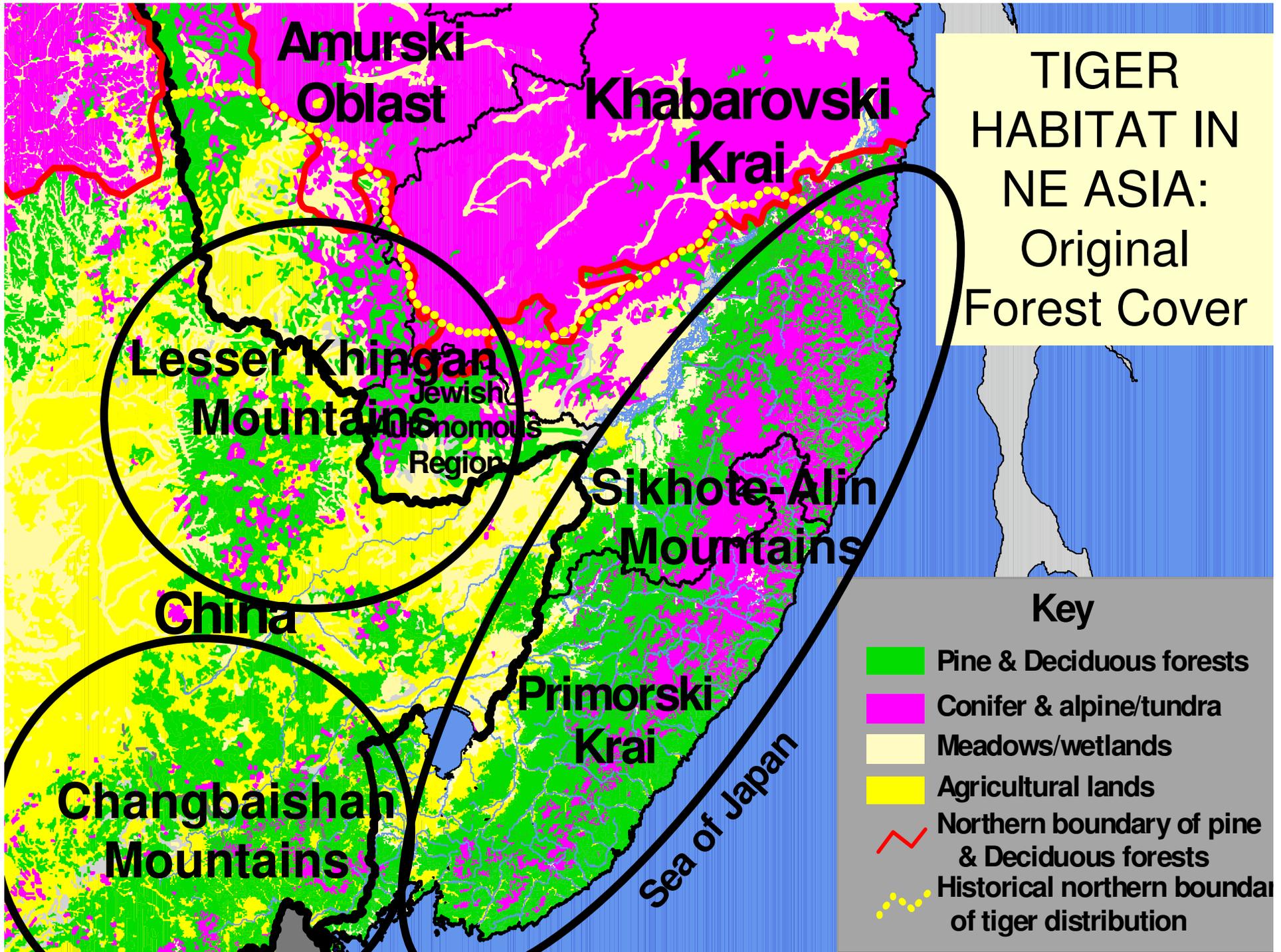




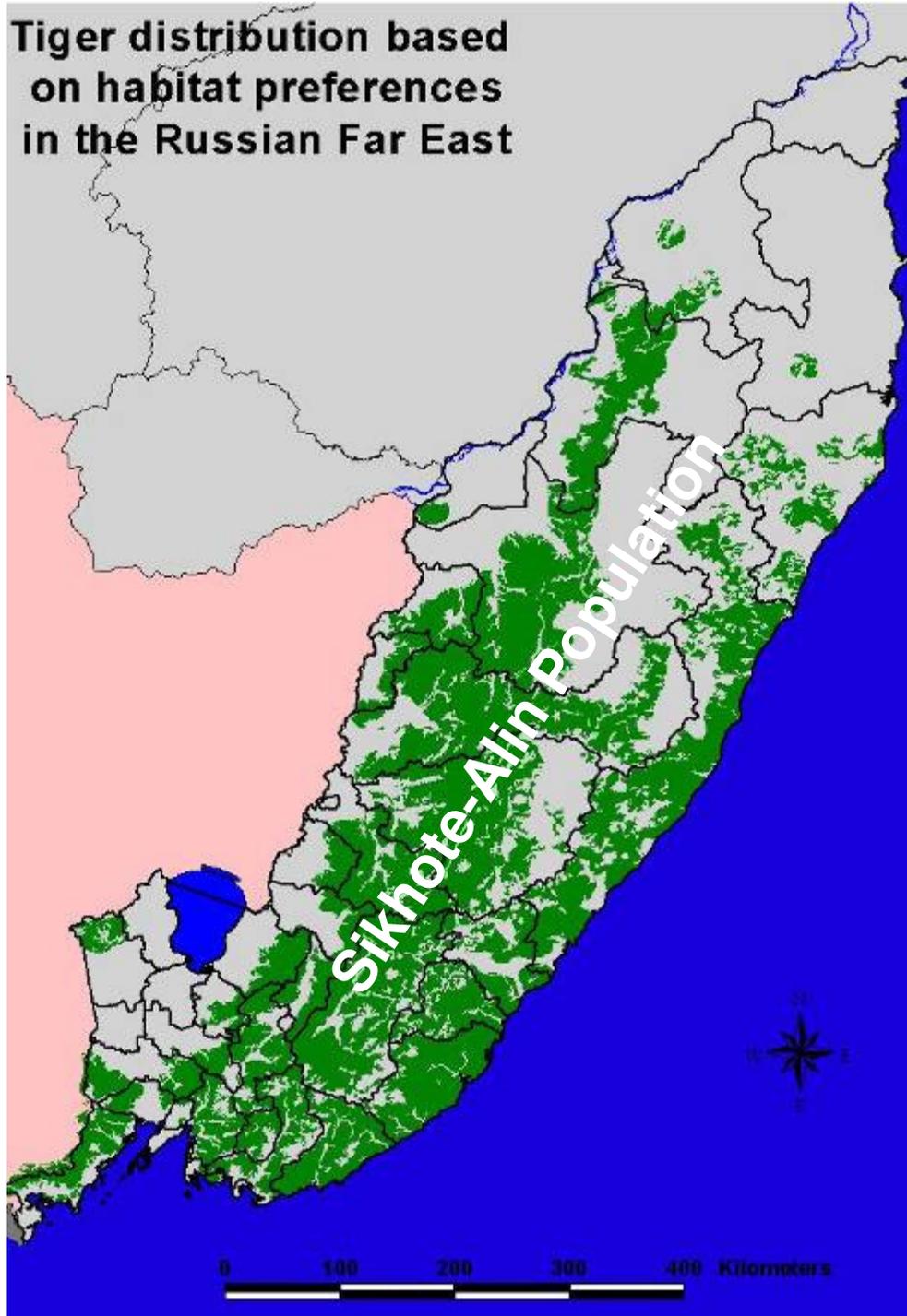
WILDLIFE  
CONSERVATION  
SOCIETY



**TRANSBOUNDARY  
CONSERVATION OF THE  
AMUR TIGER**



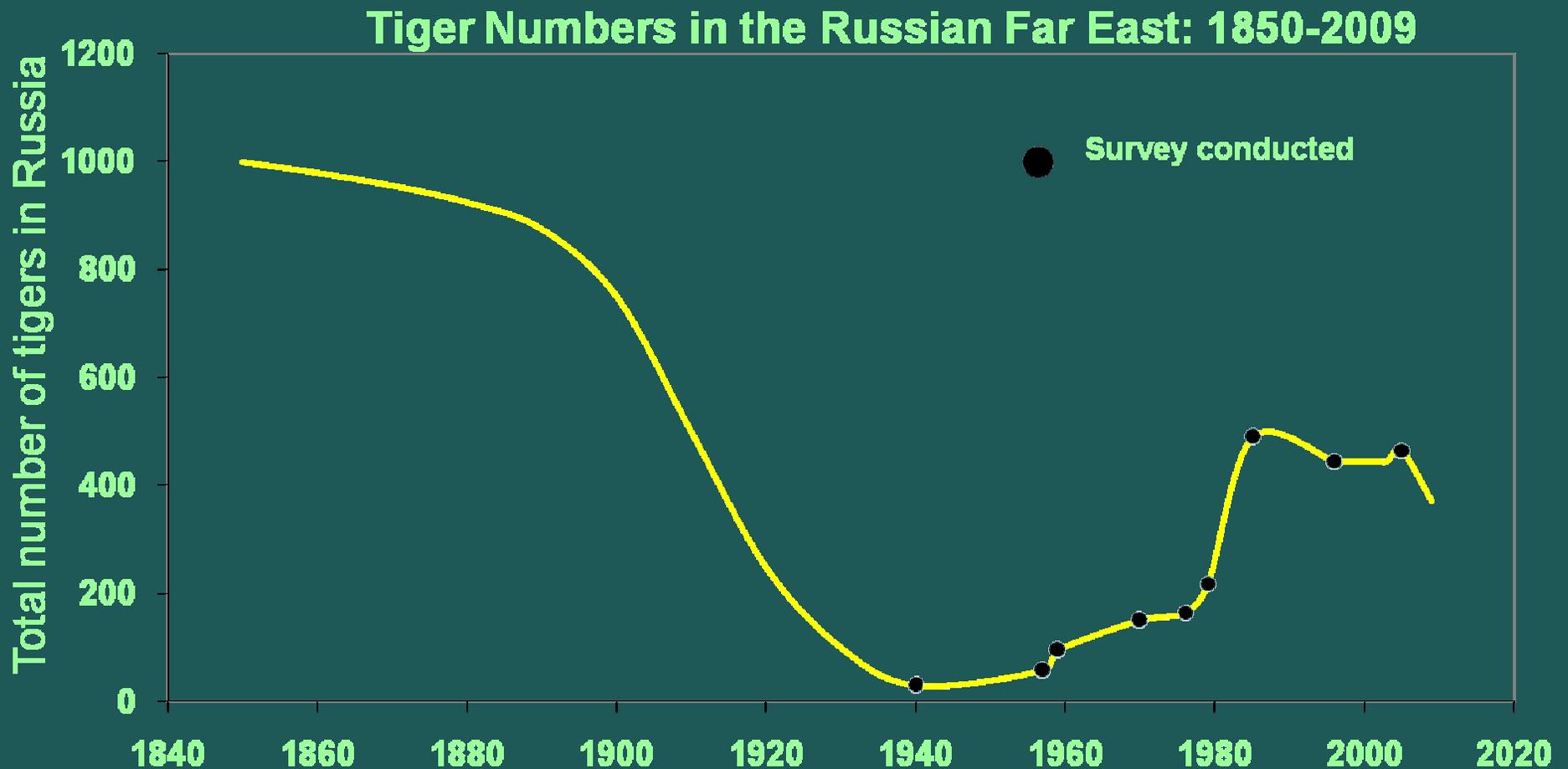
Tiger distribution based  
on habitat preferences  
in the Russian Far East



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



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





