

Results of NEASPEC Migratory Birds Project (White-naped Crane) in Dauria region (Russia)

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Daursky State Nature Biosphere Reserve



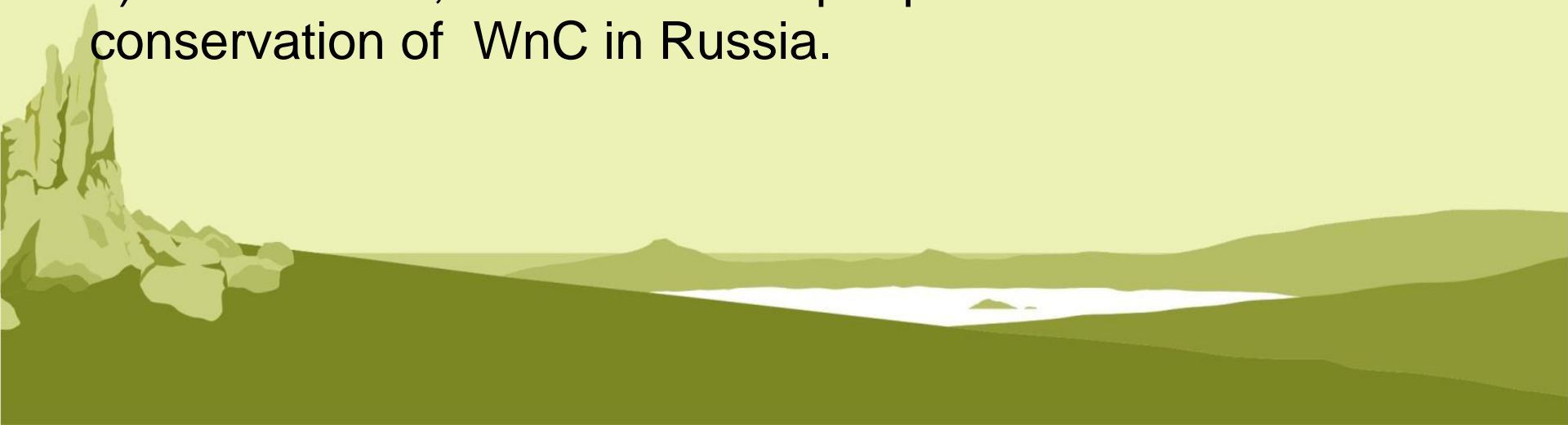
Russian-Mongolian transboundary Dauria Ecological Region is key breeding area of western population of WnC in the world. The Russian part of Dauria supports 100% of breeding sites of western population of WnC within Russia.



The NEASPEC project duration in Russian Dauria: 2014-2016.

The key scoping surveys activities:

- 1) 2014-2016, study and monitoring of WnC population in the central part of the Russian-Mongolian Dauria Region (in total 10 monitoring on the area about 18,700 km²);
- 2) 2016, whole census of WnC population in Russian Dauria (census using small helicopter on the area about 35,000 km²);
- 3) 2014-2016, work with local people and Government for conservation of WnC in Russia.

