

EVADING EXTINCTION: A 21ST CENTURY SURVEY OF THE LEGAL CHALLENGES TO WILD SIBERIAN TIGER CONSERVATION

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I. INTRODUCTION: WHY THE SIBERIAN TIGER?

The Siberian tiger (*Felidae Panthera tigris altaica*),¹ more appropriately known as the Amur tiger,² is the largest subspecies of tiger.³ The tiger is the largest feline species on earth⁴). The largest full-grown wild male Amur tiger weighed in at 660 pounds.⁵ Sadly, there are currently more Amur tigers in captivity than in the wild.⁶

While its original range extended throughout the Russian Far East, northeastern China, and the entire Korean peninsula, it is believed that the only remaining genetically viable population lives in the taiga forests of the Primorski and southern Khabarovski Krai--a region in the Far East of the Russian Federation along the Amur River basin in the Sikhote-Alin mountains.⁷ The heart of the Amur tiger's habitat lays in the legally protected Sikhote-Alin Preserve, a national park approximately the size of Yosemite.⁸ The Amur tiger--like all feline species, a dedicated carnivore--must maintain an average intake of ten pounds of meat per day and preys primarily on elk, sika deer, small roe deer, and wild boar.⁹ Because the Sikhote-Alin wilderness is characterized by thin topsoil and long winters, prey species must range widely

¹ John C. Porter, *Finding Teeth for Russian Federation Tiger Protection Laws: Using United States Gray World Populations as an Inspiration, and United States Endangered Species Legislation as a Model for Russian Federation Endangered Species Legal Reform*, 10 PENN ST. ENVTL. L. REV. 365, 369 n.30 (2002).

² The home range of this species is actually located south of the region technically considered to be part of Siberia. Kai-Ching Cha, *Can the Convention on Biological Diversity Save the Siberian Tiger?*, 24 ENVIRONS ENVTL. L. & POL'Y J. 3, 5 (2001).

³ It should be noted that recent studies suggest that the five regional tiger populations currently possessing separate taxonomic classifications as subspecies may not represent true genetic subspecies but simply wide variation within a unified species. K. ULLAS KARANTH AND KE ULLASA KARANTA, *THE WAY OF THE TIGER: NATURAL HISTORY AND CONSERVATION OF THE ENDANGERED BIG CAT* 45 (2001). The largest wild tigers have, however, been found among the tiger population commonly known as the Amur or Siberian tigers.

⁴ Porter, *supra* note 1, at 365.

⁵ KARANTH AND KARANTA, *supra* note 3, at 48.

⁶ Cha, *supra* note 2, at 13.

⁷ Porter, *supra* note 1, at 366 n.3; Cha, *supra* note 2, at 5.

⁸ Cha, *supra* note 2, at 6.

⁹ *Id.* at 5.

for sustenance, requiring their redators to also range widely.¹⁰ As a result, Amur tigers patrol individual territories averaging 175 square miles.¹¹

The Amur tiger, like all tigers, is threatened by its high black market value as an ingredient in traditional Chinese medicine.¹² In fact, the illegal wildlife generates up to ten billion United States dollars per year, trailing only the illegal narcotics and arms trade in annual revenue.¹³ The 1989 opening of the Russian-Chinese border exacerbated this illegal trade within the Russian Federation.¹⁴

The Amur tiger also suffers from a reduction of its prey base due to subsistence poaching of ungulate species and rampant logging. This reduction in wild prey has resulted in increased tiger-human conflicts such as livestock depredation, further reducing the locals' incentive to protect tigers.¹⁵

There are a number of reasons why the wild Amur tiger is an important candidate for targeted conservation efforts (not to mention an excellent case exemplar of the legal architecture of international wildlife conservation law):

First, the Amur tiger, as a species at the pinnacle of the food chain in its habitat, is what environmentalists refer to as a flagship species or indicator species--the health of which serves as an important indicator of the health of the entire ecosystem in which it lives.¹⁶ Because the Amur tiger lives in one of earth's last remaining critical carbon sinks,¹⁷ the health of its habitat has global ramifications.

Second, the Amur tiger is one of only two wild tiger populations that scientists believe may be sufficiently robust for the purposes of long-term genetic survival.¹⁸ A genetically viable wild tiger population will ideally contain at least 500 individuals.¹⁹ In 2001, the population of wild Amur tigers was estimated at 450.²⁰ Because of the current paucity of viable wild tiger populations, optimizing the conservation potential of the Amur tiger in its home range is vital for the survival of wild tigers in general.

Third, compared to much of Asia (tigers being an exclusively Asian species), the Russian Sikhote-Alin wilderness is more sparsely populated by both humans and tigers--reducing the relative rate of habitat encroachment and making tigers more difficult for poachers to find.²¹

¹⁰ *Id.* at 5-6.

¹¹ *Id.*

¹² Porter, *supra* note 1, at 366.

¹³ Amy E. Vulpio, *From the Forests of Asia to the Pharmacies of New York City: Searching for a Safe Haven for Rhinos and Tigers*, 11 GEO. INT'L ENVTL. L. REV. 463, 464 (1999).

¹⁴ Cha, *supra* note 2, at 11.

¹⁵ Porter, *supra* note 1, at 365.

¹⁶ Cha, *supra* note 2, at 7.

¹⁷ *Id.* at 8.

¹⁸ See Michael 't Sas-Rolfes, *Who Will Save the Wild Tiger?*, PERC POLICY SERIES PS-12 (1998), at http://www.perc.org/publications/policyseries/wildtiger_full.php?s=2.

¹⁹ Cha, *supra* note 2, at 4.

²⁰ *Id.*

²¹ Richard Damania, Randy Stringer, K. Ullas Karanth & Brad Stith, *The Economics of Protecting Tiger Populations: Linking Household Behaviour to Poaching and Prey Depletion*, Discussion Paper 0140, UNIV. OF ADELAIDE (Australia) CENTRE FOR INT'L ECON. STUDIES, available at <http://www.adelaide.edu.au>.

Finally, the tiger is an internationally popular, symbolic creature that people want to save, and the Amur tiger is the biggest tiger of them all. Thus, the Amur tiger's own characteristics make it a provocative target of conservation efforts.

II. THE CURRENT LEGAL ARCHITECTURE OF AMUR TIGER CONSERVATION IN THE RUSSIAN FEDERATION

A. Domestic Legislation Protecting Amur Tigers

Russia (beginning under the former Soviet Union) has criminalized the hunting of Amur tigers since 1947.²² Nevertheless, the Amur tiger remains critically endangered due to the primary threats of poaching (of both tigers and their prey species) and fragmentation of tiger habitat via both legal and illegal logging.²³ While the legal climate in the Russian Federation with regard to logging in tiger habitat will be predominately considered in Section III of this paper, the basic architecture of Russian wildlife protection laws (considered in this section) provides a basic framework relevant to the protection of both the animal and the habitat.