## AMUR TIGER DISTRIBUTION

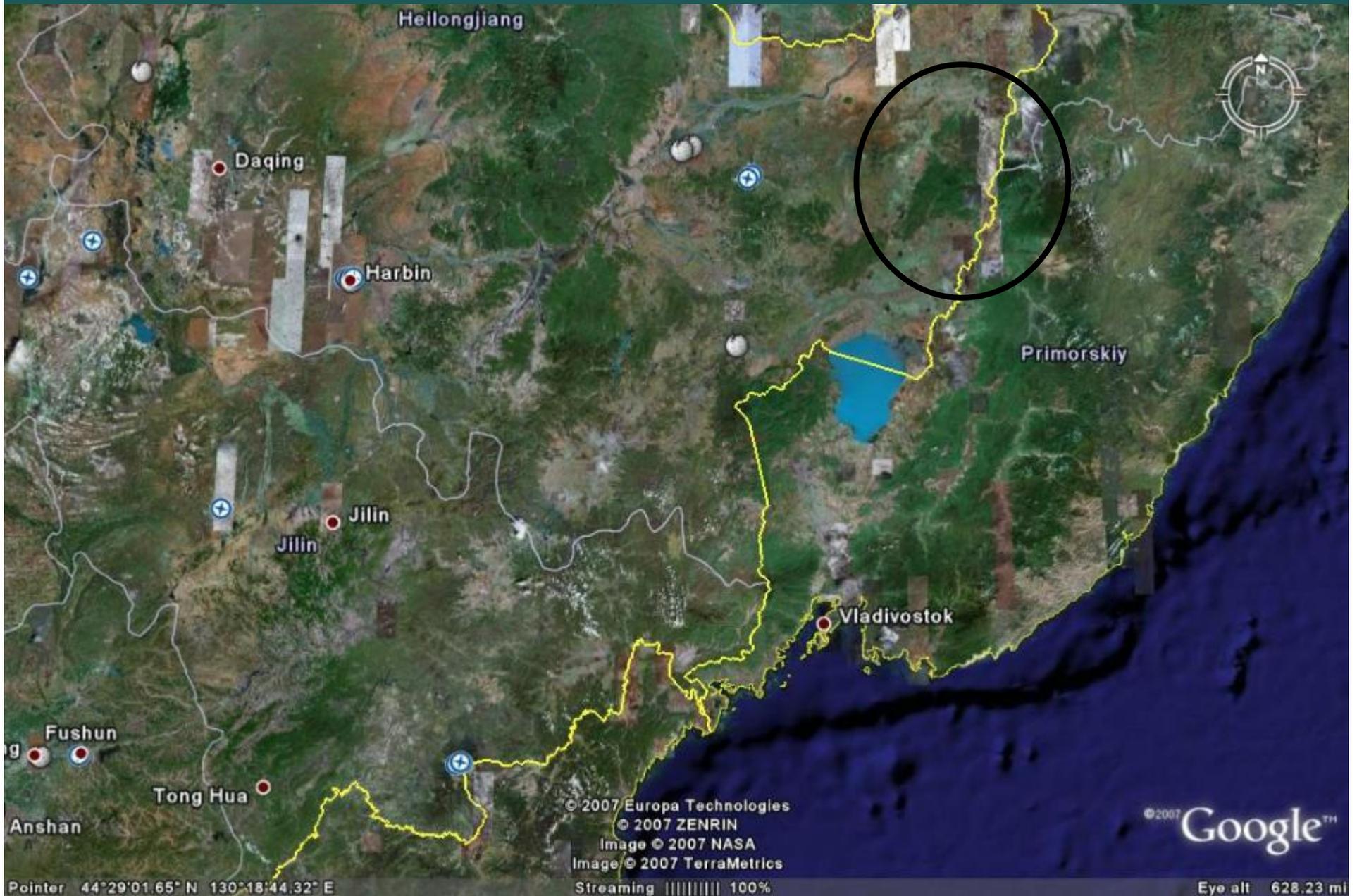
Today, recovery of tigers in China will be dependent on movement of tigers from Russia



# AMUR TIGER DISTRIBUTION

Transboundary connectivity

# The Wandashan Mountains, Heilongjiang Province



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

© 2007 Europa Technologies  
© 2007 ZENRIN  
Image © 2007 NASA  
Image © 2007 TerraMetrics  
Streaming ||||| 100%

