumption mainly focus on Ho Chi Minh City and its adjacent provinces.

#### Wildlife trade in Ninh Binh

Ninh Binh is located in the Red River delta about 80 km from Hanoi (Map 1). In addition, this province has an important highway junction and railway which are believed to be key routes for illegal wildlife trade from the South and the Central to the North (Nguyen M.H., 2002). Ninh Binh is also one of the provinces taking the most effective wildlife trade enforcement in controlling and preventing illegal wildlife trade (Nguyen V.S., 2003).

From 2000 to 2007, there was a total 29,414 kg of wild animals were confiscated from illegal trade and treated in Ninh Binh (Figure 8). According to the 2007 report of the Ninh Binh Provincial FPD, A large amount of live animals after being confiscated was brought to the center for rescuing animals to rescue and release them. Ninh Binh Forest protection Department said that there has been a reduction of illegal wildlife trade in recent years. The irregular change in quantity and individual quantity depends on the seasons and domestic and foreign consumption markets. The trade activity has also not occurred according to certain rules and the animal origin is diversified not only from Vietnam but also from the countries in the region such as Laos and neighboring countries (Ninh Binh Forest protection Department, 2007). According to the province's calculations, there have been on average around 5,000 kg of wildlife as well as hundreds of cubic meters of protected timber were confiscated.

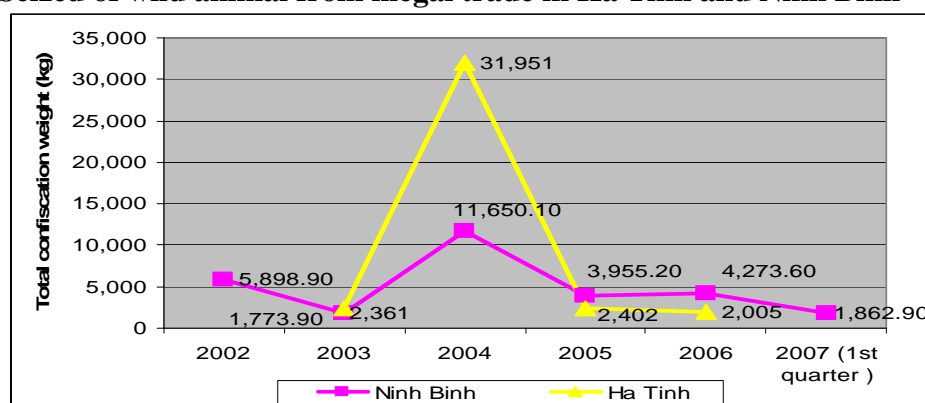
#### Wildlife trade in Ha Tinh province

Ha Tinh province is located in North Central of Vietnam and is a key junction routes to Lao People's Democratic Republic (Lao PDR) and from Lao PDR to the sea (Map 1). More importantly, interprovincial road No. 8, which connects Ha Tinh and Lao PDR, is the most vital highway for import to and export from Lao PDR. It is also believed that a large proportion of illegally acquired wildlife originating from Laos and its neighbor countries is transported via this route to end use.



According to recorded data from Ha Tinh province on suspected illegal wildlife trade from 2003 to 2006, there was 38,719 kg of animals confiscated during that period. In 2004, the confiscations shows a much higher than previous years (Figure 8) as the result of increasing demand from the market. However, according to Ha Tinh Forest Protection Department, wildlife transportation and trade has no rule, which shows via the violations every year. However, this has a trend of reduction in general. This Agency also said that the decrease in trading, especially illegal wildlife trade may be a consequence of increased law enforcement or perhaps the exhaustion of wildlife in nature.

**Figure 7. Seized of wild animal from illegal trade in Ha Tinh and Ninh Binh**



Source: Ninh Binh and Ha Tinh Forest Protection Department, 2007

#### Illegal insect and ornamental plant trade

Insects are widely used for food in Vietnam and most of them are wild harvested. In addition, many insects are captured and used for ornamental or exhibition purposes or perhaps for a collection of some kind. Among these insects, the colorful and rare butterfly is a targeted species. In addition, a huge number of plant species are being used for ornamental purposes, of that, flowering and beautifully-shaped plant species are widely exploited from the wild or artificially propagated for this purpose, of which orchids, cactuses and cycads are the most popular. Despite these facts, very little has been done to analyze the trade in ornamental plant and insect species. Very few documents or reports provide a detailed picture of the trade. As a consequence, not much is known about the nature and scale of this activity in Vietnam.

It is reported that the trade in insects is mainly undertaken to supply foreigner collectors and that it takes place in certain areas. Tam Dao National Park (northern Vietnam) and the nearby area are the most popular spots for the trade. An Assessment of Parks on Wildlife Trade (2004) identified that there were 40 coleopteron species and 90 butterfly species illegally collected and traded in the surrounding areas to foreigner collectors. Many of these insect species are listed in Vietnam's Red Data Book or IUCN Red List of threatened animal, and the Appendices I and II of CITES, particularly 2 species of the *Teinopalpus* genus (Nguyen Q.T. *et al.*, 2003).

Vietnam is home to many species of orchids and cycads, all of them are listed as protected species under Government decree No. 32/2006/NĐ-CP. Orchids and ornamental plant species are also popular in trade. Some species of orchids, especially the Vietnamese endemic lady slipper orchids (*Paphiopedilum* spp.) and many *Dendrobium* spp. have been heavily exploited and traded illegally. Most of them were illegally wild harvested. Other ornamental plants such as cycads (*Cycas* spp.) are also illegally exploited and traded in many provinces. Among

these, only *Cycas revoluta* was supplied from artificial propagation operations, others were exploited illegally from the wild. A survey of the ornamental plants and orchid trade in Tam Dao National park noted that, among the 84 species of orchid (Orchidaceae) that occur in the park, 28 species have been exploited and traded illegally, accounting for 33.3% of the total species recorded in the park (Nguyen Q.T. *et al.*, 2003).

#### **4.1.5. Wildlife trade chain**

Wildlife trade in Vietnam can be divided into two main harvest and trade chain: illegal and legal trade.

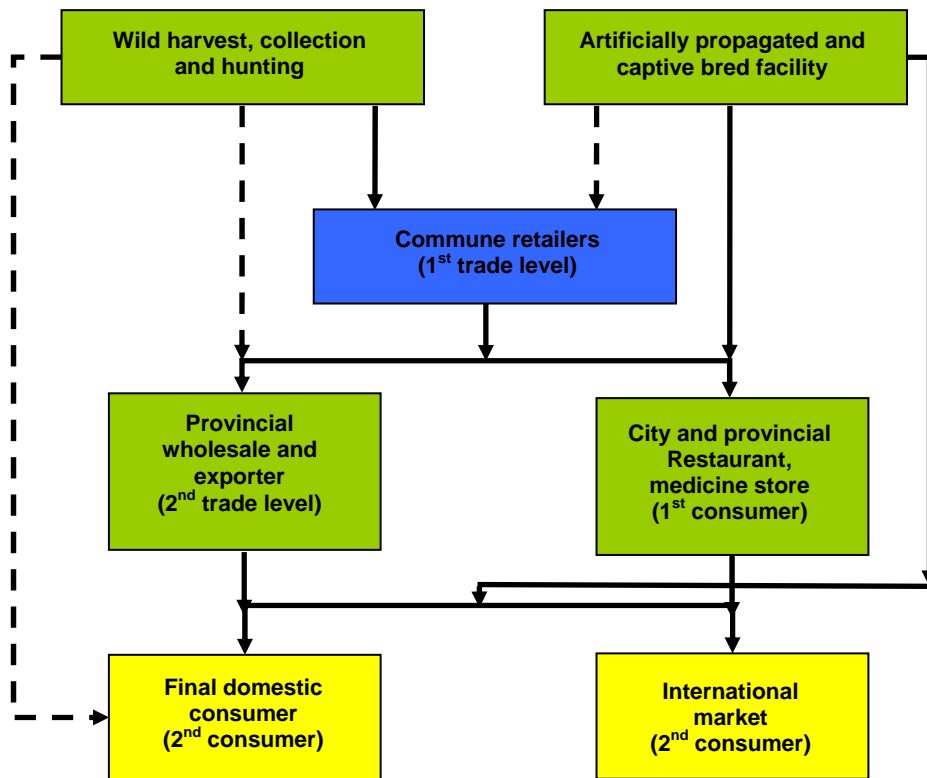
Legal and illegal wildlife trade is always distinct itself in term of trade manner and the impact on wildlife conservation and trade management. In addition, the value from the illegal trade is often considered higher but less sustainable because the overexploitation or negative impact on the natural resources as many destructive manner of harvest are often used.

Recent surveys and assessments of the illegal wildlife trade chain show that wildlife specimens are mostly harvested by local people and sold to small retailers at the commune or district level. The retailer then forwards the specimens to a provincial trader and this trader sells it to a retailer or the local consumer market or transfers it to an international trader for export (figure 9). Illegal trade is mainly conducted by this chain. Because the trade is illegal, the original collectors (local people) normally receive very little incentive (value) or benefit from the specimens while the retailer, especially the international trader or perhaps the bushmeat restaurant, takes most of the profit (Nguyen M.H., 2004; Nguyen V.S., 2003).

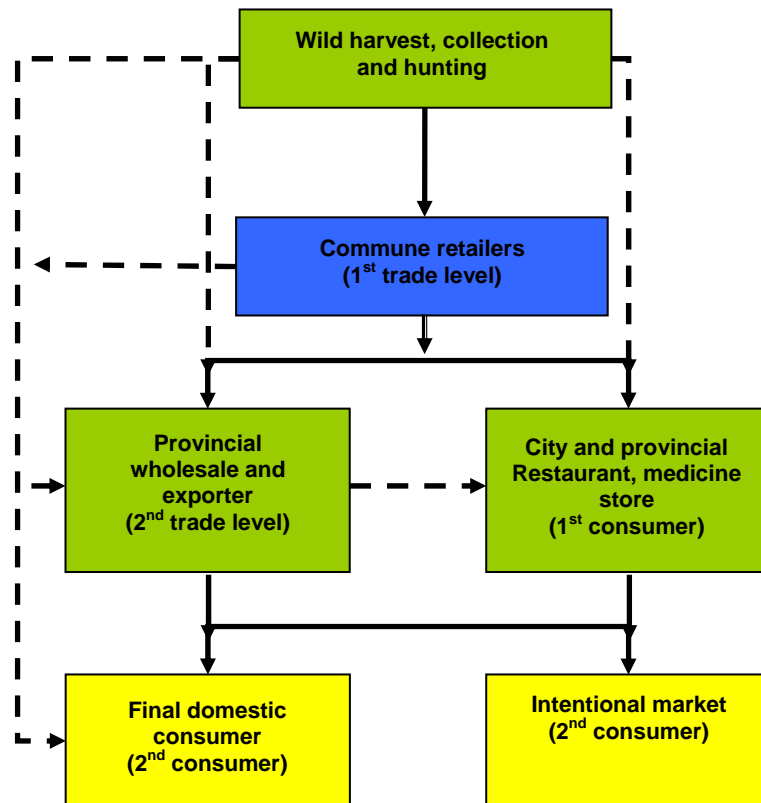
Legal trade occurs with relatively distinct form and network (Figure 10), participants including captive breeding and artificial propagation facilities are also more diversified. In this trade form, wildlife are wild-harvested or from artificial propagation facilities purchased by local collectors. After that, they are exported or consumed at medicine manufacturing facilities, restaurants, processing factories. Sometimes the captive breeding/artificial propagation facilities sell directly to domestic markets and overseas consumers. At other times they sell to a professional dealer who then sells to domestic or overseas markets (Nguyen M.H., 2002; Nguyen V.S., 2003, Cao L.A & Nguyen M.H., 2005).

Specimens found in illegal wildlife trade are usually wild-harvested. Wildlife are trapped and hunted from mountainous areas, then collected and transported to consumption sites in the locality or other areas (Nguyen M.H., 2004). However, due to the acceleration of demand for domestic use and export, additionally by the price, Vietnam itself has not been able to satisfy the demand. Therefore, an additional sources, such as its, have therefore become involved in the supply chain. Some key additional supply markets Southeast Asian countries (Nguyen M.H., 2002; Nguyen V.S., 2003; Government of Vietnam, 2004; Cao L.A & Nguyen M.H., 2005). Therefore, Vietnam not only serves as a supply source but also as the transfer or transit market.

**Figure 8. Legal wildlife trade chain in Vietnam**



**Figure 9. Illegal wildlife trade chain in Vietnam**



## 4.2. Vietnam's wildlife trade policy content

### 4.2.1. Vietnam's wildlife trade policy

Vietnam has been developing its policy on the management and protection of natural resources and general environmental protection, including specific regulations on wildlife trade. Due to the potential value of natural resources to the community and to Vietnam's socio-economic development, all of these policies emphasize and promote the sustainable management of natural resources and development, especially promotion of the captive breeding and artificial propagation of wildlife in order to increase the incomes of local people. Some key policies could be noted as:

- The National Strategy for Environmental Protection until 2010 and Vision towards 2020 (2003) emphasizes *“Strictly control the trade of rare and endangered species; eliminate all the destructive manner of exploitation, particularly in fishery exploitation; strengthen in-situ and ex-situ conservation”*.
- The National Action Plan on strengthening the wildlife trade management towards 2010 (2004) states *“...Vietnam is facing serious illegal wildlife exploitation, hunting, transportation and trade in the market economy context. The control of wildlife trade is not as effective as it is expected...”* To overcome the situation, the Action Plan set a common goal to *“Enhance the effectiveness and efficiency of the relevant agencies in order to control of illegal wildlife trade, towards the sustainable management and use of the resources.*
- Under the Project on Conservation and Development of Non-timber forest products (NTFPs) for the period of 2006-2020 (2006), MARD determined it would begin *“Strengthening studies and developments of wildlife domesticated ... Especially local participations in development of such new NTFPs ... as well as wildlife captive breeding activities. Up to now, many wildlife species are captive bred and artificially propagated to meet not only domestic market but also export demand including: Crocodiles, snakes, turtles, and frogs ...”*
- The National Action Plan on Biodiversity towards 2010 and Vision towards 2020, and the Cartagena Convention on Biological Safety emphasize the need to *“Develop a model of sustainable use of biological resources and prevent and eliminate the exploitation, trade and consumption of rare and endangered wildlife....Undertake necessary study on the development of captive bred/artificially propagated common wildlife (unprotected) for commercial purpose to meet the market demand. Planning and develop captive bred/artificially propagated facility incorporate with ex-situ conservation of endangered species”*
- The Strategy of Forestry Development for the period of 2006-2020 (2007) states *“...Forest protection must incorporate both in-situ, ex-situ conservation, and facilitate the legal captive bred of wild fauna to meet the market demand to general a high value merchandise that could be use for the protection of forest. Strengthen planting, using of non-timber forest products, focusing on the group of potential products such as bamboos, pharmaceutical products, plastic oil, food, encourage breeding forest animals. Create a sufficient mechanism that allows the allocated forest owner to legally exploit and use of non-timber forest products under supervision of current law”*.

- The Strategy of Fishery Products Export and Development towards 2010 (1995), set the target of US\$ 1.1 billion in 2000 and US\$ 2 billion in 2005 and US\$ 3.5-4.0 billion in 2010, and the primarily goal of the policy is facilitate and promotion of off-shore fishing (wild harvest).

In general, all of the action plans, strategies emphasize those wild animals and plants are national property that needs to be protected as well as strictly manage in a sustainable development manner. Therefore, it is necessary to control the wildlife trade, particularly the trade in endangered wildlife. In addition, captive bred/artificially propagated of wildlife including rare species of high value to meet the demand of the market. The issues are repeated in most strategies, action plans or development programs for the Agriculture, Forestry and Fishery sectors. Nevertheless, very few instructions on how and who should be the focal point to ensure the specified objective will be implemented. In addition, there is no mechanism of monitoring and evaluation of the implementation.

Besides issuing such action plans, strategies, the Government and relevant ministries have also adopted a large number of legislative instruments to implement the policies. Such legislative instruments have been issued continuously; however, the provisions of the most relevant legislative texts will be described in more detail in the next section (4.2.2).

#### **4.2.2. Legal documents on wildlife trade**

Together with legal documents issued on forest protection, Vietnam has issued a large number of official documents and legislation aimed at enhancing wildlife management and protection (Appendix 1). Historically, these documents can be divided into 2 periods: before Vietnam joined CITES in 1994 and from 1994 until now.

##### **From the establishment of the General Department of Forestry 1960 to 1994**

In general, the legal documents issued by the State and General Department of Forestry during this period focused primarily on protection or the prevention of illegal hunting and exploit of natural resources. None of the document mentioned any mechanism of captive bred/artificially propagated of wildlife for commercial purpose. Thus, wildlife trade and did not make any significant contribution to the economy as well as the elimination of hunger and poverty reduction.

Some important documents on wildlife trade were issued by the Government and General Department of Forestry during this period could be summarized as the following:

- Government Decree No.39/CP dated April 5, 1963 on “Temporary regulations on hunting of birds and forest animals”. The regulations prohibit the hunting of 20 birds and animals species and restrict the hunting of 4 other animal species. The document also stipulates the prohibition of some hunting tools and location such as nature reserves and protected areas. Based on this decree, the General Department of Forestry surveyed a number of forests and created a list of forests that were to be preserved as habitats for protected birds and animals. Such forests have become the backbone of subsequent protected area system in Vietnam.