The Constitution of the Russian Federation authorizes the Russian Federal Government to establish federal environmental programs and to regulate commerce as necessary to protect the environment.²⁴ Furthermore, "Joint jurisdiction over environmental protection between the federal government and subjects of the Russian Federation is granted by the Constitution and is binding on the territories within which the Amur tiger ranges."²⁵ The ramifications of this joint jurisdiction are further explored in Section III *infra* with respect to logging issues.

The Russian Federation recognizes the importance of balancing natural resource exploitation with ecological health in Russian Federation Forest Code No. 22-FZ (1997), which mandates that "the use of the forest stock must be effected by methods which do not harm the environment, animal life, or human health."²⁶ Thus, logging in a manner that will harm tiger populations is technically illegal.²⁷ Additionally, Russia has maintained a forest preserve and national park system since the 1920s,²⁸ under which, once dedicated, protected lands cannot be later removed (although protected status is not dispositive regarding the disposition of logging rights).²⁹ As mentioned *supra*, most of the Amur tiger's extant range lies within legally protected forests.

There are criminal, but not civil, penalties for poaching within the Russian Federation. The federation's Criminal Code establishes a variety of possible fines and penalties based not on the nature of the particular poaching crime but, interestingly, on the status of the offender and the

²² *Id.* at 365.

²³ *Id.* at 367.

²⁴ *Id.* at 368.

²⁵ *Id.* at 368-9.

²⁶ *Id.* at 367 n. 15.

²⁷ *Id.* at 367.

²⁸ Cymbre Van Fossen, *The Evolution of a Comprehensive Environmental Strategy in the Russian Federation*, 13 *WIS. INT'L L. J.* 531, 533 (1994).

²⁹ Porter, *supra* note 1, at 372.

minimum wage mandated by the offender's jurisdiction and employment role.³⁰ Thus, an "ordinary citizen" poaching independently is fined anywhere between the equivalent of \$14.42 and \$3605.00.³¹ Because the "ordinary citizen" poaching in tiger habitat is likely to be unemployed and impoverished,³² fines would be levied at the low end of the scale. Meanwhile, black market retail value for an adult male tiger carcass can reach upwards of \$50,000 in some cities of the world,³³ the local himself earning up to \$15,000.³⁴

The Criminal Code additionally provides that "[a] functionary who uses the power of position, a conspirator, and a member of organized crime" is fined anywhere between the equivalent of \$36.05 and \$5047.00 or "may be imprisoned for up to two years."³⁵ A "functionary" who is imprisoned under the enhanced penalty regime also loses the right to hold certain state positions for a period of three years.³⁶

Organized crime does play a substantial role in the trade in tiger carcasses and derivatives, the Russian mafia controlling illegal wildlife trafficking from the far eastern port of Vladivostok.³⁷ The poachers themselves, however, are often impoverished local subsistence farmers who may not be "a member of organized crime" despite later selling the carcass to such a member.³⁸ Thus, the stepped-up penalties (including the risk of imprisonment) are not likely to reach the typical Amur tiger poacher, rendering the Criminal Code a poor deterrent.

Making matters worse, the 1989 collapse of the Soviet Union resulted not only in massive unemployment across the nation but also opened the Russian-Chinese border.³⁹ Since China's own tiger population had been rendered all but extinct, the demand for Russian tigers skyrocketed and a Russian poacher could receive the equivalent of four or five years' salary for a single carcass.⁴⁰

Livestock and pet depredation additionally trigger the incentive for locals to kill Amur tigers by tigers as well as occasional human-tiger interactions.⁴¹ These tiger-related casualties are exacerbated by reductions in the availability of the tigers' preferred prey species due to subsistence poaching of ungulates--sometimes at a rate of three times the legal hunting limit.⁴² Finally, the prey species' themselves depend upon the nutrient-rich seeds of the Korean pine, a flora species that is frequently the target of illegal logging.⁴³

In addition to authorizing domestic environmental legislation, the Russian Federation Constitution also provides that "the international treaties of the Russian Federation shall be a component part of its legal system," thereby authorizing the enforcement of its treaty

³⁰ *Id.* at 375.

³¹ *Id.* at 375-6.

³² *Id.* at 366.

³³ Investigative Network, *Siberian Tiger/Forests Report*, available at <http://ces.iisc.ernet.in/hpg/envvis/doc6.html>.

³⁴ Porter, *supra* note 1, at 368.

³⁵ *Id.*

³⁶ *Id.* at 376.

³⁷ Damania, et al., *supra* note 21.

³⁸ *Id.*

³⁹ Cha, *supra* note 2, at 11.

⁴⁰ *Id.* at 12.

⁴¹ Porter, *supra* note 1, at 365.

⁴² *Id.* at 377-8.

⁴³ Cha, *supra* note 2, at 6.

obligations.⁴⁴ The Russian Federation, after adopting a republican form of government, reaffirmed its commitment as a signatory member to the Convention on International Trade in Endangered Species (CITES)--having been a member under the former regime since 1976.⁴⁵

As a CITES signatory, the Russian Federation is legally bound to penalize the unauthorized import, export, and possession of endangered species or their parts or derivative products.⁴⁶ Despite this obligation under CITES, however, Russian Federation law seems to draw a distinction between the protection of “animal life” and the possession of endangered “animal parts.”⁴⁷ While the federation did exercise its commerce powers to criminalize the “commercial use” of tiger parts, possession of a tiger carcass, pelt, or part--absent evidence linking the possessor to an act of poaching--is not a criminal violation.⁴⁸ The only remedy for possession of tiger parts is forfeiture.⁴⁹

In addition to the numerous weaknesses and loopholes inherent in anti-poaching laws themselves, the Russian Federation suffers from the insubordination of the courts themselves in their reluctance to enforce the wildlife protection laws--despite the legislative edict that decisions made by the Federation State Committee for Environmental Protection (authorized since 1988 to implement federal laws developed to protect the environment⁵⁰) “shall be binding on legal entities.”⁵¹

CITES responded to these numerous deficiencies in the Russian Federation’s legal system by delegating members of its Tiger Technical Team to work with Russian officials in developing a special protection program for Amur tigers, which the Russian Federation authorized by law in its 1997 Decree No. 843 entitled “On the Special Federal Program ‘Conservation of the Amur Tiger.’” Unfortunately, three years later, Vladimir Putin dissolved the Federation State Committee for Environmental Protection, transferring its functions to the Ministry of Natural Resources, the governmental body responsible for issuing corporate logging permits in the region (see *infra*).⁵² Due far more to international efforts than to domestic law enforcement, the special anti-poaching program (also to be discussed *infra*) fortunately remains in force for the time being.