© 2007 Google™

Eye alt 628.23 mi

## EAST WANDASHAN MOUNTAINS:

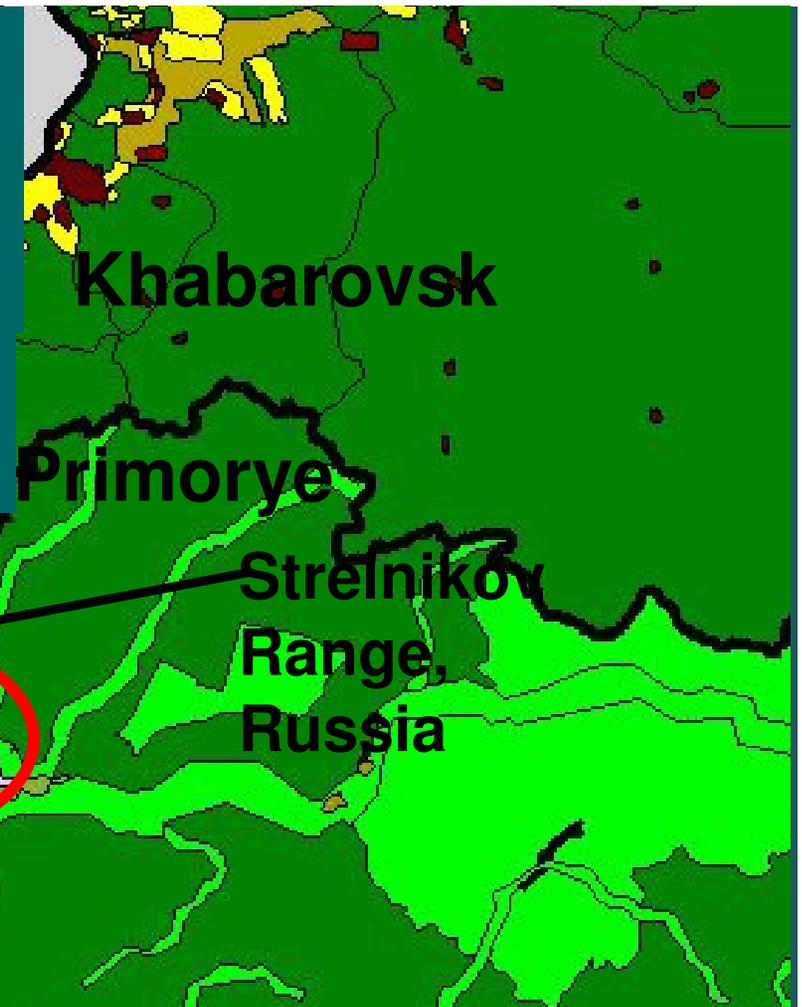
Best tiger habitat in NE China and best in Heilongjiang  
Tigers are regularly reported there, including a female with cub in 2010

