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REPORT

2018



THE WAY OF THE TIGER: REPORT ON HUMAN—TIGER CONFLICTS IN THE RUSSIAN FAR EAST



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THE WAY OF THE TIGER: REPORT ON HUMAN—TIGER CONFLICTS IN THE RUSSIAN FAR EAST

WWF—Russia
WWF—Netherlands

The Way of the Tiger: Report on Human—Tiger Conflicts in the Russian Far East.

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Front cover

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SUMMARY

*Tyger, Tyger, burning bright,
In the forests of the night;
What immortal hand or eye,
Could frame thy fearful symmetry?*
by William Blake

By the 1930s, the tiger population in the wild was 20–30 animals

The fate of the Amur tiger has waxed and waned since the 19th century when there was still a significant population. By the 1930s, however, the population had shrunk to mere 20–30 animals in the wild. This alarming situation prompted action and by the 1980s the population had increased to more than 250 with that number on the rise. However, tragedy struck again with the collapse of the Soviet Union and state controls, which resulted in the borders being opened and the tiger population plummeting again. The Amur tiger was in imminent danger of extinction until its fortunes changed again in 1996 with the implementation of a long-term conservation program. This program met with success and the population has risen to more than 500. Poaching is currently the greatest threat to tigers in the region.

This success story, however, has a flip side. The increasing tiger population needs more space to survive. Therefore, animals and humans come into contact more often, competing for prey and territory. These encounters result in an increasing number of human-tiger conflicts (HTC). These cases involve tigers preying on livestock or dogs, people getting injured and tigers being killed in defence or retaliation. One of the main causes of HTC is tigers being wounded by poachers. The injured animals cannot hunt properly and so they are forced to kill easily-accessible prey such as livestock. Another major cause is the deterioration of tigers' natural habitat due to various factors:

- The erosion of forests, making the environment less hospitable for tigers and their prey.
- The depletion of natural tiger prey through unsustainable hunting and poaching, forcing tigers to feed on livestock.
- Livestock husbandry leading to competition between livestock and wild prey for space and natural resources.

Since 2000, 33 tigers have been killed in conflicts

WWF experts say that the resolution of every HTC should be one of the top priorities. It is so important because traditionally, HTCs in Russia were resolved by simply killing the tiger, which led to a drastic decline in the population. Since 2000, 33 tigers have been killed in conflict situations and the number of deaths has increased significantly since 2000. This number is expected to grow further as the tiger population continues to increase. The number of HTCs has risen dramatically since 2010, but most of these conflicts are resolved without harm to the animals or humans involved. In order to solve HTCs, a number of measures and protocols have been agreed on. The most important tool in containing HTCs are the Rapid Response Teams

**Between 2000—2017,
24 tigers were placed into
rehabilitation centres.
13 of them were later
released into the wild**

(RRTs) that have been set up in the area. These specialised teams fight poaching and are called in to resolve HTC in the quickest, most effective way. The RRTs cooperate with two special tiger rehabilitation centres: Alekseevka in Primorsky Province and Utyos centre in Khabarovsk Province. WWF offers logistical, technical and material support to the RRTs and rehabilitation centres. The response teams have played an important role in solving HTCs by removing wounded, diseased or otherwise unfit animals from the wild and taking them to the centres. After a successful rehabilitation process, tigers are released back into the wild, often in remote areas where the chances of HTCs are less likely. Between 2000—2017, twenty four animals were placed in rehabilitation centres, thirteen of which were released into the wild after being cared for. Six died because of the condition they were in before they were captured, three had to stay in captivity and the remaining two are still at the Alekseevka centre. Ten of those that were released were tagged with GPS collars, only two of which are still transmitting. Five of the remaining eight tigers are reported to still be alive and two have been killed. The fate of the last one is uncertain.



Medical examination of Uporny at Alekseevka Rehabilitation Centre

INTRODUCTION

Less than 3.5 million people live in the Amur tiger range and its immediate vicinity

The Amur Region

The Amur tiger inhabits the Russian Far East, a mountainous region covered for more than 90% by forests. The region has a unique climate, combining winter conditions, with deep snows and freezing temperatures, with mild summers. The north has a continental climate, while there are monsoons in the south. These heterogeneous conditions make the coexistence possible of a variety of southern animals such as Amur tigers, Far Eastern leopards, Amur forest cats, yellow-throated weasels, Himalayan black bears, gorals, sika deer, etc., and northern animals e.g. red deer, roe deer, elk, wild boar, brown bears, wolves, sables, etc.

The area has a relatively small human population compared to regions inhabited by other tiger sub-species. Less than 3.5 million people live in the Amur tiger range or in its immediate vicinity. Only about 100,000 people are actively engaged in legally hunting animals and birds. Agriculture is concentrated in the densely-populated Prihankayskaya Plain next to Lake Khanka and does not infringe on the tigers' habitat. Within the tigers' range, the local population only raises livestock on a limited scale, using river valleys for grazing.

The Amur tiger's existence depends on natural factors such as abiotic conditions, (natural enemies, food competitors, stocks of potential prey) and anthropogenic factors. Anthropogenic factors can be divided into direct (poaching, direct removal for safety reasons) and indirect (forest fires, logging, infrastructural expansion, increasing population density, hunting activity, etc.).

A Brief History of the Amur Tiger

Research and practical measures for the preservation of the Amur tiger have been carried out on a regular basis since the end of the 1940s.

By the 1930s, only 20–30 of the Amur tigers were left in the wild

At the beginning of the 19th century, the tiger was common and regularly hunted in the southern part of the Russian Far East. Their numbers sharply declined due to commercial hunting. Other factors were the simultaneous reduction and deterioration of their habitat because of commercial logging and the development of taiga areas for industrial and agricultural purposes. By the 1930s, the tiger was on the brink of extinction with only 20–30 of them left in the wild. Since then, the number has gradually increased thanks to the huge efforts of Russian scientists and rangers, which resulted in a series of measures to protect the tiger population. These measures include a ban on tiger hunting and capturing tiger cubs, as well as a travel prohibition for

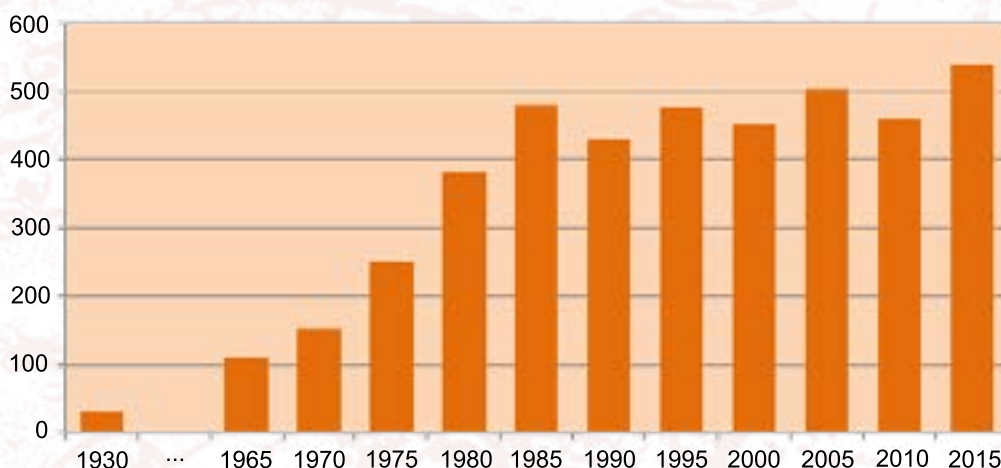
all foreigners in the Amur tigers' habitat. By the end of the 1980s, the tiger population exceeded 250 individuals and continued to grow. The Amur tiger population and range began to decrease again after the collapse of the Soviet Union in 1991, which opened the borders. During the first half of the 1990s, illegal hunting of tigers dramatically increased due to economic difficulties and the weakening of state controls, as well as the soaring demand for tiger body parts and derivatives in China and other Pacific Rim countries. The sharp decline spelt imminent extinction for the Amur tiger.