In summary, the Russian Federation’s current, fragmented array of domestic wildlife protection laws and enforcement policies remain insufficient to prevent the extinction of the Amur tiger. Therefore, the success of the tiger population remains dependent upon international assistance. Possession of tiger carcasses or parts is not criminalized in Russia, forcing the government to connect the possessor to an actual poaching crime in order to convict; poaching convictions themselves do not carry penalties severe enough to offset the potential gain to an impoverished villager from poaching; and the judiciary is reluctant to enforce even these meager laws.

⁴⁴ Porter, *supra* note 1, at 369.

⁴⁵ *Id.*

⁴⁶ *Id.* at 370.

⁴⁷ *Id.* at 370-71.

⁴⁸ *Id.* at 376.

⁴⁹ *Id.* at 370.

⁵⁰ Van Fossen, *supra* note 28, at 536.

⁵¹ Porter, *supra* note 1, at 376-77.

⁵² *Id.* at 371-2.

B. International Interventions to Prevent Amur Tiger Poaching in the Russian Federation

Because of the inadequacy of the Russian Federation's domestic wildlife protection scheme, in situ conservation⁵³ of the Amur tiger is heavily dependent upon foreign aid--the government's willingness to sanction and participate in these joint efforts stemming at least partially from international pressure to meet treaty obligations under CITES to protect the tiger.

In 1994, the Federation State Committee for Environmental Protection (Committee), responding to international pressure to save the rapidly declining Amur tiger, created a "special tiger project" with the threefold goal of: 1) preventing the destruction of tiger habitat, 2) cessation of tiger poaching and blocking channels of illegal wildlife trade, and 3) restore and maintain the ungulate prey populations.⁵⁴ The Committee also acknowledged the need to establish "wildlife corridors" linking current preserves, although it felt stymied by the lack of "legislative precedent" for such a designation.⁵⁵ Finally, the Committee recommended road closure programs, ungulate hunting quotas, and methods for livestock maintenance geared towards reducing the likelihood of depredation.⁵⁶

To combat rampant poaching, this program cooperated with international non-governmental organizations (NGOs) to create a well-trained specialized anti-poaching unit, the "Inspection Tiger"⁵⁷--later to be known as Operation Amba.⁵⁸ This program involved equipping the unit with vehicles and radio communications equipment funded by the World Wildlife Fund and England's Tiger Trust.⁵⁹

The fact that the Amur tiger did not become extinct as predicted by the year 2000 can be attributed to this highly successful cooperative effort, which managed to reduce poaching in the region by 75% over a seventeen-month period--allowing the beleaguered tigers to more than double their numbers over the next six years.⁶⁰ The unit received international recognition and a CITES commendation for its successes.⁶¹ Still, however, both the Committee and the CITES Tiger Technical Team remained concerned about the inadequacy of Russian Federation's wildlife laws as a deterrent against poaching. This concern is illustrated in the statement of the Committee itself that "although Inspection Tiger has seized forty tiger skins and carcasses, no prosecutions have followed tiger-related incidents."⁶²

⁵³ In situ conservation refers to conservation efforts taking place at the site of the wild population. In situ conservation can be contrasted with ex situ conservation, which refers to conservation-minded breeding programs outside of a species' home range--such as programs conducted by zoos or wild animal parks to maintain an extant stock of genetically and physically healthy endangered animals in an environment free of the extinction dangers of the home range.

⁵⁴ Porter, *supra* note 1, at 372-3.

⁵⁵ *Id.*

⁵⁶ *Id.* at 374.

⁵⁷ Porter, *supra* note 1, at 375.

⁵⁸ Cha, *supra* note 2, at 6.

⁵⁹ Porter, *supra* note 1, at 375.

⁶⁰ ⁶⁰ Investigative Network, *Siberian Tiger/Forests Report*, available at <http://ces.iisc.ernet.in/hpg/envis/doc6.html>.

⁶¹ Porter, *supra* note 1, at 374-75.

⁶² *Id.* at 377.

Further NGO assistance arrived in the form of the Siberian Tiger Project, “a joint effort between Russian tiger authorities and American wildlife biologists.”⁶³ This long-term study using radio telemetry allows American co-directors Maurice Hornocker and Howard Quigley to track the movements of radio-collared Amur tigers to better learn how to protect them against poaching and habitat destruction.⁶⁴ The Amur tiger’s survival in the wild is currently dependent upon these joint efforts between Russian authorities and NGOs--apparently the only way in which the Russian Federation is currently capable of meeting its treaty obligations under CITES.

C. An Economic Model Regarding the Poaching of Tigers and their Prey Species

In November 2001, Adelaide University’s Centre for International Economic Studies (Australia) issued Discussion Paper No. 0140, *The Economics of Protecting Tiger Populations: Linking Household Behaviour to Poaching and Prey Depletion*. This innovative economic model utilized contemporary scientific knowledge about threats to tigers worldwide to devise a comprehensive array of variables, the manipulation of which could statistically predict the decline or recovery of wild tiger populations.⁶⁵

While not specific to Amur tigers, the formula was based on the relevant circumstance of impoverished subsistence farmers who subsidized their nutritional intake by hunting wild ungulates as well as selling poached tigers to the illegal wildlife trade.⁶⁶

Factors introduced into the formula included the tiger’s nutritional needs, the poacher’s remuneration per tiger carcass, additional motives for locals to kill tigers, penalties exacted for poaching, effort required to successfully poach, and the cost per unit of effort.⁶⁷ A number of prey poaching variables and tiger biology variables were also introduced into this complex formula.⁶⁸

The researchers found a notable interaction between the condition of the tiger’s prey base and tiger poaching pressures. They found that when prey levels are depleted for whatever reason, a relatively small increase in the pay-offs to poaching may trigger rapid extinction.⁶⁹ On the other hand, they also found that a relatively small increase in the opportunity costs of poaching would be sufficient to mitigate this risk.⁷⁰ As a result, the researchers concluded that anti-poaching policies should be directed at increasing the opportunity costs of poaching activities (i.e. more severe penalties, increased likelihood of being caught).⁷¹ This finding suggests that current anti-poaching activities in the Russian Federation would benefit from a concurrent reformation of anti-poaching laws and enforcement policies.

⁶³ Cha, *supra* note 2, at 6.

⁶⁴ *Id.*

⁶⁵ Damania, et. al., *supra* note 21.

⁶⁶ *Id.* The Damania, et al. study recognized the greater potential for tiger conservation in areas such as Russia where both tigers and their prey are more dispersed, requiring a greater expenditure of effort from would-be poachers.