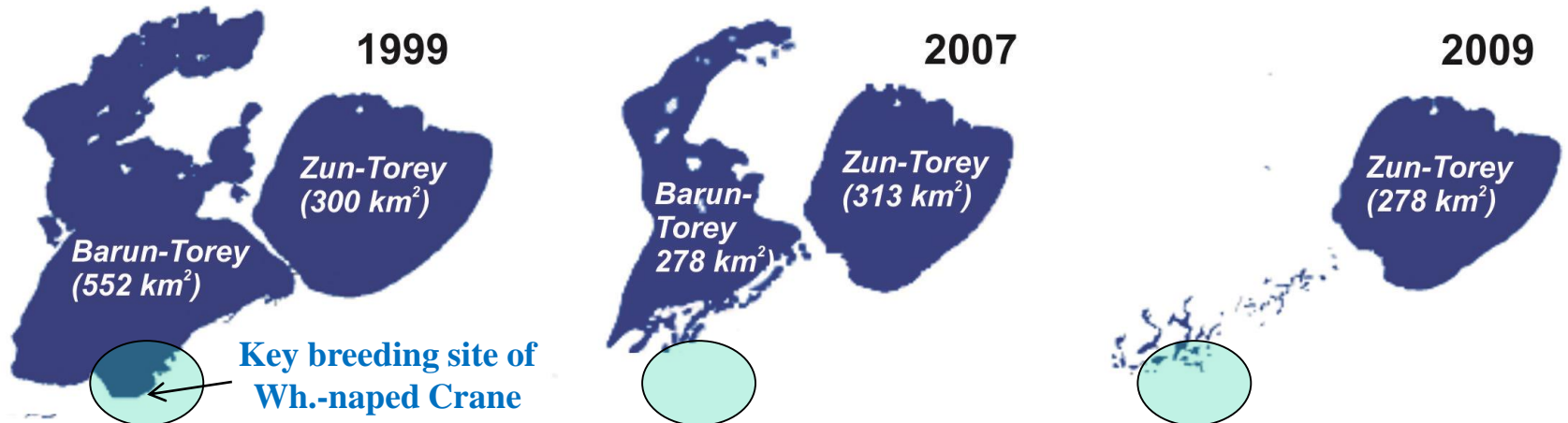


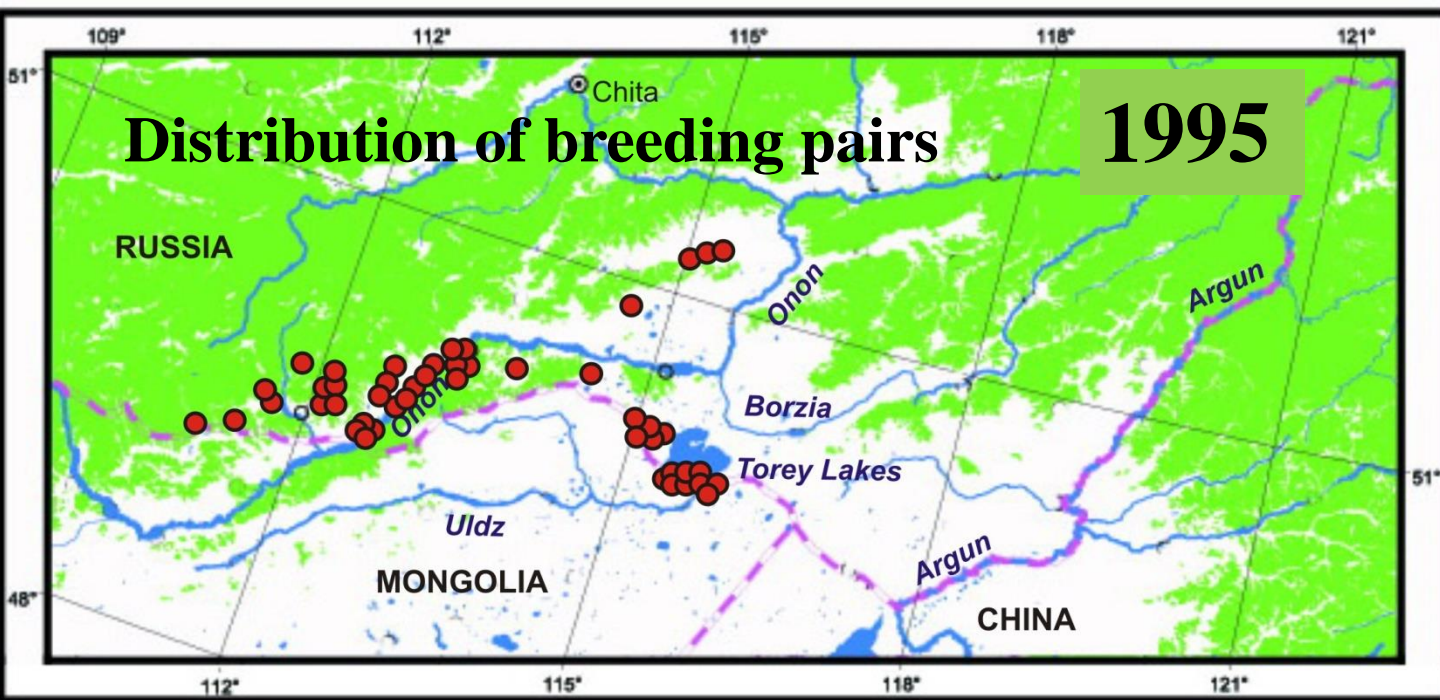
The key joint study activities (on the Russian territory):