- Congressional Ordinance on forest protection of September 11, 1972, article 9<sup>th</sup> stipulates that “The hunting of forest birds, animals for any purpose must be abide by the State regulations on the hunting of forest birds and animals and must adopt permission of provincial Department of Forestry” and “The Government Commission shall stipulate rare forest animals and plants as well as regulations on their protection”.
- Ministry of Forestry Decision No.276-QĐ (June 2, 1989) specifies requirements for the protection and export or import of forest animals. It strictly prohibits the hunting and export of 30 animal, 6 bird and 2 reptile species. The Ministry of Forestry controls the overall export and import of forest animals nationwide. It encourages the establishment of captive breeding farms for the production of specimens for export. The Decision was issued in order to protect, develop and enhance the sustainable use of forest animals, particularly rare and endemic ones, as well as to prevent illegal hunting and extermination, as well as uncontrolled extraction for export, all of which result in the rapid exhaustion of populations of forest animals.
- Law on forest protection and development (1991) - Order 58-LCT/HĐNN of August 19, 1991. Forest animals are defined as a part of the forest. The Law also clearly states that “The extraction and hunting of forest animals must be in accordance with State regulations on the management and protection of forest animals and plants. Threatened forest animals and plants must be protected under special regulations. The list and protection of forest rare animal and plant species is stipulated by the Board of Ministers (Article 19)”. Article 25 clearly states that “The import and export of forest animals and plants requires a permit issued by the Ministry of Forestry. The introduction of forest animals and plants must be consistent with biological rules and national quarantine regulations, cause no harm to the ecology and be authorized by a permit from the Ministry of Forestry”
- Council of Ministers (Government) Decree 18-HĐBT (January 17, 1992) was issued to support implementation of Article 19 of the Law on forest protection and development (1991). This Decree stipulates a list of endangered forest animal and plant species as well as measures for their management and protection, the forest animals and plants in the list are divided into 2 groups (groups 1 and 2). This is the most important and effective legal document on wildlife trade and use in Vietnam as it was the first government decree that has fairly good detail instruction for implementation. The decree also exists in fairly long period of time from 1992 to 2006 when it was replaced by the Decree No.32/2006/ND-CP.
- Prime Minister’s instruction 130-TTg (March 27, 1993) on the management and protection of endangered forest animal and plant species. The Direction provides for strictly implementation of the Law on Forest Protection and Development (1991) and Decree 18-HĐBT (1992) and for effective implementation of measures to protect SUFs. The Direction also requires provincial People’s Committees to issue decisions on the protection of local endangered and endemic animal and plant species and minimization of the overseas trade of endangered animals for food to avoid ecological imbalance. The Direction plays an important role in guiding local authorities on the adoption of specific regulations on the management of wildlife trade and extraction.

- Prime Minister’s instruction No.283-TTg (June 14, 1993) on urgent solutions for the management of valuable timber. The PM required the Ministry of Forestry, People’s Committees and relevant agencies to suspend the extraction of valuable timber and to strictly control the use, trade, transport and export of valuable timber. The Direction played an important role in supporting implementation of the Law on Forest Protection and Development (1991) and Decree No.19 HĐBT (1992), as well as the overall management, extraction and consumption of valuable timber, especially timber subject to over-logging.
- Prime Minister’s instruction No.130-TTg (March, 27, 1993) and instruction No.2635-TTg requested the Ministry of Forestry, People’s Committees and relevant agencies to ensure implementation the Decree No.18-HĐBT and immediately halt the illegal harvest and hunt endemic and endangered wildlife for consumption and export. In the instruction, Prime Minister requested “Hotels, restaurant not be allowed to display and sell stuffed mammal and local rare animals”, “Strictly control and prevent the illegal trade of rare and endemic animals in local and border markets for ornament, medicine or food” and to “Minimize the harvesting of rare or overexploitation animals to export and use for food, including snakes, turtles, crabs, frogs and other endangered species, to avoid nay ecological imbalance as the course of the trade and consumption”. In fact the instruction provided a great boost for the implementation of the Decree No.18-HĐBT consequently the bush meat consumption and illegal wildlife trade control was enhanced greatly as the instruction was simultaneously implemented in all provinces by all relevant agencies.
- Official Letter No. 6817-KGVX (December 31, 1993) in which the Government authorized the Ministry of Foreign Affairs to petition the Swiss Government on Vietnam’s Join the CITES. Government also designated the Ministry of Forestry as CITES Management Authority, Centre for Natural Resources and Environmental Studies (CRES) and the Institute of Ecology and Biological Resources are designated as Scientific Authorities. Vietnam’s decision to join the CITES showed its strong determination to control wildlife trade and to coordinate with and obtain the support of other member countries.

#### **After Vietnam joined CITES (1994)**

During this period, the demand for indigenous and introduced species of wild animals and plants has been thriving, particularly in response to the continuing consumption and use of these species in Vietnam and neighboring countries. Captive breeding and artificial propagation activities are well developed in some areas. The management and control of wildlife trade have been enhanced, especially; policies and legal documents on the management and control of wildlife exploit and trade which have provide lot of help for

- Ministry of Forestry Official Letter No.559-LN/KL (March 21, 1994) to provincial People’s Committees on the strengthening of wildlife protection to enhancement of the implementation of the Law on Forest Protection and Development (1991), Decree No.18-HĐBT (1992) and Prime Minister’s instruction No.130-TTg (1993) on the protection of endangered wild animals and plants. This document is quite practical in term of providing specific directions to have a better control of wildlife extraction and trade, especially in dealing with illegal trade and consumption.

- Ministry of Agriculture and Rural Development Circular No.04-NN/KL -TT (February 5, 1996) on the implementation of Prime Minister's Decree No.02-CP (January 5, 1995) on regulations for prohibited and conditional merchandise to be trade commercially in the domestic market (see the text of guidelines on wildlife trade).
- Prime Minister's instruction No.359-TTg (May 29, 1996) on the urgent measures for wildlife protection and development after 5 years of implementing the Law on Forest Protection and Development (1991) and 4 years of implementing Decree No.18-HĐBT (1992). The instruction is very adequate in order to requested for an evaluation and report of the law enforcement, especially those relate to illegal wildlife trade. The instruction also mentioned the necessary of establishing adequate wildlife rescue central to deal with confiscation wildlife specimen. In addition, the wildlife release operations, confiscation and the control of hunting guns and the promotion of breeding and artificial propagation were also clear request for responds. The instruction request for strong responses to illegal wildlife trade, including the prosecution of illegal wildlife trader.
- Ministry of Agriculture and Rural Development Official letter No.2472-NN-KL/CV (July 24, 1996) to relevant units to support the implementation of Prime Minister's Direction No.359-TTg on strengthening measures for the protection and conservation of wildlife. The aim of this official letter is to deliver more specific guidance on requirements under Prime Minister's instruction No.359-TTg.
- Government Decree No.11/199/NĐ-CP (March 3, 1999) on prohibited, restricted and conditional merchandise in services include wildlife.
- Ministry of Agriculture and Rural Development Decision No.45/1999/QĐ-BNN-KL (March 12, 1999) on the suspension of Cinnamon oil (*Cinnamomum balansea*) from extraction, distillation and consumption.
- Ministry of Agriculture and Rural Development Decision No.47/1999-QĐ-BNN-KL (March 12, 1999) on regulations for the control of transport and trade in timber and forest products. Articles 10 and 11 of the Decision stipulate the transport documents required for wild animals and the license or special permission required for transporting endangered animals.
- Forest Protection Department Official Letter No.390-KL-BTTN (September 9, 1999) on procedures for registering commercial crocodile farms.
- Ministry of Agriculture and Rural Development Circular No.153/1999/TT-BNN-KL (November 05, 1999) on instructions for stamping "Vietnam Forest Protection" on a small volume of imported timber from Cambodia.
- Prime Minister's Decision No.242/1999/QĐ-TTg (December 30, 1999) on import and export goods for the year 2000. In the Decision Endangered wild animal and plant species are listed by Ministry of Agriculture and Rural Development is prohibited for export.
- Prime Minister's Decision No.46/2001/QĐ-TTg (April 4, 2001) on the management of import and export goods during the period 2001-2005, in which the export of wild harvested terrestrial animals is prohibited.



- General Department of Custom's Decision No.1494/2001/QĐ-TCHQ (December 26, 2001) on temporary customs procedures for import and export goods, in the decision, detail procedure and requirement for wildlife import and export is given.
- Government Decree No.11/2002/NĐ-CP (January 22, 2002) on managing the import, export and transit of wild animal and plant, in accordance with the CITES.
- Government Decree No.48/2002/NĐ-CP (April 22, 2002) on amendment of the List of protected wild animal and plant for the Decree No.18/HĐBT (January 17, 1992) .
- Ministry of Agriculture and Rural Development Ministerial Circular No.123/2003/TT-BNN (November 14, 2003) issuing the CITES appendices to be implemented in Vietnam in accordance with the Decree No.11/2002/NĐ-CP (January 22, 2002).
- Government Decree No.32/2006/NĐ-CP (March 30, 2006) on the management of endangered forest animal and plant species to replace Decree No.18-HĐBT and Decree No.48/2002/NĐ-CP. The new decree provided more complete definition of protected wildlife and common wildlife and procedure of wildlife captive bred/artificial propagation. In this decree aquatic species that are under the supervision of the Ministry of Fishery is excluded.
- Government Decree No.82/2006/NĐ-CP (August 10, 2006) on the management of import and export, transit, ranching, captive breeding and artificial propagation of CITES-listed species to support the implementation of CITES. The decree provide the most update conditions and procedures for the export, import, re-export, introduction from sea, transit, ranching, captive breeding and artificial propagation of CITES-listed species (including hybrids) in accordance with the CITES. The Decree also includes 5 forms, including: application for a CITES permit/certificate; the CITES permit/certificate, certificates and registration forms for artificially propagation facilities and captive breeding farms for CITES-listed species and non-CITES species.
- Ministry of Agriculture and Rural Development Decision No.54/2006/QĐ-BNN (July 05, 2006) on the issuance CITES appendices to be implemented in Vietnam in accordance with the Decree No.82/2006/NĐ-CP.
- Ministry of Agriculture and Rural Development instruction No.1284 /CT-BNN-KL (April 11, 2007) on strengthening the management of wildlife ranching, captive breeding and artificial propagation facilities.
- Ministry of Agriculture and Rural Development Decision No.07/2007/QĐ-BNN (January 23, 2007) on the establishment of the CITES Management Authority.

Besides legal documents issued by the Prime-Minister, Ministers and relevant management agencies, some provinces also issued local policies and regulations to deal with local issues related to wildlife trade and harvesting or the development of captive breeding and artificial propagation facilities and which required urgent attention. An Giang province (Southern Vietnam) is one of the leading provinces for issuing such policies and regulations to deal with the management of wildlife trade in the area. In addition, their local policy also strongly emphasizes and encourages the promotion of captive breeding, artificial propagation and legal wildlife trade in order to support the national strategy on the elimination of hunger and

poverty eradication. For example, on April 1, 1998, An Giang People's Committee issued Decision No.640/1998/QĐ-UB on the management, protection and development of wild forest animals, that encourages local communities and households to invest and develop commercial captive breeding facilities. On November 03, 2000, the provincial People's Committee issued Decision No. 2268/2000/QĐ-UB on promoting and implementing investment incentives for local commercial wildlife breeders. The Decision has some remarkable provisions, which include the following: *“Breeders of wild animals and plants are exempted from taxes on land use for the period of 3 up to 11 years, corporate income in the first 2 and 3 years”* and *“Households and farms could lend appropriate credit for breeder program. As for households, individuals and farm owners who have the demand of borrowing up to VND 20 millions and less than VND 50s million for fishery breeding, it is unnecessary to have a mortgage or deposit”*.

Such documents are very specific and detailed in terms of establishing concrete promotional measures, such as the provision of appropriate credit and legal frameworks for the commercial captive breeding of wildlife. The policy actually supports strong law enforcement for dealing with illegal wildlife trade, while widely encouraging legal trade. In addition, the two Decisions have a strong mechanism for providing credit and taxes to wildlife breeding businesses that have positive effects on the development of legal wildlife breeding in An Giang. Consequently, the breeding of crocodiles, frogs, and many other aquatic species have increased significantly in the area. The development of wildlife trade in the province has brought significant income and employment to many households and the local community.

#### **4.2.3. Implementation of wildlife trade policies**

Due to the independent management and regulation of domestic vis-à-vis international wildlife trade, the implementation of Vietnam's wildlife trade policy is divided into 2 parts: a) domestic exploitation, consumption and trade; and b) international wildlife trade. This section will summarize the implementation of this policy since 1992 (after the issuance of the Vietnam's first legislation on wildlife management and trade, the Decree No.18/HĐBT) until now. The following is a summary of the actions taken to issue and implement the Country Action Plan on strengthening the management of wildlife trade towards 2010, as well as key documents on wildlife trade such as the Decree No.18/HĐBT, Decree No.48/2002/NĐ-CP, Decree No.11/2002/NĐ-CP, Decree No.59/2005/NĐ-CP, Decree No.32/2006/NĐ-CP and Decree No.82/2006/NĐ-CP.

#### **Implementation of the National Action Plan on strengthening the management of wildlife trade towards 2010**

The National Action Plan was issued in 2004 in the context of Vietnam's rapidly developing wildlife trade. The Plan responded to an urgent need to provide clear direction for the management of wildlife species and their trade, integration of such management and trade with related socio-economic development, prevention of illegal wildlife trade and enhancement of the captive breeding and artificial propagation of wildlife with high economic value.

In the Plan, a series of actions were adopted for implementation of its goals. The review team was pleased to find that many specific implementation actions have been actively addressed, including those related to law enforcement; capacity enhancement, completion of the legal framework; establishment of captive breeding and artificial propagation procedures and facilities and international cooperation.

It is significant that the Action Plan reflects an agreement between Vietnam and China to organize an annual meeting and discussion on the implementation of CITES and the management of wildlife trade between the two countries. In addition, the Plan also emphasized the need for a regular meeting of Mekong countries on the management of wildlife trade, with the support of the CITES Secretariat. These specific actions have been appropriately implemented in accordance with the Action Plan.

Education activities on wildlife protection and the need to avoid using endangered or illegally traded wildlife have been conducted under the Plan. Some key programmes were successfully conducted such as sea turtle conservation (by WWF, Traffic and Former Ministry of Aquaculture), the Tiger Conservation Program (by WWF and CRES), the gibbon conservation program (CRES) and the wild cattle conservation program (MARD). Moreover, assessments of wildlife trade and management have been carried out in more than 10 provinces and areas that were identified as hot spots for illegal wildlife trade.

In addition, the lack of proper government fund allocation and expenditure, however, slowed down implementation of the policy, particularly in enhancing capacity of administration agencies and law enforcement agencies, in relation to wildlife trading; propagandizing and public awareness raising; evaluation research of wildlife trade state, especially the populations of being exploited and traded species. The implementation of breeding development goal also met a lot of difficulties in technique, breed source and scientific background.

The implementation monitoring has not been placed special importance properly when the Plan was enacted and carried out over a half of projected duration but has not been summarized and reported. Thus, it is difficult to evaluate the implementation and unreasonable problems in execution process.

One important goal in the Action Plan, aimed at bringing benefits to the public from biodiversity resources with high value, is “To develop captive breeding and artificial propagation of wildlife as a tool for conservation and fighting hunger and poverty”. In fact, this goal has not been well implemented, as the communities living around and inside the forests have not been encouraged and supported in the development of wildlife breeding and propagation activities.

Captive breeding and artificial propagation activities have nevertheless increased dramatically during the last few years. This partly results from the promotion of policy measures designed to improve and simplify registration and certifying procedures as well as to facilitate the movement of legal trade. The captive breeding and export facilities for pythons, crocodiles, and frogs that have developed in many localities seem to show that this policy has had positive effects.

On the other hand, illegal wildlife trade is reported as having only slightly changed as a result of the policy. Records indicate that it still occurs in many places. This would seem to show that the Action Plan may not have had a very strong impact on illegal trade. As noted above, a slow implementation process, and an inadequate budget have prevented the development of a strong and effective law enforcement campaign aimed at reducing the illegal trade. In addition, the accelerated market demand for wildlife has made dealing with illegal trade more difficult.

## **Domestic wildlife exploitation and trade**

Domestic wildlife exploitation and trade has been mainly regulated by Decree No.18/HĐBT (1992), based on Forest Protection and Development Law (1991), and later regulated by Decree No.32/2006/NĐ-CP (2006). The latter Decree is based on the newly amended Forest Protection and Development Law and National Action Plan on strengthening the control of wildlife trade towards 2010 (2004). In addition, the former Ministry of Fishery (Now Ministry of Agriculture and Rural Development) also issued Decree No.59/2005/NĐ-CP on the business conditions for aquatic products (2005). These are the most important legal documents on the management of domestic wildlife exploitation and trade.

### ***Implementation of the Government Decree No.18/HĐBT and Decree No. 48/2002/ND-CP***

Decree No.18/HĐBT on wildlife trade was in effect for approximately 15 years, until it was amended (update the list of protected species) by Decree No.48/2002/NĐ-CP (2002), in fact these two decrees one with and additional updated list protected species (Decree No.48/2002/NĐ-CP). This Decree No.18/HĐBT has had the most significant impact on wildlife protection, exploitation and trade. It is also the first legal document which provided definitions for endangered and common wildlife. The Decree lists 13 species and taxa of wild plants and 36 species of wild animals whose use and extraction are strictly regulated. It also lists an additional 19 species and taxa of wild plants and 10 species of wild animals whose use and extraction are completely prohibited.

