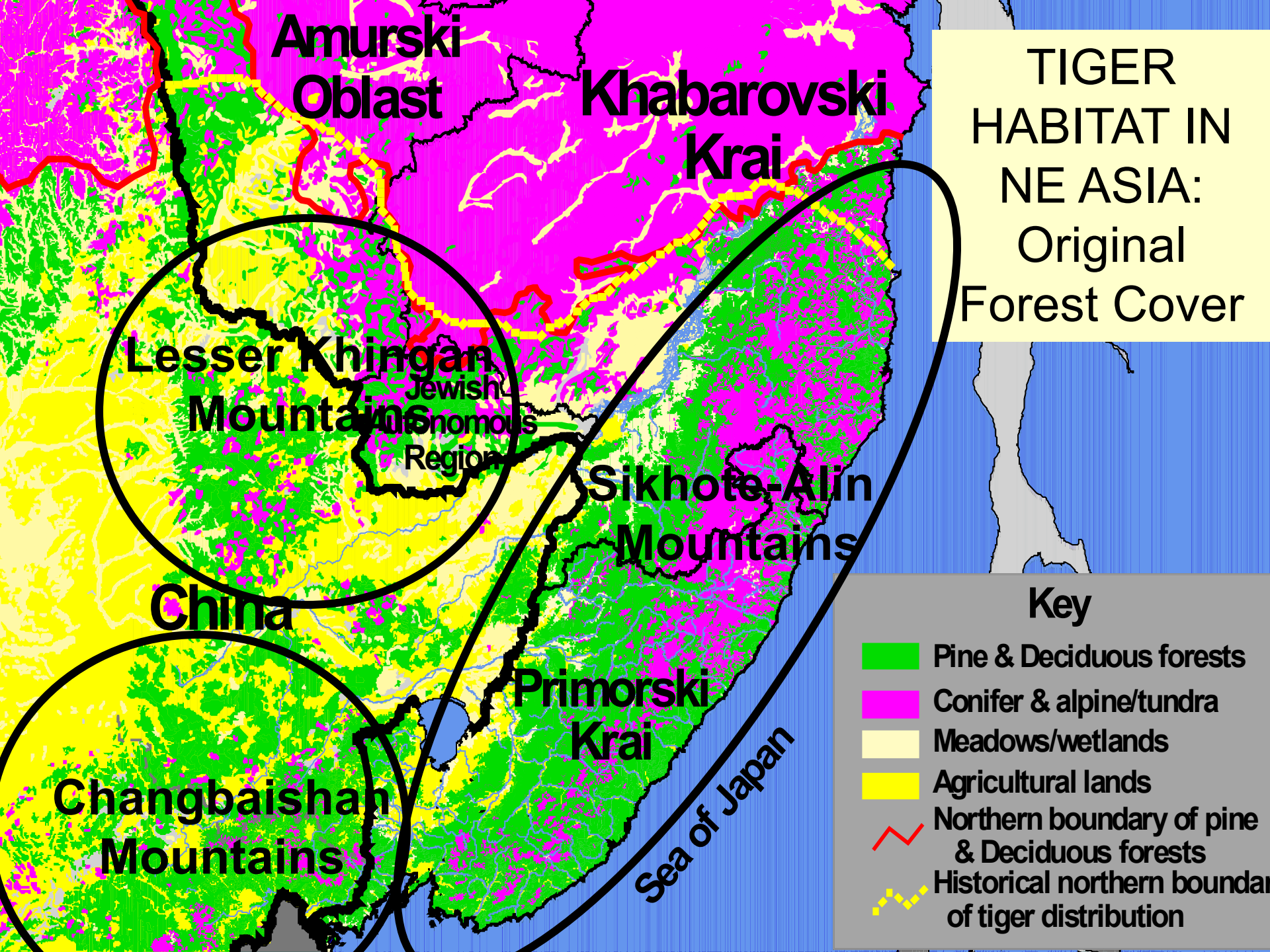


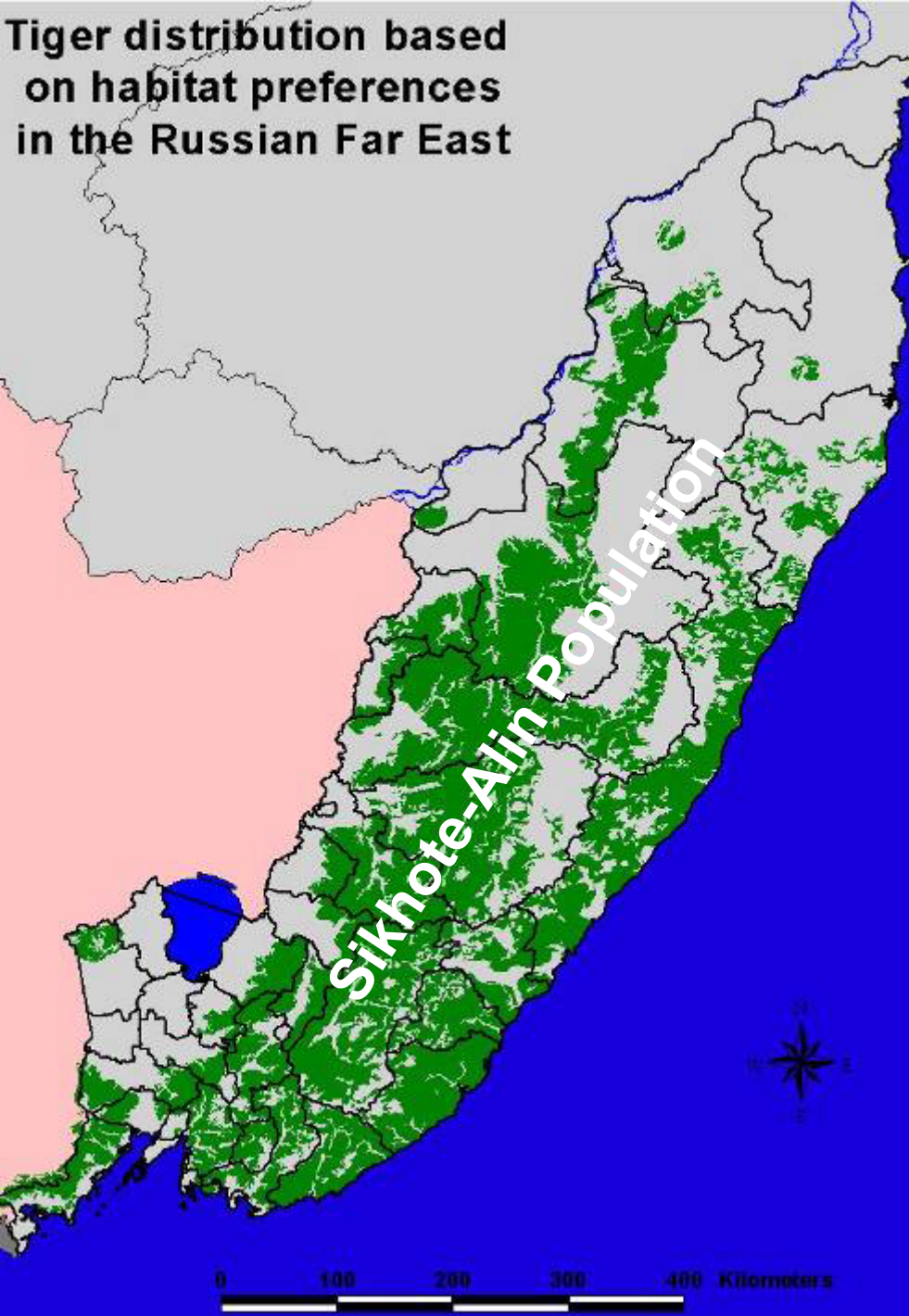
A close-up profile of an Amur tiger resting in a snowy forest. The tiger's thick, orange and black striped fur is the central focus. The background shows a dense forest of bare trees under a grey, overcast sky, with snow covering the ground.