⁶⁷ *Id.*

⁶⁸ *Id.*

⁶⁹ *Id.*

⁷⁰ *Id.*

⁷¹ *Id.*

III. THE CURRENT LEGAL ARCHITECTURE OF TIGER HABITAT CONSERVATION IN THE RUSSIAN FEDERATION

A. Legal Logging

The Russian Federation contains 58% of the world's conifer forests, most of which are located in the far eastern taiga forest region covering an area the size of the United States.⁷² This wilderness not only contains prime Amur tiger habitat but also helps protect the entire planet against global warming as a critical carbon sink.⁷³

The ecological stability of this critical forest region is threatened by two conflicting pieces of Russian Federation legislation, which reflect two competing and incompatible policies based on the country's socioeconomic reality: The Enterprises Act promotes economic development and minimal regulation of the use of natural resources, obliging exploiters simply "to make good the damage caused by an irrational utilization of land and other natural resources."⁷⁴

In direct contrast to the Enterprise Act is the Forestry Act, which prioritizes effective conservation of forests and natural resources.⁷⁵ Under the Forestry Act, jurisdiction for policymaking and enforcement is distributed to the various regional governmental bodies to ensure that forest harvests are "effected by methods which do not harm the environment, animal life, or human health."⁷⁶ The strongest enforcement language under the Forestry Act states that unauthorized concessions of logging rights shall be null and void and can subject the offending party to various criminal and/or administrative liabilities in addition to the forfeiture of illegally harvested forest products.⁷⁷

Unfortunately, the power of the Forestry Act to protect the Russian wilderness is compromised not only by its conflict with the Enterprise Act but also by structural problems with the Russian Federation's bureaucracy. Confusion and conflicts of laws can be traced in part by Russia's civil law tradition, resulting in a body of laws that emphasize comprehensiveness rather than cohesion or the enforceability of individual provisions.⁷⁸ The Russian Federation inherited "at least 670 separate environmental enactments" from the old Soviet Code of Laws.⁷⁹

Furthermore, the State Committee for Environmental Protection (Committee) was "rendered ineffective due to an entrenched bureaucracy, wildly confusing national political shifts, curtailed public participation in the legislative process, and an inefficient economic system."⁸⁰ Similar to, in its intended function, the United States' Environmental Protection Agency (EPA), the Committee was authorized to issue permits, prepare environmental

⁷² Cha, *supra* note 2, at 8.

⁷³ *Id.*

⁷⁴ Van Fossen, *supra* note 28, at 547.

⁷⁵ *Id.* at 548.

⁷⁶ *Id.* at 548-50.

⁷⁷ *Id.* at 553.

⁷⁸ *Id.* at 536.

⁷⁹ *Id.*

⁸⁰ *Id.*

assessments of proposed projects, draft legislation for environmental protection, regulate the use of natural resources, impose bans on construction, and bring lawsuits for reimbursement of state losses.⁸¹

In the mounting battle between ecological concerns and the need to attract capital investments, the Committee was further stymied by a 1992 bureaucratic restructuring in which the Committee was combined with two other ministries to form a new “super-ministry” called the Ministry of Ecology and Natural Resources.⁸² As mentioned *supra*, the Committee was finally abolished altogether in 2000. Because the Ministry of Ecology and Natural Resources was charged with the duty of attracting economic development under the Enterprise Act, the consolidating of the Committee--charged with protecting the environment under the Forestry Act--created a conflict of interest within the Ministry.⁸³

Successful legal intervention on behalf of forest conservation under these bureaucratic circumstances can be attributed to the decentralized jurisdictional provisions of the Forestry Act, which allow local and regional governmental bodies a surprising amount of control over their own resources.⁸⁴ Although no regional province is immune from the urgent need to attract hard currency and capital investments, this legal decentralization allows political mobilization on behalf of the forests to occur at a local, grassroots level by those whose livelihoods would be harmed by exploitation of the forest.⁸⁵

The way in local policymaking and enforcement can spawn grassroots conservation efforts in the Russian Federation is well-illustrated by the *Svetlaya* case, which took place in forest that also happened to be Amur tiger habitat.⁸⁶

On November 29, 1992, the Russian Supreme Court, in a landmark decision, determined that the Pozharski District did have a right to cancel the transfer of logging rights to a foreign joint venture company because the company failed to meet their regional legal obligations of obtaining the formal consent of local indigenous peoples or of submitting the required ecological impact reports.⁸⁷ As a result, Hyundai Corporation (which formed the *Svetlaya* venture in the Russian Federation with the goal of operating a large clear-cutting and paper products manufacturing operation) lost millions of dollars on its investment and was forced to resort to regionally approved selective-cutting methods.⁸⁸

While this Russian domestic legal victory on behalf of the environment demonstrates the potential strength of legislative devices permitting regional control over natural resources, there are a number of reasons why the *Svetlaya* success should be viewed with caution. First, there is no doctrine of *stare decisis* in Russian law, so the *Svetlaya* decision is not mandated legal precedent.⁸⁹ Furthermore, *Svetlaya*'s corporate behavior was particularly heinous on a number of counts: (1) by renegeing on their original promise not to attempt clear-cutting, (2) by renegeing on their original promise to employ mostly local villagers, and (3) by failing to obtain the

⁸¹ *Id.*

⁸² *Id.* at 537.

⁸³ *Id.*

⁸⁴ *Id.* at 541.

⁸⁵ *Id.*

⁸⁶ *Id.* at 553.

⁸⁷ *Id.* at 554.

⁸⁸ *Id.* at 558-9.

⁸⁹ *Id.* at 554.

permission of the indigenous Udegei.⁹⁰ Thus, the Svetlaya venture utterly failed to provide the regional populace with the sort of socioeconomic incentives that might have dissuaded their mobilization against the logging activity.

It should be noted that the presence of the Amur tiger itself provided some fuel to the revocation of the Svetlaya logging rights. Greenpeace, in an effort to focus international attention on the effects of clear-cutting on the Siberian tiger, successfully barricaded Svetlaya's primary port.⁹¹ This action reminded the world that saving the Amur tiger is inextricably linked to saving the forest habitat in which it lives.

The battle for the taiga forest continues, however, as more foreign corporations--including American companies such as Weyerhaeuser--seek to secure Russian Federation logging rights in tiger habitat.⁹² Furthermore, now that China banned domestic logging to remedy its own environmental injuries, the country is now seeking to import from the neighboring Russian Federation.⁹³ It remains to be seen if the local populace can be convinced once again to resist the temptation of this capital in-flow.