- 1) June 2015, joint study with Chinese Team;
- 2) August 2015, joint study with Mongolian Team;
- 3) September 2015, joint study with Mongolian, Chinese and Japanese Team;



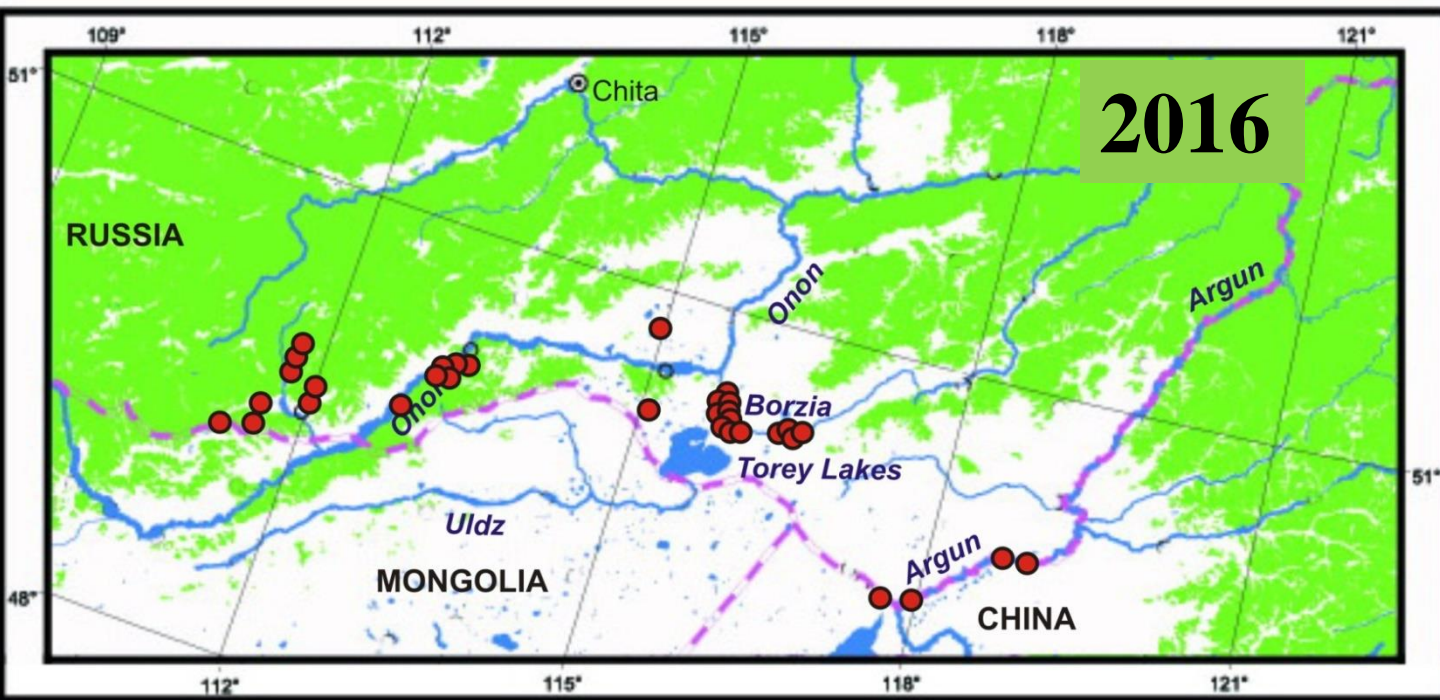
Wetlands in Dauria depend significantly on long-term climatic change. During dry 2000-2016, about 95% of lakes and small rivers in Dauria become completely dry. 2007-2009 were the most dry years. The climate cycles cause radical transformation of wetlands and crane populations. For example, the big Barun-Torey Lake (the key breeding site of WnC in Russian Dauria) is completely dry since 2009.





Previous complete census of WnC in Russian Dauria was made in 1995.

During 1995-2016, population was declined twice: about 100 territorial pairs were in 1995, but only about 45 pairs remained in 2016.