**WILDLIFE  
CONSERVATION  
SOCIETY**

# **TRANSBOUNDARY CONSERVATION OF THE AMUR TIGER**



**Tiger distribution based  
on habitat preferences  
in the Russian Far East**

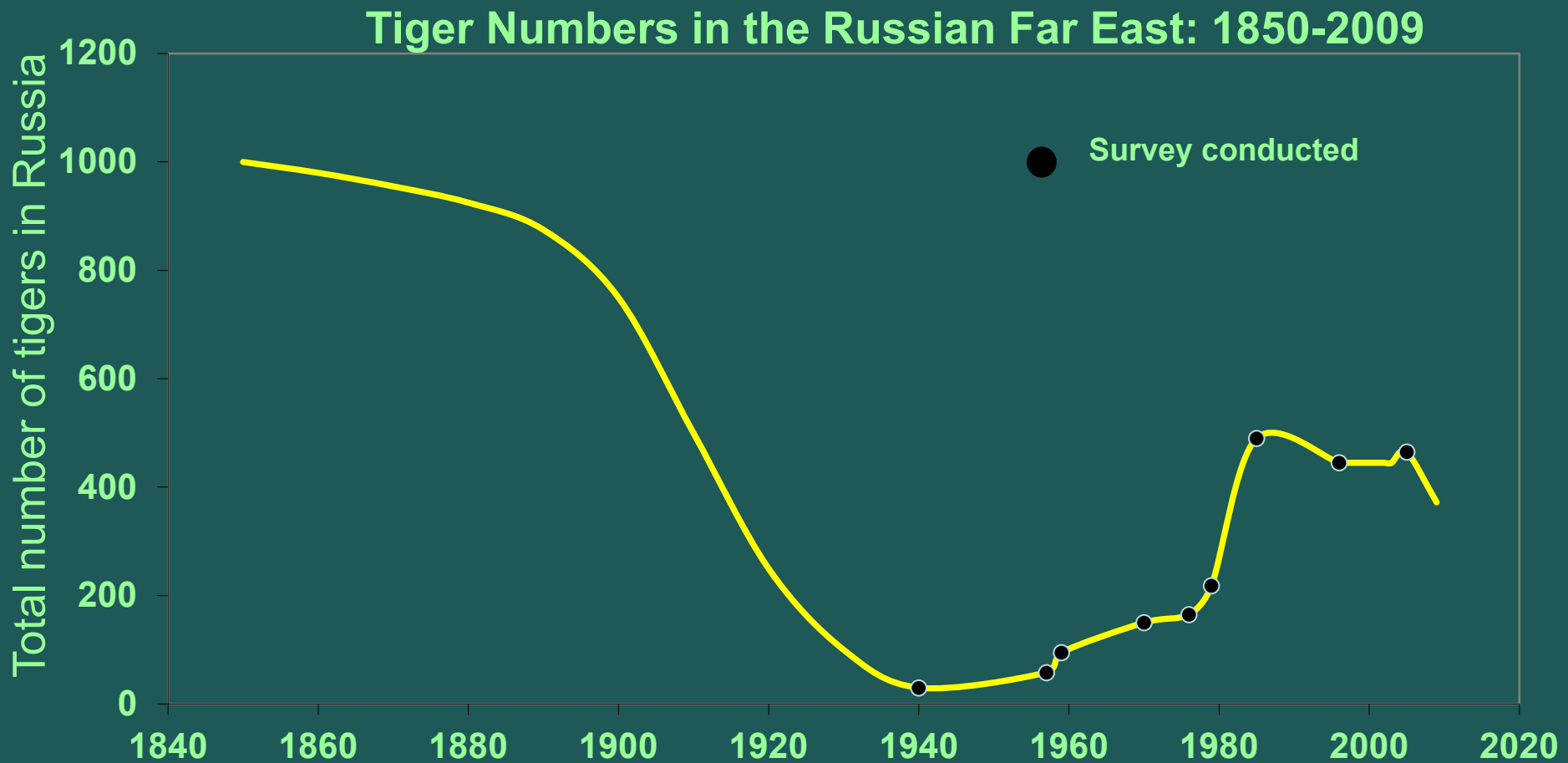


**430-500  
TIGERS IN  
RUSSIAN FAR  
EAST 2005**





# TIGER NUMBERS IN THE RUSSIAN FAR EAST: 1850-2010





# AMUR TIGER DISTRIBUTION

Today, recovery of tigers in China will be dependent on movement of tigers from Russia

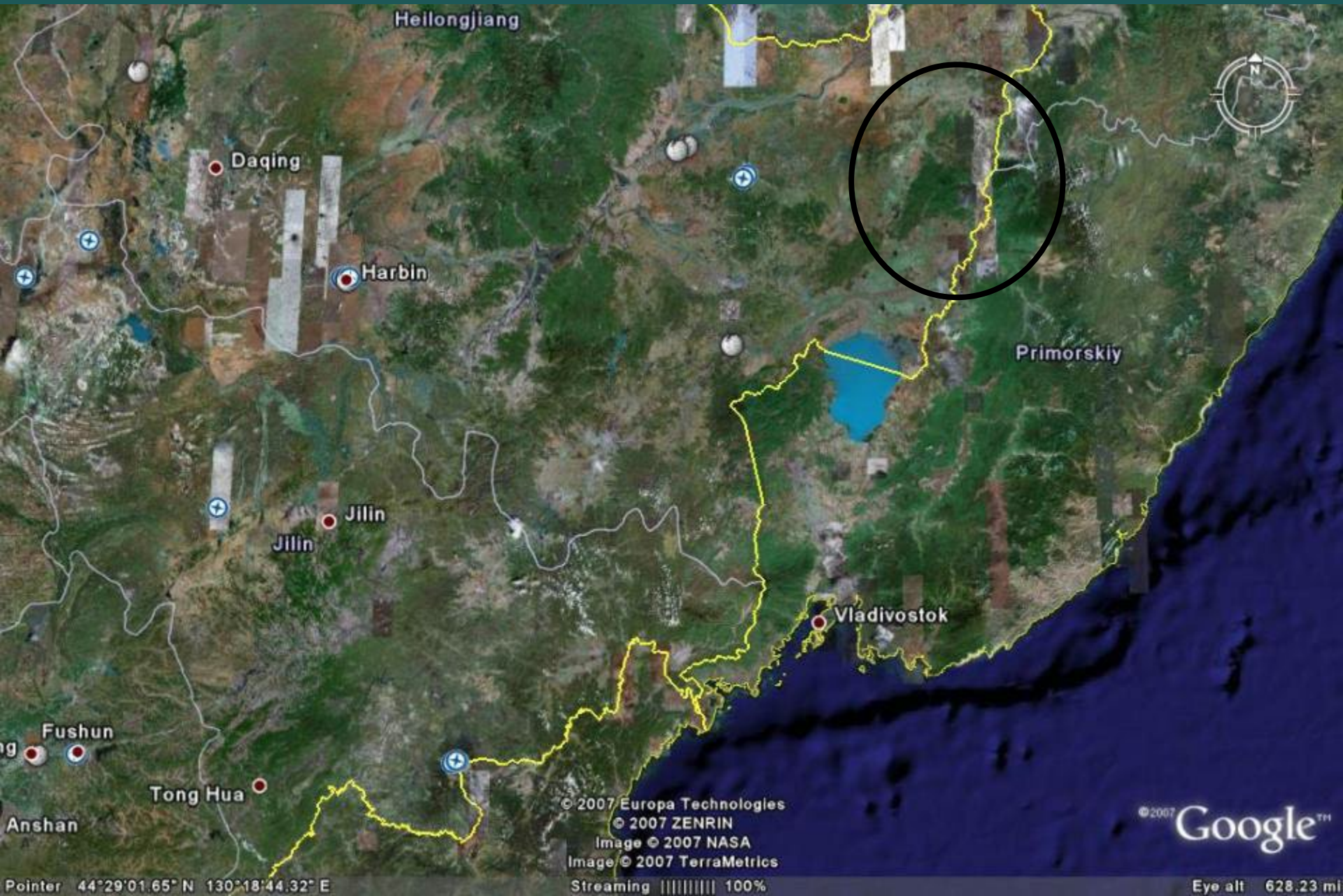


# AMUR TIGER DISTRIBUTION

Transboundary connectivity



# The Wandashan Mountains, Heilongjiang Province



Heilongjiang

Daqing

Harbin

Primorskiy

Jilin

Vladivostok

Fushun

Tong Hua

Anshan

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© 2007 ZENRIN  
Image © 2007 NASA  
Image © 2007 TerraMetrics  
Streaming 100%