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

WILDLIFE  
CONSERVATION  
SOCIETY



# CHANGBAISHAN MOUNTAIN ECOSYSTEM

WILDLIFE  
CONSERVATION  
SOCIETY



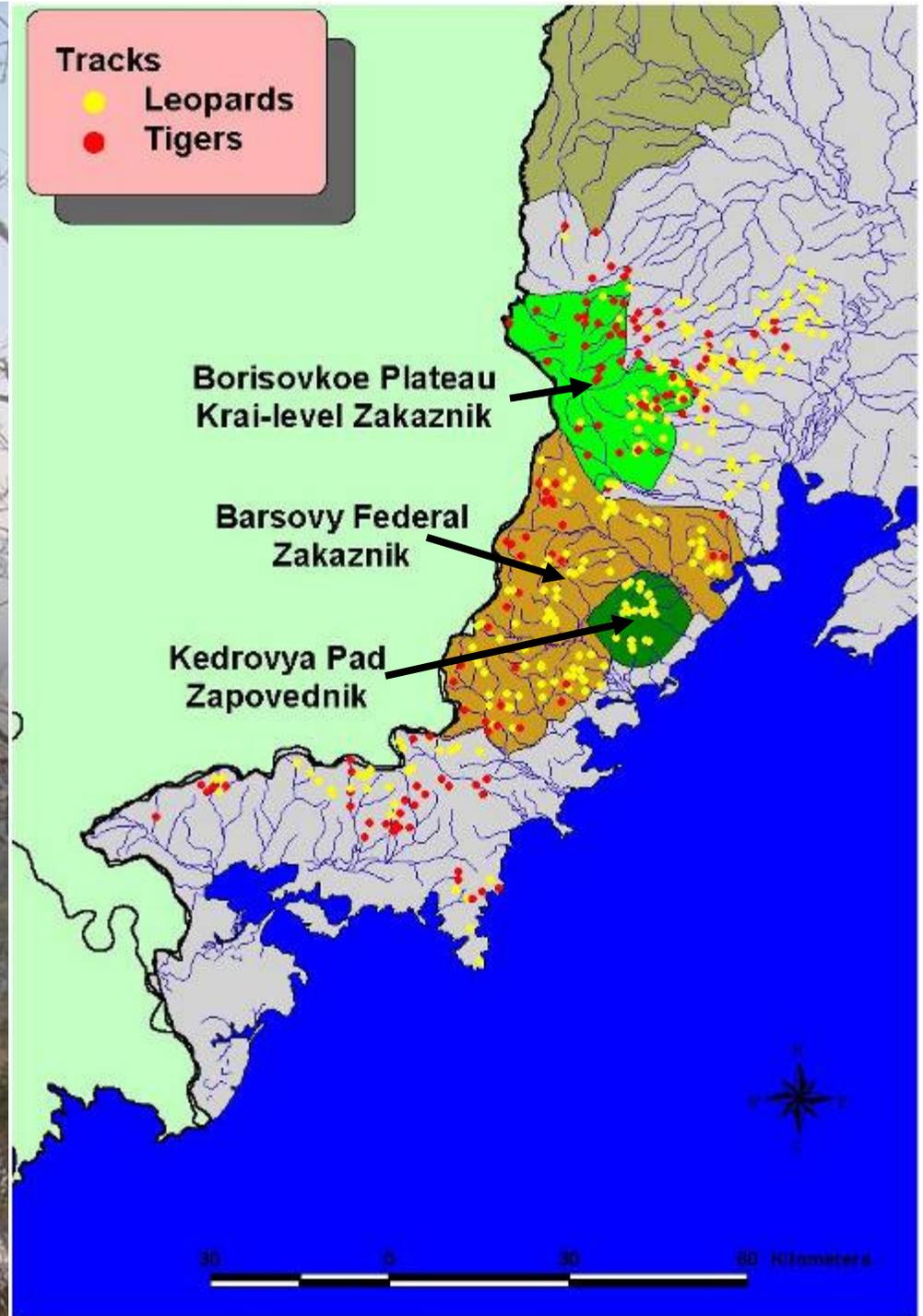
# Tigers in SW Primorye Russia

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

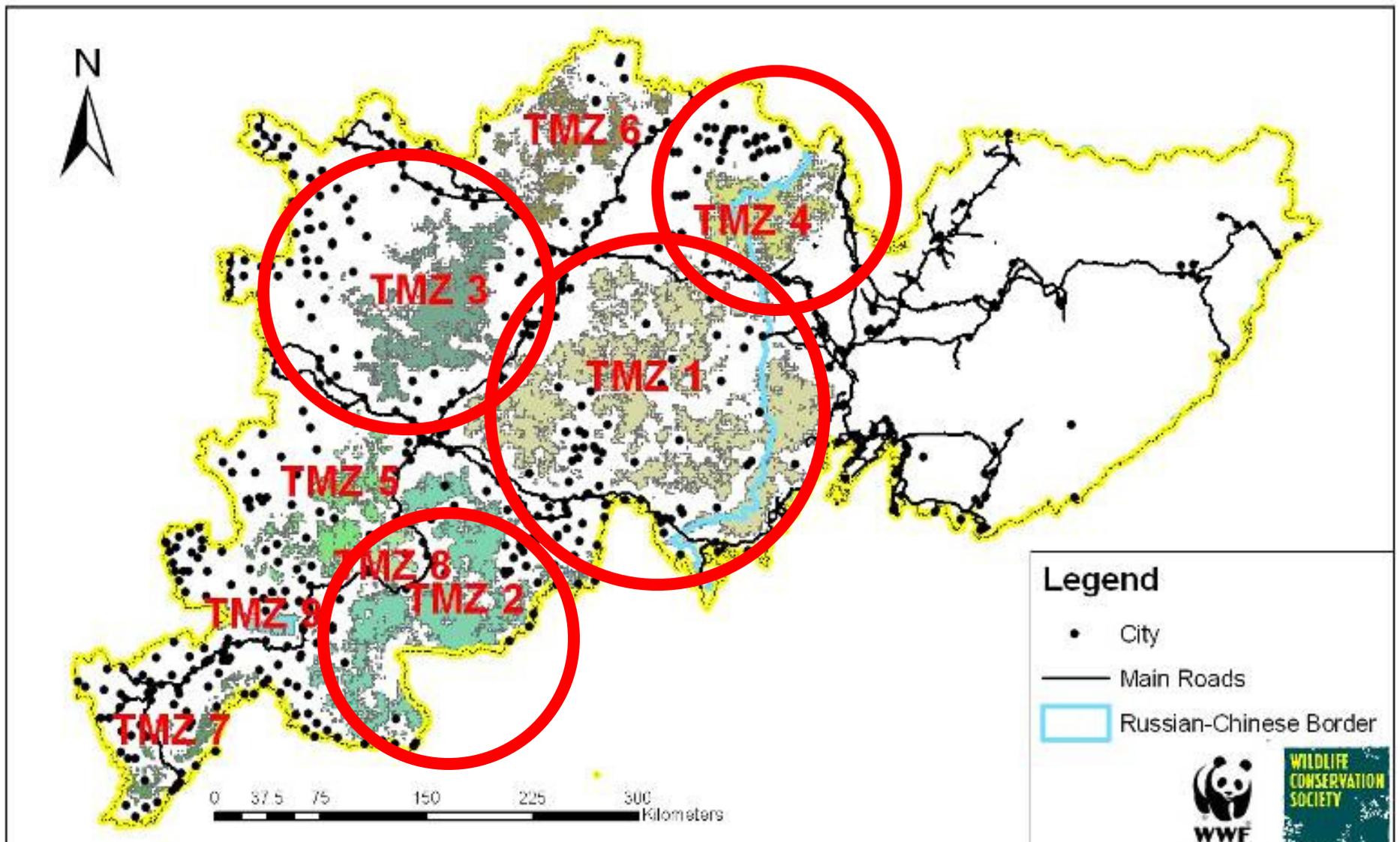
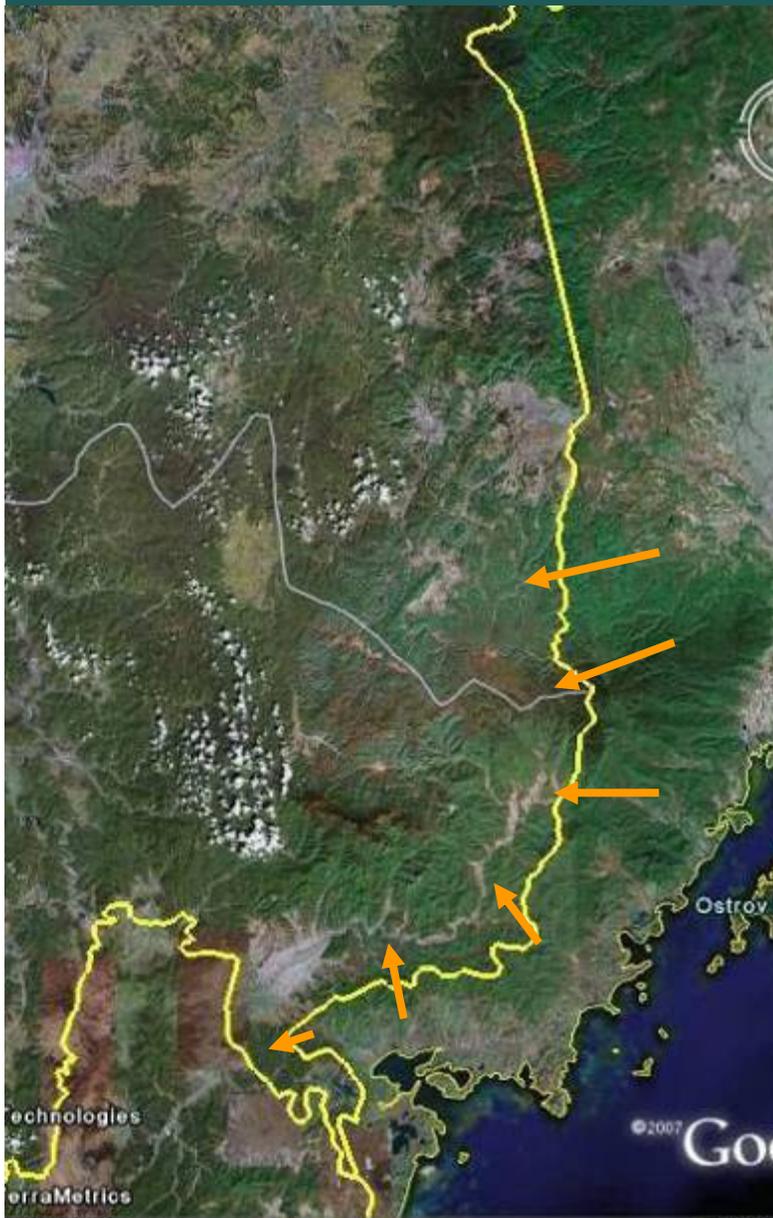


Table 7. Estimated potential Amur Tiger population size in Tiger Management Zones based on the relationship between predicted habitat quality from three different habitat models (Expert Model, RSF, ENFA, and the mean of all three).

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

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

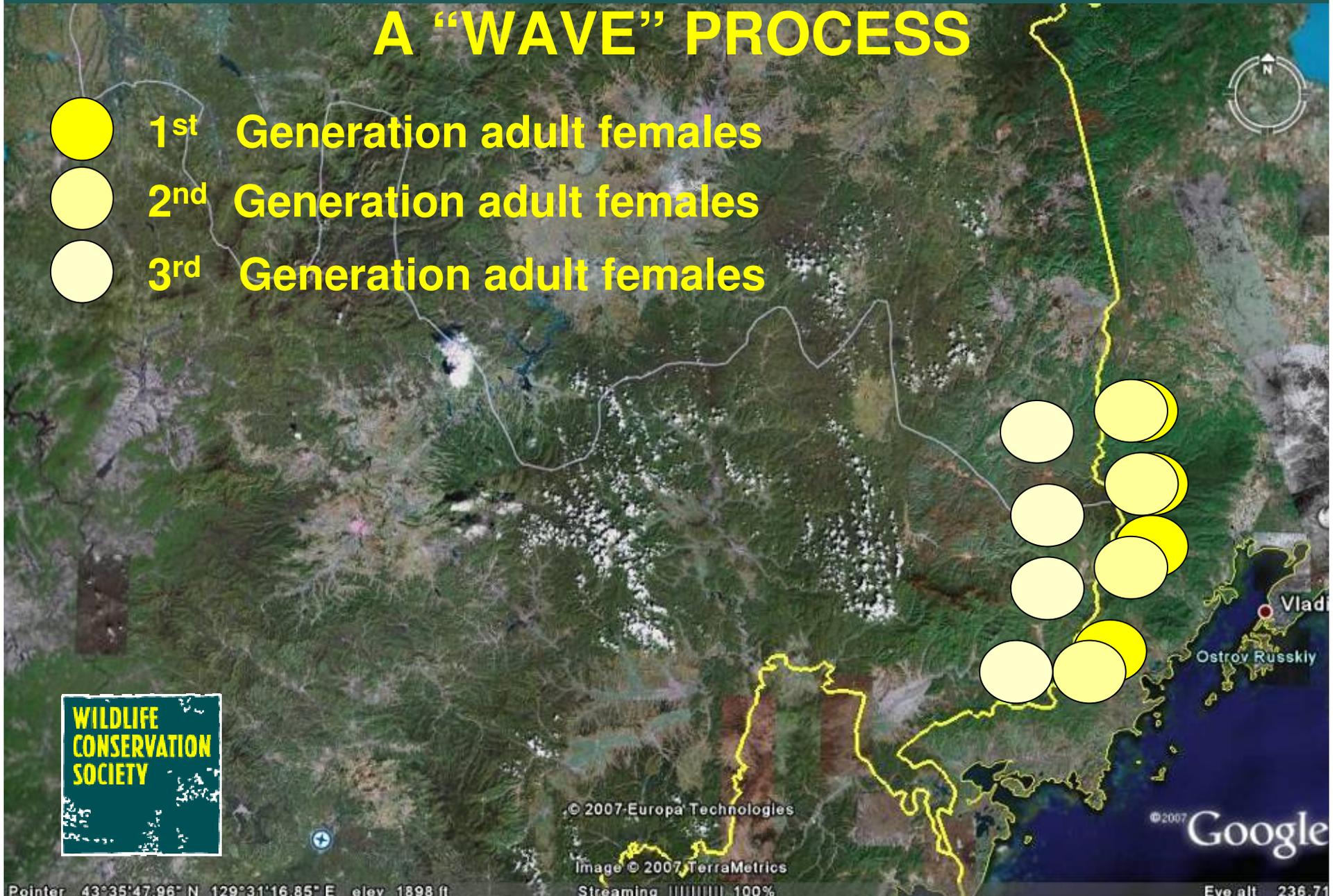
# THE HUNCHUN “BEACH HEAD”