On 22 April 2002, the Government issued the No.48/2002/NĐ-CP which revised the list of endangered wildlife established under Decree No.18/HĐBT. The issuance and implementation of both Decrees brought about good changes for the protection of many species. In fact, the issuance and implementation the Decree have brought a lot of existence opportunities for many wildlife species. For instance, before 1992, many animal populations had been rapidly reduced because of over-hunting and a loss of natural habitats. Many plants had been exhausted by timber extraction but there was no legal protection until the issuance of Decree No.18/HĐBT. In the course of implementing this Decree and the Law on Forest Protection and Development (1991), many wildlife trade violations were prosecuted.

Nevertheless, many of the Decree No.18/HĐBT' provisions were not properly implemented. For example, Article 4 of the Decree stipulated "The Government shall encourage, support and ensure the rights of organizations and individuals that help the protection and development of endangered forest animals and plants". In fact, very few or no actions were undertaken to support the implementation of Article 4. Similarly, Articles 5 and 6 required the management of endangered species and the monitoring of their populations, in reality, very few monitoring or assessment programs were conducted to meet the requirement.

Due to the lack of necessary information and instructions, many difficulties were encountered especially the inadequate training on implementation. For instance, the identification of protected animals, and particularly their products, was very difficult for most implementing agencies, including Forest Protection, Customs, Police and Market Management Units. Despite this situation, there were very few training and supportive documents to help these agencies which resulted less effective implementation of the Decree.

The prosecution and punishment of illegal harvest and trade also met with many difficulties. Violations involving animals often attract more attention than those involving plants even though they are in the same level of protected species. Moreover, many become endangered because of the illegal trade are not listed in the Decree while some species are not threatened was unnecessary included.

### ***Implementation of the Decree No.32/2006/NĐ-CP***

Decree No. 32/2006/ND-CP is the latest Decree issued in accordance with the Law on Forest Protection and Development (2004). It revises and replaces both Decree No.18/HĐBT and Decree No.48/2002/NĐ-CP, which had become somewhat outdated and limited in their effectiveness. The new Decree was prepared to avoid any overlap in the implementation of national laws and international conventions. In particular, fishery species such as sea turtles and fish were removed in order to avoid any overlap with legislation under the Ministry of Fishery.

Overall, Decree No.32/2006/NĐ-CP was well-prepared and more practical than earlier legislation. However, implementation of the Decree faced the same difficulties as implementation of Decree No. 18/HĐBT. For example, there is still no identification material for protected species or their products. Thus, no proper training has been undertaken for relevant law enforcement agencies on implementation of the Decree.

Decree No.32 states that “The Government will encourage, support and ensure the legal rights and benefits for organizations, households and individuals in the management, protection and development of rare and endangered forest animals and plants”. In fact, there have been no actions to implement this goal.

Guidance for the rescue and release of live specimens of confiscated wildlife was given in the Decree but no source of or mechanism for financing such activities was provided. The absence of proper funding has made it very difficult for the government to properly dispose of confiscated live animals.

In some ways, the list of wildlife in the Decree overlaps with Decree No.59/2005/NĐ-CP (fishery protection). Certain species such as turtles and crocodiles are listed in both decrees. This overlap has caused some confusion for local management authorities for fishery and agriculture and has made it difficult for them to determine which list (and Decree) should be applied.

The punishment of violations according to Decree 32/2006/NĐ-CP also met a lot of difficulties due to difficulties in rare species valuation; thus, it is impossible to apply punishment level or investigate appropriate accountability.

### **International trade**

International wildlife trade and business in Vietnam are basically regulated under the following three documents, Decree No.11/2002/NĐ-CP, Decree No.59/2005/NĐ-CP and Decree No.82/2002/NĐ-CP.

### ***Decree No.11/2002/NĐ-CP***

Decree No.11/2002/NĐ-CP was issued 9 years after Vietnam joined CITES. Accordingly, during that nine-year period, Vietnam had no specific policy for implementing CITES. Therefore, before the Decree issuance, international wildlife trade is managed quite flexibly according to both current regulations and CITES regulations. Decree No.11/2002/NĐ-CP provided basically and completely CITES requirements and regulations on international endangered wildlife trade. Hence, the Decree takes an important role to be principal legal base for implementing CITES and international endangered wildlife trade. This became Vietnam's first ever policy instrument on international wildlife trade.

After issuance of the Decree, at least 6 training courses on CITES implementation were conducted for owners of captive breeding and artificial propagation facilities and local wildlife traders. Some courses were also conducted for law enforcement agencies such as Customs, Police, Border Police, Forest Protection and Market Management Units which were identified as key implementation partners for CITES. In addition, training on CITES implementation and international wildlife trade has been formally included in the regular professional training for Customs and forest rangers. Such activities have had direct positive impacts on the management of wildlife trade and implementation of CITES in Vietnam.

Shortly after the issuance of Decree No.11/2002/NĐ-CP, all captive breeding and artificial propagation farms were registered and supervised under CITES regulations. This registration, in fact, had positive impacts in terms of illegal wildlife trade control and provision of a source of legal income for the community.

However, during implementation of the Decree, several overlap between it and Decree No.48/2002/NĐ-CP were identified. For instance, Customs and Market Management Units were often confused when they conducted import and export procedures for species listed in both Decrees. This confusion meant that no fines were imposed on CITES-listed species that had been illegally traded because there was no Vietnamese document providing instructions on how relevant agencies should proceed.

Implementation of this Decree has been complicated, according to reports from law enforcement agencies. The most common difficulties stem from the lack of skills and information needed for species identification, as most of the species found in trade do not occur in Vietnam. In addition, the use of 3 languages (English, Spanish and French) in CITES documents has caused difficulty for enforcement agencies. In Vietnam, English is the most common language used for export and import documents, and many Vietnamese cannot easily read documents in French or Spanish.

Direct contact between enforcement agencies such as Customs, Police, Forest Protection and CITES science and administration agencies is also difficult, particularly as for the staff working at the national import or export ports located in remote and insufficient information areas. In fact, Decree No.11/2002/NĐ-CP was enacted hastily, which causes several inappropriate and unreal points. This leads to certain difficulties during implementation process.

### ***Decree No.59/2005/NĐ-CP and Circular No.02/2006/TT-BTS***

Decree No.59/2005/NĐ-CP was issued to manage the export of endangered aquatic species which were affected by overexploitation and unsustainable trade. The Decree was actually drafted by the Ministry of Fishery, so it focused only on fishery-related issues. Circular No.02/2006/TT-BTS was issued by the Ministry of Fishery to give more instructions on the implementation of the Decree No.59/2005/NĐ-CP.

During its implementation, some difficulties such as its areas of overlap with other legislation were identified. The Decree also listed some species that were already listed and managed under other documents such as Decree No.48/2002/NĐ-CP and Decree No.11/2002/NĐ-CP. For example, sea turtles (*Chelonia* spp.), salamanders (*Paramesotriton deloustali*) and crocodiles (*Crocodilus* spp.) were mentioned in all three Decrees. Captive breeding farms as well as fishery and agriculture management authorities had difficulties in defining which Decree was applicable to crocodiles or sea turtle products. It was unclear which management authority was in charge of the issue (i.e. Forestry department, Fishery department or Agriculture department).

These fishery decrees clearly state that the trade and use of hawksbill turtle (*Eretmochelys imbricata*) are illegal. Products from hawksbill turtle such as fine art and handicraft products are sold in many local shops that show a very limited law enforcement action were undertaken. Similarly, many other fishery species listed in the decrees have been illegally exploited and traded or kept in private collections and thereafter freely traded. The weakness in law enforcement once again showed not only at the terrestrial species but also fishery species.

Law enforcement agencies such as Customs and the Border Army constantly reported the difficulties they had while implementing the Decree, particularly in connection with the identification of fishery species and products. They requested that supporting documents be developed for law enforcement agencies such as a manual, handbook of identified protected species or guide to legal documents for fishery protection and CITES implementation. Nevertheless very few such documents and guidance was ever issued to help their implementation efforts.

### ***Decree No.82/2006/NĐ-CP***

After four years of implementation (2002-2006), it was recognized that Decree No.11/2002/NĐ-CP was impractical in certain respects, and even had areas of overlap or incoherence with Decree No.48. The Decree also lacked appropriate supervision for some important terms especially insufficient guidance for implementation. This was particularly problematic because captive breeding and artificial propagation facilities and wildlife trade were continuing to increase, requiring clearer definitions and management instructions. Accordingly, the Decree could not provide appropriate and sufficient regulation. Decree No.82/2006/NĐ-CP was therefore issued to replace Decree No.11/2002/NĐ-CP with the aim of comprehensively addressing all of the requirements for sound wildlife trade management and covering the loopholes that had been identified in Decree No.11/2002/NĐ-CP.

Under Decree No.82/2006/NĐ-CP, more guidance was provided on the registration and management of captive breeding and artificial propagation farms and the procedures for issuing CITES permits and certificates were significantly streamlined and simplified. An additional office of the CITES Management Authority was opened in southern Vietnam.

Moreover, two CITES Scientific Authorities were added to provide more and better expertise on issues related to forestry and fisheries (Forestry Science Institute and Institute for Aquaculture Research). The Decree clarified the handling of situations where a species receives a certain level of protection under CITES and another level of protection under domestic legislation. More clarification was also provided on the respective responsibilities of CITES authorities.

During implementation of the Decree, it still proved to be difficult to effectively manage wildlife trade and to penalize illegal trade, particularly when consignments of live exotic animal and plant species were involved. The confiscation of illegally traded specimens continued present difficulties in terms of available financing and disposal techniques, especially with regard to the housing and care of live specimens. As a result, the mortality level for confiscated specimens was very high during prosecutions; only few of them could be released into the wild or transferred to a rescue facility.

Decree No.82/2006/NĐ-CP has generally been put into operation, despite issues and difficulties that arose during its initial period of implementation. Certainly, all of its potential weaknesses have been identified and an overall assessment of its effectiveness will now depend on how it is actually implemented over time.

#### **4.2.4. Some preliminary discussion on policy context**

From an overall perspective, the Vietnamese policies adopted on wildlife trade have been very complex and comprehensive, particularly in terms of their number and scope. Some of these policies have been quite practical and have provided crucial help in the management of wildlife trade throughout the country. In addition, policy documents have been issued continuously over a long period thus meeting some of the demands for legislative development and responding to national economic development strategies. The policies have also contributed to the building of a legal framework for implementing international conventions and treaties (on biodiversity, environmental protection and wildlife trade) to which Vietnam is party.

During this time, many actions have been undertaken to implement the commitments and goals that were set forth in those policies. This implementation progress is also visible from the regular replacement of legal documents which were found to be insufficiently practical or relevant as a result of experience with their implementation. Some policy assessments and evaluations have also been conducted, which identified overlaps and loopholes that contributed significantly to further refinement of Vietnam's policies.

Policies have been issued to strengthen the conservation and management of Vietnam's wildlife, encourage captive breeding and artificial propagation and, support sustainable extraction that ensures reasonable use and raises the income of local communities.

A number of issues related to the promotion of captive breeding and artificial propagation of wildlife were also addressed in the policies. The policies have primarily aimed to increase income for local people, especially the poor, and to decrease the demand on wild populations by providing people with an opportunity to obtain those specimens from another source. Nevertheless, this goal has only been partially achieved to date because captive breeding and artificial propagation facilities are mostly operated by average-income households, and poor people are still restricted to harvesting animals and plants from the wild.



Vietnam's policies to date have seemingly tried to address too many goals, which have made implementation more difficult. As result, most of the adopted goals and objectives have not been implemented as scheduled. In particular, the National Action Plan on strengthening the management of wildlife trade towards 2010 (2004) proposed 15 specific actions. Some of these actions have not yet been carried out, even though implementation of the Plan is now past its halfway mark. The periodic supervision and assessment of policies during their implementation is rarely done, despite requirements or expectations to the contrary. Therefore, practical problems and loopholes identified within existing policies have not always been addressed and may even have been repeated in new policy and legislation.

It seems that the manner of managing natural resources has not been closely incorporated with the needs of beneficiaries. In particular little encouragement and guidance have been provided to local people, especially communities living in the buffer zones of protected areas, on how they might find other livelihoods that could replace traditional hunting and wildlife harvesting. Policies have tended to focus only on conservation and law enforcement, and have therefore sometimes ignored social and livelihood issues.

Vietnam's policies have paid some attention to and mentioned the rights of communities regarding the exploitation and use of wildlife resources. There have also been policy provisions that support and encourage the captive breeding and artificial propagation of wildlife. In reality, however, there has been little action taken to allow the exploitation and use of wildlife. Most terrestrial wild animals have been banned from exportation, listed as endangered or restricted in terms of their exploitation and use. Therefore, the positive effects of legal use have yet to be seen because emphasis continues to be placed on detecting and combating illegal exploitation and use. There needs to be, in Vietnam's policies, true encouragement of the positive aspects of wildlife trade, economic incentives or sustainable harvest regimes.

People who are responsible for policy implementation often come from different disciplines and they need training, reference materials and supporting documents on wildlife trade issues, such as those related to species identification. The absence of such support means that agencies are often unable to effectively implement the actions that are specified in a particular policy. This may reduce, in part, the overall performance and effect of the policy itself.

Vietnam's policies establish the functions and responsibilities of the CITES authorities. Decree No.11/2002/NĐ-CP and No.82/2006/NĐ-CP, in particular, require the State to ensure the necessary operational financing for CITES authorities. In reality, however, such financing is very limited and is only allocated to operation of the Management Authority. The budget for researching, assessing and monitoring populations of protected species has not yet been provided. There also is no budget for CITES Scientific Authorities to participate in regional or international CITES meetings. As a result, participation in regional, international meetings to discuss issues regarding CITES implementation often depends solely on external financing from international donors. Due to these budgetary difficulties, the activities of both the CITES Scientific and Management Authorities remain limited.

There has not been enough background documentation prepared on national wildlife trade and CITES requirements to support law enforcement officers such as customs, the police, forest rangers, etc.... Key information about protected wildlife species, particularly information regarding their distribution, populations and trade, is sometimes insufficient or has not yet

been collected. Therefore, decision makers occasionally have little or no information on which to properly determine whether to continue exporting specimens of a particular species or to suspend exports until a comprehensive non-detriment finding can be made in relation to the harvesting of that species.

The decision to establish rescue centres for live specimens of confiscated wildlife, and the guidelines for doing so, are contained in Vietnam's policies, particularly Decrees No.11/2006/NĐ-CP, No.82/2002/NĐ-CP, and No.32/2006/NĐ-CP and the National Action Plan. However, only two centres have been established to date and one of them is quite newly established. The work of both centres is very limited due to funding difficulties and technical problems. Therefore, the confiscation and disposal of live wildlife specimens are still key issues that need to be addressed. The difficulty of housing confiscated wildlife specimens, as well as successfully releasing them into the wild, has been the subject of complaints by most Provincial Forest Protection Departments as there has not been any budget expenditure allocated for these activities. In addition, there are a number of technical problems associated with the rescue and release of live animals. Those undertaking such actions are often not well-equipped with appropriate techniques and procedures, so sometimes the release brings unexpected results which are hard to control. It is possible that some animals have been released into the wrong habitat and this may have caused negative impacts on the release areas. In some cases, injured and sick individuals may have been released into the wild.

The budget expenditure allocated for implementing Vietnam's policies is much lower than what is actually required. It is very difficult to effectively implement the policies under such constraints as objectives and required of the action plans, strategies on wildlife trade could not or insufficient be implemented simply because of inadequate budget and resources.

The above-mentioned difficulties have noticeably limited the implementation of Vietnam's policies. Accordingly, if appropriate technical and financial support were provided, the implementation of CITES and related policies on wildlife trade would certainly be much improved and more effective.

### 4.3. Identify policy impacts

#### 4.3.1. The environment and conservation impacts

##### Positive impacts

Vietnam has been implementing two long-term strategies for socio-economic development, which have brought about a high level of annual economic growth. The percentage of the poor householders has decreased rapidly, the economy of mountainous regions has developed in a sustained upward trend and the overall living standard has been improved. This positive economic growth has consequently had positive impacts on the conservation of nature and environment.

Vietnam's socio-economic policies in general, and its more specific policies on natural resource conservation and wildlife trade, have substantially contributed to the country's socio-economic development and its nature conservation achievements. Key successes include the following:

- 128 Special Use Forests (SUFs) including National Parks, Nature Reserves, Species and Habitat Conservation Areas and Landscape Protection Sites, have been established throughout the country. These protected areas represent a wide range of different eco-regions and unique habitats for many wildlife species, especially endangered and endemic species. The system is an important component of long-term environmental protection and ensures the survival of many wildlife species in Vietnam. In a number of cases, the establishment of the protected areas system is considered successful and effective in terms of protecting Vietnam's last remaining unique forests and wildlife. The effective operation of Vietnam's protected areas has provided such shelter for endangered species that now some of them can only be found in these protected areas.
- The rights of access to natural resources have been improved, particularly for communities living in the buffer zones of the special use forests. Policies on hunger eradication and poverty reduction have been effectively carried out in many areas, particular in the buffer zones just mentioned. These improvements have had many positive effects, including the stimulation of legal and sustainable natural resource extraction by local people. In some cases, illegal wildlife trade has been reduced significantly by improving people's living conditions.
- The Vietnamese government has endeavored to save, protect and recover many species from the brink of extinction. These efforts have multiplied recently in response to a growing list of endangered or potentially endangered species. The Vietnamese Rhinoceros (*Rhinoceros sondaicus annamiticus*), hatinh langur (*Trachipithecus hatinhensis*), Siamese crocodile (*Crocodylus siamensis*) and aloewoods (*Aquilaria* spp.) are typical examples of species that were prevented from reaching the brink of extinction. It is likely that many more species could be provided better protection, if it were possible to place confiscated specimens in proper rescue centres and then reintroduce them into their natural habitat.
- Recently an assessment of the Government shows that the causes of biodiversity loss and damage to forest and marine ecosystems have been lessened. Some ecologically important marine areas were protected from unsustainable exploitation and a large forest area was saved from logging through the effective implementation of a policy that banned logging

in natural forests. A new forest protection law has significantly reduced the amount of land being converted to other uses; especially those lands belonging to the protected areas system. These improvements were consequences of practical policies that were effectively implemented, especially with regard to environmental protection and the wildlife trade management. More importantly, Vietnam's environmental protection law requires the proponents of all projects and development programs to undertake environmental impacts assessments before those projects or programs are approved. This measure helps a great deal to avoid the negative effects of overharvesting and to ensure development that is supportive of environmental conservation.

