# Some recommendations on Amur tiger and leopard conservation research cooperation

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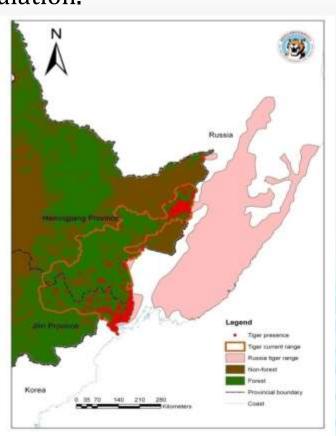
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#### Some recommendations:

1、长白山区中俄边境两侧东北虎、豹来往频繁,该区东北虎种群急需和俄罗斯北部大种群建立联系,以避免种群风险。

The transboundary movements of Amur tigers and leopards are frequent on the Sino-Russian border of Changbai mountain; This small Amur tiger population needs exchange with Russian big population.

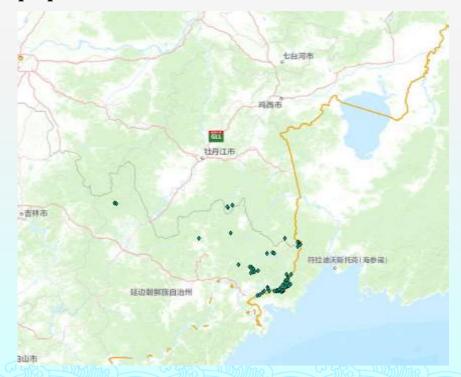
- Widen the international and national corridor;
- Stabilize inner land population of China;
- Connect Changbaishan and Wandashan population;
- Northern Zhangguangcailing should be tried to do some Amur tiger reintroduction;



2、东北虎、豹有强烈往内陆扩散的趋势,但是扩散受阻;

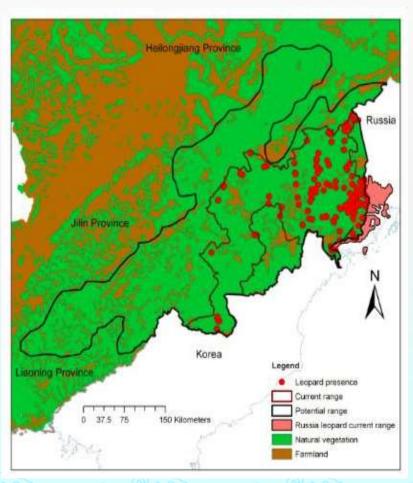
Amur tigers and leopards have a strong demand to move inner land of China further, but many obstacles are on their diffusion way.

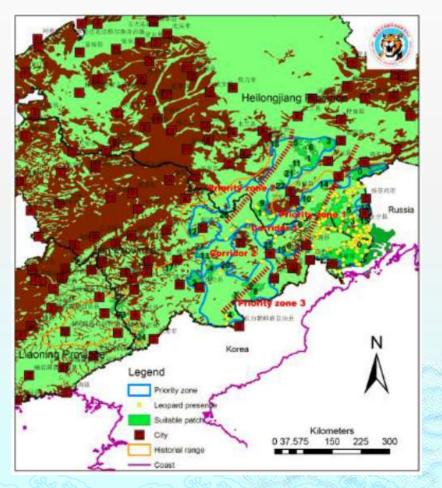
- Sino-Russia jointly habitat assessment for controlling human disturbances;
- Jointly monitoring to assess the whole population dynamics; etc.
- How to establish national tiger and leopards national park to improve their population.



3、关注东北虎的同时,也要时刻关注东北豹的种群发展,因为它更濒危! Pay great attention to Amur leopards which are much more endangered than Amur tiger!

**Recommendations:** Corridors for three countries; jointly habitat assessment;





4、自动相机监测有监测区域面积大,区域内监测点均匀,全天工作等 优势,监测到的动物数量要比DNA监测等方法多,但是在监测对象分布区边缘,这样的息地面积 大,动物密度低,多种监测方法一起使用较为有效;Camera trapping can capture more individuals than other monitoring methods, because of bigger monitoring area, all-weather monitoring, but in the edge habitat of big cats, multiple methods should be used for effective monitoring in larger areas.

- **1.** International expert group should be established for jointly monitoring methodology, database sharing mechanism under the governmental management mechanism;
- **2.** Some urgent technological cooperation need for jointly monitoring (i.e., Putin tiger ) and disease monitoring and management;





6. 中俄联合虎豹保护应关注种群遗传资源改善措施; Sino-Russia jointly cooperation should focus on the improving small population genetic resource situations.

#### **Recommendations:**

- Jointly big cat scats and other samples collection for assessing genetic diversity;
- Jointly to conduct some individual released monitoring and protection to ensure rapid recovery in inner land of China;

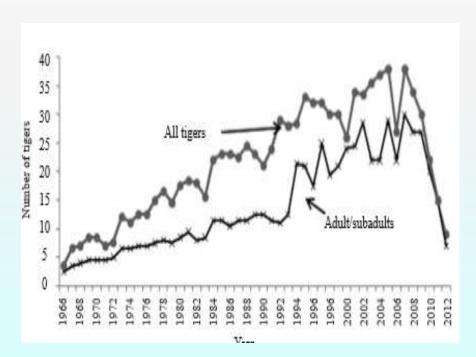
 Jointly to conduct some big cat reintroduction project and technology. 7. 对中、俄、朝历史人虎冲突的理解进行联合研究,为减少当前人虎冲突提供基础;

Jointly conduct research on the human-tiger conflicts based on long term history dataset to provide new understanding on adopting measures.

- Collected long term human-tiger conflict dataset (include past 2000 years or fossil data);
- Establish international expert group for resolving current human-tiger conflicts for nature reserves and national park management effectively......

## 8. 东北虎、豹小种群疾病中俄联合监测和防控 Small population of big cat disease monitoring and control

□ Changbaishan small Amur tiger population in China faces great risk if it can not diffuse effectively, which is demonstrated by Russia population in Sikhote-Alin Biosphere Zapovednik: 1966–2012.



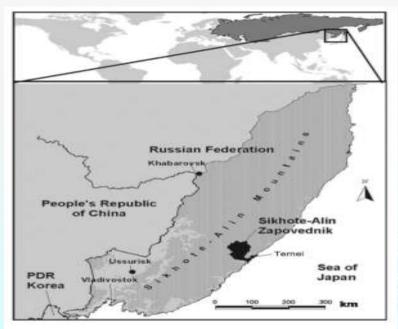


Figure 1 Location of Sikhote-Alin Biosphere Zapovednik in the Russian Far East.

Miquelle et a. (2015). Integrative Zoology 10, 315–28.

### 谢谢大家! Thank you for your attentions!

This is just only a beginning step for the Amur tiger and leopard conservation and need more and more support from multiple governments and nongovernment agencies.