# 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



# **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

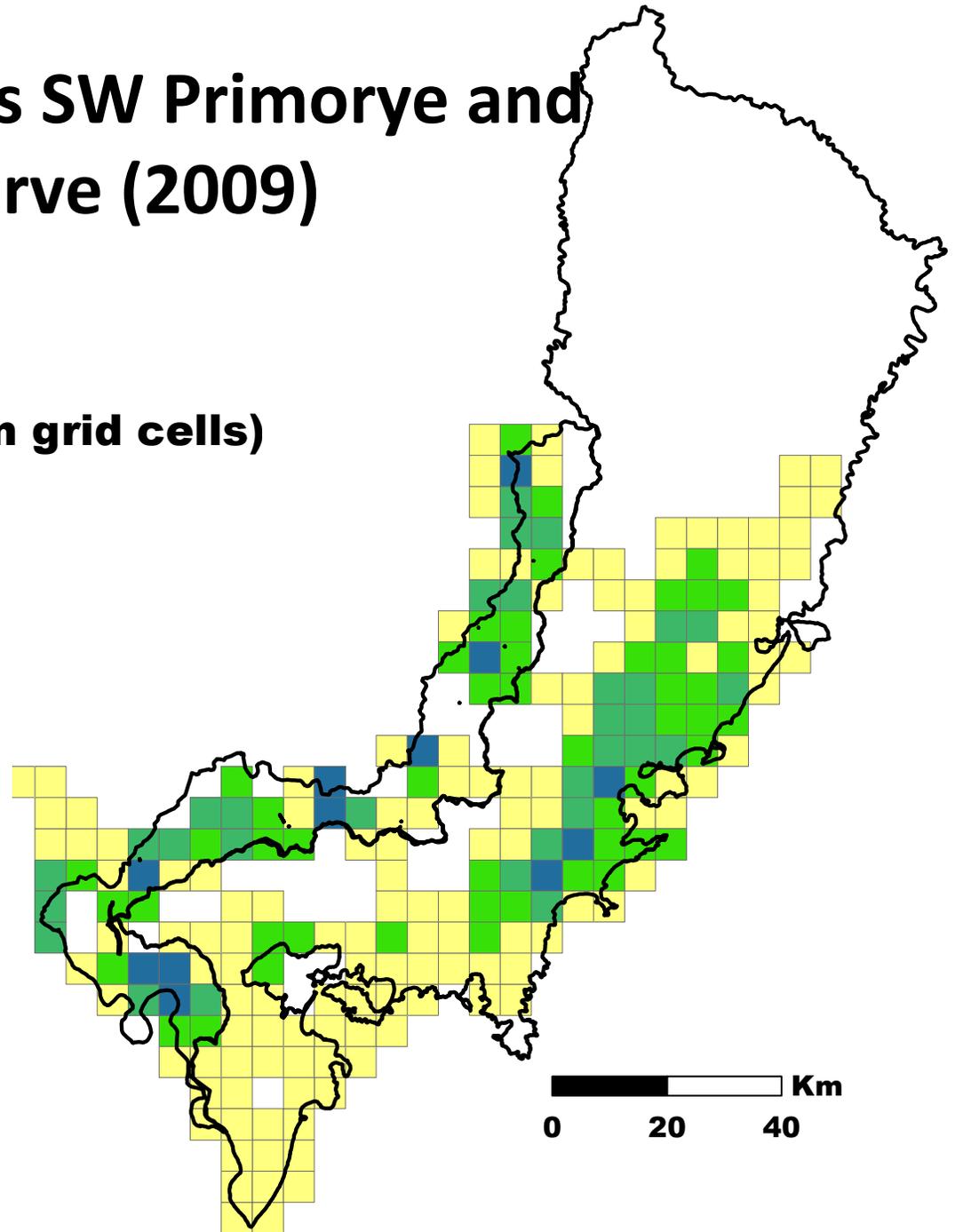
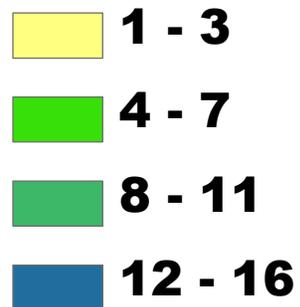


- Is a law enforcement monitoring system that, when combined with training and support, has demonstrated positive results in other tiger range countries



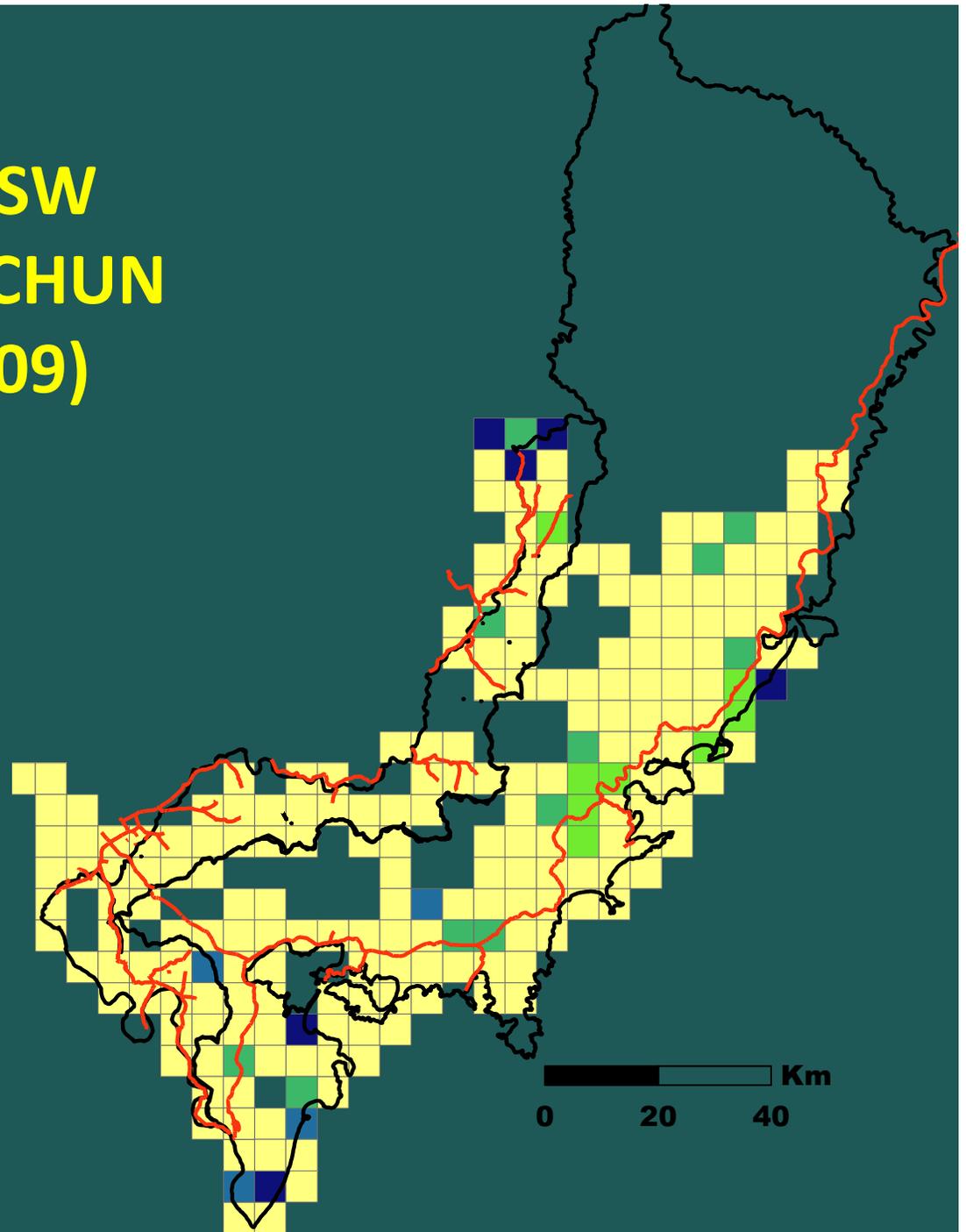
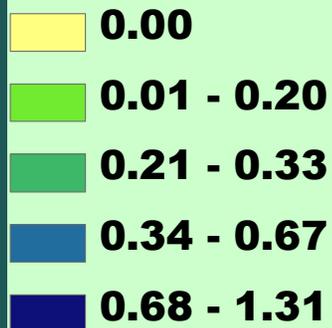
# Patrol coverage across SW Primorye and Hunchun Nature Reserve (2009)