© 2007 Google™

Pointer 44°29'01.65" N 130°18'44.32" E

Eye alt 628.23 mi

## EAST WANDASHAN MOUNTAINS:

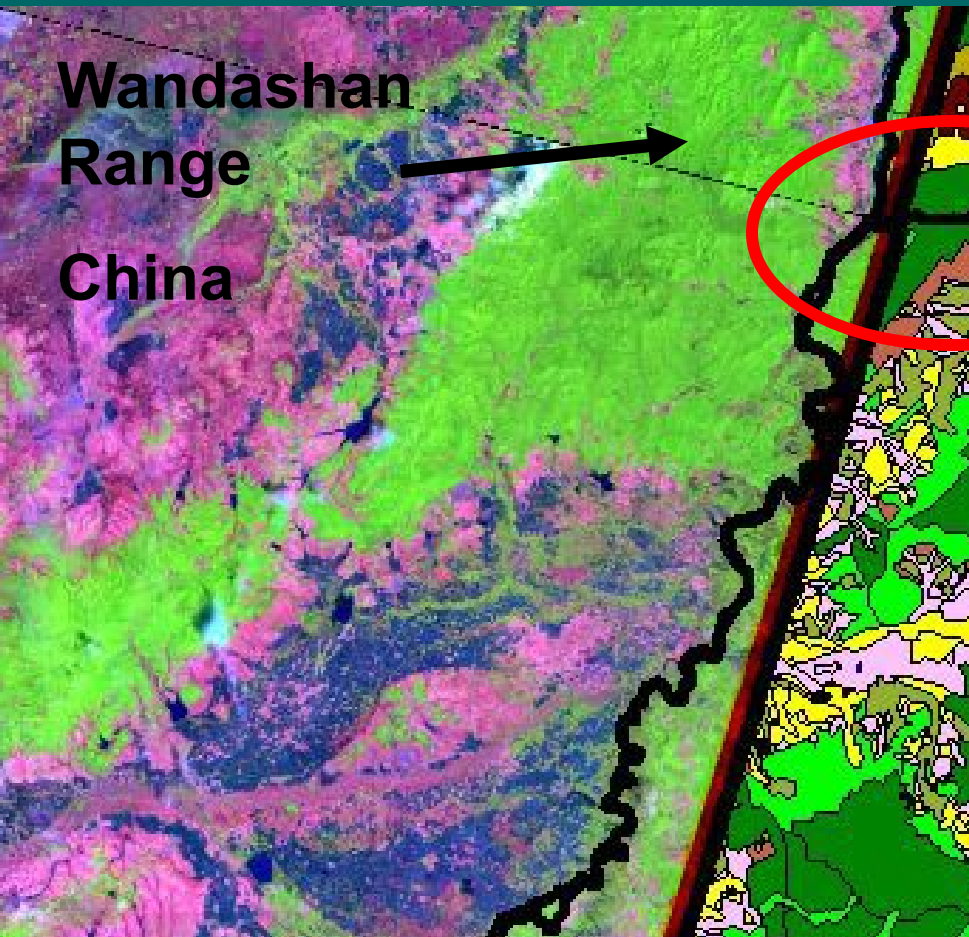
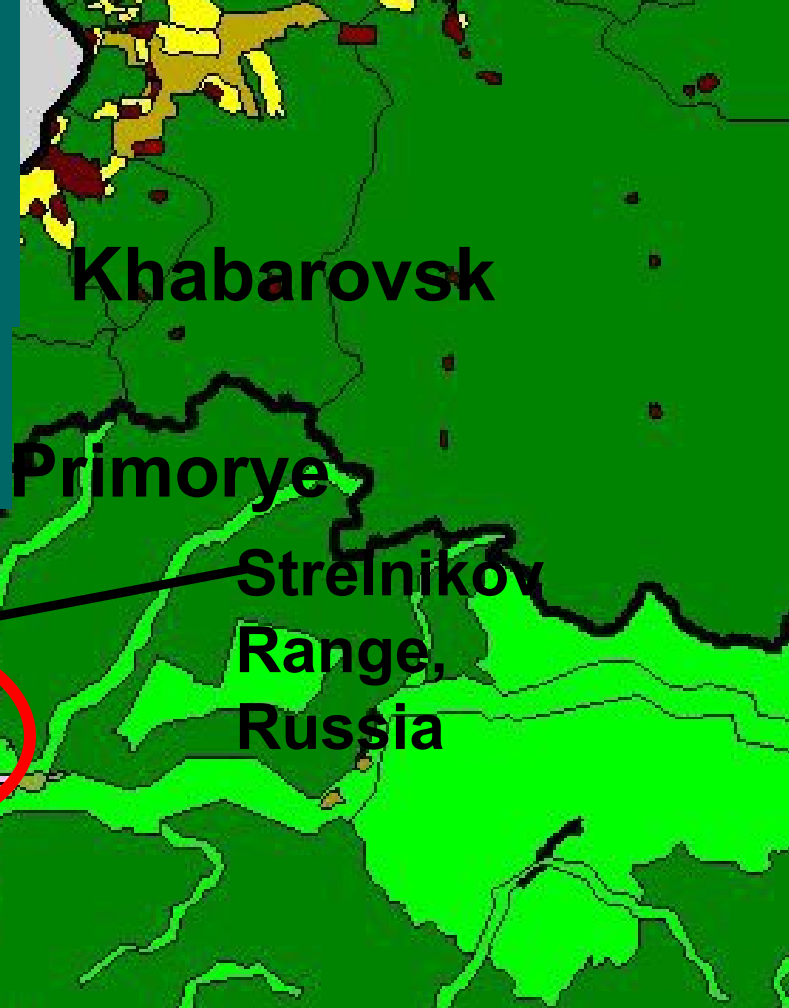
Best tiger habitat in NE China and best in Heilongjiang  
Tigers are regularly reported there, including a female with cub in 2010

Quick recovery is possible

But:

Limited in size (potential for only 8-10 tigers estimated)

Dependent on narrow corridor



Wandashan  
Range  
China

Strelnikov  
Range,  
Russia

In Russia:  
Khabarovsk Province created an ecological corridor in 2005  
A gas pipeline threatens integrity of this narrow strip of habitat.

In China:  
No movement to secure this corridor.





# AMUR TIGER DISTRIBUTION

Transboundary connectivity



# CHANGBAISHAN MOUNTAIN ECOSYSTEM



Heilongjiang

Daqing

Harbin

Heilongjiang  
Province

Primorskiy

Jilin  
Jilin

Russia

Jilin  
Province

Vladivostok

Fushun

Tong Hua

Anshan

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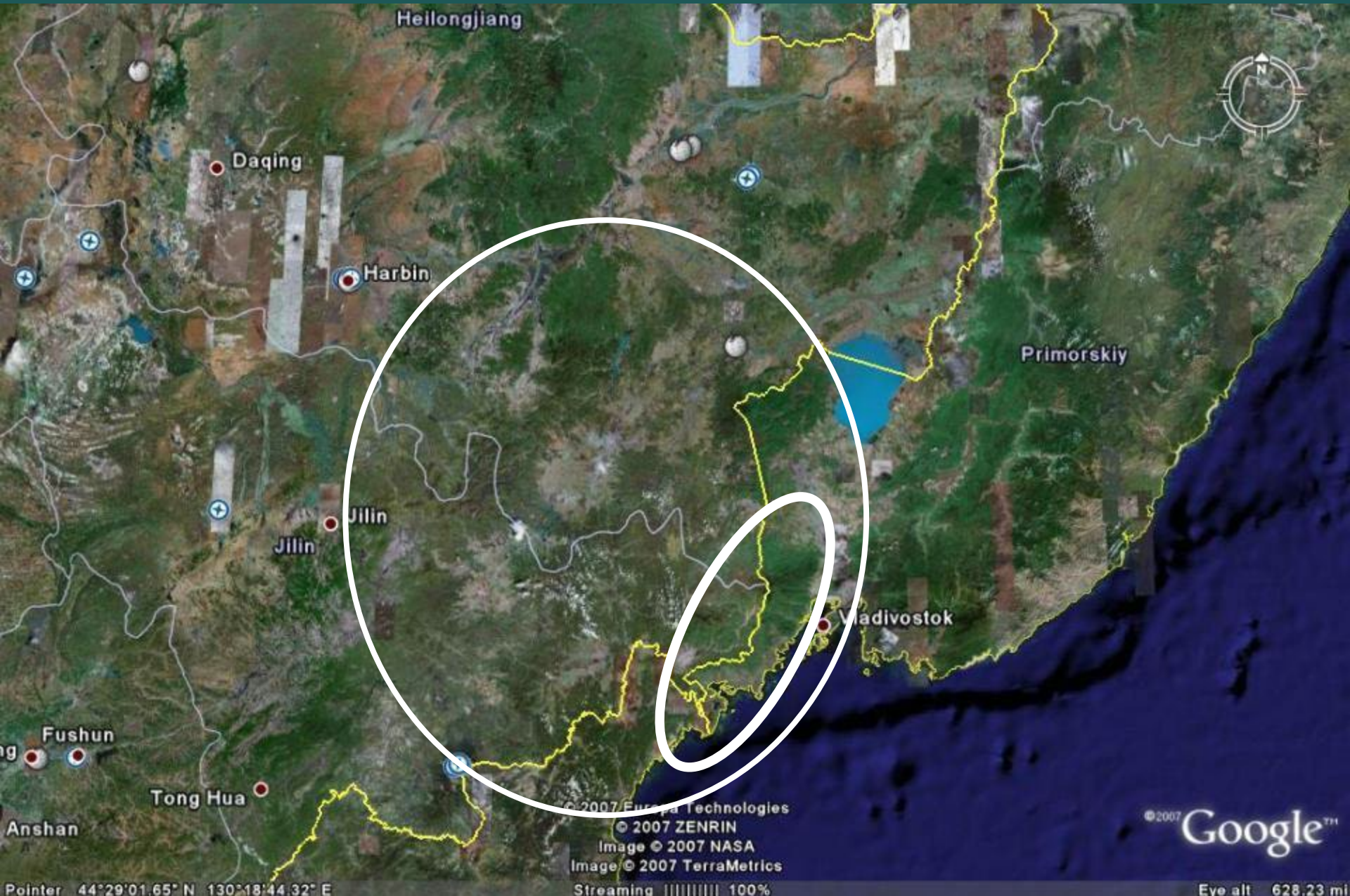
© 2007 Google™