B. Illegal Logging

Poaching is not limited to animal species but includes illegal timber poaching as well. A full 50% of the Russian Federation's timber poaching activity occurs within the Amur tiger habitat of the Primorski Krai.⁹⁴ As with tiger poaching and ungulate poaching, most offenders are unemployed local villagers seeking to sell raw logs to foreign buyers from countries better able to enforce their own environmental protection laws.⁹⁵

IV. THE LIMITATIONS OF THE CITES TREATY AS A VEHICLE OF INTERNATIONAL LAW IN PROTECTING THE AMUR TIGER

A. The Inherent Limitations of CITES as a Treaty

Since Russian Federation domestic laws have proven insufficient to protect the Amur tiger, it is important to look at vehicles of international law attempting to protect this endangered species. The Convention on International Trade in Endangered Species (CITES) is "the backbone of international prohibitions against trade in endangered species."⁹⁶ Signatory nations obligate themselves to enact national laws and enforcement bodies to curtail the extraction or trade in endangered species of flora or fauna, the level of restriction

⁹⁰ *Id.* at 556-7.

⁹¹ *Id.* at 556 n.184.

⁹² Cha, *supra* note 2, at 9.

⁹³ *Id.* at 10.

⁹⁴ *Id.* at 11.

⁹⁵ *Id.*

⁹⁶ Vulpio, *supra* note 13, at 465.

dependant on which CITES Appendix the species is listed under. All subspecies of tiger are listed on Appendix I of CITES, affording them the highest level of protection under this treaty.⁹⁷

Legal protection devices under CITES include guidelines for developing a permit system to regulate authorized trade in endangered species, namely the annual report and the biennial Conference of Parties (COPS).⁹⁸ Unfavorable reports may lead to the formation of special CITES investigative committees such as the Tiger Technical Mission, which will make specific recommendations (backed by political pressure) to the signatory nation in need of improvement.⁹⁹ The Russian Federation, for example, responded positively to intervention of the CITES Tiger Technical Team's recommendations about how to achieve greater conservation successes in the Amur tiger's home range.¹⁰⁰

CITES, however, does have a number of inherent limitations that reduce its usefulness as a device of international law. First, the burden to implement regulations and penalties falls on the signatory nations themselves; there is no supranational CITES enforcement body.¹⁰¹ Second, there is no internationally standardized permit system.¹⁰² Instead, signatory nations simply appoint a "Scientific Authority" to issue guidelines to a "Management Authority" in developing species-specific permitting and enforcement standards.¹⁰³ Third, the utility of the annual report is compromised by the fact that an estimated 45% of trade in CITES-listed animal products is not reported.¹⁰⁴

A fourth weakness in CITES relates to the lack of specificity with which prohibited trade "for commercial purposes" is to be usefully distinguished from the exemption for "personal or household effects" and the exemption for "captive-bred, non-commercial loans between scientists or museums, and those forming part of a traveling zoo, circus, menagerie, exhibition, or other traveling exhibition."¹⁰⁵ What remains clear, however, is that commercial trade in wild-caught Appendix I specimens--alive or deceased--is prohibited under a nation's CITES obligations. In furtherance of this mandate, the 2002 CITES Conference of Parties in Santiago, Chile adopted a new resolution urging parties to prioritize legislation and enforcement efforts on behalf of all Asian big cats--which would include the Amur tiger.¹⁰⁶

Perhaps the biggest weakness inherent to CITES, however, is the lack of its ability to remedy failure of implementation at the national level due to lack of funds or political instability.¹⁰⁷ There is no device inherent to CITES to enforce a remedy when the signatory nation demonstrates a lack of capacity to meet its obligations. This is certainly a problem in the Russian Federation, resulting in the increasingly common scenario in which NGOs provide financial and technical assistance on an ad hoc basis to help signatory nations meet their CITES

⁹⁷ Porter, *supra* note 1, at 369.

⁹⁸ Vulpio, *supra* note 13, at 466.

⁹⁹ Porter, *supra* note 1, at 370--n. 37; *see also* Vulpio, *supra* note 13, at 467.

¹⁰⁰ Porter, *supra* note 1, at 370--n. 37.

¹⁰¹ *Id.* at 370.

¹⁰² Vulpio, *supra* note 13, at 466.

¹⁰³ *Id.*

¹⁰⁴ *Id.*

¹⁰⁵ *Id.* at 467-8.

¹⁰⁶ *See CITES Conference Decisions on Asian Big Cats and African Leopards*, SAVE THE TIGER FUND, available at <http://www.5tigers.org/news/CatNews/cn38/CITESdecisions.htm>.

¹⁰⁷ Vulpio, *supra* note 13, at 469.

obligations.¹⁰⁸ This weakness can, however, be partially offset when the wealthier destination nations for illegal wildlife products (many of which are themselves CITES signatories) implement strong domestic regulatory legislation and enforcement systems.

B. CITES and the WTO: A Potential Conflict of Laws

Potentially more worrying than the inherent weaknesses of the CITES treaty is the possibility of a conflict of laws between CITES-mandated trade bans and the mandates of another international agreement--the World Trade Organization. As Vulpio observes, "By restricting or prohibiting outright trade in specified items, CITES risks a conflict of laws with the free trade principles embodied by the General Agreement on Tariffs and Trade (GATT) and the World Trade Organization (WTO)."¹⁰⁹

While parties acceding to these agreements do agree "to subsume trade interests to conservation when violations are severe, international consensus is strong, and the protectionism involved is environmental rather than economic,"¹¹⁰ the trade community also "worries that contrived environmental standards will be used by protectionists to disguise trade barriers."¹¹¹

A much-debated example of the international conflict between conservation and trade is found in the 1994 United States sanctions against Taiwan after CITES recommended penalties up to and including sanctions against China and Taiwan for failing to cease the manufacture and export of shoes made with endangered Finnish elk skin (which were scheduled to be imported into the United States by the Florsheim Shoe Co.).¹¹² Florsheim was unsuccessful in arguing that CITES would only apply to a country's export of *its own* endangered species.

While GATT/WTO issues were not triggered due to the fact that Taiwan had not yet acceded to these agreements, some scholars have suggested that these CITES recommended sanctions would have violated the free trade provisions of the GATT/WTO had Taiwan been a member at that time.¹¹³ The cited rationale for this analysis lies in the tendency of GATT Panels (which have jurisdiction to settle conflicts between environmental and free trade concerns under the WTO) to interpret the environmental exceptions narrowly due to the above-stated concerns about unfair protectionism.¹¹⁴

Because the Russian Federation is currently in the process of acceding to the WTO,¹¹⁵ the ability of CITES to continue to authorize Amur tiger conservation in the form of outright trade bans may well depend upon a GATT Panel decision that Amur tiger conservation is valid environmental emergency, making the resulting restriction on free trade an acceptable exception to the general rule.

¹⁰⁸ *Id.*

¹⁰⁹ *Id.* at 468.