## Patrol coverage (use of 5km grid cells)



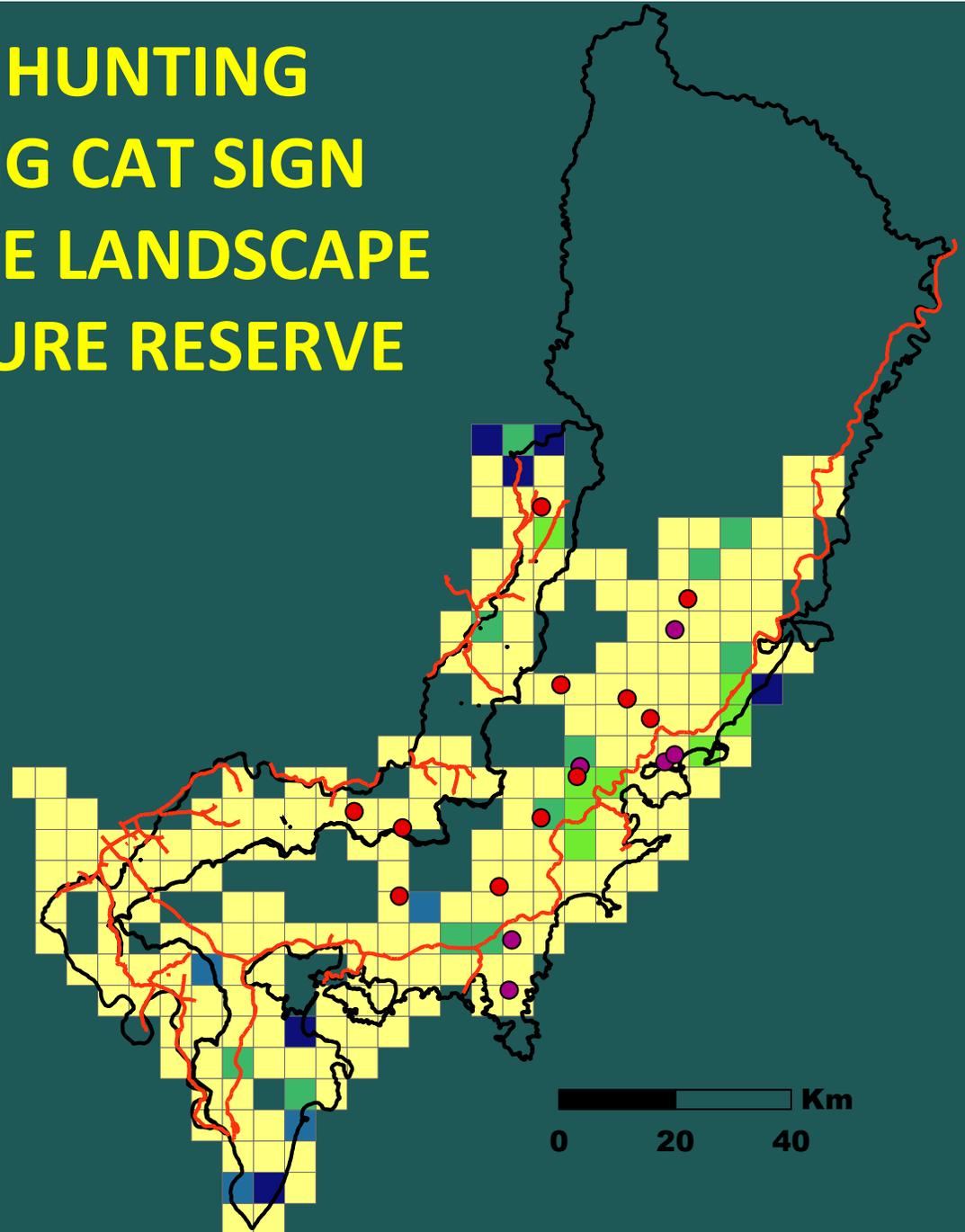
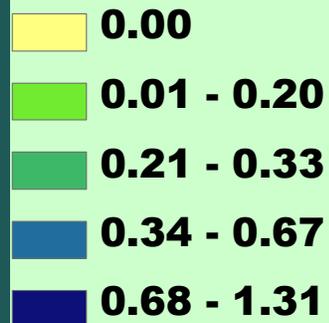
# ILLEGAL HUNTING INDICATORS ACROSS SW PRIMORYE AND HUNCHUN NATURE RESERVE (2009)

Hunting index (#cases/patrol use)



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

Hunting index (#cases/patrol use)



**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.**
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  - improve law enforcement on both sides of the international border**
  - remove snares**