- A number of Prime Minister's directions and decisions have been issued to strengthen existing policy measures for forest protection and wildlife trade management. Such documents have provided vital support and instructions to law enforcement agencies. In addition, these documents requested that implementing agencies report directly to the Prime Minister on actions related to wildlife trade management. This reporting mechanism has had strong positive effects in that it prompted proper implementation by enforcement and other relevant agencies. It also provided a useful means of monitoring and evaluating the benefits of having a direct reporting channel from law enforcement officers to the head policy maker.

### **Negative impacts**

Assessing the negative impacts that wildlife trade policies might have on the environment is very difficult as policies do not usually bring about rapid changes. Rather, they cause gradual impacts and bring about slow changes. Finding indicators that reflect such changes is also difficult. To assess these changes normally requires long term supervision and a standard baseline for monitoring change. A variety of indicators should be selected, such as several ecosystems and species populations. The negative impacts of a wildlife trade policy and its implementation could then be detected by looking at the changes that occur in those ecosystems, or species populations between the point in time when the policy is issued and when it is put into action. It must be recognized, however, that even though some of the changes detected may have been partly brought about by the wildlife trade policy, the majority of those changes were probably caused by other policies (e.g. development or economic policy) and by other natural and social factors that are difficult to identify.

In addition, there is a general downward trend in the quantity of all natural resources due to various factors. Moreover, a reduction in the quantity of natural resources is common for a developing country like Vietnam, where natural resources are being exploited to achieve the priority goal of human development. Such a reduction in natural resources is also caused by the application of inappropriate policies such as exploitation that usually exceeds the recovery of the natural resources.

Despite all of the efforts made to issue and implement related policies, the management of natural resources (including wildlife) still shows there are many weaknesses and loopholes in resulting legal framework. These may be due to the adoption of difficult goals and ambitious objectives or the lack of sufficient funding, and capacity to do the necessary work. As result, it has not been possible to prevent or effectively address illegal wildlife trade and unsustainable exploitation. This has resulted in ecosystems and species populations being diminished. In the following sections, some examples are given of the changes in ecosystems and species populations that have been caused by human actions. The recovery of certain ecosystems and populations, due to human intervention, is also described.

## The changes of some ecosystems

**Forest ecosystem.** From 1943 to 1995, the forest coverage in Vietnam declined from 44% to 28.2% of the total land area. Thanks to positive policy measures on forest protection and development, as well as those on wildlife trade management, forest coverage gradually recovered during the 90s. Remarkably, it reached 36.7% in 2005 (Table 2). The total land covered by protected areas occupies only 2% of the total land area.

**Table 4. Forest and forest cover changes in Vietnam**

Year	Area (1000ha)			Cover (%)	Average ha/capita
	Natural forest	Plantation	Total		
1943	14.300	0	14.300	43,0	0,70
1976	11.077	92	11.168	33,8	0,22
1985	9038	584	9.892	30,0	0,16
1990	8430	745	9.175	27,8	0,14
1995	8.25	1.050	9.302	28,0	0,12
2000	9.444,2	1.471	10,915	33,2	0,14
2002	9.865,0	1.919,6	11.784,6	35,8	0,14
2004	10.088,3	2.218,6	12.306,9	36,7	0,15
<b>Average area of ASEAN in 2000</b>					
2000	211.387	19.973	231.360	48,6	0,42

Source: MONRE, 2005

Although the number of forest areas and their coverage have increased; however, forest quality is declining. The recovered forests are mainly composed of regenerated, bamboo and plantations which have low volumes of biomass and are poor in biodiversity, when compared with primary forests. The primary forests, which are home to number of wildlife species, are still declining.

Such declines in the quantity and quality of forest cover are the result of human activities such as war, logging and land conversion. These activities caused the destruction of most of the primary forest together with the selective cutting of certain timber species and the conversion of forest areas to agricultural land. As a consequence of these strong negative impacts, the primary forest is now likely to remain only in protected areas.

The reduction of the forest cover is also a result of national priority being given to reconstruction and development during the last decades. Large volumes of wood were needed for rebuilding the country after the First and Second Indochina Wars (1945-1975) and land conversion was needed to ensure the necessary supply of food and other agricultural products. During this time, the environment as well as wildlife protection and management were to put aside as lesser priorities. They were reprioritized recently, however, due to the accelerated loss of forest areas and global climate change.

**Wetland ecosystem.** Wetland areas are declining rapidly. The two biggest wetland ecosystems in Vietnam, that is, the Red River delta (around 1.7 million ha) and the Mekong River delta (about 3.9 million ha) are now being largely converted to agricultural lands, industrial zones and aquaculture areas.

The total area of mangrove forests is 155,290 ha, but it has declines more than 100,000 ha since 1990 (MARD, 2004). During the past two decades, over 200,000 ha of mangrove forests have been destroyed in order to create shrimp ponds or fish ponds. The illegal conversion of mangrove forests occurs in most coastal areas. Today, it is hardly possible to find any remaining primary mangrove forests in the country. Losing mangrove forests also means losing the breeding grounds for aquatic species as well as the natural habitats and colony areas for water birds and other migratory species, Loss of the mangroves also means the loss of their capacity to ensure anti-acidification and to prevent erosion in estuaries and inshore regions.

The loss of mangrove forests and wetlands may be the result of weak forest protection and land management activities. The need to protect mangrove forests and important wetlands is recognized in the forest protection laws and the National Strategy for Environmental Protection until 2010 and Vision towards 2020. Nevertheless, the fact that illegal conversion is still occurring shows that there are weaknesses in law enforcement efforts and that neither the policy nor the law has been properly implemented. These weaknesses have resulted in large mangrove forest and wetland areas being illegally converted to aquaculture and agricultural lands

***Marine ecosystem.*** The marine ecosystem contains many resources that are important for human life and development. However, this critical ecosystem also declined due to human activities the primary cause of such decline is the overexploitation of fishery resources, particularly through unsustainable harvesting practices like intensive fishing with small-mesh nets and destructive exploitation involving explosives and toxic substances. In addition, the health of the marine ecosystem is threatened by polluting chemicals and waste as well as massive costal development and construction.

Such overexploitation and unsustainable development practices have resulted in many negative impacts upon and changes to the living resources located in Vietnam's marine areas. The populations of a number of valuable aquatic species have greatly declined. In recent years, people have noticed that many fish are no longer found in Vietnamese waters. According to the newest marine resource assessment, as many as 85 aquatic species are being threatened at different levels. Of these, 70 species have been listed in Vietnam's Red Book (MOSTE, 2000; MONRE, 2005).

Changes in the marine environment have partly resulted from slow policy implementation. Protection of marine ecosystems is required under Vietnam's Fishery Law (2003), Environmental Protection Law (2005) and other fishery policies and legislation. However, it appears that the policies and laws have not been effectively implemented, resulting in inadequate management of, and significant harm to, the marine ecosystem.

### **Box 1. Coral reef**

**Status of coral reefs in Vietnam.** Coral reefs are important natural habitats for many marine species. However, the reefs which protect coastal areas from potentially destructive tides and erosion have significantly declined. Coral reefs surveys from 1994 to 1997 at 142 sites in Vietnam showed that the damage has reached a level of critical alarm. Only 1% of the coral reef areas are in very good condition (i.e. covered by more than 75% live coral), 26% or in good condition (i.e. covered by 50-75% live coral), 41% are in medium condition (i.e. covered by 25-50% live coral) and 31% are in poor condition (covered by <25% live coral) (MONRE, 2005).

The assessment concluded that 96% of the coral reefs in Vietnam are under threat. Among the threats identified, destructive fishing methods were found to be the key threat to 85% of the coral reefs, overfishing threatened 60% of the coral reefs, solid sediment pressures affected 50% of the reefs and infrastructure development affected 40 % of the reefs (MONRE, 2005).

### **Changes of some wildlife populations due to overexploitation**

Vietnam is one of the most important areas in the world for biodiversity, as it is believed that the country is home to many endemic and unique regional wildlife species. It is estimated that from 1996 to 1998, Vietnam had 226 endangered species, but in 2004 the number of endangered species increased to 289 (27.8%) (IUCN, 2006). As reflected in the Vietnam Red Book (1992&1996), there were 721 species of endangered animals and plants. According to the newest edition of the Red Data book (2004), however, the number of endangered species is 1,056, with 335 new taxa (31,7%). In particular, many medicinal plant species have been overexploited and some are already on the brink of extinction. Vietnam's Red List of Medical Plants earlier listed 114 threatened medicinal plants species, but in 2006 the number increased to 139 species (Nguyen T., 2006)

1990s and early 21<sup>st</sup> century are the period when Vietnam gained high economic growth, wildlife trade and harvest were also expanded. In addition, a number of policies on environmental conservation, protection and wildlife harvest management were issued in this period. However, the decline of several wild fauna and flora has still been recorded, the illegal wildlife harvest and trade has still been developing (Ministry of Natural Resources and Environment, 2005).

A number of wild fauna and flora in Vietnam are generally in the trend of declining, many species' habitats has been invaded and partitioned ; hence, they are in danger of extinction in the near future without effective conservation activities (Table 3).

**Table 5. Population changes in some endangered animals and plants**

No	Species		Number of individuals	
	Common Name	Scientific name	Before 1970	2005
1	Vietnamese rhino	<i>Rhinoceros sondaicus annamiticus</i>	15-17	5-7
2	Asian elephant	<i>Elephas maximus</i>	1,500 – 2,000	100
3	Indochina tiger	<i>Panthera tigris corbettii</i>	1,000	80-100
4	Kouprey	<i>Bos sauveli</i>	20-30	Possibly extinct
5	Gaur	<i>Bos gaurus</i>	3,000-4,000	500
6	Banteng	<i>Bos javanicus</i>	2,000- 3,000	300
7	Musk deer	<i>Mochis moschiferus</i>	2,500- 3,000	200
8	Eld' deer	<i>Cervus eldii</i>	700-1,000	100
9	Mod deer	<i>Cervus porcinus</i>	300-800	Very rare
10	Saola	<i>Pseudoryx nghetinhensis</i>	>1,000	250
11	Muntjac	<i>Megamuntiacus vuquangensis</i>	>1,000	300-500
12	Chevrotain	<i>Tragulus napu</i>	200-300	Very rare
13	Black gibbon	<i>Nomascus nasutus</i>	100	Very rare
15	Yellow cheeked gibbon	<i>Nomascus gabriellae</i>	>1,000	150-200
16	White cheeked gibbon	<i>Nomascus leucogenys</i>	600-800	60-80
17	Tonkin snub-nosed monkey	<i>Rhinopithecus avunculus</i>	800-1,000	110-190
18	Hatinh langur	<i>Trachypithecus hatinhensis</i>	NA	300-350
29	Delacour's langur	<i>Trachypithecus delacouri</i>	NA	80-100
20	Imperial pheasant	<i>Lophura imperalis</i>	NA	Very rare
21	Vietnamese pheasant	<i>Lophura vietnamensis</i>	NA	Rare
22	Siamese crocodile	<i>Crocodylus siamensis</i>	NA	100
23	Agarwood	<i>Aquilaria crassna</i>	>10,000	Almost extinct in the wild
24	Yellow cuppres tree	<i>Cupressus tonkinensis</i>	Abundance	Possibly extinct in the wild
25	Vietnamese ginseng	<i>Panax vietnamensis</i>	Abundance	Almost extinct in the wild

Source: MONRE, 2005; Vu Van Dung, 2006

Among 19 precious and rare animal species listed in Vietnam Red Data Book (1992), there are 9,628 individuals were hunted and trapped from 1991 to 1995, which means that 1,925 individuals were in average hunted and trapped annually.

In the 1990s and early 21<sup>st</sup> century, wildlife exploitation and trade developed rapidly due to the expansion of the overseas market. In addition, a number of measures promoting wildlife management and wildlife trade were issued during this period, and they had a positive impact on the trade.

As legal trade blossomed, illegal wildlife trade also accelerated significantly causing disastrous effects on the survival wildlife. Illegal wildlife trade especially trade on wild



animals has been identified as the most serious threat to the survival of large terrestrial wild animals. A recent assessment of illegal wildlife trade found that the continuing increase in illegal trade will lead many species to the brink of extinction, unless pro-active protection and conservation measures are undertaken to help the overexploited and traded species (Table 6).

**Table 6. Number of Endangered Species hunted from 1991 to 1995**

No.	Common name	Scientific Name	Number of individual was hunted
1	Serow	<i>Naemorhedus sumatraensis</i>	820
2	Gaur and Banteng	<i>Bos</i> spp.	413
3	Chevrotain	<i>Tragulus javanicus</i>	1174
4	Asiatic black bear	<i>Ursus thibetanus</i>	194
5	Sunda bear	<i>Ursus malayanus</i>	277
6	Tiger	<i>Panthera tigris</i>	70
7	Leopard	<i>Panthera pardus</i>	54
8	Dhole	<i>Coun alpinus</i>	32
9	Gibbons	<i>Nomascus</i> spp.	851
10	Macaques	<i>Macaca</i> spp.	1145
11	Bear macaque	<i>Macaca arctoides</i>	227
12	Langurs	<i>Trachypithecus</i> spp.	608
13	Douc Langur	<i>Pygathrix</i> spp.	1364
14	Pangolins	<i>Manis</i> spp.	963
15	Giant flying squirrel	<i>Petaurista philippensis</i>	451
16	Green peafowl	<i>Pavo munticus</i>	13
17	Pheasant	<i>Lophura nycthemera</i>	619
18	Siamese fireback pheasant	<i>Lophura diadi</i>	20
19	Pythons	<i>Python</i> spp.	333

Source: Do T., 1997

Illegal hunting using short-gun was the most common manner to supply the demand. However, Hunting guns are now less available, however, due to strict hunting gun regulations. For instance, in the Nghe An province, a total of 10,124 hunting guns were seized by the Police during the 90s decade. Consequently, trapping has become the principal kind of illegal hunting. Snare trapping, using a small steel cable, is the most common trapping method used. Snare traps are formed by creating fence lines in the forest that force animals to pass through an area where the traps are set up. This method of hunting is currently widespread in the country and presents a serious threat to most terrestrial, ambulatory animals (Do T., 2005). As a result of overexploitation and hunt, many terrestrial animals are or may become threatened with extinction in the country. Some typical example such as the Indochinese tigers (*Panthera tigris*), otters (*Lutra* spp.) and bears (*Ursus* spp.). Moreover, many species identified as playing an important role in the natural food chain are being illegally exploited and traded, including snakes, lizards and frogs. This causes serious negative effects on the ecological balance in their habitats.

The overexploitation of many plants and animals has led to them being categorized as 'possibly extinct from the wild', such as *Cuppressus tonkinensis*, Vietnamese ginseng (*Panax vietnamensis*), Siamese crocodile (*Crocodylus siamensis*), saltwater crocodile (*Crocodylus porosus*), Japanese eel (*Anguilla japonica*) and some freshwater fish such as *Hypophthalmichthys harmandi* and *Ctenopharyngodon idella*.

### **Box 2. Trade in protected plants**

In early 1986 cypress (*Cuppressus tonkinensis*) timber was selling at a high price, so the people in Huu Lung district, Lang Son province began to exploit cypress wood for sale. Large whole trees were harvested first, then smaller ones and finally branches and roots were collected. Explosives were used to extract the cypress roots. The price of cypress wood specimens reached between VND 45,000 and VND 120,000/kg depending on the size of the specimen.

Due to high demand for the species, as well as overharvesting and destructive exploitation, the cypress is one of the most threatened tree species listed in group IA of the Decree No.32/2006/NĐ-CP and also is considered as possibly extinct in the wild in Vietnam (Vu V.D. & Mai T.B., 2006).

Marine organisms are also declined seriously, some species have even no longer been found in nature. According to statistics, up to 85 fisheries are threatened at different levels, in which over 70 species have been listed in Vietnam Red Data Book. Some species such as *Dermochelys coriacea* have no longer recorded in Vietnam marine area, some other sea turtle species are also evaluated at brink of extinction without protection and fishing limitation.

The actual impacts of illegal wildlife trade and overexploitation on the environment and biodiversity are very serious and need to be more carefully assessed and verified. Such impacts are contributing to the decline of area and quality of main eco-systems such as forests, wetland and seas.. Species populations, particularly those of endangered species, have been continuously declining as a consequence of illegal hunting. Many species such as tigers (*Panthera tigris*), otters (*Lutra* spp) are in danger of extinction due to over exploitation and trade. Several species which are important links of the food chain in nature are being over traded and exploited, such as snakes, lizard (*Varanus* spp.). This has seriously affected ecology balance causing biodiversity degradation.

