



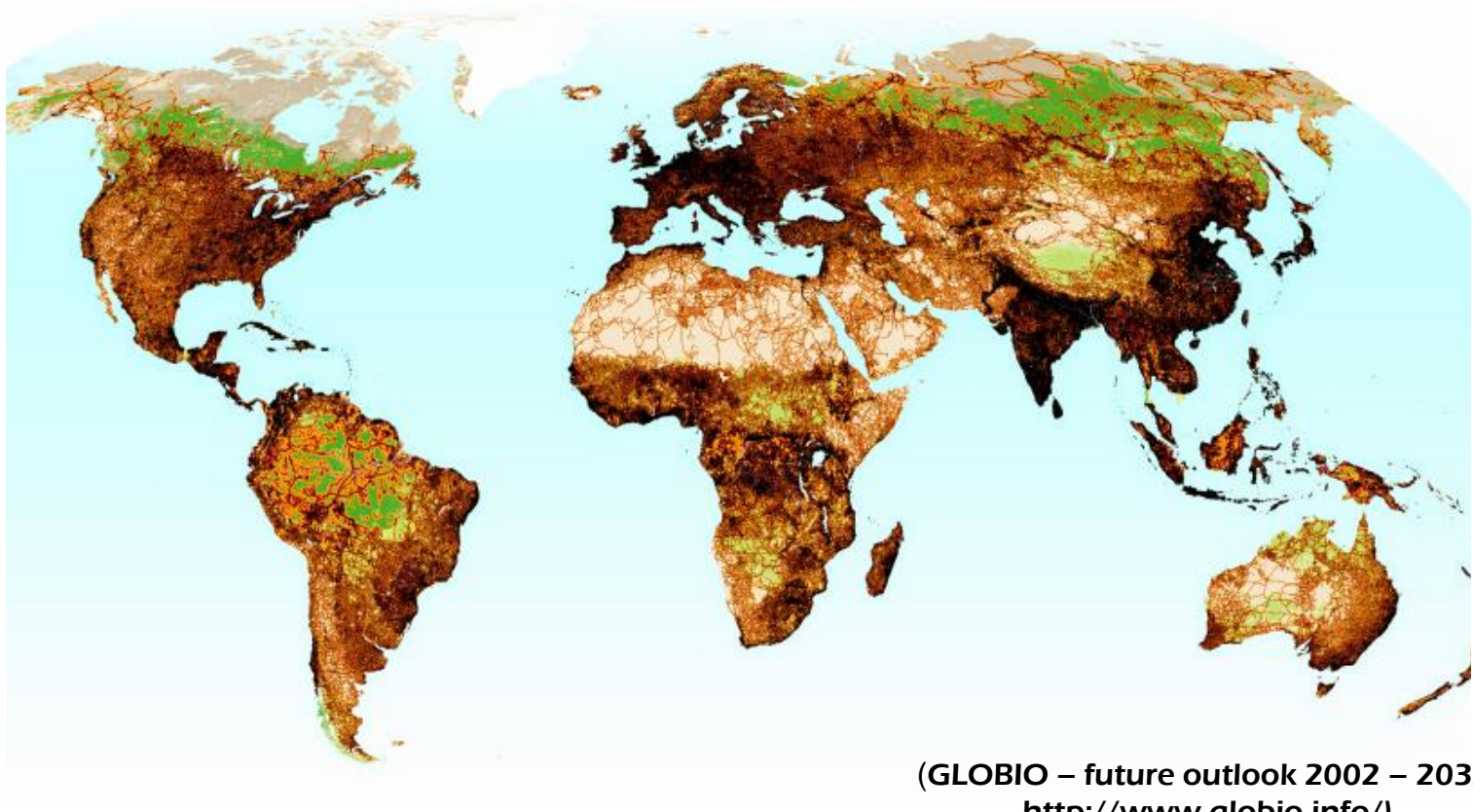
# Biodiversity conservation along transport infrastructure in China