Pointer 44°29'01.65" N 130°18'44.32" E

Eye alt 628.23 m



# CHANGBAISHAN MOUNTAIN ECOSYSTEM



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Image © 2007 NASA  
Image © 2007 TerraMetrics  
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Pointer 44°29'01.65" N 130°18'44.32" E

Eye alt 628.23 m





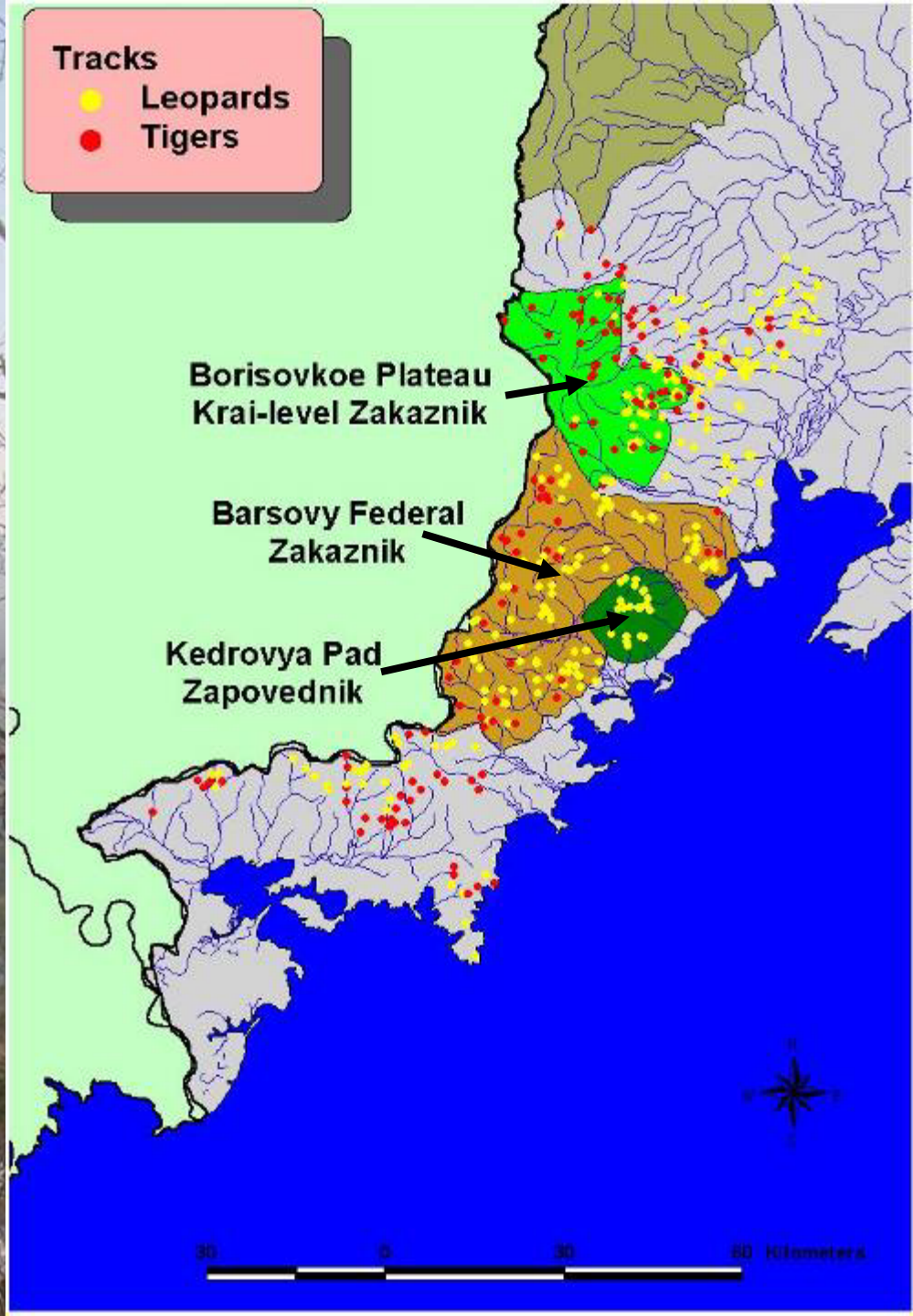
# Tigers in SW Primorye Russia

**Year Total**

**2003 16-21**

**2005 10-13**

**2007 9-12**





# IS THERE A FUTURE FOR TIGERS IN THE CHANGBAISHAN LANDSCAPE?



# PRIORITY TIGER MANAGEMENT ZONES

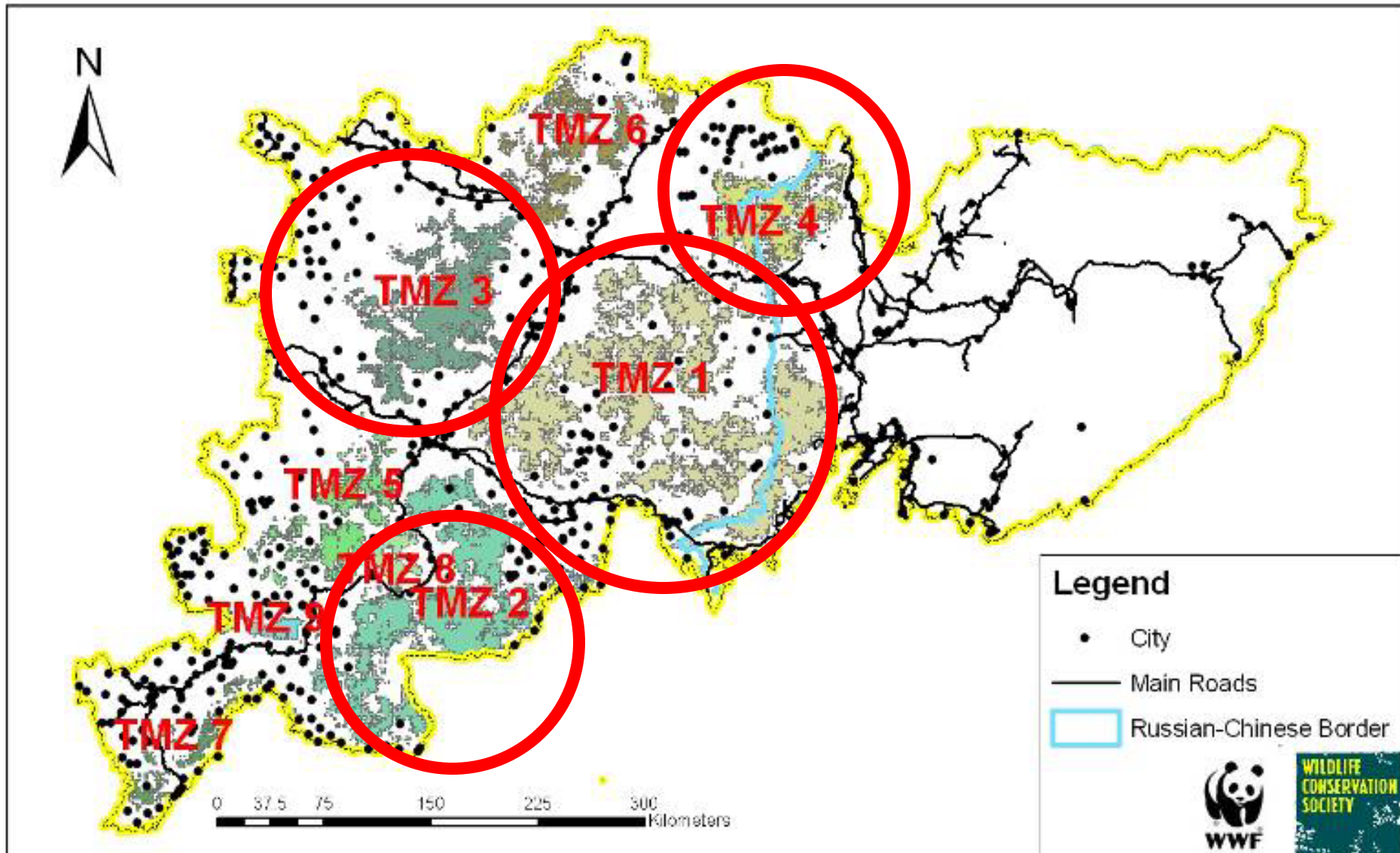


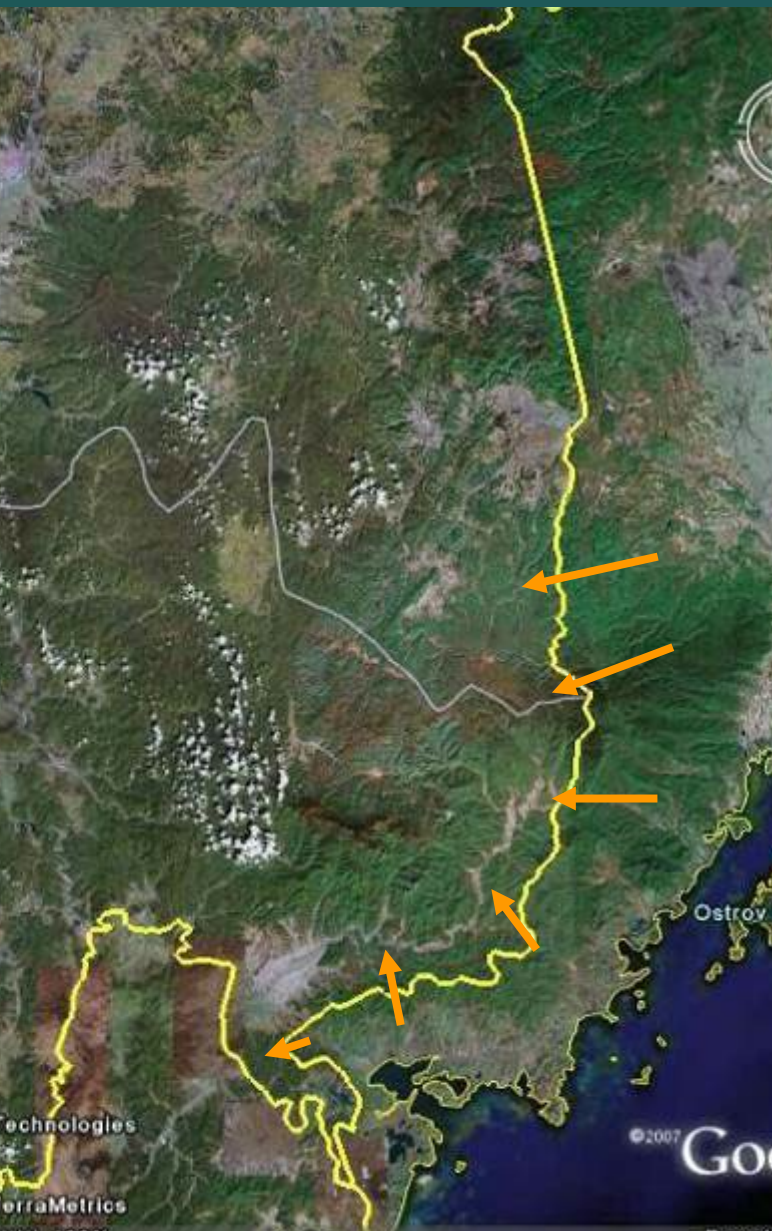


Table 7. Estimated potential Amur Tiger population size in Tiger Management Zones based on the relationship between predicted habitat quality from three different habitat models (Expert Model, RSF, ENFA, and the mean of all three).

#	Conservation Unit Name	Area [km <sup>2</sup> ]	ENFA	RSF	Expert	Mean
1	Hunchun-Wanqing- Daning-Shiyang	14,239	39	37	45	40