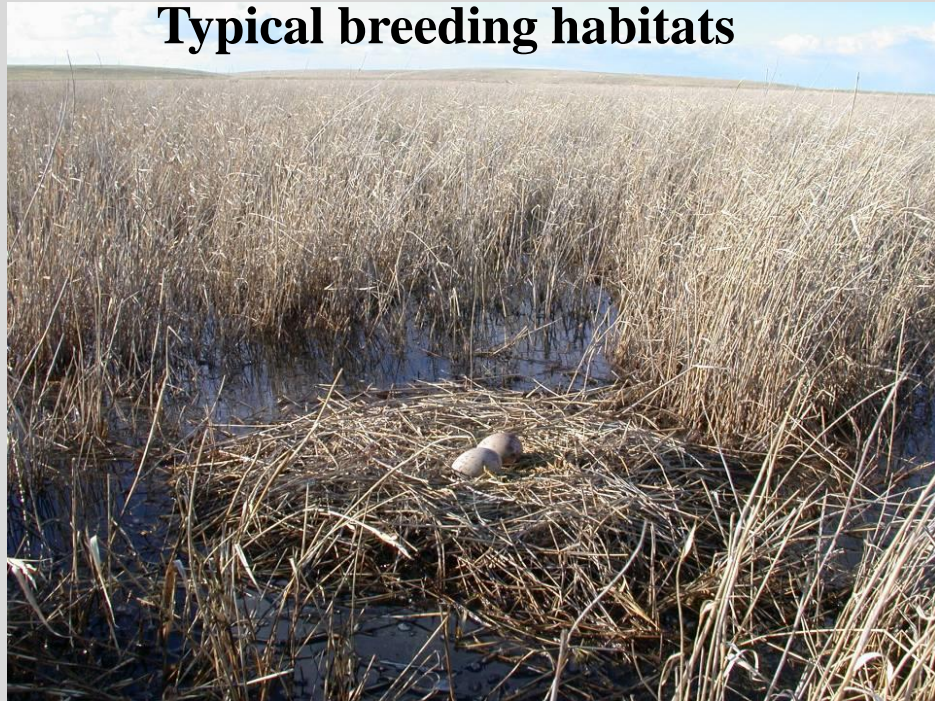
The main causes of population decline (the main threats):

No significant threats in Daursky NR. But, there are many threats outside of protected areas.

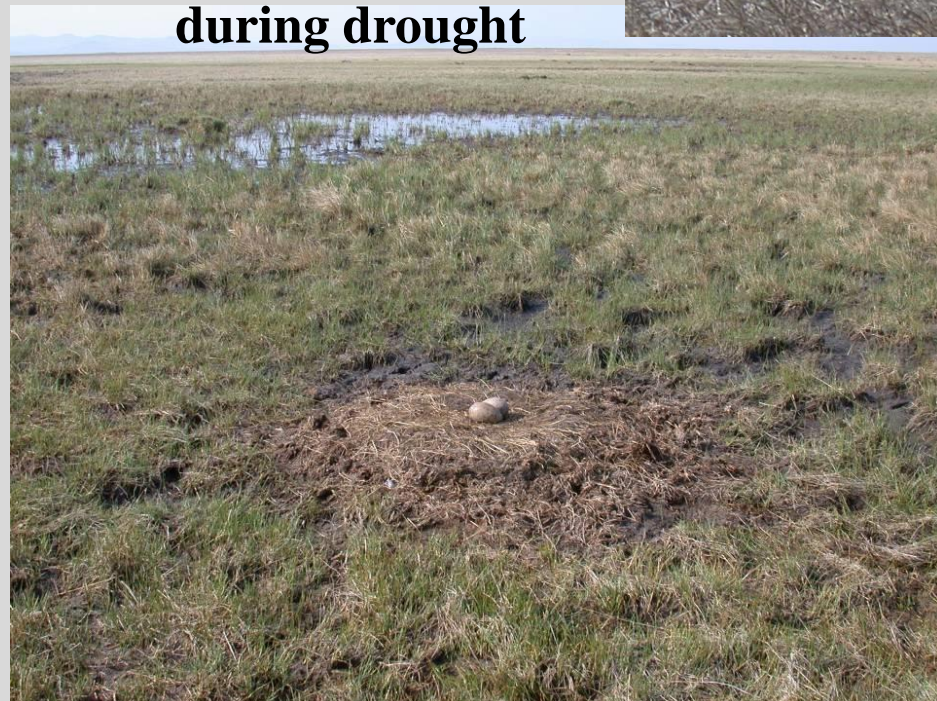
Main natural threat: limit of habitats (wetlands) and limit of forage resources because of dry climate period 2000-2016.