Chinese Academy of Transportation Sciences

Yun Wang

2022. 6. 21 Brussels

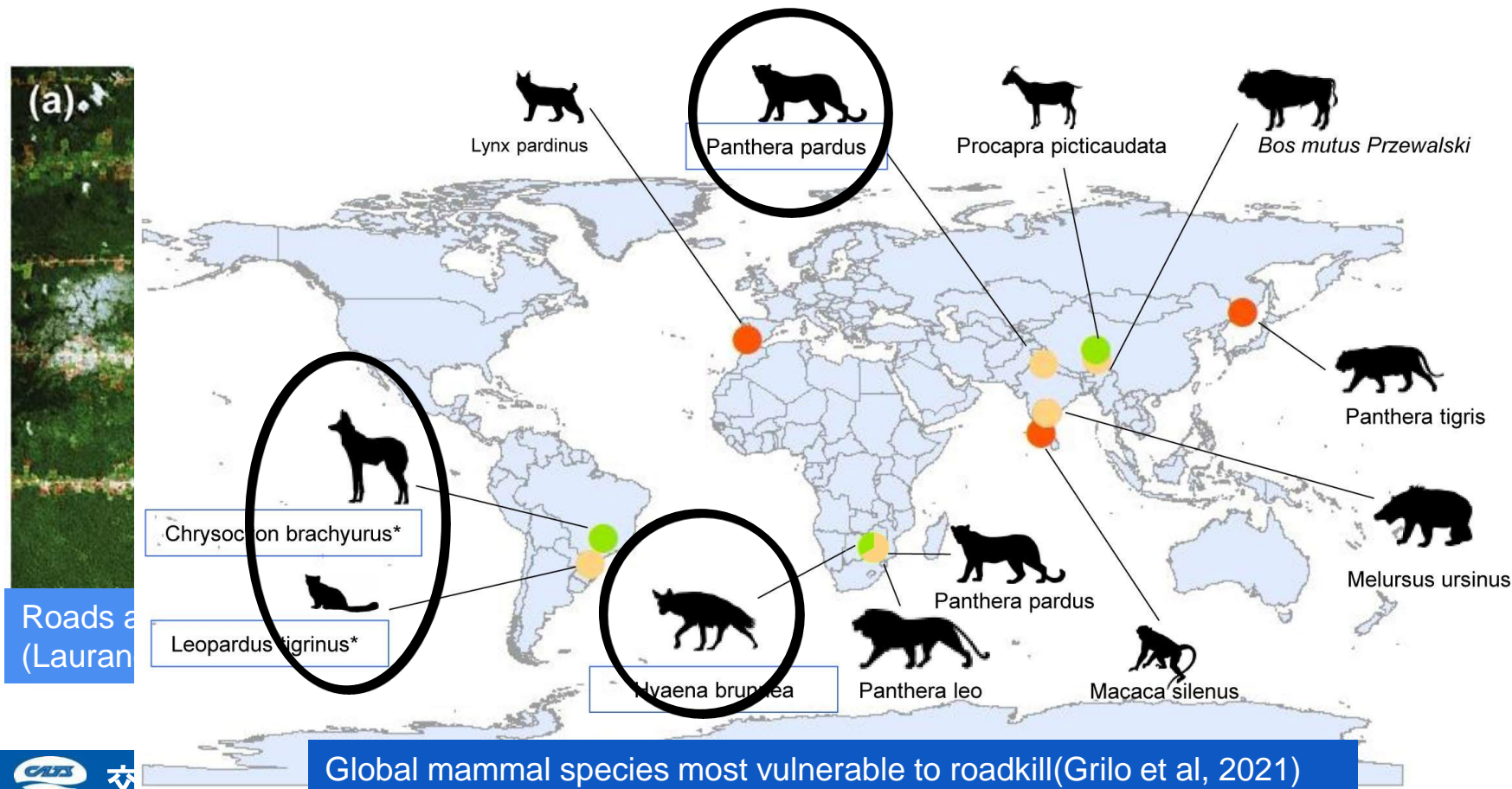
- The demand for Transport Infrastructure(TLI) has increased globally (Dulac 2013)
- While the loss to biodiversity accelerates“global infrastructure tsunami”(Laurance 2018)