2	Changbaishan South	8,420	23	20	29	24
3	Zhangguangcailing	5,373	15	12	17	15
4	Mulin	3,231	9	8	10	9

**Possible to retain 85 tigers in this landscape**

# THE HUNCHUN “BEACH HEAD”

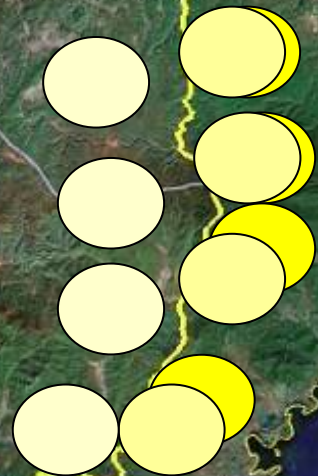




# RECOVERING TIGERS IN CHANGBAISHAN –

## A “WAVE” PROCESS

-  1<sup>st</sup> Generation adult females
-  2<sup>nd</sup> Generation adult females
-  3<sup>rd</sup> Generation adult females



© 2007 Europa Technologies

Image © 2007 TerraMetrics

Streaming 100%

© 2007 Google

Pointer 43°35'47.96" N 129°31'16.85" E elev 1898 ft

Eye alt 236.71



# TRANSBOUNDARY STEPS TO RECOVERY

1. **Develop a landuse plan for recovery.**
2. **Increase prey numbers:**
  - **improve law enforcement on both sides of the international border**

# IMPLEMENTATION OF MIST

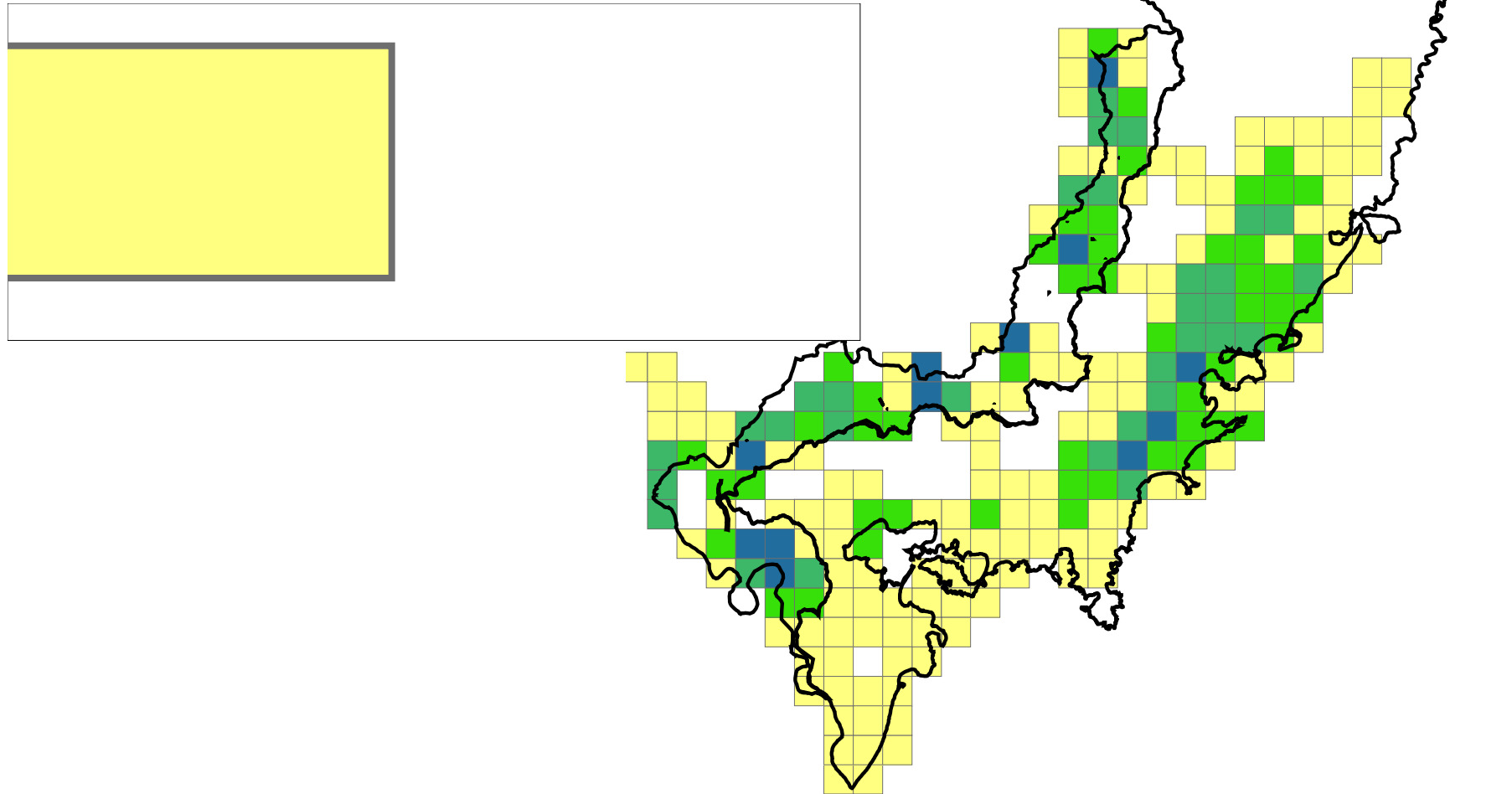


- Is a law enforcement monitoring system that, when combined with training and support, has demonstrated positive results in other tiger range countries