Saving the Amur Tiger

In 1994, WWF Russia launched its first project for Amur tiger conservation. At that time, only a few hunters could say that they had seen tiger tracks in their hunting areas, never mind actually encountering the Master of Taiga in the wild. Today, finding tiger tracks and even encountering a tiger in the forest is no longer rare. Not even for city people, who visit the forest for a picnic in the weekend. How was this remarkable turnabout achieved?

In order to save the Amur tiger population, governmental, scientific and public organisations developed a «Strategy for Amur tiger conservation in Russia». This was approved by the Minister of Environment and Natural

Figure 1. Amur Tiger Population Dynamic



Resources of the Russian Federation on 24 June 1996. The strategy's main goal was to compile a half-century of experience in Amur tiger research and protection in Russia, to formulate basic principles and outline a comprehensive system of conservation measures for the long term.

One of the main aspects of the strategy is the reduction of human-tiger conflicts (HTCs). These are expected to grow with increasing tiger populations that require more space and overlap with human habitation. Tigers and people come into more regular contact, competing for prey and territory. These encounters are labelled HTCs if they lead to situations in which tigers prey on livestock or dogs, people get injured, or tigers are killed in defence or retaliation. Even if people or tigers are not injured or killed, big cats encroaching on human-dominated areas can cause fear and a negative attitude.

In 1994, WWF Russia launched its first field project for Amur tiger conservation

CASE STUDY. Uporny

The case of the male tiger Uporny gives a good picture of how the rehabilitation centres operate. Uporny, which means ‘stubborn’ in Russian, was three or four years old when he was caught during a HTC on 14 November 2014. He was taken for recovery to Utyos Rehabilitation Centre, where he remained until being released into the wild on 28 May 2015. Prior to his release, Uporny’s abilities to hunt and avoid people were checked by experts at the centre. The tiger was reintroduced into the wild with the support of the Khabarovsk Province Government, WWF Russia and the Amur Tiger Centre. Uporny was released into a forest area called “Tigrovoy Dom” (the tiger home) in Nanaisky District, Khabarovsk Province.

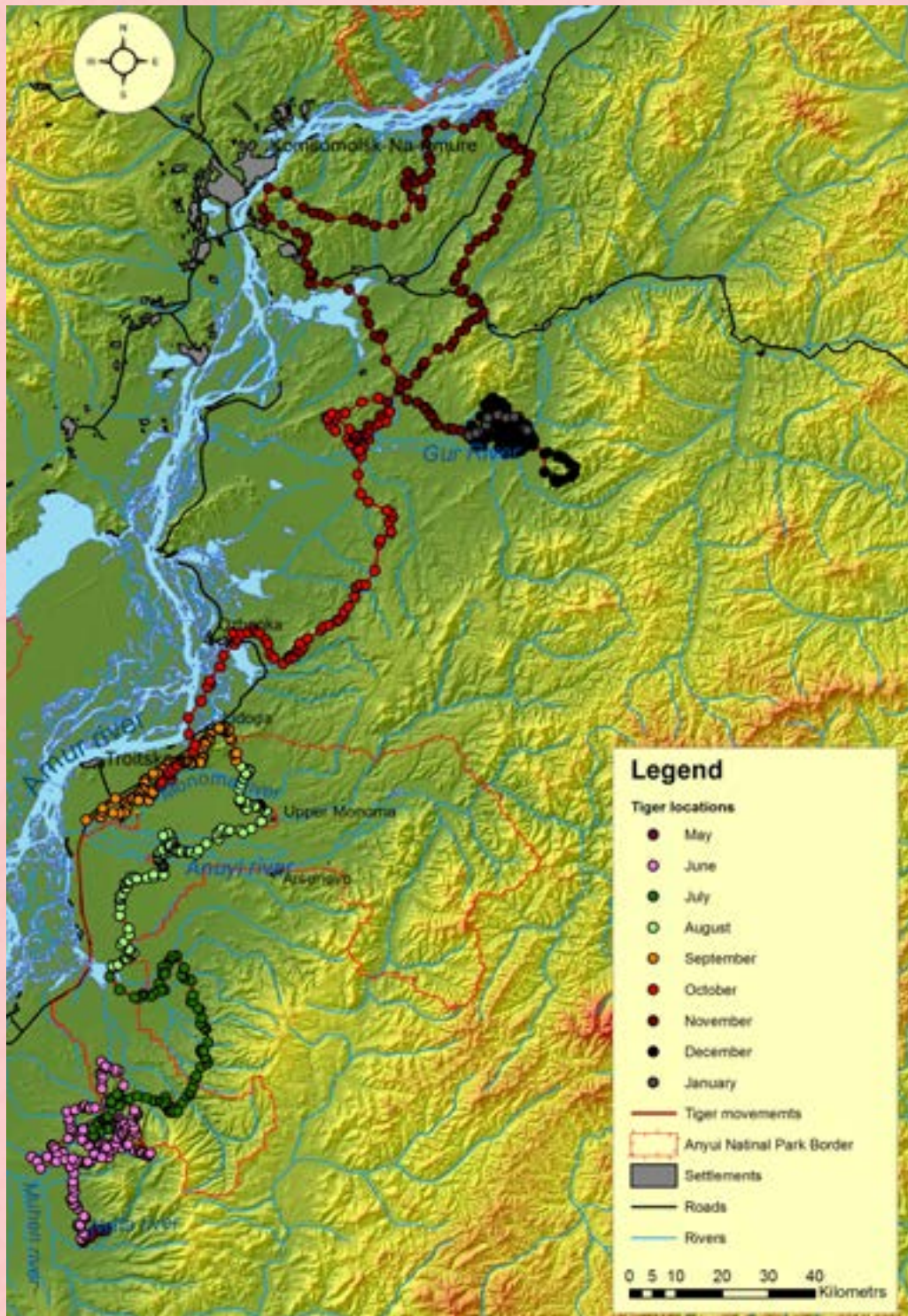
Uporny was tagged with a Lotek GPS collar, which showed his daily walks usually varied from three to six kilometres. His shortest recorded walk was 67 metres, while the longest was 22 kilometres.