¹¹⁰ *Id.*

¹¹¹ *Id.*

¹¹² *Id.* at 481.

¹¹³ *Id.* at 469.

¹¹⁴ Christine Crawford, *Conflicts Between the CITES and the GATT in Light of Actions to Halt the Rhinoceros and Tiger Trade*, 7 GEO. INT'L ENVTL. L. REV. 555, 584 (1995).

¹¹⁵ See *Russia Acceding to the WTO*, WTO, at http://www.wto.org/english/thewto_e/acc_e/al_russie_e.htm (last visited Dec. 31, 2004).

V. THE UNITED STATES AS A DESTINATION COUNTRY FOR TIGER PRODUCTS AND THE AMERICAN LEGAL ARCHITECTURE OF TIGER CONSERVATION

While many people associate illegal tiger products with the traditional remedies hawked in Asian street markets, the truth is that the United States is a major destination state for illegal wildlife importation.¹¹⁶ Independent surveys conducted in 1998 by the World Conservation Society and the World Wildlife Fund found that just under half of over 100 medicinal shops visited by undercover investigators in Asian neighborhoods of several U.S. cities offered imported products claiming to contain rhinoceros, tiger, or leopard ingredients.¹¹⁷

Because wealthier destination states such as the United States, Taiwan, Hong Kong, and South Korea¹¹⁸ both create the market for tiger products and have access to greater economic resources and technology, the steps these nations take to combat the trade in endangered species under their treaty obligations or on their own initiative are vital to the conservation of species like the Amur tiger. The following is a survey of the current legal architecture protecting the Amur tiger--a species located halfway across the world.

A. Implementation of CITES and the Endangered Species Act

As a CITES signatory party, the United States is obligated to pass domestic legislation implementing the treaty and authorizing enforcement. Thus, Section 8 of the Endangered Species Act (ESA) expressly and specifically implements CITES, and Section 9 utilizes the commerce power to prohibit the shipping, selling, or offering of endangered species for sale in interstate or foreign commerce.¹¹⁹

The ESA is similar to the Lacey Act (see *infra*) and distinguishable from Russian Federation legislation in that it authorizes a monetary reward to citizens who provide information leading to the arrest, conviction, civil forfeiture, or civil penalty assessment for any violation of the ESA or any regulation promulgated under the ESA.¹²⁰ The provision for not just criminal but also civil penalties is, itself, distinguishable from Russian Federation legislation. Finally, the penalties for violating the ESA can be substantial, and the American courts do not uniformly share the Russian courts' reluctance to assess these penalties.¹²¹ Thus, the ESA inserts an arguably far greater disincentive to partake in the illegal wildlife trade at the user end of the market than the Russian Federation's legislation does at the supplier end.

¹¹⁶ Vulpio, *supra* note 13, at 485.

¹¹⁷ *Id.*

¹¹⁸ *Id.* at 478.

¹¹⁹ *Id.* at 480.

¹²⁰ Porter, *supra* note 1, at 382-83.

¹²¹ *Id.* at 394.

B. The Lacey Act

While pre-dating both the ESA and CITES by decades and overlapping with the ESA considerably in its scope of protections, the Lacey Act of 1900¹²² includes the important, specific provision that it is a federal offense to violate another nation's wildlife laws.¹²³ The Lacey Act makes it unlawful to (1) "import, export, transport, sell, receive, acquire, or purchase any fish or wildlife or plant taken, possessed, transported, or sold in violation of any law, treaty or regulation of the US or in violation of any Indian tribal law"; or to (2) "import, transport, sell, receive, acquire, or purchase in interstate foreign commerce any fish or wildlife taken, possessed, transported, or sold in violation of any law or regulation of any State or in violation of any foreign law."¹²⁴

The Lacey Act also imposes both civil and criminal fines, including civil fines if the offender "should have known" that the conduct they engaged in was in violation of the law.¹²⁵ The criminal penalties include the possibility of up to five years imprisonment, and there is a reward provision for any individual who provides information leading to a prosecution.¹²⁶

C. The Rhinoceros and Tiger Conservation and Product Labeling Acts

In 1994, the United States Congress passed the Rhinoceros and Tiger Conservation Act (RTCA), the purpose of the act being "[t]o assist in the conservation of rhinoceros and tigers by supporting the conservation programs of other nations whose activities directly or indirectly affect rhinoceros and tiger populations, and the CITES Secretariat."¹²⁷ This important appropriatory act initially designated a Rhinoceros and Tiger Conservation Fund authorizing up to ten million dollars for the fiscal years 1996-2000, which was appropriated to finance such international NGO-mediated interventions such as aerial monitoring of Zairean rhinoceros and Indian tiger poaching investigations.¹²⁸ In 2002, the RTCA was, fortunately, reauthorized by the Bush administration to distribute annual funding for several more years¹²⁹ and could provide vital funding to NGO interventions in the Russian Federation on behalf of the Amur tiger.

In 1998, the United States Congress overcame a major hurdle in illegal wildlife trade prosecutions by passing the Rhinoceros and Tiger Product Labeling Act (RTPLA).¹³⁰ Prior to the RTPLA, the government was stymied in its prosecutorial efforts by the prohibitively expensive laboratory testing necessary to prove that a suspicious product did in fact contain ingredients derived from endangered species.¹³¹ The RTPLA, however, imposes a legal presumption that any product claiming to contain rhinoceros or tiger ingredients does in fact

¹²² Vulpio, *supra* note 13, at 470.

¹²³ *Id.*

¹²⁴ Porter, *supra* note 1, at 381 n.117.

¹²⁵ *Id.*

¹²⁶ *Id.*

¹²⁷ *Id.* at 370 n.34.

¹²⁸ Vulpio, *supra* note 13, at 486.

¹²⁹ See *Bill Signings*, WHITE HOUSE, at <http://www.whitehouse.gov/news/releases/2002/01/20020109-1.html>.

¹³⁰ Vulpio, *supra* note 13, at 470.

¹³¹ *Id.* at 487.

contain such ingredients.¹³² As a result, it is effectively illegal to offer a product even *pretending* to contain tiger parts.