# SNARES REPRESENT A MAJOR THREAT TO TIGERS AND PREY

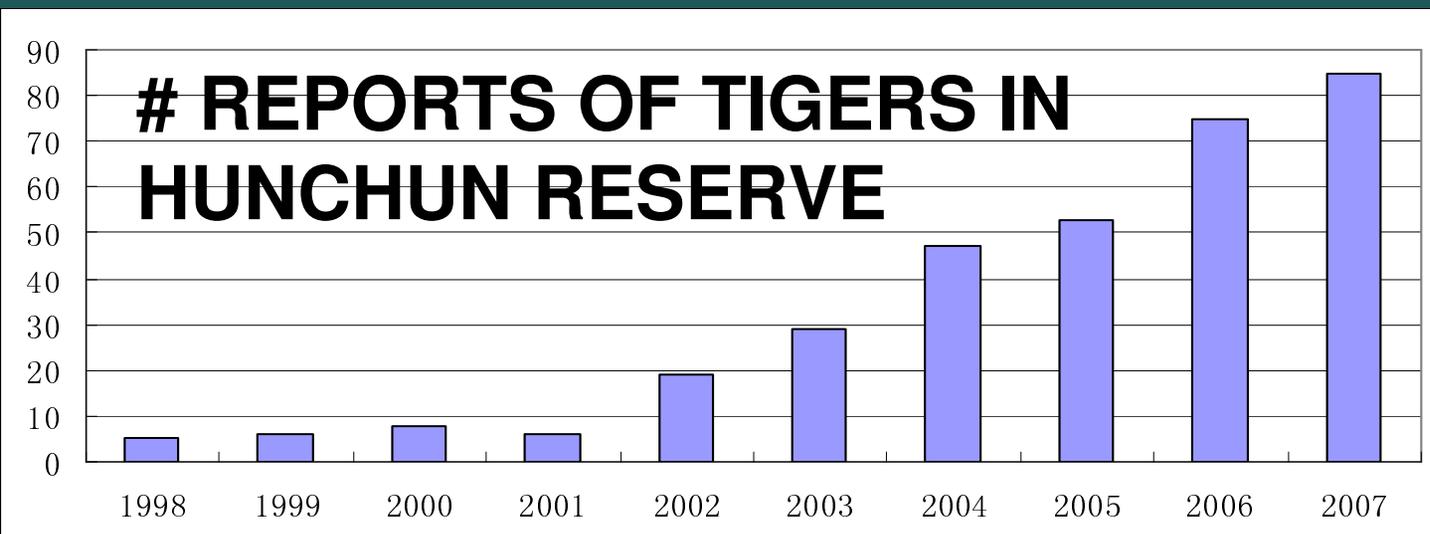
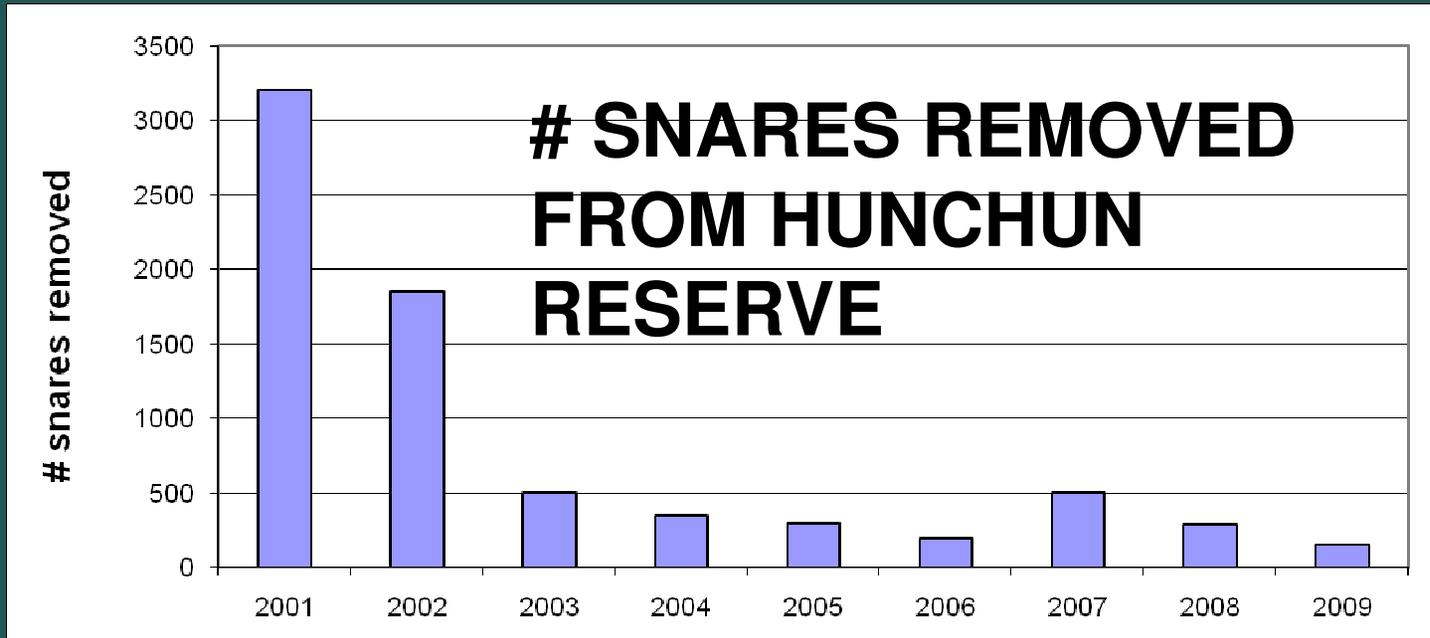


December 2006



January 2002

# IMPACT OF SNARE REMOVAL AND PATROLING



# **TRANSBOUNDARY STEPS TO RECOVERY**

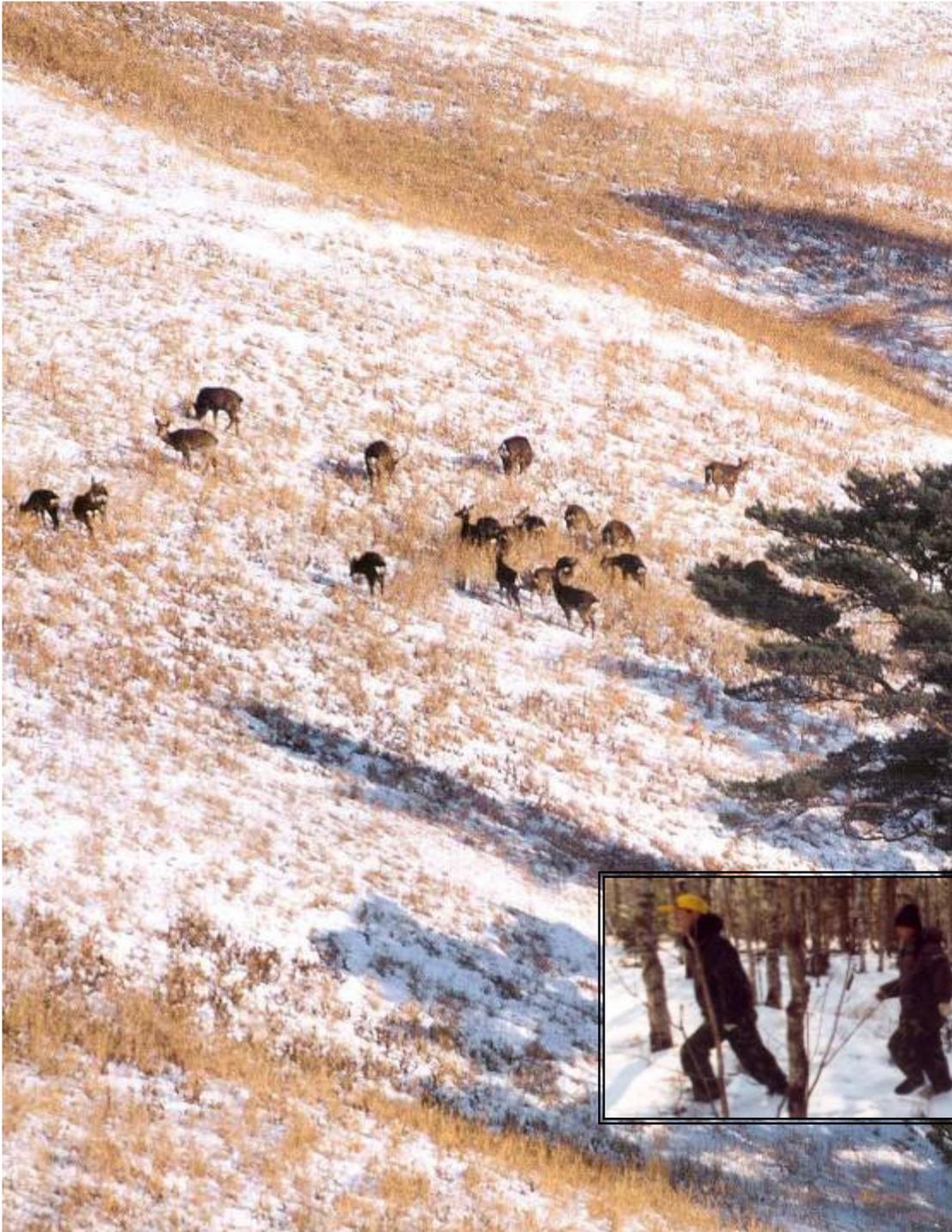
- 1. Develop a landuse plan for recovery.**
- 2. Increase prey numbers:**
  - improve law enforcement on both sides of the international border**
  - remove snares**
- 3. Manage border fences for both China and Russia – agreements to protect ecological corridors.**

# 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:
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4. Monitor prey and tiger numbers.
5. Control illegal trade;