Uporny crossed a number of large rivers such as the Pikhtza River, Anyui, Manoma, Gur, and the mouth of the Khara River (the Gassi Lake). The tiger crossed eight roads, of which five were forest roads for timber transport, and three were asphalt. One time he was registered very close to the motorway connecting Khabarovsk and Komsomolsk-na-Amure, which he followed at a distance of only 100–150 metres for six kilometres. He was recorded near human settlements three times, but he never entered the villages. On September 2015, he spent about 24 hours at a distance of 500 metres from the village of Lidoga (about 1,600 inhabitants). On 25 September 2015, he passed the settlement of Nizhnyaya Manoma (about 180 inhabitants) by as close as one kilometre. On 10 October 2015, Uporny crossed the Innokentievskoye Lake one kilometre away from the village of Dzhonka (about 1,250 inhabitants).

His most northern point of movement was the right bank of the Amur River just in front of Komsomolsky Nature Reserve. After that, the tiger moved back to much better habitats with Korean pine forests. By the end of December, it seemed Uporny had found his home range north of Anuisky National Park on the territory of the Gur-Khoso Nature Park.

Since late November 2015, Uporny’s home range has been in the Gur River basin covering more than 1,000 km². His home range includes the left and right feeder basins of the Gur River. On 28 August, experts examined one of the ridges where the tiger spent five days and discovered evidence of possible mating, indicating that Uporny is mature enough to breed.

Unfortunately, the monitoring of Uporny abruptly stopped on 14 March 2016, when he was found dead in the Gur River valley with wounds to his head and back. His corpse was found near a wild boar he had attacked. The boar was probably finished off by another predator, possibly quite a large male tiger. This situation confirms that the life of predators in the wild is very hard and death from natural causes is higher than described in scientific studies.



Uporny's movements before he settled in his home range (May–December 2015)

to be continued on the next page

Uporny's Tale

based on the story by Matthew Twombly

NOVEMBER 2014
VYAZEMSKOYE VILLAGE, RUSSIA

SEVERAL VILLAGERS SPOTTED A LONE, RAGGED MALE TIGER ON THE OUTSKIRTS OF TOWN—A RARE SIGHT, BUT NOT UNHEARD OF IN THE REGION.



SEVERAL EXPERTS FROM THE GROUP CAME TO SNARE AND TRANQUILIZE THE CAT, A THREE-YEAR-OLD MALE IN POOR HEALTH.

HIS FUR WAS PALE, AND HIS RIBS WERE SHOWING. HE WAS SERIOUSLY EXHAUSTED.



BUT UPORNY'S HEALTH IMPROVED QUICKLY, AND HE EAGERLY ACCEPTED FOOD.

EXPERTS FROM UTYSO MADE SURE TO KEEP CONTACT WITH UPORNY TO A MINIMUM, PRESERVING HIS WILD INSTINCTS FOR HIS EVENTUAL RELEASE.



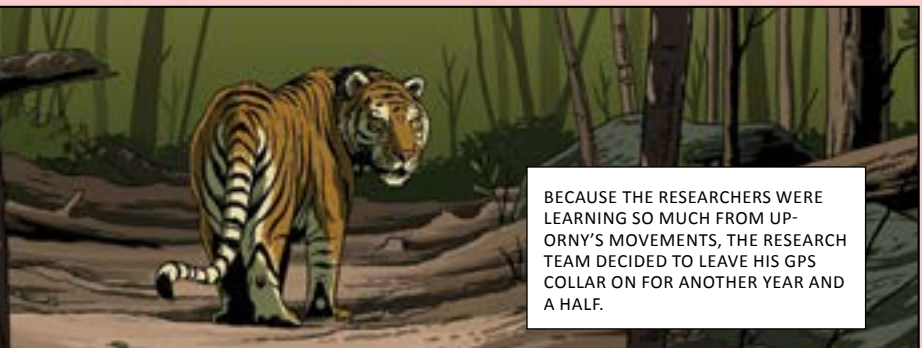
MAY 28, 2015
BORDER OF ANYUISKY NATIONAL PARK

A SITE FOR RELEASE WAS CHOSEN 124 MILES NORTHEAST OF UTYSO REHABILITATION CENTER, JUST OUTSIDE THE PARK IN PRIME TIGER HABITAT.



HE WAS OUTFITTED WITH A RADIO COLLAR, WHICH MEASURED BODY TEMPERATURE AND LOCATION, SO HIS MOVEMENTS THROUGH THE WILDERNESS COULD BE CLOSELY TRACKED.

BECAUSE THE RESEARCHERS WERE LEARNING SO MUCH FROM UPORNY'S MOVEMENTS, THE RESEARCH TEAM DECIDED TO LEAVE HIS GPS COLLAR ON FOR ANOTHER YEAR AND A HALF.



FOR MOST OF THE PAST TWO YEARS, THEY'VE BEEN CLOSELY TRACKING THE TIGER THROUGH A GPS COLLAR.

BUT A DAY CAME WHEN THE COLLAR STOPPED RECORDING ANY MOVEMENT, AND SHOWED A DRAMATIC DROP IN THE CAT'S BODY TEMPERATURE.

TO FIND THE POINT OF THE LAST SIGNAL, THEY TRAVEL 5 MILES FROM THE NEAREST ROAD, EXPECTING THE WORST.



AND THEY'RE RIGHT.

ALL EVIDENCE POINTS TOWARD A FIGHT WITH ANOTHER LARGE PREDATOR, ALMOST CERTAINLY ANOTHER MALE TIGER.



FOR WWF-RUSSIA, UPORNY BECAME A SYMBOL FOR THE FREEDOM AND STRUGGLE OF SURVIVAL IN THE WILD.

HE WAS CAPTURED, REHABILITATED, AND FORCED TO ADAPT ALL OVER AGAIN.

HE LIVED FREELY IN THE FOREST FOR TWO YEARS, IN THE HARSHTEST CONDITIONS, WITH TEMPERATURES DROPPING TO -40°F AND SNOW UP TO FIVE FEET DEEP.

HE SUCCESSFULLY KILLED LARGE PREY, AND WE BELIEVE HE FOUND A MATE.



UPORNY LIVED A TRULY WILD LIFE, AND MET A WILD END.

"HE SHARED HIS LIFE STORY WITH US," SAYS FOMENKO.

1. CAUSES OF HUMAN—TIGER CONFLICTS (HTC)

Many factors influence the frequency and scale of Human-Tiger Conflicts:

- Poaching of tigers and their prey leads to injuries, e.g. from foot snares or gunfire wounds. Injured tigers are not capable of hunting for wild prey and turn to easier food supplies such as livestock or chained dogs.
- A tiger range must meet certain requirements in order for tigers to survive. These requirements include a high-quality habitat consisting of dense, natural forest.
- Competition between tigers and humans for space is the main factor causing conflicts. Continued human incursions into tiger ranges will increase the risk of HTC.
- The erosion and fragmentation of forests decrease the tigers' habitat, as well as that of its prey, leading tigers to seek alternative food (e.g. livestock) in or near human habitations. The decrease in tiger prey is also caused by hunting. The lack of natural prey results in increased HTC in areas where humans live near forests.
- Tigers' prey is also negatively impacted by overexploitation and competition with livestock. This probably accounts for the increased number of tiger attacks on livestock. Karanth and Smith [1] cite the decline of prey as an important cause of the decline of tiger populations.
- Many heads of cattle fall prey to tigers in various locations due to inefficient livestock husbandry and management practices. HTC is often related to the location of grazing pastures and the poor security of livestock enclosures.
- The risk of HTC is also increased by activities, which lead to people venturing into tiger habitat, such as hunting, fishing and the collection of Non Timber Forest Products (NTFP).
- The success of tiger conservation also leads to HTC as the increasing tiger population needs more space to survive, thereby encroaching on human territory.