Fortunately, this legislation is increasingly being paired with education as traditional medicine practitioners and researchers seek substitutes and inform customers of the endangered status of some of the species used as ingredients.¹³³ In his February 1998 testimony before the United States Congress, Dr. Lixing Lao of the American College of Traditional Medicine emphasized the importance of conquering the perception in Asian cultures that conservation efforts are merely the product of cultural imperialism and insensitivity.¹³⁴

D. The Pelly Amendment

The Pelly Amendment to the 1967 Fisherman's Protective Act of 1967 is the most controversial of the United States' laws protecting foreign endangered species, as it authorizes the United States to impose unilateral import sanctions against CITES signatories with insufficient enforcement records.¹³⁵

While the 1994 Clinton administration sanctions against Taiwan were the only trade sanctions ever imposed by any signatory for CITES violations, the action is significant in that the violations involved tiger products and because it occurred after Taiwan, unlike China, failed to respond to a specific recommendation by a CITES Standing Committee to step up enforcement.¹³⁶

The sanctions cost Taiwan an estimated ten to twenty-five million dollars before they were lifted by the United States in 1995 following Taiwan's passage of legislation significantly raising the penalties for trading in endangered wildlife.¹³⁷ While the international community generally disfavors unilateral trade sanctions, the political impact was mitigated in this case by the international consensus inherent in the CITES recommendation to impose the sanctions and by the relatively modest cost to Taiwan in light of their total annual foreign trade revenue.¹³⁸

The willingness of tiger product destination states such as the United States to impose trade sanctions on countries failing to meet their CITES obligations could successfully offset the weaknesses regarding enforcement inherent in the treaty itself. Sanctions against other economically wealthy destination states could also offset the difficulties economically impoverished supplier states such as the Russian Federation have in protecting endangered species in situ. However, as discussed *supra*, the legality of sanctions under the Pelly Amendment may depend upon the degree of deference a WTO/GATT Panel allots to a CITES recommendation as an environmental concern outweighing the policy to promote free trade.

¹³² *Id.*

¹³³ *Id.* at 483.

¹³⁴ *Id.* at 482.

¹³⁵ *Id.* at 470.

¹³⁶ *Id.* at 479.

¹³⁷ Julie Cheung, *Implementation and Enforcement of CITES: An Assessment of Tiger and Rhinoceros Conservation Policy in Asia*, 5 PAC. RIM L. & POL'Y J. 123, 138 (1995).

¹³⁸ Vulpio, *supra* note 13, at 480.

Efforts to save the Amur tiger would benefit enormously from an uncoerced increase in the motivation of other wealthy destination states to put energy and resources into enforcing the trade ban. As Vulpio aptly observes:

In stark contrast to their less developed neighbors, Asia's economic 'tigers'--particularly Taiwan, Hong Kong, Japan, and South Korea--enjoy twentieth century levels of prosperity generated by manufacturing and trade. Nonetheless, these wealthy countries often contend that insufficient funding hampers their efforts to protect endangered species. Many observers feel that these constraints could actually be more a function of unwillingness, rather than inability, to allocate the necessary resources for effective trade control.¹³⁹

VI. 21ST CENTURY CONSERVATION STRATEGIES FOR THE WILD AMUR TIGER

A. *In Situ* Strategies

National and international legislation will not alone provide all the ingredients required to save the wild Amur tiger.¹⁴⁰ Tiger conservationists increasingly agree that the survival of wild tigers depends upon allowing them "a sufficient habitat area, sufficient prey, low human disturbance, and genetic viability."¹⁴¹ Whether efforts at providing these requisites are focused at the impoverished villages sharing the wilderness with the tigers or the urban shopkeepers touting expensive tiger products, the fate of the wild tiger will depend upon it becoming worth more to human beings alive than dead. With this reality in mind, a number of conservation strategies have been suggested for increasing the Amur tiger's chances of survival in its home range.

Operation Amba is an excellent example of a multi-pronged, cooperative, in situ conservation effort with considerable success. A well-publicized international fundraising campaign on behalf of a highly prized, highly symbolic species provided ample funds to equip, train, and pay a local anti-poaching squad. Local authorities consented to give the squad arrest authority; local judges were educated about the severity of the crisis; farmers were compensated for depredated livestock; and the newly trained employees were paid well and on time.¹⁴² The local incentive to poach plummeted, and the Amur tiger more than doubled its wild population in a scant six years.

Efforts like Operation Amba depend heavily on the continuing generosity of the international community--both that of private donors and volunteers and that of governments such as that of the United States with donor legislation such as its Rhinoceros and Tiger Conservation Act. Furthermore, anti-poaching regimes will be rendered moot without simultaneous conservation of the taiga forest and its ungulate prey population. Svetlaya was

¹³⁹ *Id.* at 478.

¹⁴⁰ Vulpio, *supra* note 13, at 471.

¹⁴¹ Ronald Tilson, Philip Nyhus, Neil Franklin, Sriyanto, Bastoni, Mohammad Yunus, & Sumianto, *Tiger Restoration in Asia: Ecological Theory vs. Sociological Reality*, in *LARGE MAMMAL RESTORATION: ECOLOGICAL AND SOCIOLOGICAL CHALLENGES IN THE 21ST CENTURY* (David S. Maehr, Reed F. Noss, & Jeffery L. Larkin eds., 2001) 277, 279.

¹⁴² Cha, *supra* note 2, at 19-20.

only the beginning of what Cha refers to as “the coming free-for-all in the use of Russia’s natural resources.”¹⁴³ Whether domestic and international concern for the wild Amur tiger and the ozone layer will continue to keep the logging trade at bay remains to be seen.

A second in situ conservation strategy that has met with considerable success in Africa and mixed success in parts of Asia is ecotourism--which, when done well, has the potential to increase the value of live animals by allowing their appreciators to see them in person and by allowing the local villagers to profit from this viewing. The danger of ecotourism, however, lies in the potential for mismanaged tourist access to result in severe habitat encroachment and animal harassment.¹⁴⁴ Problems also arise when tourist operations fail to offer local villagers the opportunity to profit from the venture.¹⁴⁵

A good example of an ecologically and economically successful ecotourism operation is the safari offered by the Namibian village of Purros.¹⁴⁶ The eight extended families who comprise the village have complete control over the safari venture--including organized game-ranger patrols and supplemental income from craft sales.¹⁴⁷ As a result, the villagers’ incentive to poach endangered local wildlife has disappeared.¹⁴⁸

One must be cautious, however, before attempting to apply the African model of ecotourism to Asia. African wildlife tends to thrive on open grasslands, making it easier to view from a safari vehicle; plus, many of its species are social and live in dense herds or prides--again, making the animals easier to see. Tigers are solitary, elusive cats that depend on cover and silence to meet their nutritional needs.¹⁴⁹ An additional hurdle in the case of the Amur tiger is its location in a remote, often cold and snowbound location with a very low density of wildlife. Nonetheless, at least one Russian company is currently offering the opportunity to attempt to track and photograph (either via remote-control “camera traps” or, if one is lucky, in person) wild Amur tigers in the Primorye province.¹⁵⁰ It remains to be seen if ecotourism can make a more definite inroad than logging in the Russian Far East.

Other strategies to reduce the pressure on the wild Amur tiger population involve finding alternate means of meeting the demand for tiger products. Educating destination state consumers about the plight of the species used in traditional medicine products is one approach. Another is to research and develop alternative remedies for the afflictions allegedly cured by tiger products.