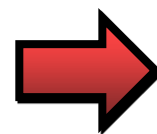
(GLOBIO – future outlook 2002 – 2032,  
<http://www.globio.info/>)

(Forman et al, 2003; Van der ree et al, 2015; Griolo et al, 2021)

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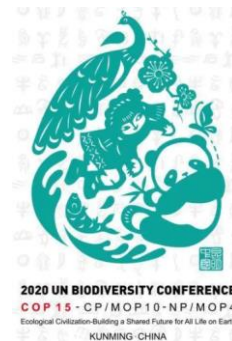
- Length of high-speed railway, expressway both list 1st in the world (MOT, 2022)
- Rich in biodiversity (673 mammal, 1372 bird, 408 amphibian, and 461 reptile species) (Jiang et al., 2016)



Mainstreaming  
biodiversity and  
infrastructure



- the 15<sup>th</sup> meeting of the Conference of the Parties (**COP15**) to the United Nations Convention on Biological Diversity (UN-CBD)
- second United Nations Global Conference on Sustainable Transport



Report on Sustainable  
Transport in China

Chinese Academy of  
Transportation Sciences



United  
Nations



United Nations  
Sustainable  
Transport  
Conference

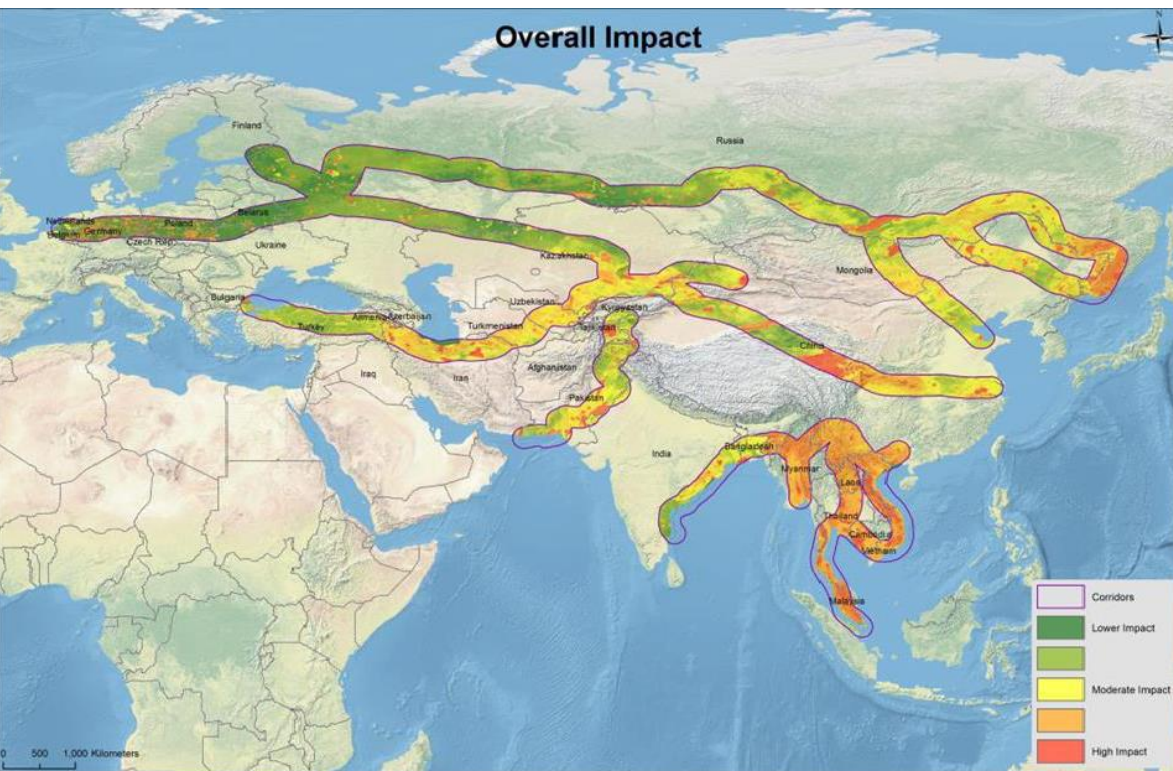
Beijing



交通运输部科学研究院

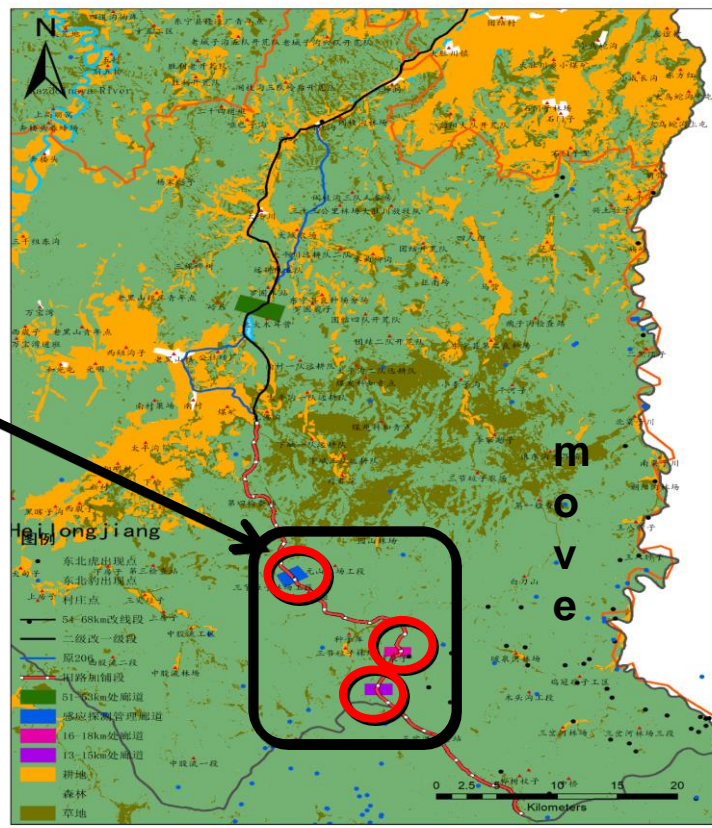
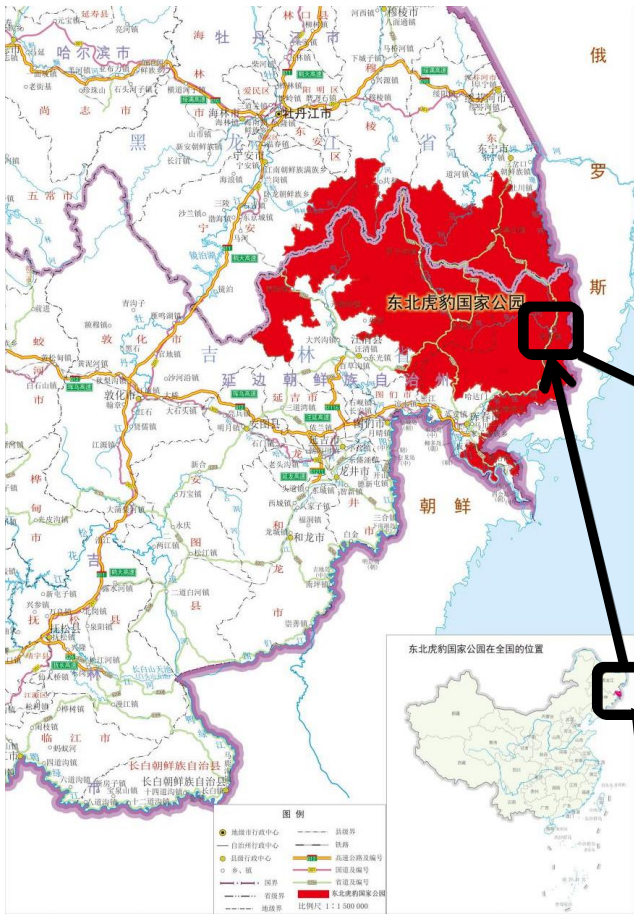