The number of HTC has doubled since 2010

*Tigress
seriously wounded
by a poacher,
Primorye, summer
2015*

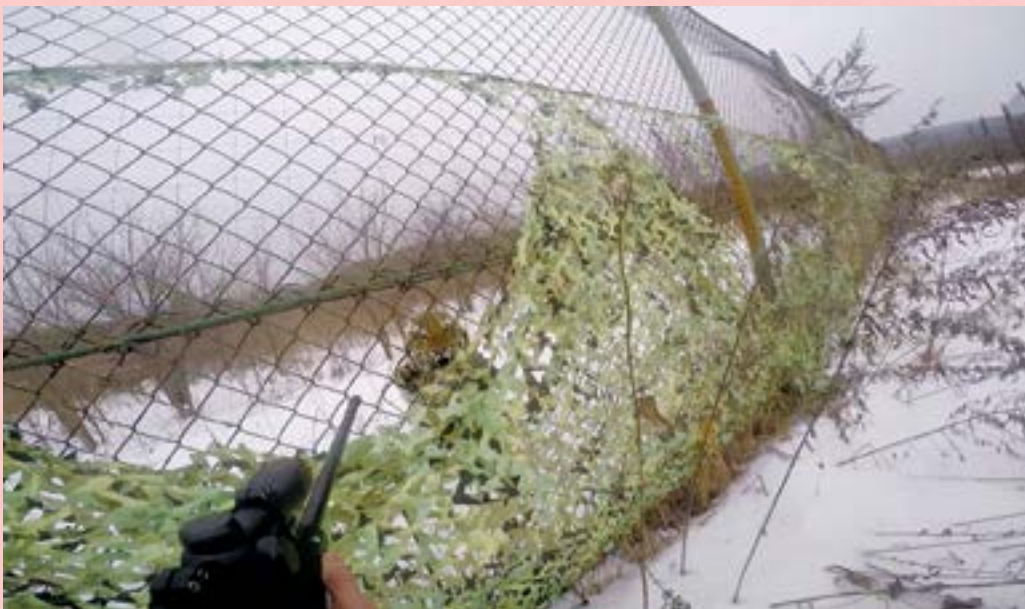


TIGER TALES. Artyomka

Successful Translocation

On 26 October 2016, Artyom City police received an alert from a citizen about a cow killed by a tiger. A group, specialised in solving human-tiger conflicts, was called in. The group consisted of experts from the Primorsky Province Hunting Department, WWF Russia and the Amur Tiger Centre. They immediately arrived at the scene and discovered the cow's remains. Footprints left in the soil proved that the bovine was attacked by an adult Amur tiger. That same evening, the group detected the animal with an infra-red camera when he was returning to his prey to feast further. The animal was safely captured and taken to Alekseevka Rehabilitation Centre, where he was examined. The examination and analyses showed that he was a healthy four to five year old male Amur tiger, weighing more than 170 kg.

The cat was kept at the centre for four days before being released on 30 October, fitted with a transmitter collar. He was set free in the Tigrovoye Hunting Lease* on the border with Ussuriysky Nature Reserve. The location was selected by a joint decision by various nature conservation organisations. The decision was based on several factors such as the availability of plentiful stocks of wild ungulates to feed on, sufficient distance from human settlements and the absence of people in the vicinity at the moment of release. GPS information received a day after the release showed that Artyomka had recovered nicely from the sedation and had moved five kilometres north, away from densely populated areas. Translocating tigers is a widely used method to deal with wild 'conflict' animals.



Vet aims tranquilizer rifle at Artyomka



Artyomka sniffs the air of freedom



Artyomka's first steps in the wild

* **Hunting Lease** is a site that is managed for the purpose of hunting ungulates, waterfowl and small mammals. People can buy a permit from the leaseholder, which allows them to hunt a certain number of animals. Each lease/estate has a hunting quota based on the health of ungulate populations. Hunting leases are

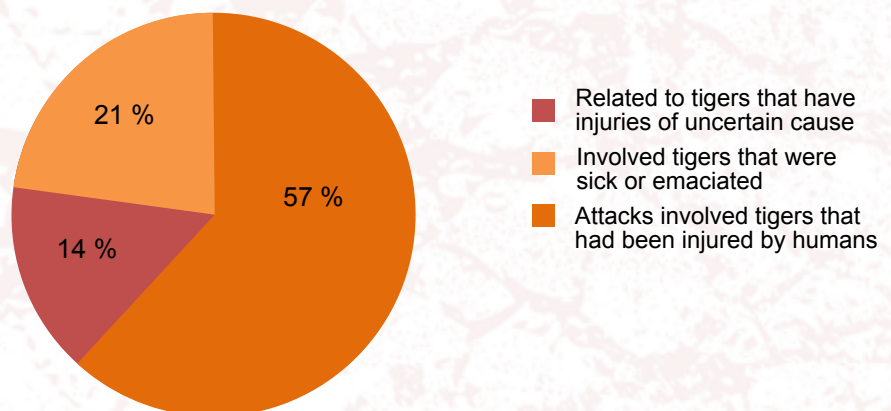
important conservation partners of WWF. They support high numbers of deer, wild boar and other wildlife as it means they have higher hunting quotas. WWF also hails higher densities of these animals as they are the tiger's prey. A high population of ungulates is in the best interests of all those involved.

2. HUMAN—TIGER CONFLICTS IN THE RUSSIAN FAR EAST

17 Russians were killed in conflicts with tigers in the last 40 years

Humans are rarely killed by Amur tigers as the feline is not as aggressive towards humans as other species. A tiger, who encounters a human, will usually try to avoid direct contact. This also applies to conflict tigers that have lived close to human settlements for a long time and regularly visit them to take livestock. Encounters with a tiger are uncommon, but when it happens, the animal is rarely aggressive. Nonetheless, there is a potential threat as tigers do attack in extenuating circumstances. Most tigers that attack people have been injured by humans or are sick or emaciated. A study of tiger attacks on people showed that 17 fatal cases have been recorded in Russia in the last 40 years. The research, conducted by Igor Nikolaev of the Russian Academy of Science, shows that 57% of attacks involved tigers that had been injured by humans and only 21% involved tigers that were sick or emaciated (Fig. 2) [3].

Figure 2. The Division of Amur Tiger Attacks on People



297 conflicts with tigers were reported in 2000—2016

Increase of HTC

In the period between 2000 and 2016, 279 conflict situations were reported. Conflict situations resulted in the deaths of 33 tigers in roughly the same period. Data shown in figure 3 shows that the number of conflicts between people and tigers has doubled since 2010. Given the growing tiger population and human activities within their habitat, this number is expected to rise even further in the near future. Part of the reason for this is because since the Amur tiger population stabilised at 500, trackers and specialists can no longer physically cover the areas where HTCs occur.

