

# BIODIVERSITY CONSERVATION IN VIETNAM: A PERFECT STORM

Jake Brunner<sup>1</sup>

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A “perfect storm” is an expression that describes an event where a rare combination of circumstances will aggravate a situation drastically. The term is also used to describe an actual phenomenon that happens to occur in such a confluence, resulting in an event of unusual magnitude. [http://en.wikipedia.org/wiki/Perfect\\_storm](http://en.wikipedia.org/wiki/Perfect_storm), accessed March 17, 2012.

Over the last few years, a series of reports have documented the disappearance of Vietnam’s globally threatened plants and animals and the ineffectiveness of current management responses.<sup>2</sup> Loss of species matters because while degraded habitats can often be restored and genetic material preserved, extinction is forever. Vietnam’s wildlife in particular faces a perfect storm that has resulted in a three-pronged assault.

The first prong is the growth-at-all-costs strategy that has characterized economic development over the past 20 years. Rewards at the provincial level, which is where most land use decisions are made, are linked to a narrow set of economic criteria. Thus, while government staff may understand the intellectual case for biodiversity conservation, this is unlikely to influence their decision making.<sup>3</sup> Indeed, they face a clear conflict of interest between meeting their economic growth targets (and filling provincial budget deficits) and biodiversity conservation.

The second prong has been a high dependence on exports of agricultural commodities. This has driven the rapid, large-scale, and effectively unregulated, conversion of natural habitats to paddy, shrimp ponds, rubber, and other land uses. This conversion has been most dramatic in the relatively sparsely populated and fertile areas of the Central Highlands and Mekong Delta. The ease with which land can be converted has reduced incentives to invest in branding, certification, and other forms of added-value.<sup>4</sup> The industrial sector has been equally destructive. For example, the boom in cement production in the mid-2000s was led by the proliferation of state-owned enterprises that bought obsolete technology from China. The result has been huge excess capacity, an uncompetitive industry, and irreversible environmental damage (without any form of offset or compensation). Industrial pollution has also been a major driver of freshwater biodiversity loss.

The third prong has been cultural preferences that encourage the consumption of products made from endangered wildlife. The demand is deep-rooted, sanctioned at the highest levels of society, and, at least in the case of tiger bone and rhino horn, price-inelastic, meaning that consumers are willing to pay almost any price for the product.<sup>5</sup> Numerous internationally financed awareness campaigns have had no discernible impact on the demand for wildlife products. Indeed, the assumption that a growing and more Westernized middle class would result in a drop in consumption has provided false (as it has in China). Meanwhile, Vietnam’s biodiversity “footprint” has expanded internationally. Demand from Vietnam (and China) is driving the massacre of South Africa’s rhinos and the large-scale poaching of marine turtles in the East Sea.

These forces, combined with the presence of many restricted range species, have driven many species to the edge of extinction and in some cases beyond. The loss of the last Javan rhino (*Rhinoceros sondaicus*) in Vietnam was confirmed in 2011. A similar trend has been observed in China with the extinction in the wild over the last 10 years of the South China tiger (*Panthera tigris amoyensis*) and Yangtze River dolphin (*Lipotes vexillifer*). Populations of wide ranging and commercially valuable wildlife in Vietnam are highly depressed. According to a 2010 review of tiger conservation priorities by WCS, only one of Vietnam’s six tiger conservation landscapes is now home to a viable tiger population and even that one is mostly in Laos and has just been bisected by a military road. A 2010 study showed that less than 100 banteng (*Bos javanicus*)

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<sup>1</sup>IUCN Program Coordinator for Vietnam, Cambodia, and Myanmar. The views expressed in this paper are those of the author and do not necessarily reflect the position of IUCN. He can be contacted at [jake.brunner@iucn.org](mailto:jake.brunner@iucn.org).