Typical breeding habitats



Breeding habitats during drought



Main anthropogenic threats (outside of Daursky Nature Reserve):

1) often spring floodplain **grassfires: annually, about 50% of crane breeding habitats burns. Grassfires are most often in May. Human activity is the main cause of the grassfires. Grassfires are most spacious during first years of dry climate period (because of reach dry vegetation).**





2) **Spring hunting** is very serious threat in Russia for many species of waterbirds including WnC. Cranes are not game species, but spring hunting creates intensive disturbance for breeding cranes. WnC starts to lay eggs in third decade of April; hunting season usually is since May 1, when the main part of crane pairs are already incubate eggs. On the hunting areas, up to 60% of breeding pairs can lost clutches because of hunting disturbance.

3) Disturbance from humans and livestock is especially high during dry climate periods. There is significant lack of sources of water and pastures during dry years. Therefore, a lot of cattle concentrate near few remained wetlands outside of nature protected areas. Birds try to breed there (because they have not alternative) but breeding success is very low.



Horses are the most dangerous, because they prefer to feed and rest near the water.

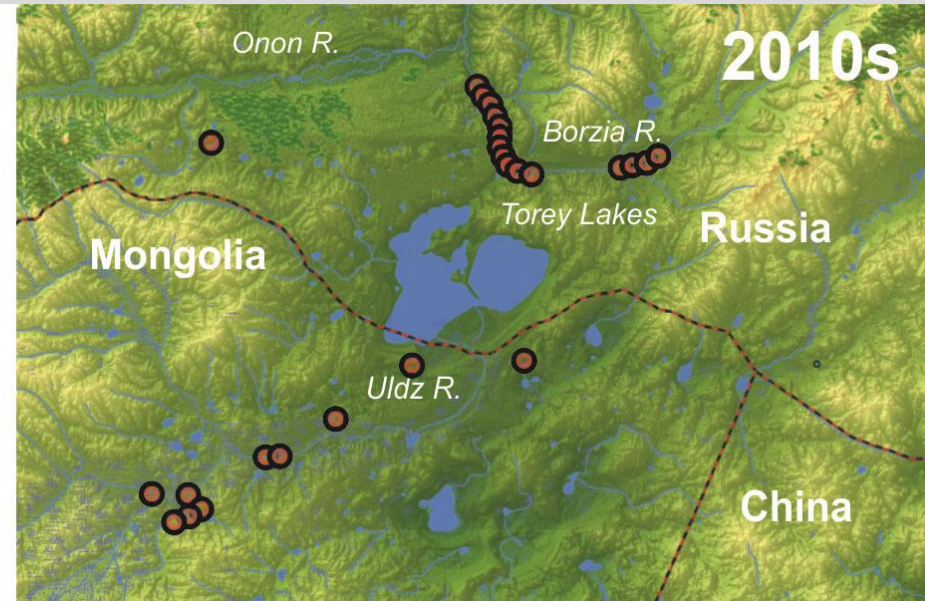
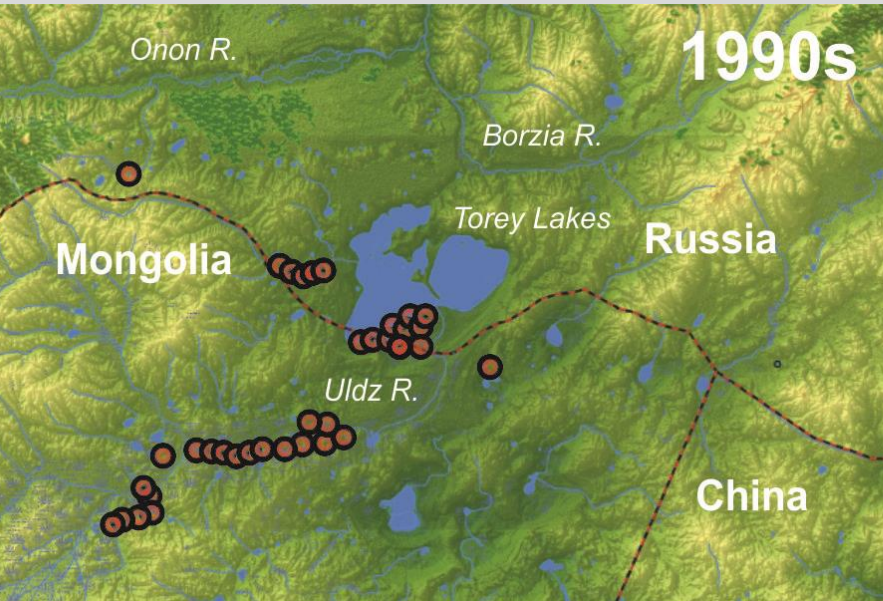