Figure 3. Conflicts with Amur Tigers in the Russian Far East, 2000—2016

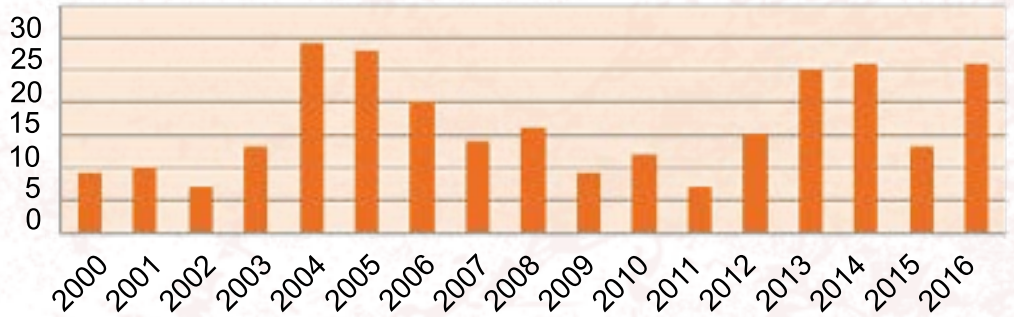


Figure 4 provides an overview of the number of tigers killed in conflicts between 2000 and 2016. Figure 5 shows the number of people that were attacked and killed by tigers over the same period.

Figure 4. Amur Tiger Killed in Conflicts, 2000—2016

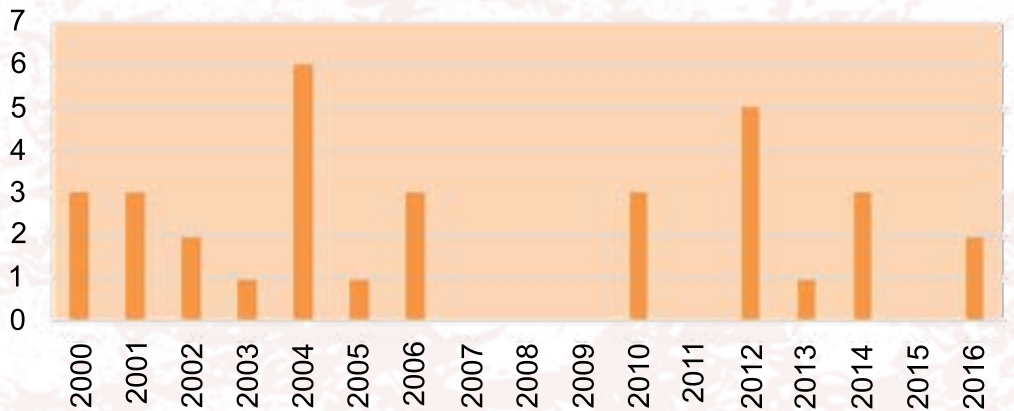
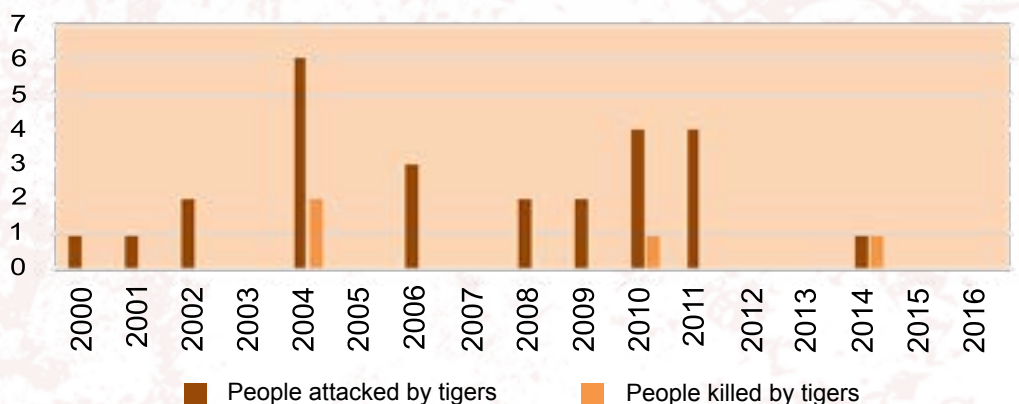


Figure 5. Number of People Attacked and Killed by Tigers, 2000—2016



**26 CASES OF TIGER
ATTACKS ON PEOPLE
RESULTED IN 4
FATALITIES AND 14
CASUALTIES**

Main Cause of HTC

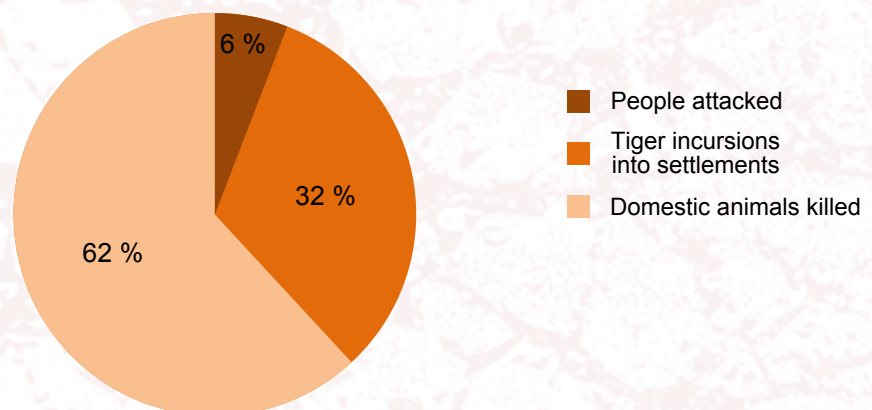
Poaching is the main cause of death of Amur tigers, as well as one of the main causes of HTC. An Amur tiger may become aggressive when chased or when unexpectedly confronted with a human, but also when it is defending its prey or cubs. Tigers may also get injured, making them unable to hunt wild prey. This forces them to look for easier prey such as livestock or chained dogs. Poaching does not just result in dangerous confrontations between people and tigers. It also leads to other HTCs, such as vehicles colliding with tigers and tiger cubs being orphaned. Every year, especially during winter, a number of cubs lose their mothers and are unable to live independently.

Types of HTC

According to WCS data, 57% of all recorded conflicts involve tigers attacking livestock. On average in Russia, tigers kill each year around 30 domestic animals and heads of cattle. The vast majority of fatalities are dogs, with around five cases of large horned cattle. These figures are roughly ten times less than in other countries, such as India. For example, between 280 and 430 heads of live-stock are reported to be killed by tigers each year in the Khanha tiger reserve alone [2].

More recent data from 2009–2017 shows that confrontations with dogs were the most widespread type of conflict (62%). In 32% of these cases, tigers came to the settlements and their tracks were identified. There were only two tiger attacks on people (6%), in which one person was killed and the other injured.