#### **4.3.2. The economic impacts**

It is difficult to identify the economic impacts of wildlife trade policy, as economic development is influenced by many factors and policies. Nevertheless, policies on wildlife trade seem to have minor impacts on economic development. It is particularly difficult to choose appropriate indicators which reflect the changes that are caused by wildlife trade policies. In addition, potentially available information on such changes is very technical and difficult to find. In order to have realistic indicators and to gather relevant data, a monitoring or assessment scheme should first be set up. This would provide baseline data on the basis of which impacts could later be identified. Accordingly, in this part of the review report, some initial findings and examples are given that reflect the most visible or likely economic impacts of existing wildlife trade policy.

The economic impacts of Vietnam's policies, in terms of 'micro' impacts, include the behavior of manufacturers (hunters, harvesters, operators of captive breeding and artificially propagation facilities) suppliers and consumers; effects of the 'input market' (harvesting, hunting and producing cost) and the output market (supply). Wildlife trade policies also have 'macro' impacts including tax structure, taxation or the Government's expenditure (T or G), investment structure (I), consumption (C), export (EX), import (IM) and income from export and import. These are all components in the calculation of the GDP. The issue that needs to be considered is whether and how wildlife trade policy has affected one or more of these components?

### ***Impacts on the demand structure***

Demand is influenced by many factors, including the: price; related services; price of alternatives and supplements; income of the consumer; consumer behavior and expectations of the consumers; and the policy. Wildlife trade policy is an important factor that affects the demand for wildlife products in the market. Vietnam's policy contributed to the flourishing growth of captive breeding and artificial propagation operations and associated legal trade. The supply wildlife products therefore increased dramatically, which may have resulted in a reduction in illegal hunting and trapping, it somehow helps to reduce demand for wild-harvested products.

Wildlife trade policy is an indirect factor affecting the price of alternative wildlife products. When consumers have alternative products from which to choose, e.g. products from captive breeding operations or wild-harvested products, this choice will influence the price of those products. In addition, when the market is flooded by products originating from artificial propagation and captive breeding operations, the price of those products is likely to decrease. The demand for illegally harvested or traded products may also be reduced. For example, the price of artificially propagated orchids is lower, and their ornamental value is higher, than wild-harvested orchids. The price of captive bred Chinese soft shell turtles (*Trionyx sinensis*) is two to three times cheaper than turtles that are wild-harvested. This indicates that a policy which has positive economic impacts on the production of wildlife products and associated legal trade should also have positive impacts in reducing the demand for illegally harvested and traded products. This occurs by bringing about changes in consumer behavior and making products available at a cheap price.

Consumer behavior is also an important factor affecting market demand. Many alternative methods and approaches have been used to provide more and better goods produced by captive breeding or artificial propagation operations, with the hope of changing consumer purchasing behavior. The aim has been to encourage consumers to replace illegal wild-harvested products with those from legal production operations. Some consumers, however, still choose to continue consuming wild-harvested products, even though the prices are much higher. Accordingly, wildlife trade policies do not seem to be having any real impacts on consumer behavior or perhaps such behavior is just changing very slowly. The policies have not yet been effective in educating consumers to change their behavior. This issue should be taken into account when drafting any new policies on wildlife trade. The thoughtful, integration of an educational component into wildlife trade policy could provide a good opportunity for to implementers of the policy to change consumer behaviors and attitudes towards the origin of wildlife products.

Changes in demand structure are also revealed in the value chains within the wildlife trade. Increasing demand for wildlife to satisfy local consumption and export needs has caused price and harvesting speed to increase. More importantly, it may also have increased the amount of illegal harvest and trade. A recent assessment of illegal wildlife trade in Vietnam showed that illegal trade is not declining but rather seems to be increasing (Nguyen M.H, 2002; Nguyen V.S., 2003; Government of Vietnam, 2004; Cao L.A. & Nguyen M.H., 2005). This means that the current policies have not had a significant impact in terms of reducing the volume of illegal trade. Instead, illegal trade may be stimulated by price increases for wildlife products and market or consumer behavior towards illegal trade and the availability of alternative products from captive breeding and artificial propagation operations.

Although there have been the policies on trade and use management, along with propaganda activities in many localities, consumption demand of the domestic market continuously increases (Nguyen M.H, 2002; Nguyen V.S., 2003; Gove; Cao L.A. & Nguyen M.H., 2005). The number of restaurants selling prohibited wildlife products has still been recorded everywhere although the business and advertisement forms have changed. For instance, the arrests of rhinoceros horns illegal import cases have been recorded; the confiscation of illegal products from tigers still occurred in Hanoi, Ho Chi Minh City and Quang Tri.

### ***Impacts on supply structure***

Wildlife trade policy has certainly had impacts on the supply structure of wildlife trade. Legislation such as Decree No.32/2006/NĐ-CP and the Decree No.82/2006/NĐ-CP has created a legal and management framework that supports the development of captive breeding and artificial propagation operations. Such operations have diversified the supply sources for wildlife trade in terms of the location and quantity of available products. For instance, according to the report of Vinh Son commune (Vinh Phuc province), the quantity of snakes produced by commercial captive breeding operations has increased 4 times, from 60 tons in 2000 to 250 tons in 2006. The number of households participating in the captive breeding of snakes has increased from 450 to 973. The scale of breeding activity (supply) within each household has also rapidly increased. These developments have resulted from the adoption of supportive wildlife trade policy measures such as streamlined and simplified procedures for the registration of captive breeding operations and the issuance of permits. The increased supply of snakes has certainly reduced their price and may have reduced the demand for illegally harvested and traded snakes. Significantly, it has brought significant benefits and work opportunities to the local people of Vinh Son.

The demand for local consumption and export exceeds domestic supply, and a significant quantity of wildlife has been imported from neighboring countries to meet this demand. The supply of additional wildlife products from neighboring countries has significantly diversified the supply structure of Vietnam's wildlife trade. For instance, in two years 2006 and 2007, some *Macaca fascicularis* were imported from Laos and Campuchia to make parents breed source and expand *Macaca fascicularis* captive breeding activity in some southern provinces of Vietnam. If domestic demand cannot be met by the supply from captive breeding and artificial propagation activities, especially those involving rare species, this may stimulate the demand for illegally harvested and traded products involving those species.

In addition to the supply from captive breeding and artificial propagation activities, Vietnam's wildlife from nature which are prohibited to exploit have still been contributing a large part in wildlife quantity traded in supply-demand chain. As noted above, illegal trade is still increasing, which indicates that current policies have not had a significant impact on such trade. More effort seems needed to ensure that the policy has a real influence on illegal trade. Illegal trade may be converted to legal trade by promoting legal trade with incentives, such as tax reductions and credits. Real benefits for local people and well-regulated legal trade should help to ensure that illegal trade does not continue to increase.

### ***Impacts on the competition between the legal traders***

If competitive environment is guaranteed fairly in macroscopic level, the nature and manpower resources will be used most effectively.

Vietnamese wildlife trade policy has been providing a good competitive environment among legal producers and traders. The adoption of wildlife legislation such as Decree No.11/2002/NĐ-CP, Decree No.48/2002/NĐ-CP, Decree No.32/2006/NĐ-CP and Decree No.82/2006/NĐ-CP have created a supportive framework for the development of legal wildlife trade based largely on the captive breeding and artificial propagation of wildlife. These legal instruments are also considered to provide an appropriate and specific management regime for local wildlife trade and export, which has led to an increasing number of species and traders being involved in the trade. Under new regulations, the procedures for registration as well as the issuance of import and export permits have been significantly streamlined and otherwise improved. Some owners of captive breeding farms were guided and trained on CITES as well as national policies on wildlife trade and how to register procedures of establishing breeding and planting farms, wildlife export and import procedures. This has created a fairer economic environment as the favorable conditions provided under the legislation are equally available to all legal traders and producers. For instance, Ninh Binh Forest Protection Department has supported households and individuals to register captive breeding make monitoring book, consult technique...Those favorable conditions in management have contributed to increase the number of households breeding wildlife such as porcupines, tortoise in this locality in 2007. In addition, legal wildlife traders and producers currently do not have to pay any fee for registration or the issuance of permits and certificates. They can also obtain free advice (and the opportunity for consultations) on CITES and copies of Vietnamese wildlife trade legislation from any CITES office in Vietnam.

Under the regulations of Decree No.82/2006/NĐ-CP, households engaged in captive breeding or artificial propagation must use a standard type of farming method which complies with the current environmental protection law and forest protection law. This makes their investment more secure and also creates a secure ‘trademark’ for their products, improving their ability to legally trade their products in the market. This scheme also offers traders and producers better access to competitive markets.

Thanks to the guarantee about legal origin and framework of captive breeding activity, wildlife trade has recently faced little risk while producing, processing and consuming products.

### ***Impacts on enhancing private investments in sustainable natural resources management***

An increase in the number of species being captive bred and artificially propagated, registered farms and wildlife traders shows that the current policy has encouraged sustainable natural resources management. Promoting the replacement of wild-harvested products by artificially propagated or captive bred products could also be a means of encouraging the use of environmentally sustainable products.

Private investments in captive breeding and artificial propagation, however, largely depend on interest rates and market demand. The interest of contributing to a sustainable development objective or to wildlife conservation is likely to not be so strong. For example, the development of captive breeding operations for species such as snakes, crocodiles, porcupines, sika deer (*Cervus nippon*), seahorses, and orchids have increased because the actual market demand and current legislation do not allow the export of wild-harvested terrestrial animals. Thus, captive breeding operations are the only solution to meet the export demand. Whenever such demand decreases, captive breeding operations immediately come to a halt.

### *Impacts on employment and income*

The development of wildlife trade has provided many local people with the opportunity to work and to increase their income. The contribution from the agriculture and fisheries account for 38% of the GDP, about 25 million people depend on forest resources and 8 million people depend on fisheries. In addition, around 12 million people have irregular income based on natural resource exploitation and fisheries (WB, 2005). This information shows that a substantial portion of the population benefits from natural resource exploitation and trade. The export of NTFPs and other wildlife products has brought a great deal of income to local communities and traders. This shows that the current policy has been advantageous to local people in terms of increased opportunities for work and related income generation.

Impacts of current policies on income and employment are most visible in fisheries, one of the important sectors contributing to Vietnam's GDP. As of 2006, the fisheries sector had attracted nearly 9 million employees. The export revenue had reached US\$ 3.3 billion per year. Fish products are one of the three most important exports of the country, after petroleum and textiles & garments. The potential for developing aquaculture and fisheries in Vietnam is very high; especially if it were to be managed in a sustainable manner. Sustainable managed fisheries could create jobs and income for many people, which is the key aim in implementing the national policy on hunger eradication and poverty reduction.

The employment and incomes of people participating directly in wildlife propagation and breeding has increased recently. According to a survey in Ninh Binh and Vinh Phuc, the number of households engaged in captive breeding and their wildlife products has increased 3 to 4 times. In addition, a large number of previously unemployed people have been involved in the activity. The revenue derived from commercially bred snakes in the commune of Vinh Son in 2006 reached US\$ 465,000 and the growth rate is 20% (US\$ 931,000). Compared with rice production, the income from breeding snakes is 20 times higher. In addition, the employment generated from wildlife breeding and propagation also brought income to those employees involved in the business. For example, the breeding of snakes in Vinh Son brings an average income of US\$ 93 per month/employee (VND 1,500,000). This increased income for local people could help to reduce hunger and poverty in many localities. This example shows that Vietnam's wildlife trade policy has contributed significantly to the generation of income and employment in some communities and areas, and, accordingly, to the eradication of hunger and poverty.

Nevertheless, the policy itself has also caused difficulties for certain communities and traders, especially those that participate in the collection and hunting of wildlife species which were recently prohibited from exploitation and trade (e.g. newly-listed species). Such prohibitions require a sudden suspension or cessation of work and associated income, which has a negative impact on people's livelihoods. If those people continue working, it means that they do so in violation of the law. Sometimes, it is nevertheless very difficult to find another means of making a livelihood, especially if one is poor. It is clear that, if the policy does not fully take into consideration potential changes in the limitations or prohibitions on wildlife exploitation and trade, any new restrictions or prohibitions on trade may have more severe impacts on those people whose livelihoods depend on wildlife exploitation and trade.

### ***Positive impacts of the policies on local economic development***

Wildlife trade has brought significant income and profits to many local households. It has also contributed to the accumulation of wealth in certain areas. Captive breeding and artificial propagation potentially offer sustainable jobs and incomes for many local areas. If this potential were well- exploited, it could contribute significantly to the fight against hunger and poverty, and would substantially boost socio-economic development in some areas.

A survey undertaken in the commune of Binh Minh, Khoai Chau district, Hung Yen province, measured the impacts of the commune's shift from tradition agricultural products to medicinal plant cultivation. Medicinal plant production has raised local household income from 4 to 5 times higher than it was when households were growing rice and other agriculture products. Newly cultivated products positively helped farmers increase their living standard and have made them more adaptable to expansion of the economic market. As a result of the commune's willingness to adapt to new opportunities and to convert to medicinal plant, the proportion of rich households increased from 20% in 1995 to 45% in 2003 (Do *et al.*, 2003).

**Table 7. Comparison of income from rice and medicinal plant**

No.	Species	Harvest period	Total income	Production cost	Net income (VND)
Rice (traditional agriculture product)					
1	<i>Oryza sativa</i> (rice)	4 months	340.000	238.000	102.000
Medicinal plants					
2	<i>Mentha arvensis</i>	5 months	600.000	200.000	400.000
3	<i>Angelica chinensis</i>	8 months	1.800.000	630.000	1170.000
4	<i>Atractylodes macrocephala</i>	8 months	2.550.000	787.000	1763.000
5	<i>Dioscorea persimilis</i>	10 months	2.750.000	550.000	2.200.000
6	<i>Angelica dahurica</i>	8 months	2.600.000	910.000	1690.000
7	<i>Achyranthes bidentata</i>	3 months	1.350.000	270.000	1.080.000

Source: Do *et al.*, 2003

In some provinces, the net income from the captive breeding of wildlife and the cultivation of medicinal plants reached US\$ 87 (VND 1,400,000) to US\$ 168 (VND 2,700,000) per month/employee. The average household income ranged from US\$ 234 (VND 3,710,000) to US\$ 474 (VND 7,640,000) depending on the scale of the breeding or cultivation activities.

According to a survey undertaken in the provinces of the Red River Delta, North Central Region and Mekong River Delta, the captive breeding of wildlife has been characterized by higher economic efficiency than the growing of traditional agricultural products. In the Red River Delta, the captive breeding of soft-shelled turtles (*Trionix chinensis*) has allowed households to earn incomes that are ten times higher than those earned from rice cultivation and vegetable plantations, and one hundred times higher than those earned from the breeding of pigs and cows. The income from snake breeding is also 3 to 5 times higher than the income from vegetable and crop cultivation, and dozens of times higher than the income from pig and cattle breeding. In the North Central provinces, the captive breeding of sika deer and sambar deer to harvest young antlers has resulted in incomes that are 5-10 times higher than those resulting from the breeding of poultry and small livestock. In the Mekong River Delta, the captive breeding of pythons and crocodiles has allowed households to earn incomes that are ten times higher than incomes earned from the cultivation of wet rice and one hundred times higher than incomes earned from small livestock husbandry.

**Table 8. Comparison income from agricultural and wildlife products**

Province	Products	Unit	Labor day	Harvest period (month)	Unit: thousand VND		
					Total income	Product ion cost	Net income
Hai Duogn, Ha Tay, Bac Giang, Vinh Phuc	Rice	1 ha	162	4	8,640	6,048	2,592
	Vegetable	1 ha	280	3	12,000	7,200	4,800
	Pig breeding	1 head	20	6	595	357	238
	Cow breeding	1 head	180	12	900	180	720
	Soft shell turtle breeding	360m <sup>2</sup>	180	24	324,000	216,204	107,796
	Cobra breeding	100 heads	60	30	32,400	18,882	13,518
Nghe An and Ha Tinh	Pig farming	1 head	30	6	550	340	210
	Poultry farming	100 heads	60	4	2,650	1,800	850
	Sika deer breeding	1 head	50	12	10,000	6,622	3,378
	Sika deer for antler harvest	1 head	40	12	4,000	2,724	1,276
	Samba deer <sup>1</sup> for antler harvest	1 head	40	12	4,000	2,600	1,400
An Giang, Ca Mau	Rice	1 ha	150	4	12,500	8,460	4,040
	Pig farming	1 head	20	6	820	500	320
	Crocodile breeding	100 heads	250	12	90,000	28,400	61,600
	Python breeding	30 heads	60	24	70,000	12,000	58,000

Source: Do. et al., 2003

In some provinces, the captive breeding of wild animals has contributed significantly to the income of households and localities. It has also played a vital role in reducing hunger and poverty.

The above paragraphs show that, the trade in and captive breeding or artificial propagation of wildlife has brought clear benefits to many local people and offers potential for additional growth in household incomes and local as well as national economic development. In some aspects, the wildlife trade policy had advantages for and gave opportunities to local people interested in producing and selling their wildlife products. It has also caused some significant changes in local economies and development. However, the expansion of existing production operations or extension of those operations to other local communities and households needs to be well-planned and organized to ensure that it stays at a level (e.g. production quantity) that is controllable using existing management tools. Overproduction would bring down the price of various products and perhaps cause the production activity itself to become uncertain and risky.