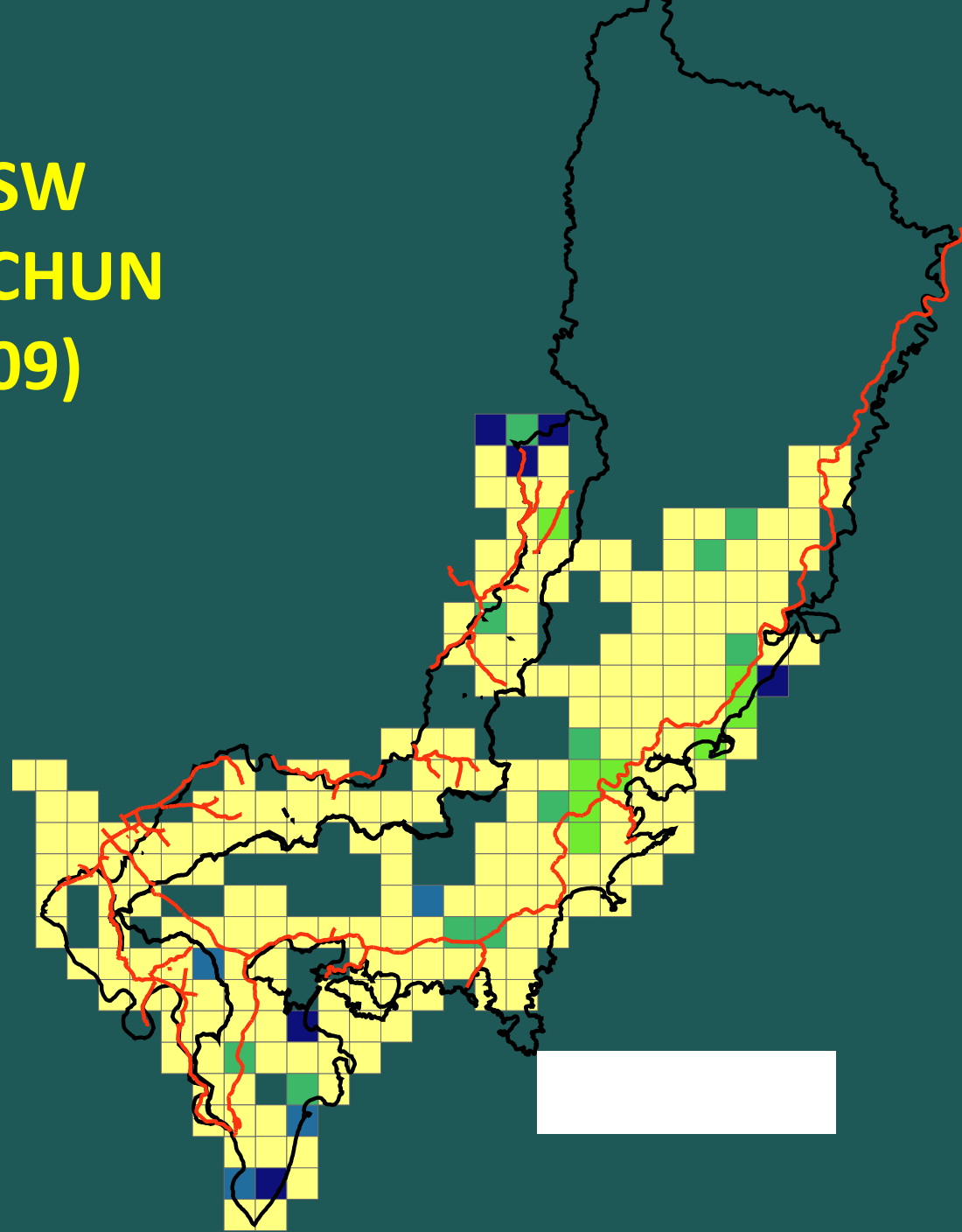
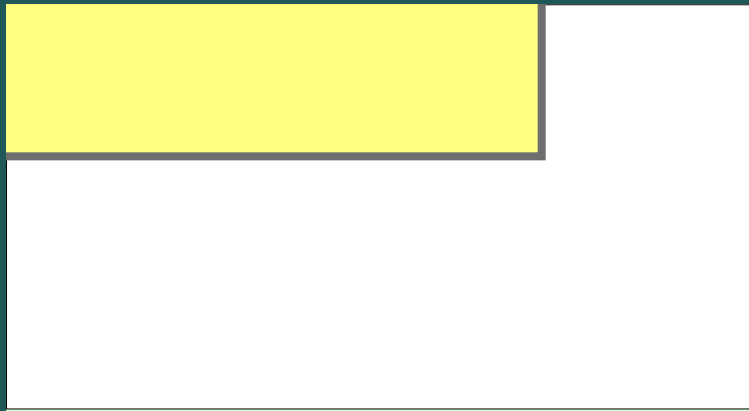




# Patrol coverage across SW Primorye and Hunchun Nature Reserve (2009)

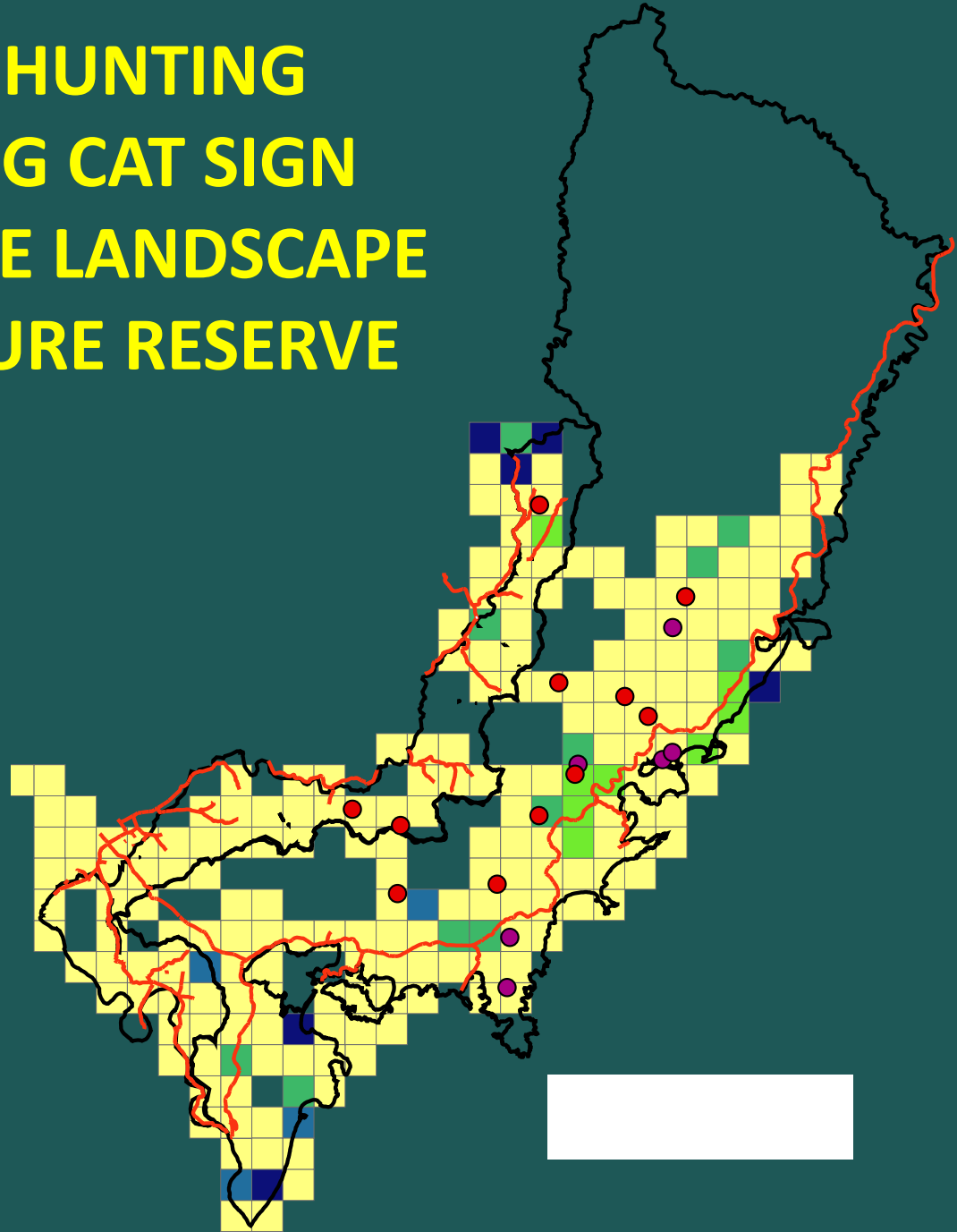
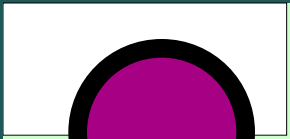