Figure 6. Types of Human—Tiger Conflicts in Russia



An initial WWF study (2000-2016) provided some interesting insights in HTC. Adult tigers with a pad width of more than 8 cm were involved in 41% of HTC cases. 15% involved tiger cubs and 6% tigresses with cubs. In the remaining 38% of cases, the sex and age of the animals were not identified.

The data shows that 26 cases of tiger attacks on people were recorded that resulted in four fatalities and 14 casualties (Fig. 5). The majority of these attacks were provoked by people.



One of the training sessions for students and specialists at the Diagnostic Centre of the Primorskaya Agriculture Academy



A conflict tiger captured and sedated by the Rapid Response Team for Khabarovsk Province, December, 2017

3. HUMAN—TIGER CONFLICTS RESOLUTION

Given the current and expected increasing levels of human-tiger conflicts, WWF experts identified HTC as its number one priority. This is important because traditionally, HTCs in Russia were resolved by simply killing the tiger, which led to a drastic decline in the population. In cooperation with the governmental agencies and local stakeholders, adequate measures need to be taken to reduce HTC.

In 2012, a special standard operating procedure (SOP) for HTC was designed by the Hunting Department of Primorsky Province. As part of this procedure, Rapid Response Teams (RRTs) were set up to resolve conflicts in Primorsky and Khabarovsk Provinces.

These teams each consist of two to three nominees of the hunting department, a field veterinarian, and a WWF representative. They can be alerted when people encounter a tiger close to human habitation, or if they see an injured or orphaned tiger.

Four risk categories of HTC were identified that require a different response by the teams:

- Category 1: Tiger attack on humans.
- Category 2: Tiger attack on livestock or domestic animals.
- Category 3: Visual sighting of a tiger in the vicinity of a village.
- Category 4: Detection of tiger tracks in the vicinity of a village.

Based on these categories, the teams decide on their procedure when called to a HTC scene. In general, the following steps are taken:

1. They investigate the conflict scene to evaluate the situation.
2. They monitor the tiger involved to assess behaviour and movement.
3. In category 3 or 4 cases, they will try to haze the animal using special equipment such as flashlights, fireworks and guns with rubber bullets.
4. If that does not work, or if it is a category 2 case, they will proceed to capture the animal with a foot snare, after which the animal will be tranquilized by the veterinarian and transported.
5. The tiger is then brought to a rehabilitation centre for a medical examination and recovery.

In 2012, Rapid Response Teams were set up to resolve conflicts in Primorsky and Khabarovsk Provinces

Under no circumstances, should tigers be killed when straying into human habitation. Therefore, some additional measures are taken by the response teams:

- Local administrations are encouraged to work with local people to deescalate the situation;
- Anxious locals must be prevented from surrounding the animal, which hampers capture and could lead to people and staff being seriously injured;
- The police and local administrators are to be called in at an early stage because smooth coordination is critical to control crowds. Frightened mobs can worsen a tense situation and lead to avoidable casualties or tragedies.



A medical examination of a tiger cub at Alekseevka Rehabilitation Centre

TIGER TALES. Vladik

Tiger Go Home

On 19 October 2016, a citizen of Vladivostok got the shock of his life when he saw an Amur tiger prowling the streets. He reported the incident to the emergency call centre and another person confirmed the sighting. Police were quickly dispatched to the location and the Hunting Department of Primorsky Province was alerted. WWF Russia was also informed and they closely monitored the incident. The tiger was difficult to track because of the absence of snow and drones were used to look for him. While the search was underway, the hunting department instructed alarmed citizens how to act in the event of an encounter with the fugitive tiger. The main advice was not to run as the tiger was unlikely to harm anyone unless provoked. Pavel Fomenko, species programme coordinator at WWF Russia's Amur branch, speculated that the tiger was probably searching for a new habitat. As the Amur tiger population increases, big cats tend to go in search of less populated areas. Often young tigers are chased away by adult males, who consider them competition.

The feline intruder in Vladivostok was captured by special rangers a day after the initial sighting. On the night of 20 October, police received a report of the tiger being sighted in the Shamora Bay area. Ranger groups immediately descended on the



Final medical examination before a long trip to Khabarovsk Province

area and WWF participated in the operation. Visual contact was made at 10 p.m. when the tiger was detected in a forest by a thermal camera. As the animal was within firing range, it was shot with a sedative. The tranquilizer soon took effect and the beast was left unharmed. Afterward, the cat was moved to Alekseevka Rehabilitation Centre. Upon arrival, the animal was thoroughly examined, measured and samples were taken. The subject was a young male Amur tiger about three-years-old, weighing approximately 140 kg. He was healthy and in good condition, as well as being well-fed as he had apparently recently eaten a cat or a dog. After



Vladik leaps to freedom

the examination, the tiger was placed in an enclosure at the rehabilitation centre, pending analysis of the samples taken. Based on the results, a panel of experts had to decide on whether to release the tiger or not. They also needed to determine whether it was a domestic or wild tiger and why it roamed into human territory.

On 15 May 2017, after around eight months in captivity, Vladik was released back into the wild at his new home in Bikin National Park. The release mission was performed with the support of WWF Russia and the Amur Tiger Centre. At the time of his release, Vladik was in peak physical condition, weighing 125 kg. He was skilled at hunting ungulates and was shy of people. Pavel Fomenko explained that his new home was chosen because it is far away from human settlements so there was little chance of Vladik straying into urban territory again. Besides that, there were no other tigers or large predators in the area to compete with Vladik for prey. There were also plentiful stocks of ungulates.

You would think that Vladik lived 'happily ever after' in his new home, but surprisingly, his story did not end there. Vladik had been tagged with a GPS module and in November 2017, the tracking device showed that the tiger had returned to what experts assume must be his original home range in the south-west of Primorsky Province. After that, he moved on to the major tiger area in Sikhote-Alin. Vladik's return home was an epic journey that took him from the north of Primorsky Province all the way to the south-west. During his odyssey, Vladik carefully avoided all encounters with humans and left domestic animals unmolested. He even seemed to make a 'victory lap' of his old haunts before settling down in Sikhote-Alin. Pavel Fomenko described the tiger's behaviour as 'unique'. Who knows what the next chapter will be in Vladik's extraordinary life.

4. AMUR TIGER REHABILITATION AND MONITORING

A tiger will be captured and placed in the Alekseevka or Utyos rehabilitation centre in cases in which a tiger cannot be chased away from the scene; is injured; has caused serious damage (e.g. preyed upon livestock or dogs, or injured people); is an orphaned cub.

Rehabilitation Centres

The rehabilitation centre in Alekseevka (Primorsky Province) was established in 2012 to care for wildlife in need of human aid. Utyos centre was established in Khabarovsk Province. It was launched by tiger expert Vladimir Kruglov in 1991 and has been his family's life work ever since, with his son Eduard and daughter Lyudmila following in his footsteps.