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<sup>1</sup> Samba deer (*Cervus unicolor*)



**Table 9. Income from some captive bred wild animals**

Scientific name	Income rate/ investment	Employment and Social attraction	Market potential
<i>Hystrix brachyura</i>	100%	Small	Domestic trade
<i>Naja</i> spp.	20-25%	large	Domestic trade and export
<i>Rana</i> spp., <i>Trionyx sinensis</i>	19-20%	large	Domestic trade and export
<i>Ursus</i> spp.	Lost	small	Domestic trade
<i>Cervus nippon</i>	20-25%	medium	Domestic trade

Source: WTPR Surveyed in May, 2007

### Negative impacts of wildlife trade policies to the economic development

The uncontrolled growth in illegal trade has caused the populations of some wildlife species to decline and the price of certain wildlife species to continuously rise. This combined increase of price and demand has presented a serious risk to the continued survival of many animal and plant species (Table 8).

**Table 10. Estimation price of some wildlife species illegally traded**

No	Scientific name	Price (VND)	Locality
1	<i>Manis</i> spp.	700,000 - 1,000,000/1kg	Kien Giang
2	<i>Ophiophagus hannah</i>	1,200,000/1kg	Vinh Phuc
3	<i>Cuora trifasciata</i>	30,000,000 - 40,000,000/1kg	Any forest areas
4	<i>Panax vietnamensis</i>	30,000,000/1 kg (dry)	Kon Tum
5	<i>Dalbergia tonkinensis</i>	500,000,000 - 900,000,000/1m <sup>3</sup>	Quang Binh

Source: survey on May, 2007

Vietnam's wildlife trade policy to date has not shown adequate consideration of the strong contribution that legal wildlife trade could make towards increased incomes for local people and their involvement in wildlife trade management and conservation as the primary beneficiaries of related earnings.

Existing captive breeding and artificial propagation operations have had high economic efficiency in terms of the income that is earned. Not everyone, however, can conduct and monitor such an operation because they require a great deal of investment, skill and technical knowledge/experience. These requirements are beyond the reach of most poor people. Statements within various policy instruments reiterate the need to use wildlife trade and production as tools to combat hunger and poverty. However, no specific language requiring that local people be provided with the credit, technical means or methods and appropriate guidance that would enable this ideal policy objective to be achieved in reality. This means that the policy has not yet been successful in promoting legal wildlife trade as a tool for reducing poverty and eradicating hunger.

It is also likely that the current policy does not give enough appropriate guidance to direct the development of legal wildlife trade and regulate the growth in captive breeding or artificial propagation operations. Such guidance is crucial in order to ensure the trade and its further development is sustainably managed rather than wholly free of regulation. There were sudden rushes of captive breeding and artificial propagation activities during 1995-1999. Suddenly,

the captive breeding of pythons (*Python molurus*) collapsed due to low prices and the absence of a market. Local people in the Southern provinces lost a great deal of cash and property at that time. Similarly, if the recent mass creation of Agarwood plantations (*Aquilaria crassna*) is not well-directed and underpinned by good market research, it would be subject to the same consequences. A sudden collapse brought about by overdevelopment could have very serious impacts on local community development.

These loopholes in the current policy should be seriously considered. The government should not have any direct control over wildlife markets and trade; however, it could provide vital support in terms of directing related development. This would help to ensure that such markets and associated trade are well-managed and sustainable.

### **4.3.3. The social impacts**

Identifying social impacts is also a complicated issue, even more complicated than identifying economic and biodiversity impacts. As mentioned above, representative indicators are the key to effectively identifying social impacts. Monitoring standards are also required in order to assess the indicators over a period of time. The results of such monitoring and assessment could be used to show the social impacts of a particular policy. Again, policies do not always cause visible and rapid changes or effects. In addition, wildlife trade policies in Vietnam have been continuously adopted over time. This means that the impacts of old and new policies may be overlapping and mixed, making it difficult to identify the actual social impacts of a particular policy.

The identification of social impacts involves looking at both negative and positive impacts of wildlife trade policies. For example, what are the impacts of a policy which allows local people in rural and mountainous areas to use and depend on wildlife resources for meeting their subsistence and livelihood needs? Answering this question requires an analysis of which wildlife trade activities directly and indirectly provide income for local people in the rural and mountainous or coastal regions.

#### ***Impacts of policies on property right of local people***

Recently, the property rights regarding wildlife that is harvested and traded were clarified by the adoption of policies on forest land allocation. Large areas of forest land and forests are allocated to households, communities and the private sector. On the land allocated to them people can legally harvest and trade a sustainable quantity of NTFPs and other common (unprotected) wildlife. This policy development has had the advantage of increasing the amount of income local people derives from forest and related biodiversity resources. It also illustrates a balanced approach to responsible and fair benefit sharing between the government and local people. By taking this approach, which integrates natural resource management, use rights and personal benefits, the policy has had positive impacts on the conservation and sustainable use of forests and other biodiversity resources. One consequence of the policy has been a decline in the illegal harvesting of and trade in wildlife species. This has occurred because, in many areas, the forest has been well-managed and protected by local people. In addition, sustainable harvesting regimes have been proposed and discussed as a means of ensuring that the future harvesting and management of wildlife resources is made even more sustainable and beneficial.

Nevertheless, current wildlife trade policy does not provide any real mechanism for communities to possess and manage wildlife, land or other natural resources. For instance, the present land law does not allow anyone to permanently own any land. This policy approach has resulted in a tendency towards weak responses to any illegal harvesting and hunting of wildlife on the allocated land because most people think they have only temporary ownership of the land. In addition, the local community still plays a passive role in any policy changes because they were not consulted on the policy change. For example, when there is a proposal to prohibit the exploitation or harvest of a species, the local community is seldom or never invited to participate in the consultation meeting or to comment on the change. Accordingly, the local community does not have either rights to possession or rights to participate in decision-making related to these resources and sometime even their livelihoods. This manner of policy-making should be changed in the future.

### ***Impacts of wildlife trade policies on financial resources of exploiters***

*Change in production and exploitation cost.* Policies in wildlife trade have caused a change in the cost of wildlife products and exploitation.

The impacts on exploitation and production cost can most be seen when a species is put in Appendix I of CITES, or listed in the Annex I of Decrees No.18-HĐBT, 48/2002/NĐ-C and, No.32/2006/NĐ-CP. The listing of a species as endangered (or threatened with extinction) means that any exploitation from wild for the purpose of international commercial trade is generally prohibited. Wild-harvesting must therefore be replaced completely by captive breeding or artificial propagation if specimens of these species are to be traded. There are costs associated with the investment in and establishment of a captive breeding or artificial propagation operation. There are also costs related to administering the operation thereafter. The total costs of such an operation are therefore usually higher than exploitation from the wild.

The issuance of Decision No.46/2001/QĐ-TTg on the management of imports and exports during 2001-2005 also created significant changes in wildlife exports. Under this Decision, wild harvested terrestrial animals in Vietnam were absolutely prohibited from export. Under these circumstances, the cost of exporting wild animals could be expected to rise because wild harvested products were being replaced by captive bred and imported products. Furthermore, the procedural and administrative costs would necessarily increase.

As for wildlife captive breeding, according to investigation result of production households, production price and cost have recently increased not due to the rise in management cost but it is mainly due to food and employees costs... (Material cost) continuously increased. In contrast, management costs (indirect cost) have decreased. These costs related to transaction cost (registration documents and procedures of producing and consuming wildlife) are in the trend of declining due to two reasons: firstly, the number of participants of captive breeding has increased; secondly, registration cost of legal wildlife production and exploitation is unnecessary.

*Change in income.* Returns on sale of captive bred and artificially propagated wildlife caused the income of participating households to noticeably increase. For example, the porcupine is the most profitable wildlife species bred in captivity with a profit of over 100%. This means that \$1 of investment would earn \$2 of profit within approximately 3 months. According to a survey, undertaken in 2006, the total number of sika deer being bred within the Huong Son

district (Ha Tinh province) was 10,300 individuals and the related profit from selling associated products was VND 83.45 billion annually. The income earned by households engaged in breeding deer for their antlers also changed significantly. Deer breeding provides a significant source of income for many households in the district. In addition, in Huong Khe district (also Ha Tinh province) the total income derived from agarwood (*Aquilaria crassna*) plantations was VND 13 billion, of which VND 12 billion came from tree seedlings.

As mentioned above, in some areas wildlife trade has shown its potential to provide sustainable income. Changes in the income levels of communities participating in the captive breeding and artificial propagation of wildlife can clearly be seen. Those who collect or harvest from the wild also earn significant levels of income if they are able to sell their products when prices are rising and trade is expanding. The wildlife trade policy has affected considerably the income structure of communities participating in wildlife trade.

The situation is slightly different for wildlife traders, as they often have a variety of items to trade. Prohibitions on the exploitation or export of a particular species or category of species would have certain impacts on their business, but it is hard to assess those impacts. In addition, it is very difficult to gather expenditure and profit data from wildlife trade activities, particularly illegal trade.

Nevertheless, the policy on wildlife trade has had an impact on the profits made by the trading community. This is especially true for the last few years when many species were put on the list of species whose exploitation and use was limited or prohibited, particularly fishery products such as corals and some invertebrate animals. For instance, when the Ministry of Fishery decided to stop completely the export of stony coral in 2004, this Decision caused exports and the related business activities of some companies to come to a halt. This trade suspension therefore had a serious impact on both companies engaged in such trade and the local communities that were harvesting or collecting the coral products. In addition, when the government suspended the issuance of export permits for *Cibotium barometz* and medicinal orchids (*Dendrobium* spp.), it had an impact on the income of the community that was participating in the collection of those medicinal plants and the income of exporters of those plants, who were living in certain northern provinces.

When viewed from another aspect, wildlife trade policy has had significant impacts on the income of communities that are engaged in illegal exploitation and trade. The issuance of new policies to control illegal wildlife trade has partly reduced the number of participants in such trade. Those policies, in some cases, have been effectively carried out. This caused a reduction in the amount of illegal exploitation and trade and consequently a reduction in the incomes of those involved in such activities. Moreover, a reduction in the amount of illegal wildlife trade helps to ensure the survival of endangered and overexploited species.

*Change in access to credit.* In fact, changes in the access to credit only affect wildlife producers and traders. When communities harvest from the wild (excluding fisheries), the investment in exploitation is not significantly high. In fact, the wildlife trade policy does not mention the any financial support mechanism for captive breeding of, artificial propagation of, exploitation of or trade in wildlife. With some exceptions, however, there are credit loans for the development of operations to exploit or trade in fish, especially those related to offshore fishing or post-fishing processing.

The availability of funds for households to invest in wildlife production or exploitation depends on two main sources, that is, their own capital and, occasionally, loans. Households with wildlife breeding farms often complain about the lack of funds for production costs (around 80%). The poor also do not have the savings or the credit needed to develop such expensive businesses. In addition, business security plans are always requested when submitting an application for a loan. The current policy therefore does not have positive mechanisms for helping the poor to access the credit they need to engage in wildlife production or trade.

Nevertheless, in some places there is a long tradition of large-scale captive breeding or artificial propagation operations being well-supported by local authorities. For example, in Vinh Son (Vinh Phuc Province), Ho Chi Minh City and An Giang Province, both proposed and existing captive breeding farms are offered loans from banks to develop their farms. Even in these areas, however, poor households rarely find the means to access such a bank loan. Therefore, wildlife trade policies have, in fact, not had much practical impact on the provision of financial support to all of the people who are involved in wildlife trade activities.

### ***Impacts on the participation in and benefits from sustainable trade***

Most of the benefits from wildlife trade go to the middlemen. Such trade generally passes from the producer or collector to a first middleman (local level), then to a second middleman (provincial, regional) and then to the export market and end-users. Only a small part (around 10-15%) of wildlife products is traded directly from producers or collector to end-users (Nguyen M.H., 2002; Nguyen V.S., 2003). It is rare for benefits from the trade to go directly to the producers without being shared among the stakeholders in the trade chain.

Wildlife trade policies have not had strong positive impacts on the producers and exploiters in terms of increasing their benefits from the trade. The policies also do not provide for market research and product development, therefore, the trade is not very stable. This means that the supplier and producer are vulnerable if there are any changes in the market. For instance, the breeding of some small reptiles and frogs for export came to a halt when demand stopped and the selling price could not cover the breeding cost. The breeding of frogs – which once provided income to many households, communities and export companies in An Giang, Can Tho, Dong Thap provinces (Southern Vietnam) – came to a halt because of unexpected changes and instability in the outputs from these operations.[this sentence does not seem to make complete sense.] Due to the lack of market research and market development strategy, wildlife trade has not yet shown itself to be a sustainable trade and the policy has not provided any solution to the problem.

### ***Impacts of policies on the human development index of the poor***

The human development index (HDI) includes: GNP per head; intellectual standards; progress in public health; and human free index (HFI). It is impossible to assess completely the HDI in this study due to the lack of surveyed data in intellectual standards, social progress, public health and human free index. However, according to the analysis of income earned by households participating in wildlife exploitation and production, it appears that wildlife trade policies in recent years have contributed to an increase in the GDP for many localities, which made the HDI in many localities increase as well. In reality, opportunities to engage in wildlife production and trade, and to obtain the benefits these activities offer, do not reach the poor. For example, the costs involved with investment in, technical support for and,

particularly, the marketing of wildlife production operations and trade are still high. Accordingly, the poor are hardly able to develop the necessary business plans. For the most part, the poor benefit from collecting and hunting specimens in the wild. In recent years, however, there have been limitations and even prohibitions on the exploitation and export of wild-harvested specimens, which has had significant impacts on the livelihoods of the poor.

**Box 3. Contribution of commercial captive breeding of snakes to local development**

In 2002 the Vinh Son commune sold 40 tons of snakes that had been captive bred for commercial purposes, which brought of VND 12 billion of income to the commune. In the same commune, the regular cultivation of 148 ha rice and 100 ha vegetables and other agriculture crops only provided VND 7.3 billion of income (net benefit is VND 1 billion). The breeding of snakes therefore brought almost twice the amount of monetary benefit compared with traditional agricultural crops. Moreover, breeding operations provide more jobs for local people. In 2002, about 44 % of the total numbers of households in the commune were high-income households, 46% were medium-income households and 10% were low-income households. However, 100% of the households engaged in snake breeding had reached the medium-income level and 55% of them had even reached the high-income level.

Therefore, snake breeding contributed significantly to the development of and improvements in local living standards. In 1996, only 50% of the houses in the whole commune were made of concrete. There were 50 motorbikes and 0.4 televisions per household. In 2002, 90% of the houses were made of concrete, 100% of the households had a television, and there were 350 motorbikes. Improvements in the quality of people's lives and the wealth of the commune were mostly brought about by commercial snake breeding (Do *et al.*, 2003).

#### 4.4. Analyze the policy and its impacts

##### 4.4.1. The completeness and relevance

Some of Vietnamese wildlife trade legislations have not yet reflected the exact context of the CITES. Therefore, some policies have stated the wildlife trade generally as the violation of law, similar to drug trafficking, trade of explosion or antiques without proper defining between legal wildlife and illegal wildlife trade. Some legislation was misunderstanding stated of the term of “Convention on international trade ...” and “International convention on trade...” The mistaken interpretation of the convention in any legal document may cause the issuance of an incorrect protocol then could make confusion for the implementation. To avoid and misunderstanding and possible conflict between the legislation the national legislation on wildlife trade should be in accordance with principal of the national policy and other international convention. The mistakes were identified in some documents such as the Decree No.02/CP, the Decree No.11/1999/NĐ-CP, the Circular No.04NN/KL-TT, the Circular No.41/2000/BNN, the Decision No.46/2001/QĐ-TTg, the Decision No.242/1999/QĐ-TTg.

The strictly regulation or policing attitude in the policy would not be a best solution for the wildlife trade management. The policy should well incorporate of legal trade and sustainable harvest regime and responsible of protection and management. Any extremism attitude such as banding or prohibition only reveals a reality of stuck and confusion of the management system that always does not give much actual help. The management would only be effective when the illegal trade and exploitation are well managed. More importantly, it would work only the entire stakeholder such as trader, law enforcement agency and local community are involved. The above mention strict regulations was identified in the following documents such as the Decree No.02/CP (5/1/1995), the Decree No.11/1999/NĐ-CP (03/3/1999), the Circular No.04/NN/KL-TT (05/02/1996), the Decision No.242/1999/QĐ-TTg (30/12/1999), the Circular No.41/2000/BNN (13/4/2000), the Decision No.46/2001/QĐ-TTg (04/04/2001). The document should be careful reviewed, as some their context showed the unbalance between protection and utilization.

Some of the issued wildlife trade policies were developed without proper the involvement of the stakeholders. The policy was drafted, comment mostly by the decision makers, managers, scientists, law enforcement agency, however an important party such as the as harvesting community, captive bred owner and wildlife traders have not been invited to give comment on the policy. As result, many policies show it's ineffective and impractical during the implementation because it does not receive any cooperation from the stakeholder. As result the illegal trade was reported as increasing. The participants in the drafting and development of policy is key to it future implementation success, appropriate consultation always give a change of making a comprehensive and practical policy.

The policies likely do not put equal attention between the animals and plants. Animals are often more strictly managed and gain more attention than plants even they are in the same category of protection and conservation priority. The inequality in the management may result from the different concepts between animals and plants, and it is believed that the individual of plants is far better than animals therefore, animal are less endangered. Due to unequal attention, many plants have been exploited heavily as some medicinal orchids (*Anoectochilus* spp.). For example, as regulated all wild harvest terrestrial animals could not be granted a CITES export permit (even species in Appendix II of the Decree 32/2006/ND-CP). However, wild harvest plant such as orchid (*Dendrobium* spp.) they actually in the same appendix, however it could be easily acquire a CITES permit for export of the plants.