Other anthropogenic threats in Dauria:

- 4) Illegal hunting in Russian Dauria for using cranes for food. Illegal shooting of cranes by farmers because of crop depredation by cranes.
- 5) Electric power lines collision.
- 6) Changes in hydrology and loss of suitable habitat due to water control projects.
- 7) Lost of habitats due to mining development (especially gold mining in the Onon River basin).



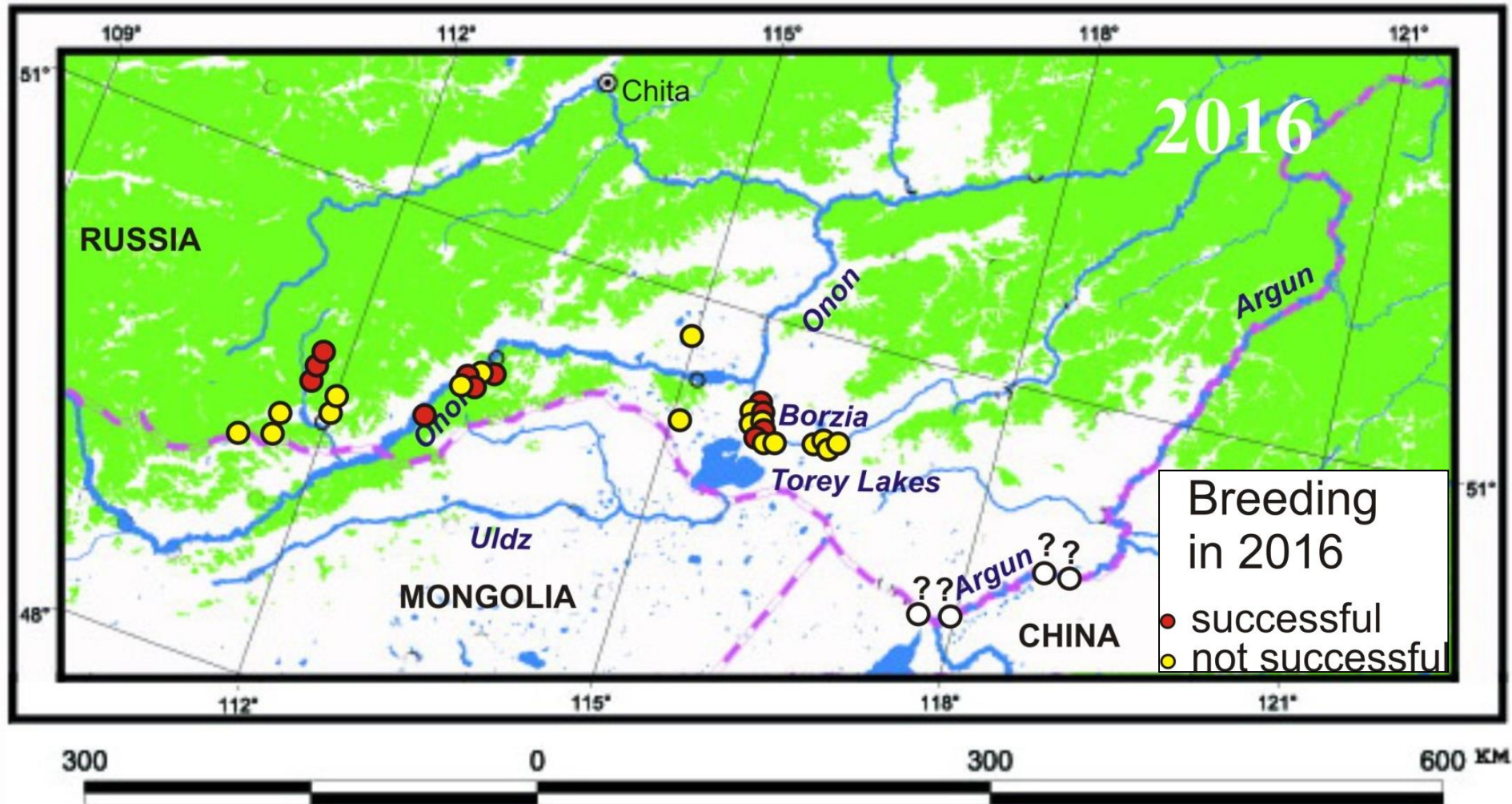
Redistribution of White-naped Cranes during climate cycles in the Torey depression