<sup>2</sup>These include: Dudley and Stolton (2011) *Death of a Rhino: Lessons Learned from the Disappearance of the Last Javan Rhinoceros in Vietnam*, WWF and Equilibrium Research; Brook et al. (2011) *Extinction of the Javan Rhinoceros (Rhinoceros sondaicus) from Vietnam*, WWF-Vietnam; Appleton et al. (2011) *Capacity Needs Assessment for Management of Protected Areas in Vietnam and Proposals for Job Descriptions for Key Protected Area Management Positions*, GIZ and MARD; Walston et al. (2010) *Bringing the Tiger Back from the Brink—The Six Percent Solution*; Pedrono et al. (2009) *Status and Distribution of the Endangered banteng (Bos javanicus birmanicus) in Vietnam: a Conservation Tragedy*, Fauna & Flora International, Oryx, 43(4), 618–625; Corbett (2008) *Paper Parks and Paper Partnerships: Lessons for Protected Areas and Biodiversity Corridors in the Greater Mekong Sub-region*, IUCN and ADB/GMS; Carew-Reid and Nguyen Huu Dung (2007) *Building Vietnam’s National Protected Areas System—Policy and Institutional Innovations Required for Progress*, IUCN, ICEM, and MARD.

<sup>3</sup>The same tendency has been observed in China where the Ministry of Environmental Protection has recommended reforming the performance evaluation criteria for local government officials to include environmental outcomes.

<sup>4</sup>NUS and CIEM (2010) *Vietnam Competitiveness Report 2010*.

<sup>5</sup>Felbab-Brown (2011) *The Disappearing Act: the Illicit Trade in Wildlife in Asia*, The Brookings Institution.

survive in Vietnam, the population has declined by at least 50% since the mid-1990s, and the species is likely to go extinct in Vietnam in the near future.

Generally speaking, Vietnam has a good body of environmental laws and regulations but implementation is very weak. In practice, protected area managers respond to other incentives. For example, after the fires in U Minh in September 2002 resulted in the public criticism of senior government officials, fire suppression became the dominant management objective even if it meant keeping wetlands flooded all year round, with damaging impacts on biodiversity. While a protected area manager could lose his job if a fire breaks out, he is most unlikely to suffer consequence if the wildlife is hunted out. Indeed, one of first things one sees upon entering Vietnam's protected areas is an enormous dial showing fire risk (*cap du bao chay rung*).

The gap between policy and practice helps explain the very low persistence of numerous national and internationally funded ranger training programs. A 2011 GIZ/MARD study concluded that despite a well educated workforce and plentiful access to training, individual ranger confidence and capacity are very low, particularly with respect to basic protected area management functions. The team that did the banteng study never met any ranger patrols in the protected areas they surveyed during 1,700 survey-hours over three years. Rangers, it would, appear, are even rarer than banteng in Vietnam's protected areas.

Given these enormous challenges, what can be done? The first step is to segment the problem. Vietnam's globally threatened wildlife can be divided into two main groups:

1. Species that are mostly assessed by IUCN as Critically Endangered (CR) and are endemic or largely endemic to Vietnam (Type 1).
2. Species that are mostly assessed as Endangered (EN), for which Vietnam is peripheral to their survival, yet nevertheless retain cultural significance (Type 2).

From a global conservation perspective, conserving Type 1 species in Vietnam is a higher priority than conserving Type 2 species in Vietnam because the alternative is global extinction. There are about 10 Type 1 species:

#### Type 1 Priority Species

Name	Status	Endemic to Vietnam	Estimated Global Population	Strongholds in Vietnam
Cao vit gibbon ( <i>Nomascus nasutus</i> )	CR	No	110	Cao Vit Gibbon Conservation Area, Cao Bang
Tonkin snub-nosed monkey ( <i>Rhinopithecus avunculus</i> )	CR	Yes	250	Tonkin snub-nosed monkey Species and Habitat Conservation Area, Ha Giang
Cat Ba langur ( <i>Trachypithecus poliocephalus</i> )	CR	Yes	60	Cat Ba Island
Delacour's langur ( <i>Trachypithecus delacouri</i> )	CR	Yes	250	Van Long Nature Reserve
Western black-crested gibbon ( <i>Nomascus concolor</i> )	CR	No	2,000	Mu Cang Chai Species and Habitat Conservation Area
Grey-shanked douc langur ( <i>Pygathrix cinerea</i> )	CR	Yes	400	Kon Ka Kinh National Park and Que Son District, Central Vietnam
Vietnamese pond turtle ( <i>Mauremys annamensis</i> )	CR	Yes	Unknown	Central Vietnam
Swinhoe's softshell turtle ( <i>Rafetus swinhoei</i> )	CR	No	4	Hanoi and environs
Edwards's pheasant ( <i>Lophura edwardsi</i> )	EN	Yes	Unknown	Central Vietnam
Saola ( <i>Pseudoryx nghetinhensis</i> )	CR	No	<200	Central Vietnam

Several Type 1 species have such restricted ranges that a hunter with a gun or a disease outbreak could wipe out half their global population. This calls for close, uninterrupted protection, intensive management and monitoring, and in some cases assisted reproduction. The technical difficulties are substantial. There is no hard evidence of where the Saola and Edwards's pheasant should best be protected in the wild. And ensuring the survival of Swinhoe's softshell turtle may require lending the male in Dong Mo to breed with the female in Suzhou Zoo in China.