Policy is often lacked appropriate specific definitions and criteria for species listed in the appendices, accordingly, often one appendix mentions species with different conservation issues. In reality, each conservation criteria need a specific conservation solution and conservation measurement. Therefore, put a group of species with different conservation criteria in the same appendix would make the implementation become very complicated. Hence, it is necessary to specific those criteria for each conservation issue. For example, Category 1 for species being over exploit and trade; Category 2 for species are threatened; Category 3 for species that is promote for commercially development...

It can also be seen that the list of protected plants in the policy was created base mostly on the conservation and endemic value (scientific significant) rather than being threatened by illegal trade. Accordingly, many species not being traded or overexploited are put in the list; however, some species that are heavily harvested and traded were not listed. As the result, many species of plant are seriously threatened by the exploitation and trade but they have never received any conservation measure and appropriate protection. Under The Decree No. 32/2006/NĐ-CP some species face no overexploitation or trade, was listed in the appendix IA (prohibit to exploit and use) such as Taiwanii cypress (*Taiwania cryptomerioides*), Vietnamese cypress (*Xanthocyparis vietnamensis*), fansipan abies (*Abies delavayi fansipanensis*), muddy pine (*Glyptostrobus pensilis*), paco pine (*Pinus kwangtungensis*). And some was also listed in Appendix IIA (restrict of use and exploit) which have never been threatened by trade such as mountain pine (*Cephalotaxus mannii*), mountain abies (*Keteleeria evelyniana*), dalat pine (*Pinus dalatensis*), tiny-leafed pine (*P. krempfii*).

Sometimes, the inclusion of a possibly extinct species in the protection list is unnecessary. In fact, the some species were extinct in the wild however; they are well propagated for commercial purposes, then the inclusion will make lot of confusion and paper work for those were bred or propagated in artificial environment. Instead of include the species in protection lists; it should be put in the Red Book for warning purposes. The Decree No. 32/2006/NĐ-CP include the Vietnamese ginseng (*Panax vietnamensis*), Siamese crocodile (*Crocodylus siamensis*), salted water crocodile (*Crocodylus porosus*), kourey (*Bos sauveli*), wild water buffalo (*Bubalus bubalis*), napu chevrotain (*Tragulus napu*), should not be listed in the decree as these species is considered as possibly extinct in the wild. It would be adequate if these species should be listed in the red data book.

The issuance of some Government decrees on wildlife protection and wildlife trade also has some overlaps. Specifically, there has been some overlap between the legal documents of the Ministry of Fishery and Ministry of Agriculture and Rural Development. The overlaps have caused some confusion during the implementation. The overlaps and confusion of legal documents should be to be minimized that would help an effective implementation the policy. For example, Appendix 5 of the Circular No.02/2006/TT-BTS to support the implementation of Decree No.59/2005/NĐ-CP also listed some species that already listed in the Decree No.32/2006/NĐ-CP such as the salted water crocodile (*Crocodylus porosus*), the siamese crocodile (*Crocodylus siamensis*) and the tamdao newt (*Paramesotriton deloustanii*).

During the drafting and develop the legal documents, some practical issues such as the local name of wildlife was not paid attention. In fact, the common name and scientific name is only common for scientists and some special law enforcement officers, however most of the local authority and local people are only familiar with their local name. Therefore, local names of species should be also included beside scientific names and common name. As sometimes, a small detail would have a special impact on the actual implementation of policy.



The encouragement and promotion of wildlife breeding and propagating were mentioned and highlighted in the policies. Especially, the National Action Plan on the strengthening of wildlife trade management towards 2010 (2004) and the Decree No.82/2006/NĐ-CP, however, no or not yet an actual encouragement was made to implement the promotion. That mean the policy is not yet implemented completely as requested. Currently there is not any mechanism that allow the legal exploitation to formed a captive bred and artificial propagate. Nevertheless, some document even states the prohibition of any manner of wild harvest for any purpose. For example, under the announcement No.637/KL-BTTN by the Forest Protection Department state the promotion of captive breeding and development of wildlife, however, in Section 2 of the announcement state a very strict regulation such as strictly prohibit the wild harvest of terrestrial animals - this statement actually give no change for the implementation of the first part in the same document; and even the national strategy. This confusion of the legal document shows the incomplete of the policy and it implementation.

The current wildlife trade policy may lack of the orientation for the development of the wildlife trade. The orientation is important to drive the development of the trade and the captive bred and propagated which could avoid out break of trade and production. The free going trade and production would goes in an unpredictable trend which make the management more difficult to catch up with these changes. A detail orientation for the establishment of sustainable harvest or exploitation regime is also crucial, it would help to prevent an extreme management of nature resources such as ban or suspend. The well driven of management and exploitation would give much help to maintain people livelihood and instead of the underground growing of illegal trade and exploitation. Therefore, the future development of a National wildlife trade Action Plan would be a good option to cover all the loopholes incompleteness, and irrelevant point of the current policy.

#### **4.4.2. The coherence**

The Vietnam's wildlife trade policies were developed in the point of harmonizing the management and sustainable use of the natural resources, especially, the opinion of using the value of biodiversity to increase income for local people, and the poor. These strategic objectives are also correspond and very well connect with other relevant policies and laws such as the National Action Plan on biodiversity (1992), National Strategy for the management of the Vietnam' Protected areas in 2003 - 2010 (2002), The national strategy for Environmental protection until 2010 and vision toward 2020 (in 2003), Forest protection and development Law (2004), Environment Protection Law (2005), Fishery Law (2003).

The issuance of many policies on wildlife trade also shows determination of Vietnamese Government to complete policy system and ensure that the goal of wildlife trade management, natural resources and environment protection will be implemented. In addition, the issuance of several policies together with drafts careless and lack of proper references led to a lot of shortages, draft mistakes, incoherence. Namely, a number of documents provided information contrary and inappropriate with the current documents.

However, there are some exist inconsistencies that were identified in the current wildlife trade policy. Which might a result of the frequent new policy and relevant legislation issuance, the mistake of inappropriate references to other relate policies and documents. As the result, some circumstances, the policy or its related document shows some different point which should be corresponded or supported the implementation of other related national policies.

The first of the inconsistencies is the wildlife trade' terms and definitions are often used uncommonly many related policies and their supporting documents. For instance, the term of "rare" and "endangered" species have been used differently in the following documents, the Decree No.18-HĐBT (1992) used the terms "*rare forest plants and animals*" and the Decree No.48/2002/NĐ-CP used "*rare wild animals and plants*" and the Decree No.32/2006/NĐ-CP used "*rare and endangered forest animals and plants*", and each used term was interpreted quite differently in the documents. In contrast, the terms that were and are used the three documents should be united or at least inherit each other because the document is the precession of others. In addition, "the National Action Plan on Biodiversity towards 2010 and orientation towards 2020 for the implementation of CITES and Cartagena protocol on biological safety" use two deferent term to mention the same issue that were "*Rare endangered wild animals and plants*" (Section I.1.d) and "*Endangered species which face extinction*" (Section II.1.g). The uncommon terms and words are used in the documents that show the illogical and incoherent in the policy. In addition, the uncommon terms and words would make difficulty for the implementation and interpretation if there would be any debate on prosecution of the related subjects.

Therefore, it is essential to have a clear definition and standard term that define the listed "precious, rare" species. It is necessary to have specific definition of "precious" and "rare" because in fact, some species are precious but not rare; in contrast, some species are rare but nor precious. "Precious" definition should be distinguished specifically according to science or use value.

In our opinion, the terms of "threatened" and "endangered" species should be used in legal documents to agree with the current international terms and replace for the being used inconsistent terms of "precious and rare" species.

Some of the documents were lacked appropriate connect and coherent with other related policies. There were also some mistakes of include the supervision of the domestic legislation on some species that has never been recorded in Vietnam, and name of some species in the list was not correctly named. These mistakes should be strictly avoided as a principle of the legal document system. For instance, the Decision No. 15/2006/QĐ-BTS that give the supervision for the Asian toad (*Euphlyctis hexadactyla*) as a domestic fishery however, the species do not occur in Vietnam. In the same document, some species the scientific name was wrongly listed as the fresh water fish *Tenualosa toli*. In addition, the Decision No. 15/2006/QĐ-BTS also state that there is required no restriction or supervision for export and import, however some species that already listed in the CITES appendix I such as the the Mekong giant catfish (*Pangasianodon gigas*) and golden arowana (*Scleropages formosus*). The context of this document show the fact that the document was drafted and issued without proper referred to other relevant policies and documents such as the CITES and the Decree No. 11/2002/ND-CP and the Decree No. 82/2006/ND-CP. In addition, the mistakes would exist in other documents if there would be a serious review for the coherence.

#### **4.4.3. The effectiveness**

Protection and exploitation are always a difficult issue, and there is always a question of how to integrate the protection of endangered species and maintain livelihood and income people. The effective management and sustainable use is the result of a good policy implementation and the positive involvement of stakeholders. To date, the wildlife trade policies have some certain impacts on the biodiversity conservation, the community involves and impact directly

on the wildlife trade activity its self. Those impacts would be a positive impact that could show the effective of the policy, however, there are some negative impacts and that shows the ineffective of the policy and its implementation.

The wildlife trade is much controlled at least in last five years. The illegal wildlife trade was effectively controlled in some area. The strong law enforcement on wildlife trade was also strengthened throughout the country. The captive bred also well controlled and the legal trade and legal procedure is much streamlined that actually help the development of the trade and increase income of people involve in the trade. The effective of the policy had increase significantly the development of legal wildlife trade and make some strong contribution to the national strategy on poverty eliminate and hungry eradication as well as other national social and economic development strategies.

However, the wildlife trade policy has shown some of its weakness, ineffective, especially while they were implemented. As stated in the recently illegal wildlife trade survey and assessment, the illegal hunting, logging and trade is increasing (Cao L. A. and Nguyen M.H., 2005; Nguyen M.H., 2002; Nguyen V.S., 2003; Government of Vietnam, 2004), the development of the illegal trade has posed some serious threats to many wildlife species, especially those population are declining because of the trade. The increasing of illegal trade also specifies the ineffective of the policy on reducing the illegal one.

Up till now, the national policies on Vietnam's wildlife trade have some positive effects in managing wildlife trade. In fact, illegal trade; however, has not been prevented effectively. Unsustainable wildlife hunting and exploiting even in natural reserves have still occurred commonly. A number of restaurants and trade points have still sold rare wild animal species publicly or secretly. If the problem is not managed effectively, it is likely that the unsustainable exploitation and consumption will lead to extinction risk of Vietnam's wildlife next time.

The ineffective of the implementation on reducing the illegal trade may result of the punishment and prosecution of illegal trade, it's seemed like this mechanism is not strong enough to warn the involved of the stakeholders. The wildlife violation and crime currently is supervision by the Decree No.139/2004/NĐ-CP and the highest level is criminal law. However, in the actual implementation, it is difficult have a precise decision or solution in many cases, because the punishment and the fine was developed mainly based on the violation of wood and plant which far different from animal. For instance, the level of violation will normally be calculated weight and the total value (in cash) of the violation that is not applicable for biodiversity violation when most of the damage should be considered and calculated base on in total impacts on the ecology... Moreover, the total weight counted for the violation is also not applicable for many species as elephant is large than most of the animals but they are in the same appendix and level of conservation as the less weight species. Accordingly, the price base calculation is also no applicable for the violation, because some appendix I species is much cheaper than those in low appendices. Hence, the current prosecution calculation of the wildlife trade violation in Vietnam is not very applicable; some of the current calculation would actually create some loopholes that the traders could easily exploit. These loopholes would be one of the reasons why the policy makes such small impacts on the illegal harvest and trade.

The policy had also mention the prohibition of wildlife exploitation in the breeding season, however not specification for breeding season of any species was defined, that mean no actual

limitation of harvest or exploit during the breeding seasons would ever been implemented. The situation shows somehow the ideal was included in the policy however some them would never been evaluated their effect as well as their practical.

In another aspect, the inefficient of the wildlife trade policies regarding the stimulation of the illegal trade is also result from the weak cooperation of the stakeholders. As mentioned, the development of the policies was not undertaken with appropriate consultation of all stakeholders and the beneficiaries such as the local harvesters, the traders and the consumers. Therefore, these group of stakeholders are likely unaware of the existing policy as well as the obligation of implementation of such documents.

The Effective of the policy would be also resulted of proper training and supervising for implementation. Wildlife trade policy implementation training was undertake a few times, however, it was mostly concentrated on the CITES implementation, at least more than ten training courses were undertake for CITES and wildlife trade issues, nevertheless, the numbers would never been adequate for the country, in addition, it should be undertaken more official and frequent. Limitation of training for law enforcement and relevant implementation authorities would limit much of the policy effective.

The environmental education issue has not been paid much attention in the current policy. As result only small part of population and stakeholders is aware the existence of the policy. This limitation partly resulted of the inadequate funding. The limitation of people's understanding of the wildlife trade policy would limit the effective of the policy and would even make some difficulties during the implementation.

The monitoring and evaluation mechanism of the policy implementation is likely not paid adequate attention. Up-to-date, numbers of documents legal frameworks have been issued, however, there is no evaluation or review process has been made to evaluate the implementation, effect and impacts of the policy. The policy evaluation and assessment is very important for appropriate correction and revision for the effectiveness. In addition, the evaluation is crucial to determine the negative impact of the policy on social and economic as well as the actual effect on the improvement of environment. The ineffective issue of policy would somewhat be resulted from the weak monitor and evaluation mechanism or the implementation of the mechanism. The weak points of implementation of evaluation are often identified in the current Vietnamese wildlife trade policy.

## 5. Conclusion

The use of natural and biological resources such as wild animals and plants for daily subsistence and trade has long been a traditional custom of Vietnamese, but is also widespread in neighboring countries. Utilization as such need not be harmful. Biodiversity decline is a consequence of unsustainable exploitation and the illegal wildlife trade for commercial purposes; in addition, the decline of many wildlife populations was a result of habitat destruction by many other human activities. Therefore, a clear distinction between legal wildlife trade and consumption and the unsustainable and illegal wildlife trade is crucial. This distinction is also vital in order to make appropriate interventions to ensure the survival of Vietnam's rich biological resources.

To date, Vietnam has developed a nearly complete framework of policies and laws for the wildlife trade. The content of the policy covers most of the trade issues and its future development. Moreover, the policy impacts on a variety of stakeholders in the wildlife trade. Thanks to the legal framework the protection of nature has been enhanced and the illegal wildlife trade has been addressed. In addition, captive breeding and artificial propagation have been helped to develop. The framework has provided some critical support for the establishment and operation of terrestrial and aquatic captive breeding. Furthermore, the international community acknowledges that Vietnam has appropriate national legislation for implementing CITES.

The development, promulgation and implementation of the wildlife trade policy have provided some important experiences and useful lessons for the development and implementation of future policy on the wildlife trade.

The wildlife trade policy of Vietnam has provided important support for the development of the legal wildlife trade, which brings lots of income and job opportunities to local people. Additionally, recent measures have streamlined the registration process and permit issuing procedure. Again, this supports the development of the legal wildlife trade. These developments have brought a significant contribution to the income and standard of living for many people and communities such those in Ninh Ninh, Vinh Phuc, Hung Yen, An Giang, Ho Chi Minh city and Khanh Hoa provinces. The success of the policy in these areas could be a very good model and lesson for further wildlife trade development and promotion.

The success of the policy has provided an opportunity captive breeding and artificial propagation operations to contribute to re-stocking of wild populations. Some captive breeding owners have voluntarily donated a certain number of captive bred animals to the wild such as Siamese crocodile (*Crocodylus siamense*), soft-shelled turtle (*Trionyx sinensis*), marine turtles (*Chelonia* spp.), and primates (Primates spp.). Some had also financed scientific research on wild population restoration. Such positive movements need to be promoted and could be used to demonstrate the effectiveness of the wildlife trade policy.

Nevertheless, the current Vietnamese wildlife trade policy still has some weaknesses that have limited much of the positive impact of the policy, especially on curbing the illegal trade. The problem mostly arose during the development of the policy; some policy measures were quickly out date due to the rapid development of and changes in the wildlife trade. The existence of these weaknesses should be seriously evaluated and reviewed for future policy improvement. Some of the most important problems are summarized below.