In 1991, Utyos Rehabilitation Centre was established in Khabarovsk Province

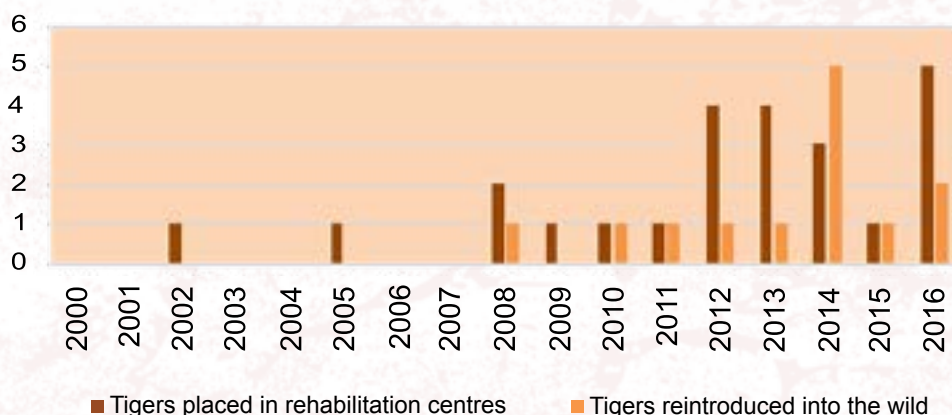
There are four to six staff members at each centre, including the director, a veterinarian, one or two animal keepers and one or two additional staff.

When a tiger is brought in, it receives a thorough medical examination to identify possible injuries and to assess its overall physical condition. In the case of serious injuries, surgery can be conducted by the centre's veterinarian. A tiger is usually quarantined first. Then it is released into a large enclosure, where it can recover further from its ordeal. During the animal's rehabilitation, a group of experts decide whether it can be released again in a remote area in the wild or whether it will need to remain in captivity. The decision is based on the animal's physical condition and its ability to hunt and survive in the wild. The release of an animal is always a joint decision.

In 2012, Alekseevka Rehabilitation Centre was established in Primorye

Between 2000—2017, 24 animals were placed in rehabilitation centres. Six of these tigers died due to their bad physical condition when they were captured. One adult male was translocated to the Rostov-na-Donu's Zoo. Figure 7 shows the total number of tigers that were placed in rehabilitation centres and released back to nature.

Figure 7. Tigers Placed in Rehabilitation Centres and Reintroduced into the Wild, 2000—2016 (including orphaned cubs (WWF, WCS))



Catering to Cubs

Besides rehabilitating tigers that cause HTC, the centres’ main task is to care for cubs, who lost their mothers due to poaching. They are usually orphaned so young that they have not yet developed the skills to survive in the wild without coming into conflict with humans. The centres have large, naturalistic-looking enclosures, which allow the cubs to be as wild as possible, while still receiving the support they need. There is minimal human contact and living prey is provided so they can hone their hunting skills. The cubs stay at the centres until they are deemed fit for release. After their release, they are carefully monitored through satellite tracking to make sure they are coping with their return to the wild.

Monitoring of Released Tigers

Between 2009—2017, a total of 13 tigers (nine tiger cubs and four young adults) were released into the wild after rehabilitation. Ten of them were tagged with GPS collars to monitor their movements to prevent them becoming involved in HTCs again. Two of this group of ten tigers are known to still be alive and are being monitored via their collars. The other animals’ collars stopped transmitting due to battery failure. The usual lifespan for a GPS collar is about three years, but sometimes they malfunction earlier for unknown reasons. The only recent information we have received about them is from local people and camera traps. Five tigers have survived and adapted, one died from exhaustion, possibly connected with infection, and one tiger was killed by another tiger. One adult male has disappeared from the radar, but he is suspected to have been killed by poachers.

WWF Support

WWF provides various support services to the Rapid Response Teams and both rehabilitation centres. WWF staff members, Pavel Fomenko and Alexey Kostyria, are members of the RRTs. Their personal involvement is critically important in various areas, such as:

- solving conflict situations;
- medical examinations at conflict sites, as well as at the centres;
- investigating the circumstances of the death of any tigers in HTC;
- explaining individual rehabilitation courses;
- assessing an animal's physical fitness for release into the wild;
- assisting in the release of an animal into the wild.

Pavel and Alexey have a lot of personal experience in mitigating HTCs. Furthermore, they have specialised knowledge about biology, veterinary care, psychology and other important skills necessary to work efficiently with conflict animals. Their regular participation in the field, conducting workshops and training require special facilities and material resources, which are provided by WWF.

WWF's main goal in supporting the rehabilitation centres is to return tigers to the wild. WWF helps the centres to purchase different kinds of equipment, such as remote-controlled monitoring systems and electric fences. It also helps with repairing enclosures and in the construction of special, temporary cages and quarantine units. The rehabilitation centres actively use these facilities and equipment.



Mobile «hospital» for tigers in service in Primorye since January 2018



*Pavel Fomenko,
head of the Rare Species Conservation Unit,
WWF—Russia, Amur branch*

Before joining WWF's ranks Pavel, a game biologist by profession, worked as a researcher at the Pacific Institute of Geography of the Russian Academy of Science. He headed the Division on Protection of the Altaisky Nature Reserve and took part in the first international research projects on the Amur tiger and Amur leopard.

As a WWF member, Pavel created a network of anti-poaching groups in the key Amur tiger habitats, built

reliable contacts with tiger-range protected areas, governmental agencies supervising nature protection. On his initiative, conflict resolution groups were formed in Primorsky and Khabarovsk Provinces. He also laid the basis for cooperation with the Operative Customs, Sniffer Dogs Service, the Customs Academy and the Frontier Service. TIME magazine named Pavel the Hero for the Planet—2000" and the Russian Geographical Society awarded him a Golden Medal.



*Alexey Kostyria,
Ph. D., senior coordinator of the Rare Species Conservation Unit,
WWF—Russia, Amur branch*

Alexey liked to explore the wilderness since his childhood. After specialising in mechanics at the Primorskaya Agricultural Academy, he worked at the Sikhote-Alin Nature Reserve as an inspector and a lab assistant. In 2001, Alexey graduated from the Far Eastern University, the faculty of biology and worked as a senior research associate at the Institute of Biology and Soils of the Russian Academy of Sciences for ten years. Alexey headed international

research projects on Himalayan and brown bears, as well as on the Amur leopard monitoring with camera traps. He also participated in the Amur tiger census. He carried out research into the trans-border movements of Amur tigers and leopards between Russia and China, using data from genetic analysis and camera traps. In 2016, Alexey joined the WWF—Russia team monitoring Amur tiger camera traps.

TIGER TALES. Filippa

A Night on the Town

On 29 April 2017, the tigress Filippa was transported from Alekseevka Rehabilitation Centre in Primorsky Province to the Dichun Wildlife Refuge in Evreiskaya Province. She was released upon arrival and disappeared into the deep forest, roaring with excitement. Filippa was tagged with a GPS collar so that her movements could be monitored. The release mission was carried out with the support of WWF–Russia and the Amur Tiger Centre.



Freedom is at Filippa's fingertips

Almost 15 months earlier, on 29 December 2015, an exhausted five-month-old tiger cub was found in one of the gardens of Filippovka village (hence her name) near the Land of the Leopard National Park. The cub was dying from starvation and stealthily approached the village in search of food. However, instead of finding food, she almost became a meal for local dogs. Villagers reported the incident to the national park staff and they rescued the young tigress.