A more controversial strategy proposed to reduce the pressure on wild tiger populations involves “tiger farming” and the harvesting of captive-bred tigers to supply the traditional medicine market.¹⁵¹ Proponents of this strategy note that CITES relaxes the trade regulations for specimens of Appendix 1 animals that are bred in captivity for commercial purposes.¹⁵² Additionally, for an Appendix 1 species to be considered “bred in captivity” for this purpose, the

¹⁴³ *Id.* at 13.

¹⁴⁴ Vulpio, *supra* note 13, at 476.

¹⁴⁵ *Id.* at 477.

¹⁴⁶ *Id.* at 476.

¹⁴⁷ *Id.*

¹⁴⁸ *Id.*

¹⁴⁹ *Id.* at 476.

¹⁵⁰ See *Ecology Tour*, LUCKY TOUR, at <http://www.luckytour.com/text/inbound/ecologtour.htm> (last visited Dec. 31, 2004).

¹⁵¹ Joon Moo Lee, *Poachers, Tigers, and Bears. . . . Oh My! Asia’s Illegal Wildlife Trade*, 16 NW. J. INT’L L. & BUS. 497, 505 (1996).

¹⁵² *Id.* at 505-6

breeding stock must be established in a way that does not detrimentally affect the wild population and managed in a way “that is capable of reliably producing a second generation and maintaining a continuing breeding stock indefinitely.”¹⁵³ In other words, the captive-bred stock cannot be developed or replenished using wild specimens.

A number of criticisms can be lodged at the “tiger farming” suggestion: First, there is no exemption in the Rhinoceros and Tiger Product Labeling Act for captive-bred specimens, thereby rendering all “farmed” tiger products illegal within the United States. Second, conservation groups are concerned that legitimizing tiger consumption could actually stimulate further poaching.¹⁵⁴ Perhaps most importantly, it would be impossible to distinguish between legally farmed tiger products and illegally poached tiger products.¹⁵⁵ Finally, none of the utilitarian rationales for tiger farming consider the cruelty involved in raising a solitary, wide-ranging, territorial carnivore as a farm animal. The CITES exemptions for captive-bred specimens would arguably be better employed by ex situ tiger conservation efforts discussed *infra*.

B. Ex Situ Strategies

Ex situ conservation usually suggests carefully selected, carefully managed, captive-bred populations of rare species collected and propagated for the purposes of preventing their extinction and educating the public about their nature and plight in the wild. The term almost always implies a captive--not a wild--population.

Tigers breed very well in captivity, and there are currently around 1200 registered purebred tigers living in captivity worldwide,¹⁵⁶ each one representing one of the five subspecies.¹⁵⁷ Of course, if it turns out that phenotypic variation among regional populations of tigers does NOT rise to the level of subspecies classification, the status of these tigers as “purebred” will not be an issue. It is hoped that maintaining this captive population will eventually allow tigers to re-populate the wild once poaching and habitat factors are resolved.¹⁵⁸

It appears, however, that the prospect of new populations of wild tigers is no longer necessarily dependent upon improvements in the Asian habitats. Conservation biologists have noted that there is evidence that captive-bred tigers can learn to adapt to wild conditions if they are suitably trained how to hunt and how to avoid humans and livestock before being released.¹⁵⁹ Though considered theoretically possible, this strategy was often discounted as being too difficult, expensive, and time-consuming.¹⁶⁰

Tiger conservationists John Varty and Dave Salmoni, however, have turned this theory into reality. In the Discovery Channel’s television documentary *Living with Tigers*, Varty and Salmoni demonstrated to the world that captive-bred tiger cubs can indeed be trained how to

¹⁵³ *Id.* at 506.

¹⁵⁴ Vulpio, *supra* note 13, at 475.

¹⁵⁵ *Id.*

¹⁵⁶ Many more mixed breed tigers are privately owned or commercially bred in captivity as well.

¹⁵⁷ *See*, Michael ‘t Sas-Rolfes, *supra* note 18.

¹⁵⁸ *Id.*

¹⁵⁹ *Id.*

¹⁶⁰ *Id.*

select, hunt and sustain themselves on wild prey as well as how to avoid humans, vehicles, and livestock--and not in Asia but in Africa!¹⁶¹

Introducing an exotic species into a new wilderness is controversial, and not all tiger conservationists support Varty and Salmoni's South African project. Responding to such criticism, however, Salmoni stated:

In choosing a location for a tiger sanctuary . . . we had to be careful not to be invading an otherwise healthy ecosystem. The sanctuary was developed on farms that had become unviable for grazing domestic stock. Poor farming techniques had led them to a state in which no healthy ecosystem could exist.¹⁶²

By successfully training two Bengal tiger cubs to fend for themselves on damaged South African land, the project minimized its impact on extant African ecosystems while giving tigers a chance to establish a multi-generational wild population in the comparative safety of a well-patrolled game park in a country with a well-developed infrastructure and well-developed wildlife protection laws. Salmoni hopes that tigers from this very first wild ex situ tiger population will prove suitable for re-introduction to their native Asia once conservation reforms there make it safe for new tiger populations.¹⁶³

While the difference in climate between the South African lowlands and the Russian Sikhote-Alin wilderness may well prove too drastic to repopulate Russia with Amur tigers raised in South Africa, there is no reason why similar ex situ projects undertaken in more temperate climates might not supplement the extant in situ Amur tiger population--guaranteeing that it remains genetically viable for long-term survival.

VII. CONCLUSION

The fate of the magnificent wild Amur tiger remains precarious and thoroughly dependent on a tenuous, ever changing network of domestic and international laws, obligations, and enforcement policies. The Russian Federation continues to suffer a slow economic decline, depending more than ever upon foreign capital investment to bolster its economy and upon foreign NGOs to help protect its tigers. Its anticipated accession to the World Trade Organization might present serious limitations on the enforceability of its obligations under CITES.

Meanwhile, the international demand for tiger products and taiga forest lumber continues. The legislative, enforcement, and education policies regarding the illegal trade in tiger products in wealthy destination states remain critical vehicles in reducing the incentive to poach. Without this multi-faceted international and domestic legal architecture attempting to protect wild tigers, not even the most inventive conservation project could succeed. The wild Amur tiger, if it is to evade extinction, will need a lawyer.

¹⁶¹ *Living With Tigers* (Discovery Channel broadcast, Mar. 24, 2003); see also *Tiger Conservation: What Others are Saying*, DISCOVERY CHANNEL, at <http://dsc.discovery.com/convergence/tigers/voices/voices.html>.

¹⁶² *Id.*

¹⁶³ *Id.*