1. Some Vietnamese wildlife trade legislation has probably attempted to regulate the trade too strictly. Solutions should be based on good integration of protection and legal utilization. Vietnam's current wildlife trade policy is heavily focused on protection and law enforcement. The development of legal utilization is not given equal attention. The right of local people to harvest and use wild species is not taken into account in the policy. Therefore, those livelihoods that heavily depend on the exploitation of natural resources are severely impacted by a policy of banning use and trade. Alternative livelihoods to replace the use of the banned species were rarely provided. In addition, the policy does not show a willingness to develop a sustainable harvesting mechanism to address illegal harvesting and trade.
2. The development of the policy is mainly based on the contributions of and consultation with the Management Authority, the law enforcement authorities and scientific institutions. There is a lack of consultation with local people, farmers and wildlife trade communities. The lack of appropriate consultation with and participation of relevant stakeholders limits the policy.
3. The current policy had promoted the development of the legal wildlife trade and captive breeding and artificial propagation. This has resulted in the rapid recent growth of the trade and captive breeding. The development of legal trade and captive breeding has helped to address the pressure of wild harvesting and illegal trade. However, the development of the trade and captive breeding has been hampered by the lack of proper markets and an absence of research and evaluation. As a result, the legal trade and captive breeding have often been negatively affected by the market with reduced prices and uncertain demand. This means that wildlife trade and captive breeding can be unstable and unsustainable businesses that do not provide a good approach to increasing the income of local people and casts doubt on the use of captive breeding as a tool to help the national strategy for hunger elimination and poverty eradication.
4. The inclusion of some species in the protection and management list of the current policies is base mostly on their scientific or the endemic value rather than whether they are impacted by overexploitation and trade. As a result, some listed species have never been threatened by illegal trade or overexploitation, and some species heavily impacted by illegal trade are not on the lists. In addition, some species that are considered to be extinct in the wild, but are bred in captivity, were listed creating some difficulties for the trade in captive bred specimens. The confusion of the list caused an increase in paper works and affected on the income from captive breeding and limited the potential for promoting the breeding of species to increase income for local people.
5. The evaluation and monitoring of overexploitation and the trade in wildlife has not yet been implemented. Very little research was carried out in the field to support the up-listing or down-listing of species. The lack of this important information does not help the development of either correct listing or the use of appropriate conservation measures for those species that are heavily impacted by overexploitation and illegal trade. Sometimes impractical lists of protected wildlife are issued that do not assist effective implementation.
6. The coherence of the current policy also needs to be taken into account. There are some inconsistencies in the terms and definitions often used. In addition, some of the documents issued lacked appropriate connections with related policies.

7. The equal consideration of animals and plants in the policy and implementation also needs to be taken into account. And the operation of the prosecution and punishment mechanism also needs to be reevaluated to make it more practical and to have a stronger effect on the illegal trade.
8. Effective policy implementation is the key to achieving the overall goal of wildlife trade policy. This requires proper staff training and supervision. In addition, environmental education is also crucial to help implementation.
9. As the trade increases, illegal trade can also increase. Hence rescue and rehabilitation preparation is very important to deal with confiscated wildlife. The issue is referred to in many wildlife trade policy documents. Nevertheless, very little funding has been made available for wildlife rescue and rescuing live wildlife remains a big difficulty for the law enforcement authorities.
10. The implementation of the wildlife trade policy still slow and ineffective. The targets are often set too high and are difficult to reach. Adequate attention is not paid to the monitoring and evaluation mechanism for policy implementation.

## **6. Recommendation**

Vietnam's wildlife trade policy has contributed significantly to addressing the illegal trade and brought opportunities to increase income and jobs to people, especially those that are involved in the trade. However, due to the policy's limitations it is necessary to improve and complete current policy to ensure its efficiency and applicability. By undertaking the necessary steps, the policy would then be a useful tool for the management of the wildlife trade.

The identified loopholes and weaknesses of the wildlife trade policy need to be carefully addressed. The improvement of policy will require appropriate consultation with the stakeholders.

The problems with the policy include overlaps and inconsistencies between relevant policies and their supporting documents. In addition the relevance of several different sectoral policies (fisheries, agriculture and biodiversity) to the wildlife trade poses some difficulties for implementation. Hence, it is crucial to have a united document for wildlife trade management. The production of such a document would create favorable conditions for implementation and monitoring.

Development objectives are not given adequate attention in the wildlife trade policy. The policy has not yet become an economic tool to increase income for local people. This aspect of the wildlife trade should be considered because the legal trade and captive breeding have brought significant income and jobs for local people in some instances. Good examples of captive breeding from Vinh Phuc, Huong Son and Hung Yen provinces should be documented as they provide lessons for other areas and it would show the positive aspect of the wildlife trade.

The inclusion of a species in a protection list should be careful to consider the impact that the listing would make on the livelihoods of local community. The list should focus strictly on the species that are threatened by overexploitation and the illegal trade. Possibly extinct species should be excluded to avoid complications. The best way to develop such a list is to have appropriate involvement of relevant parties and stakeholders through a consultative workshop. The term for endangered and threatened species should be standardized for all policy documents.

The concepts of captive breeding, legal trade and illegal trade should be distinguished in the policy. Only the illegal trade threatens wildlife and biodiversity. Well managed utilization and trade would actually help control the illegal trade increased income from the trade is a potential tool for economic development and conservation. In addition, wildlife trade policy should have an orientation mechanism to help the legal trade and development to make this business more sustainable then it would give a change of bringing biodiversity value to the life.

Scientific monitoring and assessment of and research on wildlife populations and the wildlife trade are crucial. The requirement for monitoring and assessment is very weak in the current policy. Therefore, a strong mechanism for wildlife population monitoring and trade evaluation is very important to ensure the survival of wildlife as well as the sustainability of the trade.



The evaluation and review of current effects and impacts of wildlife trade policy are not undertaken in a regular and timely manner. This is important to reduce the negative impacts of the policy and to ensure its proper implementation.

Current funding for wildlife trade policy implementation is far less than needed. A lack of investment in the CITES Authorities has limited much of their activities. Law enforcement is also limited by a shortage of funds. Therefore, it is strongly recommend that there is appropriate funding for wildlife trade management, especially for addressing the illegal wildlife trade. Appropriate funding will certainly improve the effectiveness of the wildlife trade policy.

Official state funding for wildlife trade rescue activities is necessary to assist law enforcement. It is also important in order to fulfill the commitment the wildlife rescue in the current policy and supporting documents. Wildlife rescue should not be only restricted to state zoos and state rescue centres, but could also be allocated to some experienced wildlife captive breeding farms, private zoos, protected areas as a way of enlarging the involvement of people in this issue.

The current policy of selling confiscated wildlife needs to be reevaluated. The re-selling of confiscated specimens could accidentally legalize the illegal trade and encourage the use of illegal products. To develop captive breeding and artificial propagation, it may be helpful to transfer a certain number of wild specimens to form a parent stock to promote legal captive breeding and artificial propagation. In addition, dead specimens and products from confiscated wildlife should be transferred to museums and universities for educational purposes and should not be disposed of as has been done in the past.

The development of captive breeding and artificial propagation has been growing very fast recently. In addition, wildlife disease outbreaks and transmission to humans has been well documented. Good veterinary management is very important to prevent any possible out break of disease. Currently, there is no trained wildlife veterinarian and nor has there been any preparation to deal with this issue. It needs to be considered and acted on. The requirement for wildlife disease control should be properly incorporated in the current policy.

In order to develop captive breeding as well as the legal trade requires careful preparation in terms of techniques, breeding stock, and market research. Currently the most difficult issue for captive breeding development is the availability of parent stock, especially for rare species. Moreover, the currently law strictly regulates the harvesting of rare wild animal and plant species. What is needed is to allow a certain amount of wildlife to be taken from the wild for the purpose. Again, the confiscated wildlife could be another good option to solve this difficulty.

Environmental education is not properly addressed in the wildlife trade policy. However, a few education campaigns on the wildlife trade have been undertaken in the last five years. Stronger educational activity would gain significant support from the public and could help control the illegal wildlife trade. It is recommended that there is a large and stronger educational campaign on wildlife trade to promote the implementation of the policy. Campaigns should be implemented regularly with official funding from state.

## 7. References

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## 8. Appendices

### 8.1. Legal documents and regulations on wildlife trade

No	Documents
<b>Legal documents issued from 1962 to 1994</b>	
1.	Direction No. 134-TTg, dated 21-6-1960 by The Prime Minister on prohibiting elephant hunting.
2.	Decree No. 39/Government Commission, dated 5-4-1963 by Government Commission on temporary prohibition on bird and animal hunting.
3.	Circular No. 40/LN, dated 20-7-1963 by General Director of Forestry Department on explanation and guideline on temporary prohibition on bird and animal hunting.
4.	Ordinance on forest protection regulations – Order to declare Ordinance No. 147-LCT dated 11-9-1972 by The President of Vietnam.
5.	Ordinance on Fisheries Protection and Development, dated 25-4-1989.
6.	Decision No. 276/QĐ, dated 2-6-1989 by Minister of Forestry on stipulating forest animals export, import and management.
7.	Laws on Forest Protection and Development, Order No. 58-LCT/HĐNN, dated 19-8-1991 by Vietnam Government Commission on Announcement of Laws on Forest Protection and Development.
8.	Decree No. 17-HĐBT, dated 17-1/1992 by The Government Commission on the implementation of Laws on Forest Protection and Development.
9.	Decree No. 18/HĐBT, dated 17-1-1992 by The president of Government Commission on the stipulation of the list of rare and specious wild life and management and protection regulations.
10.	Circular No. 13-LN-KL, dated 12-10-1992 by The Minister of Forestry on the implementation guidelines of Decree No. 18/HĐBT, dated 17-1-1992 by The president of Government Commission on the stipulation of the list of rare and specious wild life and management and protection regulations.
11.	Direction No. 130-TTg, dated 27-3-1993 by The Prime Minister on management and Protection of rare and specious animals and plants.
12.	Direction No. 283-TTg, dated 14-6-1993 by The Prime Minister on urgent measures to protect rare and specious timbers.
13.	Official Letter No. 1888 LN/KL, dated 16-8-1993 by The Minister of Forestry to Provincial People's Committees, Provincial Forestry Departments, Provincial Departments of Agriculture on implementation guidelines of Decree No. 283-TTg
14.	Official Letter No. 1817/KGVX, dated 31-12-1993 by Government Office to announce directions of the Prime Minister on CITES participation of Vietnam.
15.	Laws on Environment approved on 27/12/1993, by The National Assembly, Term IX, 4 <sup>th</sup> Session.

<b>Legal documents issued from 1994 to 2007</b>	
1.	Decision No. 844-TCLĐ, dated 5-8-1994 by Minister of Forestry on assigning Forest Protection Department on behalf of the ministry as CITES Management Authority.
2.	Decision No. 845/TTg, dated 22-12-1995 by The Prime Minister on Approval of “Biodiversity Action Plan in Vietnam”.
3.	Biodiversity Action Plan in Vietnam dated 1995.
4.	Official Letter No. 551/LN/KL, dated 21-3-1994 by The Minister of Forestry to Provincial People’s Committees and Cities on strengthening wildlife protection.
5.	Direction No. 359-TTg, dated 29-5-1996 by The Prime Minister on urgent measures to protect and develop wildlife.
6.	Official Letter No. 2472/NN-KL/CV, dated 24-7-1996 by Minister of Agriculture and Rural Development to Provincial Departments of Agriculture and Rural Development, Forest Protection Departments and Forestry Cooperation in Vietnam to protect and develop wildlife.
7.	Circular No. 04/NN/KL dated 5-2-1996 by Minister of Agriculture and Rural Development on implementation guidelines for Decree No. 02-CP, dated 5-1-1995 by The Prime Minister trade prohibition on good items and conditions for trade activities in domestic market.
8.	Decree No. 11/1999/NĐ-CP, dated 3-3-1999 by The Prime Minister on good items transferring prohibition, services providing limited and trades under specific conditions.
9.	Decision No. 47/199-QĐ-BNN-KL, dated 12-3-1999 by Minister of Agriculture and Rural Development stipulating examination regulations on forest products and timber processing, transportation, and business.
10.	Decision No. 242/1999/QĐ/TTg, dated 30-12-1999 by The Prime Minister on coordination of export and import goods in 2000.
11.	Decision No. 43/2000/QĐ-BNN-TCCB dated 19/4/2000 on the establishment of Vietnam CITES Office.
12.	Official Letter No. 637-KL-BTTN dated 2/11/2000 by Director General of Forest Protection Department on wildlife management guidelines for Provincial Forest Protection Departments.
13.	Decision No. 140/2000/QĐ/BNN-KL dated 21/12/2000 by Minister of Agriculture and Rural Development on stipulation on the list of wildlife pets of mice.
14.	Decision No. 08/2001/QĐ-TTg dated 11/01/2001 by the Prime Minister on stipulation of management regulations on special use forest, protective forest, and plantation.
15.	Decision No. 46/2001/QĐ- TTg dated 4/04/2001 by The Prime Minister on issuing temporary procedures for import and export goods in 2001-2005.
16.	Decision No. 1494/2001/QĐ-TCHQ dated 26/12/2001 on issuing temporary procedures for import and export goods.
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<b>Legal documents issued from 1994 to 2007</b>	
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23.	Decree No. 139/2004/NĐ-CP, dated 25/6/2004 on administration fine on forest resource and forest management and protection.
24.	Decree No. 59/2005/NĐ-CP dated 04/5/2005 stipulating conditions for aquatic producing and trade careers.
25.	Environment Protection Laws (Laws No. 52/2005/QH11), approved by The National Assembly Term XI, 8 <sup>th</sup> Session dated 29/11/2005.
26.	Decree No. 23/2006/NĐ-CP, dated 03/3/2006 on the implementation of Laws on Forest Protection and Development.
27.	Circular No 02/2006/TT-BTS of Minister of Fisheries dated 20/3/2006 on implementation guidelines of Decree No. 59/2005/NĐ-CP by the Prime Minister dated 04/5/2005 on conditions for aquatic producing and trade careers.
28.	Decree No. 32/2006/NĐ- CP by The Prime Minister dated 30/3/2006 on rare, endangered wild animals and plants management.
29.	Decree No. 59/2006/NĐ-CP, dated 12/6/2006 by the Prime Minister on stipulating Trade Laws on banned, restricted, conditioned business goods and services
30.	Decision No. 54/2006/QĐ-BNN dated 05/07/2006 by the Minister of Agriculture and Rural Development on promulgating the list of wild animals and plants listed CITES appendixes.
31.	Decicion No. 82/2006/NĐ-CP dated 10/8/2006 by the Prime Minister on quản lý hoạt động xuất nhập khẩu, nhập nội từ biển, quá cảnh, nuôi sinh sản, nuôi sinh trưởng và trồng cây nhân tạo các loài động vật, thực vật hoang dã nguy cấp, quý, hiếm.
32.	Decision No. 186/2006/QĐ-TTg by The Prime Minister dated 14/8/2006 on issuance of forest management regulations.
33.	The National Strategy for Forestry Development in Vietnam for the period of 2006-2020, stipulated accompanying with Decision No. 18/2007/QĐ-TTg dated 05/02/2007 by the Prime Minister.
34.	Direction No. 1284/CT-BNN-KL by the Minister of Agriculture and Rural Development dated 11/4/2007 on strengthening management of wildlife ranching, captive breeding and artificially propagating.
35.	Decision No: 07/2007/QĐ-BNN by the Minister of Agriculture and Rural Development dated 23/01/2007 on The establishment of CITES management authority.
36.	Decision No. 178/2001/QĐ-TTg dated 12/11/2001 by The Prime Minister on responsibilities and benefits of households contracted forest and forest land management.

## 8.2. Survey locations

No.	Location	Time	Agency
1	Ho Chi Minh City	07-08/5/2007	<ul style="list-style-type: none"> <li>- Provincial Forest Protection Department (PFPD)</li> <li>- Animal Rescue Centre</li> <li>- Department of Customs</li> <li>- Provincial Department for Aquatic Resource Exploitation and Protection</li> <li>- Ho Chi Minh Zoo</li> <li>- Hoa Ca Crocodile Captive Breeding Farm</li> <li>- Naforvanny primate captive breeding and development Company</li> </ul>
2	Kien Giang	09-10/5/2007	<ul style="list-style-type: none"> <li>- Provincial Forest Protection Department</li> <li>- Department of Customs</li> <li>- Provincial Department for Aquatic Resource Exploitation and Protection</li> <li>- Captive breeding farms and wildlife export and import companies</li> </ul>
3	An Giang	11-12/5/2007	<ul style="list-style-type: none"> <li>- Provincial Forest Protection Department</li> <li>- Provincial Department of Customs</li> <li>- Provincial Department for Aquatic Resource Exploitation and Protection</li> <li>- Crocodile Captive Breeding Farm</li> <li>- Agarwood Plantation and Development</li> </ul>
4	Vinh Long	12/5/2007	<ul style="list-style-type: none"> <li>- Animal Captive Breeding Enterprises</li> <li>- Representative of Southern Animal Captive Breeding Farm Association</li> </ul>
5	Ha Noi	28/5/2007	<ul style="list-style-type: none"> <li>- Hanoi Zoo</li> <li>- Provincial Forest Protection Department</li> <li>- Soc Son Animal Rescue Center</li> </ul>
6	Ninh Binh	29-30/5/2007	<ul style="list-style-type: none"> <li>- Provincial Forest Protection Department</li> <li>- Cuc Phuong National Park</li> <li>- Deer and Porcupine Captive Breeding Households</li> <li>- Endangered Primate Rescue Center</li> <li>- Turtle and Tortoise Rescue Centre</li> </ul>
7	Vinh Phuc	31/5/2007	<ul style="list-style-type: none"> <li>- Provincial Forest Protection Department</li> <li>- Vinh Son Snake Village</li> </ul>
8	Quang Ninh	12-15/6/2007	<ul style="list-style-type: none"> <li>- Provincial Forest Protection Department</li> <li>- Department of Customs</li> <li>- Wildlife trade enterprises</li> </ul>
9	Ha Tinh	11-13/5/2007 18-20/7/2007	<ul style="list-style-type: none"> <li>- Provincial Forest Protection Department</li> <li>- Department of Custom</li> <li>- Border Port Cau Treo Customs</li> <li>- Agarwood nurseries and plantation in Huong Khê</li> </ul>
10	Son La	25-28/7/2007	<ul style="list-style-type: none"> <li>- Department of Custom</li> <li>- Local medicinal plants collectors and traders</li> <li>- Wildlife Captive Breeding Households</li> </ul>