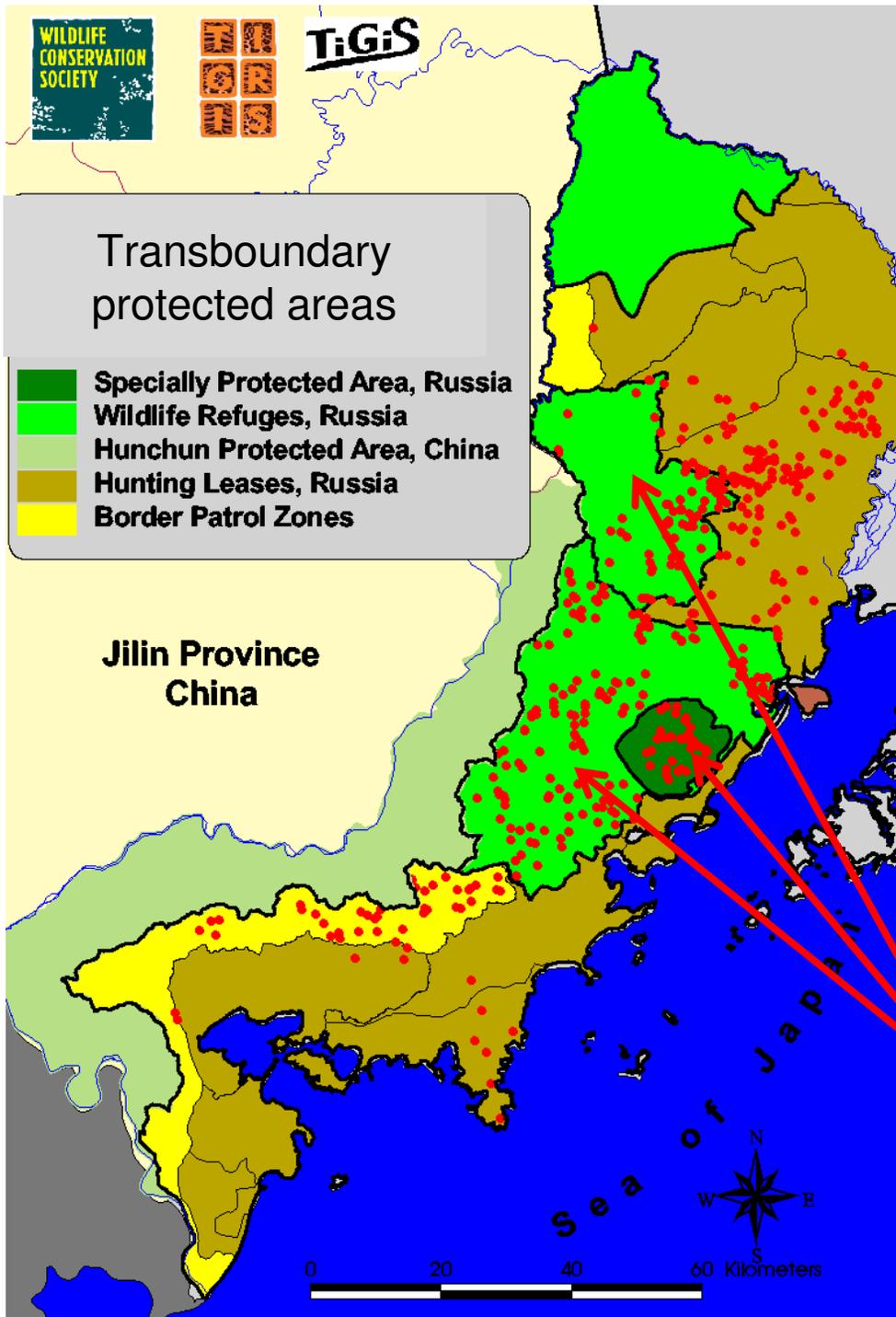
**Transboundary trade in tiger parts is a huge problem.**

# TRANSBOUNDARY STEPS TO RECOVERY

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7. Establish transboundary Protected area.



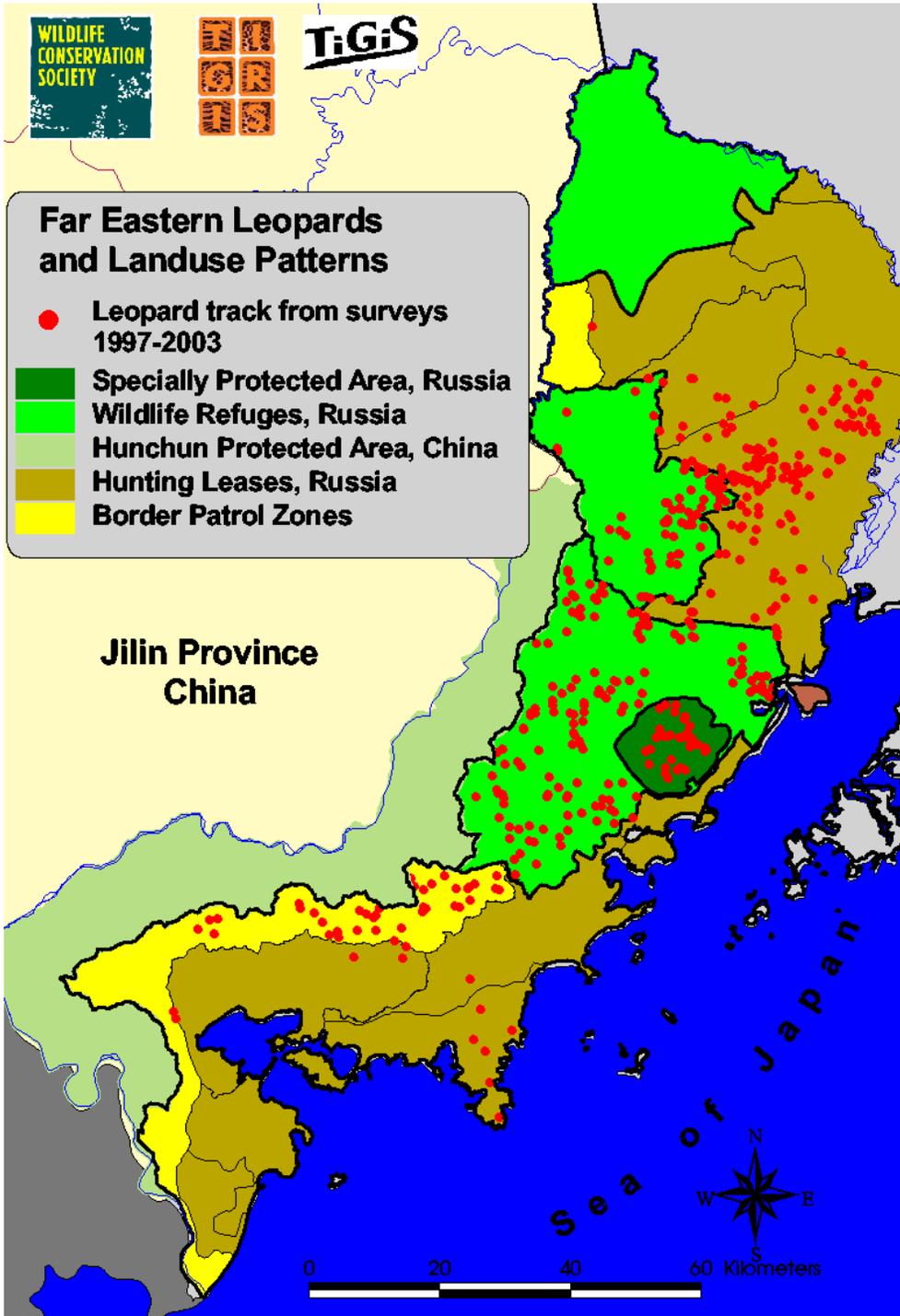
**ORGANIZATION OF A TRANSBOUNDARY PROTECTED AREA IS EASIER NOW SINCE 3 PROTECTED AREAS IN RUSSIA ARE NOT MANAGED AS ONE ENTITY.**

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**

<b>Трансграничное сотрудничество между Россией и Китаем :</b>	<b>Transboundary Cooperation</b>
<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>	<b>1. Create transboundary ecological corridors.</b>
<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>	<b>2. Develop official mechanism for effective coordination of ecological questions at the regional level.</b>
<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>	<b>3. Develop an official channel for exchange of information on illegal trade of wildlife.</b>
<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>	<b>4. Develop a working group of specialists for exchange of information on status of the tiger population and for coordination of</b>



**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.**



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