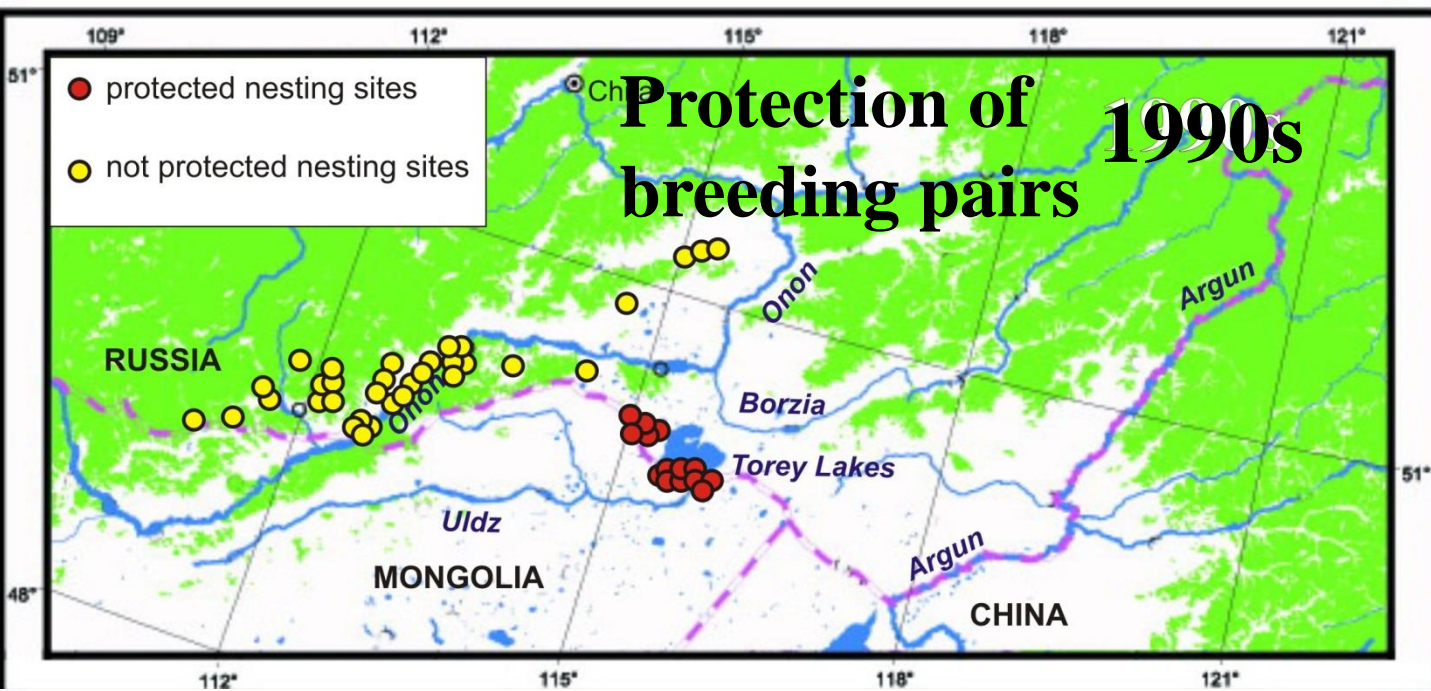


In wet-1990s., up to 15 pairs of cranes nested on the Torey Lakes. At that time, floodplain of the Borzya River was too swampy, cranes were not able to breed there. During dry 2000s, wetlands on the Torey Lakes dried up and became not suitable for breeding, but wetlands on the Borzia River dried up partially and became very good for breeding. Since 2009, White-naped Cranes do not inhabit on the Torey Lakes, but up to 15 pairs of these birds breed on the Borzia River.