All of these species are being technically and financially supported by international NGOs. Yet despite the urgency, these projects are typically small and fragile. This vulnerability exists for several reasons:

1. Responsibility for these species based projects often rests with just one or two people. Technical capacity within projects is therefore often limited in many of the areas required for effective and holistic species conservation approaches.

2. Changes in personnel may result in a large shift in technical capacity, a change in focus based on staff experience and interest, and a loss of institutional memory.
3. Institutions change priorities, which can result in reduced or termination of funding. For example, changes in institutional priorities and geographic focus have been identified as factors resulting in a reduction in support by WWF for the last population of Javan rhino in mainland Asia, which ultimately caused its extirpation from Cat Tien National Park in 2010. This may in turn be driven by changes in donor funding priorities (e.g., climate change, REDD, payments for environmental services).
4. Funding gaps can result in the reversal of years of investment in a very short time. For example, a funding gap from 2007-2010 for the western black-crested gibbon in Muong La resulted in a population collapse of the species due to lack of support for enforcement groups.

In response to the well documented frequent failure of both state- and NGO-led projects to protect Vietnam's most threatened wildlife, a group of NGOs is in the process of establishing an alliance whose central mandate is the long-term conservation of species that can only be conserved in Vietnam. Such a body should be apolitical, not aligned with any particular ministry, include a diversity of viewpoints, members, and institutions, provide a pool of technical capacity to be drawn upon as needed, provide long-term institutional memory by acting as a clearing house for information on these species, and ensure access to emergency funding through donor connections.

Because Type 2 species are wide ranging and often of high commercial value, protecting them represents a different challenge. Specifically, the ability to conserve these species hinges on being able to manage large areas of land, inside and outside of protected areas. The major constraint on improved protected area management in Vietnam is the lack of a central body with the authority and capacity to support and intervene at the site level. All but six of Vietnam's 164 protected areas are managed by the provinces. As a result, Vietnam does not have a national protected area system but rather a highly decentralized system in which biodiversity conservation is often subordinated to local development imperatives.<sup>6</sup> Without stronger accountability and performance, very little else matters. Current discussions over best practices in zoning and benefit sharing, for example, do not address the fundamental problem, which is that protected areas are not primarily managed for biodiversity conservation.<sup>7</sup>

A difficulty with calling for improved protected area management is that there is very little charismatic (or viewable) wildlife left to save and consequently little incentive for government to do a better job. (This was apparently one of the reasons why government refused to relocate a settlement from the middle of Cat Tien National Park.) It's a vicious circle: weak protection leads to less wildlife leads to less commitment leads to weaker protection.

At the same time, Vietnam has a lot of wildlife in zoos, commercial farms, and conservation breeding centers. Whether this captive wildlife could be used to help restock Vietnam's empty forests depends on whether this sector can be reformed. Several zoos and commercial farms are involved in buying, selling, and laundering wildlife. While some conservation breeding centers are managing captive populations in line with international standards, raising public awareness, and serving as assurance colonies for the most threatened species, no facility can yet demonstrate a clear link between their work and the survival of globally threatened wildlife. Establishing this link would probably require banning the commercial farming of wildlife, deciding which species can be legally bred (IUCN has published technical guidelines on the management of ex situ populations for conservation), and ensuring that breeding centers contribute directly to conservation in the wild.