# ILLEGAL HUNTING INDICATORS ACROSS SW PRIMORYE AND HUNCHUN NATURE RESERVE (2009)





# DISTRIBUTION OF HUNTING INDICATORS AND BIG CAT SIGN ACROSS SW PRIMORYE LANDSCAPE AND HUNCHUN NATURE RESERVE (2009)



**WHEN USED IN COMBINATION WITH  
TRAINING AND FINANCIAL SUPPORT, MIST  
HAS THE CAPACITY TO PROVIDE:**

- 1. A standard means of assessing success**
- 2. Better planning of law enforcement effort**
- 3. Adaptive management of law enforcement**
- 4. Increased morale of rangers**
- 5. Higher densities of prey and tigers**



# TRANSBOUNDARY STEPS TO RECOVERY

1. Develop a landuse plan for recovery.
2. Increase prey numbers:
  - improve law enforcement on both sides of the international border
  - remove snares

# SNARES REPRESENT A MAJOR THREAT TO TIGERS AND PREY



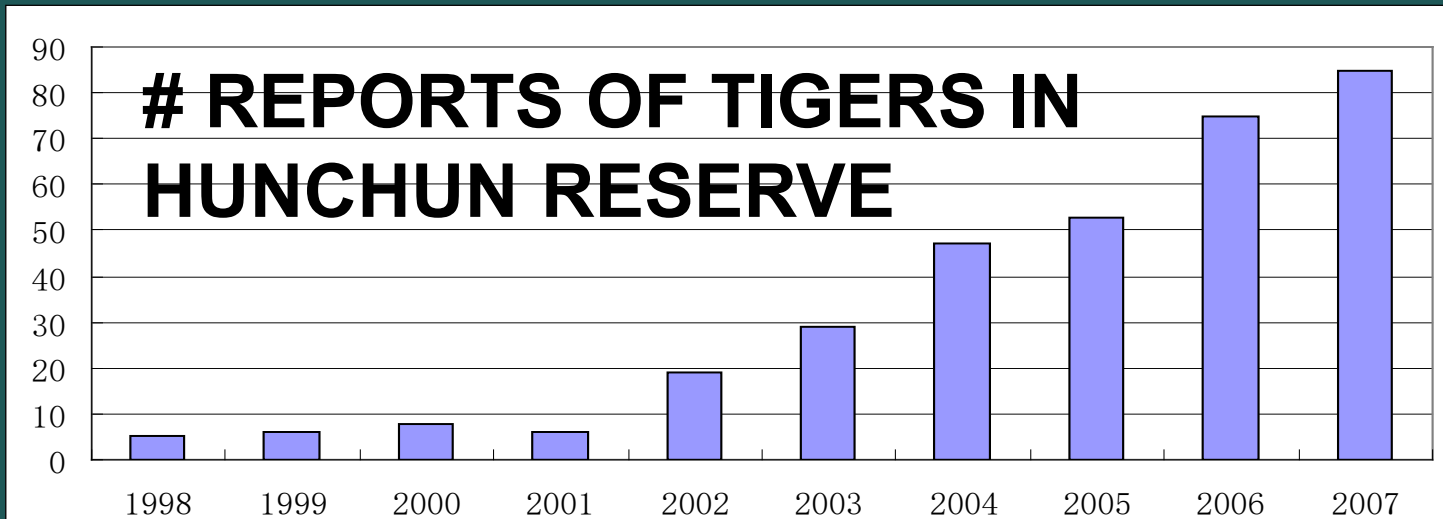
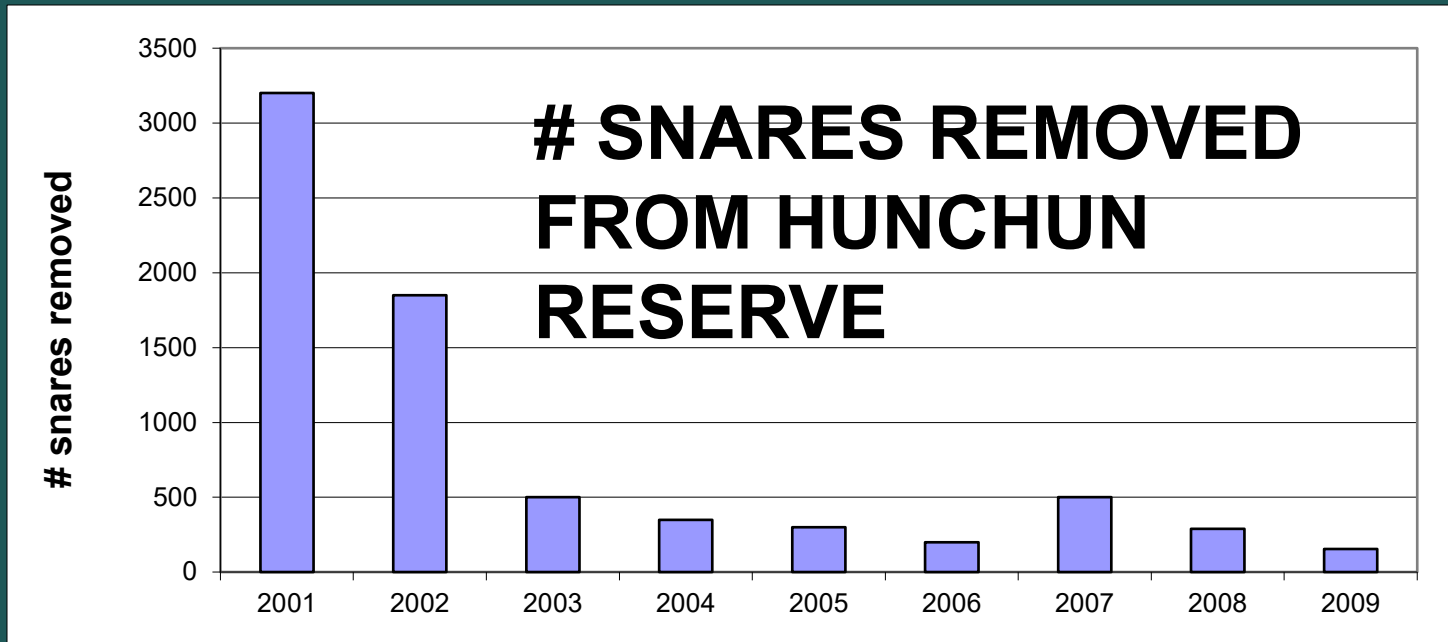
December 2006



January 2002



# IMPACT OF SNARE REMOVAL AND PATROLING



# **TRANSBOUNDARY STEPS TO RECOVERY**

- 1. Develop a landuse plan for recovery.**
- 2. Increase prey numbers:**
  - improve law enforcement on both sides of the international border**
  - remove snares**
- 3. Manage border fences for both China and Russia – agreements to protect ecological corridors.**



# Border patrol fences inhibit movement of wildlife and can eliminate migration pathways



# **TRANSBOUNDARY STEPS TO RECOVERY**

- 1. Develop a landuse plan for recovery.**
- 2. Increase prey numbers:**
  - improve law enforcement on both sides of the international border**
  - remove snares**
- 3. Manage border fences for both China and Russia – agreements to protect ecological corridors.**
- 4. Monitor prey and tiger numbers.**



**PREY SURVEYS  
PLANNED FOR  
HUNCHUN &  
ADJACENT  
AREA WINTER  
2010-2011**





# TRANSBOUNDARY STEPS TO RECOVERY

1. Develop a landuse plan for recovery.
2. Increase prey numbers:
  - improve law enforcement on both sides of the international border
  - remove snares
3. Manage border fences for both China and Russia – agreements to protect ecological corridors.
4. Monitor prey and tiger numbers.
5. Control illegal trade;



**Transboundary trade in tiger parts is a huge problem.**

# TRANSBOUNDARY STEPS TO RECOVERY

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  - remove snares
3. Manage border fences for both China and Russia
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4. Monitor prey and tiger numbers.
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6. Establish mechanisms for exchange of information at the regional level (working groups).