- **BRI** corridors overlap with the range of **265 threatened species** (saiga antelopes, tigers and giant pandas, etc)
- BRI corridors overlap with **1,739** Important Bird Areas or Key Biodiversity Areas and **46** biodiversity hotspots or Global **200** Ecoregions (WWF, 2017)



- **Guidance on Promoting Green Belt and Road (Ministry of ecology and environment, 2017)**
- **Guidelines for Ecological Environmental Protection of Foreign Investment Cooperation and Construction Projects (Ministry of ecology and environment, 2022)**





(Research Center for Carnivore of National Forestry and Grassland Administration, 2018)



**Road improvement:  
2 lanes to 4 lanes**



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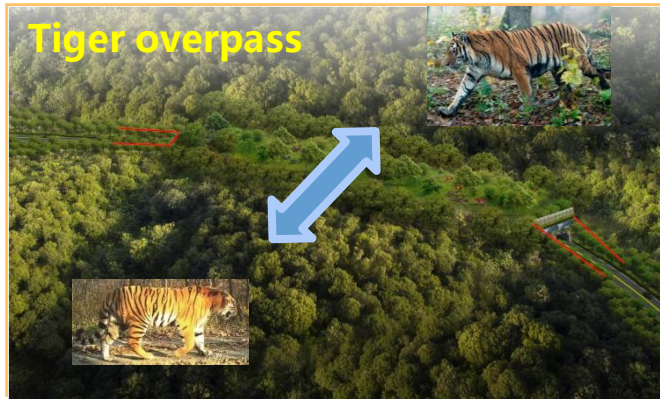
Route selecting: **Make full use of** the old road within National Park



Design for Wildlife crossing structures: 3 WCSs for *Siberian Tiger* and *Amur Leopard* **90 million RMB**



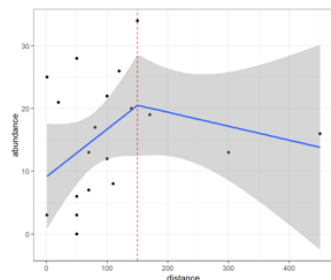
Before and During Construction and operation: **ongoing** monitoring is important



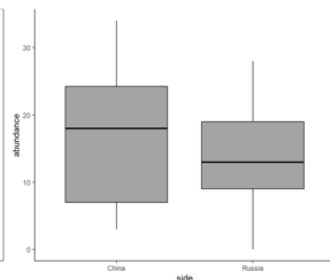
(Research Center for Carnivore of National Forestry and Grassland Administration, 2018)



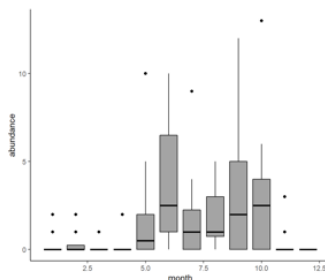
- 18 mammal species(2018.4-now)
- spatial and temporal distribution
- road effect zone
- .....



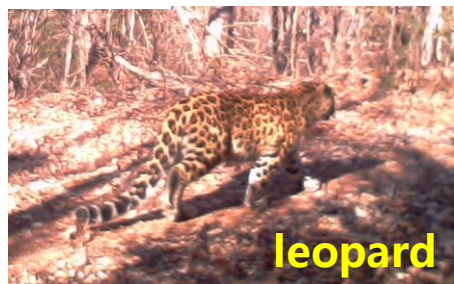
$P < 0.05$   
Threshold : 150



p-value = 0.4607



$P < 0.05$



*Research is ongoing*  
(unpublished)



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[https://www.researchgate.net/prof  
ile/Yun-Wang-96](https://www.researchgate.net/profile/Yun-Wang-96)

<http://www.transportecology.net/>

- **1st Asia-Europe Transportation Ecology Forum**
- **12-13 October 2022.**

<https://www.iene.info/news/1st-asia-europe-transportation-ecology-forum/>

**Welcome join us!!!**



**Thank you for your attention!**