At that point, it would be possible to consider reintroducing wildlife. There are, for example, about 100 tigers in commercial farms in Vietnam. If these facilities were properly regulated, it would be possible to consider reintroducing tigers into fenced enclosures inside protected areas in suitable habitat such as the dry forest along the border with Cambodia. Some organizations insist that it is not even worth considering reintroducing captive-bred tigers. But this has been done with the South China tiger in South Africa and there no technical reason why the same could not be done in Vietnam. If tigers (and their prey) were strictly protected, they could form the basis of viable wildlife viewing industry. The long-term economic return from captive breeding would therefore come from increased visitation to protected areas not from buying and selling wildlife. And a viable wildlife viewing industry would provide a strong incentive for the government to enforce its own laws. A recent review of ex situ conservation concluded that: "The chasm that has traditionally divided in situ and ex

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<sup>6</sup>This conflict of interest is particularly strong in the fast growing coastal areas. For example: <http://english.vietnamnet.vn/en/environment/17887/sea-conversation-strategy-remains-on-paper.html>

<sup>7</sup>The inability to establish a protected area management authority is analogous to the inability to implement integrated water resource management because of the reluctance of any ministry to surrender authority over "its" resources. In such cases, intervention by the Prime Minister or National Assembly may be required.

situ approaches may diminish as approaches are combined. Moreover, the relentless loss of the 'wild' may soon render the in situ / ex situ distinction misleading, or even obsolete."<sup>8</sup>

Reintroducing wildlife, particularly top predators, should only be done under the most stringent conditions and would require international oversight. Whether or not these conditions can be met is open to question. But what is not open to question is that such a strategy offers the prospect of recapturing some of what's been lost to hunting and habitat lost.

Despite the enormous challenges, there are grounds for optimism. The collapse of state-owned Vinashin in 2010 and the onset of a period of severe macro-economic turbulence have led to an official move away from "steroid-fueled" growth. The decision by the Prime Minister to publically oppose the Xayaburi dam in Laos may reflect understanding at the highest level of government of the risks posed by large-scale environmental damage. In response to consumer pressure in the EU and US, there is growing interest in the more environmentally friendly production of shrimp, fish, and other commodities. These trends should, over time, reduce pressure on natural resources.

Another area of promise is the emergence of a new generation of local NGOs that are truly private voluntary organizations, i.e., a group of individuals coming together to work toward a common vision on a non-profit basis. These groups are expanding the scope of what civil society can achieve. Education for Nature-Vietnam, for example, has led the campaign to close down bear bile farms. And there is extensive cooperation between national and international NGOs in recognition that they have complementary roles to play. There is also evidence that some ministries are becoming more open to policy input from NGOs.

Based on this initial analysis, and in order to spark discussion and feedback, a strategy to conserve globally threatened plants and animals in Vietnam might include some of the following recommendations:

#### **TYPE 1 SPECIES**

1. Formation of an alliance among NGOs and specialist organizations to ensure that Tier 1 species receive uninterrupted management and protection over the next 10 years.
2. Government financial and policy support to the alliance, including legislation that would allow for Vietnamese bodies to take out long-term conservation leases (as is being done for the pond turtle).
3. Government endorsement of an internationally managed operation to bring the Swinhoe's softshell turtle in Dong Mo to Suzhou Zoo to breed.
4. Intensive government support, including transboundary cooperation, to identify viable populations of Saola and Edwards's pheasant and, if found, initiate strict protection measures.

#### **TYPE 2 SPECIES**

5. Establishment of a single body with the authority, capacity, and interest to supervise management of all Vietnam's protected areas, enforce protected area policy, and control protected area financing.
6. Implementation of strict controls over all existing wildlife farms Vietnam and closure of those that do not meet minimum standards or pose unacceptable risks to wild populations.
7. Government participation in a study to assess the feasibility of reintroducing captive-bred tigers in well protected natural habitats.
8. Government should coordinate international interventions to suppress the large-scale poaching of rhinos, marine turtles, and other globally threatened wildlife overseas.

Vietnam is currently going through its second economic revolution after the *doi moi* reforms of the mid-1980s. As it restructures its economy toward the production of higher quality goods and services, reversing 20 years of rapid biodiversity loss can help restore its international image. The NBSAP, which needs to be submitted to the Prime Minister by the end of 2012, is an opportunity to take advantage of current economic and political trends to propose bold new goals and approaches. Business as usual is not acceptable. The NBSAP should be a genuine strategy, not a laundry list of needs and wants. This means setting priorities and focusing on what is absolutely vital. It is also an opportunity to bring together multiple stakeholders and give them the opportunity to listen and learn from each other. In some cases, organizations may need to adjust long-standing positions to current realities.

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<sup>8</sup>Pritchard et al. (2011) *Bring the Captive Closer to the Wild: Redefining the Role of Ex Situ Conservation*, Fauna & Flora International, Oryx, 46(1), 18–23.