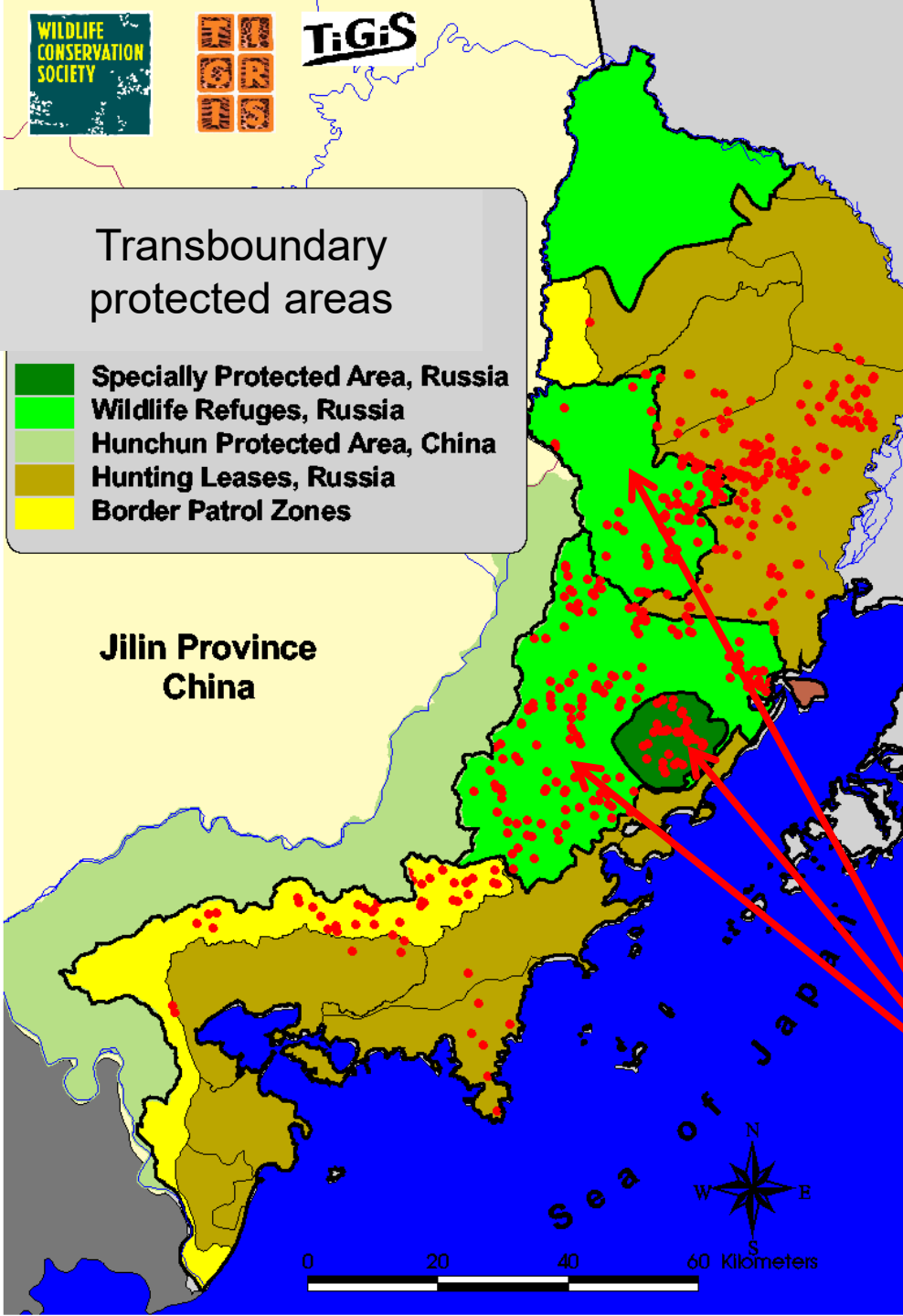
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  - agreements to protect ecological corridors.
4. Monitor prey and tiger numbers.
5. Control illegal trade;
6. Establish mechanisms for exchange of information at the regional level (working groups).
7. Establish transboundary Protected area.

Transboundary protected areas

- Dark Green: Specially Protected Area, Russia
- Bright Green: Wildlife Refuges, Russia
- Light Green: Hunchun Protected Area, China
- Brown: Hunting Leases, Russia
- Yellow: Border Patrol Zones

Jilin Province  
China



**ORGANIZATION OF A  
TRANSBOUNDARY  
PROTECTED AREA IS  
EASIER NOW SINCE 3  
PROTECTED AREAS IN  
RUSSIA ARE NOT  
MANAGED AS ONE  
ENTITY.**

Kedrovay Pad  
– Leopardovyi  
Refuge

**ПЛАН ДЕЙСТВИЙ НА ПЕРИОД ДО 2020 ГОДА ПО РЕАЛИЗАЦИИ  
 ПЕРВООЧЕРЕДНЫХ МЕР ПО СОХРАНЕНИЮ АМУРСКОГО ТИГРА,  
 ОПРЕДЕЛЕННЫХ СТРАТЕГИЕЙ СОХРАНЕНИЯ АМУРСКОГО ТИГРА В РОССИИ  
 ACTION PLAN FOR IMPLEMENTING THE STRATEGY FOR CONSERVATION OF  
 AMUR TIGERS IN RUSSIA TO 2020**

Трансграничное сотрудничество между Россией и Китаем :	Transboundary Cooperation
<p><b>1 Создать трансграничные экологические коридоры, начав с создания охраняемой территории в Хасанском районе Приморского края в России и в китайской провинции Цзилинь, чтобы обеспечить возможность для безопасного перехода амурского тигра и диких копытных через границу.</b></p>	<p><b>1. Create transboundary ecological corridors.</b></p>
<p><b>2 Оптимизировать работу в соответствии с российско-китайским протоколом о международном сотрудничестве по экологическим вопросам для создания официального механизма тесного взаимодействия на региональном уровне (провинция – край).</b></p>	<p><b>2. Develop official mechanism for effective coordination of ecological questions at the regional level.</b></p>
<p><b>3 Создать официальный канал для обмена информацией на региональном уровне (провинция – край) в целях своевременного представления/получения оперативных данных о незаконной торговле дикими животными, выявленных правонарушениях и ненормальных климатических условиях, которые могут приводить к гибели диких животных.</b></p>	<p><b>3. Develop an official channel for exchange of information on illegal trade of wildlife.</b></p>
<p><b>4 Создать двустороннюю рабочую группу, состоящую из экспертов государственных учреждений и НПО, которые могут эффективно реагировать на оперативную информацию о состоянии популяции тигра.</b></p>	<p><b>4. Develop a working group of specialists for exchange of information on status of the tiger population and for coordination of</b></p>



### Far Eastern Leopards and Landuse Patterns

- Leopard track from surveys 1997-2003
- Specially Protected Area, Russia
- Wildlife Refuges, Russia
- Hunchun Protected Area, China
- Hunting Leases, Russia
- Border Patrol Zones

Jilin Province  
China

Sea of Japan



**ALL THESE ACTIVITIES  
ARE DOUBLY VITAL FO  
THE FAR EASTERN  
LEOPARD, WHICH IS  
ON THE VERY EDGE OF  
EXTINCTION**



# IN SUMMARY:

1. Right now there is much attention on the tiger:

- Year of the Tiger
- Tiger Summit
- Chinese-Russian biodiversity Agreements

2. It is a good time to move ahead with transboundary activities that will improve probability of tigers surviving in both Russian and China in the immediate future.



# **TRANSBOUNDARY STEPS TO RECOVERY**

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- 2. Increase prey numbers:**
  - improve law enforcement on both sides of the international border**
  - remove snares**
- 3. Manage border fences for both China and Russia**
  - agreements to protect ecological corridors.**
- 4. Monitor prey and tiger numbers.**
- 5. Control illegal trade;**
- 6. Establish mechanisms for exchange of information at the regional level (working groups).**
- 7. Establish transboundary Protected area.**