After 14 months of rehabilitation at Alekseevka Rehabilitation Centre, Filippa had a new name and a new lease on life. She had fully recovered and learned to hunt; a small helpless tiger cub had turned into a graceful, powerful tigress. It is hoped that she will breed in the wild, further increasing the Amur tiger population



Tranquilizers are loaded and final instructions given



Vet's examination before a long journey

5. LESSONS LEARNED

Recently, governmental agencies of Khabarovsk Province placed the Utyos enclosure under their jurisdiction. This is only the first step to make the centres independent of WWF support. Unfortunately, at present, the centre cannot fully operate without WWF support. They are in constant need of money to provide the services cited above. At present, WWF has an agreement with Alekseevka Rehabilitation Centre to provide the bulk of funding or its operations.

The response teams have played an important role in solving HTC by removing wounded, diseased or otherwise unfit animals from the wild. The teams' actions seem to have increased the local populations' acceptance of their feline neighbours. Solving HTC, fostering local acceptance and fighting poaching prove the team's success. Their standard operating procedure of investigating, monitoring, hazing, capturing, evaluating and finally releasing the tiger into or removing it from the wild seems to be a logical and effective approach.



The Rapid Response Team for conflicts resolution for Primorsky Province

Recommendations

We recommend that RRTs continue their work. In dealing with tiger attacks on domestic animals, we recommend that they explore additional techniques and technologies. In addition, they should collect data to evaluate their effectiveness. GPS collars should help to monitor tigers that repeatedly cause conflict and may improve hazing efforts by helping the response team to get close to the tiger. They will also provide data on the tiger's response to hazing. This is a very important part of the process and one of the main reasons why the government and public organizations provide financial support. Experience with the current use of GPS collars shows that they only provide sufficient data to record the animal's movements and whether it is alive or dead.

We make the following recommendations to further improve the performance of the Rapid Response Teams:

- The teams are currently dependent on WWF for animal handling and telemetry expertise. Therefore, continued training is required so that the teams can operate more independently in future.
- To further reduce the loss of tigers due to conflict, the teams should continue to use and improve methods to maintain tigers in the wild. These methods include translocation and returning cubs to the wild and rehabilitation in the rehabilitation centres when necessary. Translocation is becoming an important method to re-establish sub-populations (e.g. translocation* to Evreiskaya and Amurskaya Provinces) and to increase small populations.
- Anti-poaching efforts should be continued to prevent poachers from taking advantage of conflict situations to kill tigers. This will also reduce the risk of injuries and cubs losing their mothers. In addition, it gives the teams a meaningful task when they are not engaged in managing conflicts.
- A methodology is required to evaluate interventions, including standardised data sheets and a central data base. Measures of effectiveness should reflect how effective the team is in reducing the loss of human life and livelihood, as well as the number of tiger deaths.
- More robust and regular support should be provided to the rehabilitation centre in the village of Alekseevka in Primorsky Province and to Utyos Rehabilitation Centre in Khabarovsk Province. The number of conflict tigers or orphaned cubs is hard to predict so the centres need to have the capacity to accommodate at least ten animals. It should be noted that if long-term rehabilitation is necessary for an animal, that means it will need to be kept for up to two years.
- Russia was the first country to create a government-sponsored response team. Today, response teams exist in several countries in some form, as do proposals to create response teams in other countries. If, the activities of the response team are properly evaluated, they may serve as a model for developing teams in other areas.

* A tigress, named **Zolushka** (Russian for Cinderella), was found in February 2012 as a starving four-month-old cub. Her mother is thought to have been killed by poachers. She was nursed back to health at the Alekseevka Rehabilitation Centre, having had

the tip of her tail removed following severe frostbite. The orphaned Siberian tiger was rehabilitated and released back into the wild. She has given birth to two cubs in 2015.

TIGER TALES. Pozharsky Cub

The Miracle Cub

Friday 13 2017 turned out to be a lucky day for one male cub. The Primorsky Province Hunting Department received an alert about a wounded tiger cub in the northern part of the region. A team was quickly dispatched to capture the seriously injured cat and provide it with emergency first-aid to save its life. Then it was quickly transported to Alekseevka Rehabilitation Centre for further treatment. An examination established that the cub was five to seven months old. The centre's specialists placed the weakened animal in a heated quarantine box for observation, while the experts consulted on what further steps to take. His wounds were extremely serious and the cub's survival was described as a miracle.

Careful investigation of the shooting site revealed that the cub's mother was nearby with a sibling. They were alive and unharmed and under no immediate threat from the poachers, who presumably shot the male cub.

A week after the cub's retrieval, he was still struggling for his young life. A special commission consisting of specialists from government organisations, NGOs and research institutions decided that urgent surgery was warranted to save the tiny animal's life. His nose was operated on, thereby restoring his breathing and careful examination of his eyes revealed that initial fears of impaired vision were unfounded. After the medical procedure, the cub was put in quarantine for further medical treatment. In the meantime, WWF—Russia purchased video cameras to monitor the young animal around the clock and the Amur Tiger Centre paid for his medical treatment and care.

After his recovery, the cub was put with a female cub in a large enclosure encompassing about one hectare, where they can walk around freely and play together. This is very important for such intelligent animals as tigers. Their being together will allow them to grow stronger and hone their hunting skills, while forging a strong social bond. WWF Russia equipped the enclosure with a video system to keep an eye on the tigers and monitor their progress. Experts are optimistic about their prospects of eventually being released into the wild.



The first day at the Alekseevka Rehabilitation Centre, Primorye

TIGER TALES. Lazovsky Cub

The Cub Who Came In From the Cold

On 16 December 2016, specialists of the Hunting Department of Primorsky Province and the Tiger Rehabilitation Centre successfully captured an orphaned tiger cub near Lazo village. Hunting Department staff took immediate control over the situation as soon as they were alerted to the little predator's appearance.

Little Lazovsky had been regularly sighted since 30 November near the village dump site. There were no signs of the mother so after two weeks of monitoring the tiny tiger's movements, the Hunting Department decided to capture her for repatriation to the wild. The operation was conducted using special equipment provided by WWF—Russia and Amur Tiger Centre. A careful examination followed the successful capture. Lazovsky was revealed to be a five-month-old female cub, weighing 20 kg. She had a cut on her paw, presumably from glass in the dump site, and even though she was weakened, Lazovsky was otherwise in fine shape.

Winter had descended on Primorsky Province with temperatures plummeting to -25°C . The little orphan could not possibly survive alone in such harsh conditions so she was sent to Alekseevka Rehabilitation Centre for observation and medical care.



The tiger cubs now share one enclosure at the Alekseevka Rehabilitation Centre. They are to be released into the wild in spring 2018



Medical examination with the new equipment at Utyos Rehabilitation Centre, Khabarovsk Province, May, 2016

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**THE WAY OF THE TIGER:
REPORT ON HUMAN—TIGER CONFLICTS IN THE RUSSIAN FAR EAST**

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To stop the degradation of the planet's natural environment and to build a future in which humans live in harmony with nature.

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