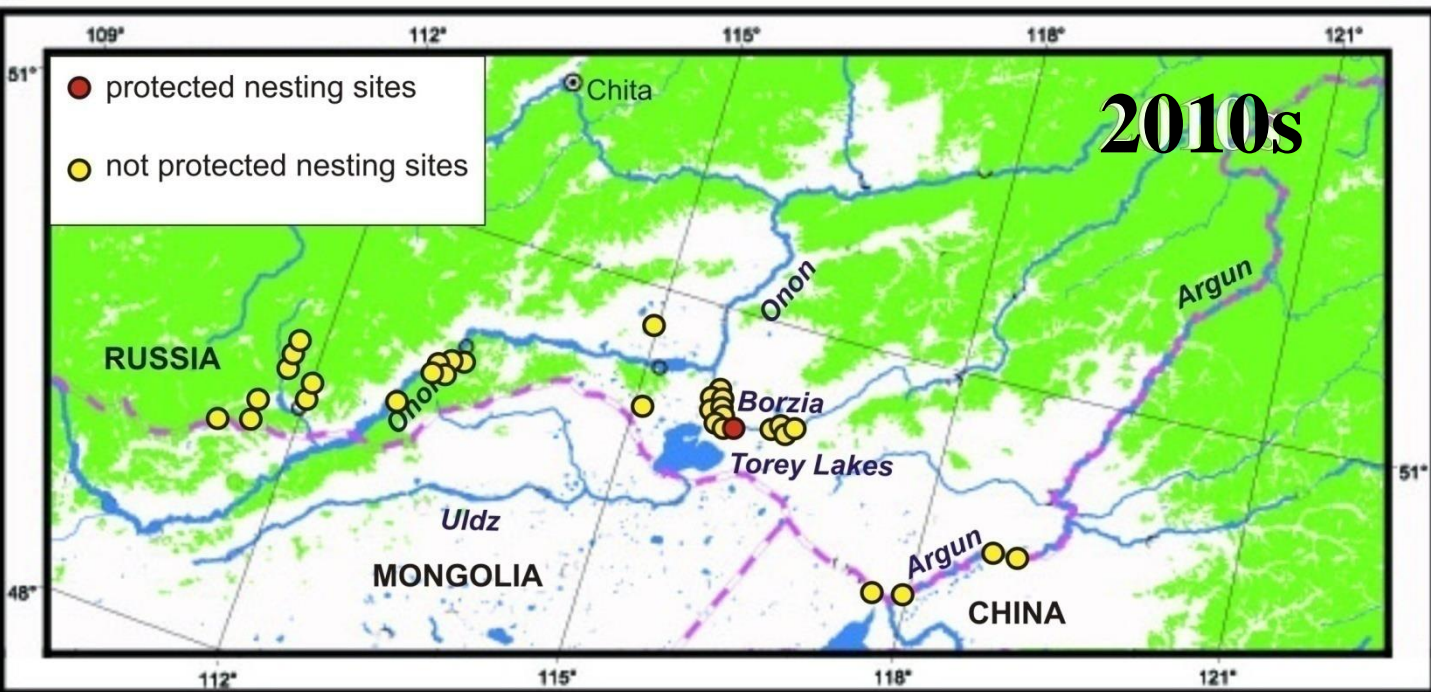


Breeding success during dry 2000s is very low. In 2016, only 36% of territorial pairs have chicks.





In wet climate period (1990s) 15% of population were protected (15 pairs located in Daursky NR on the Torey Lakes).



In dry period (2010s) only 2% of population are protected (only 1 pair located in Dolina Dzerena Nature Refuge is protected by staff of Daursky NR). All other crane pairs breed outside of existing nature protected areas.

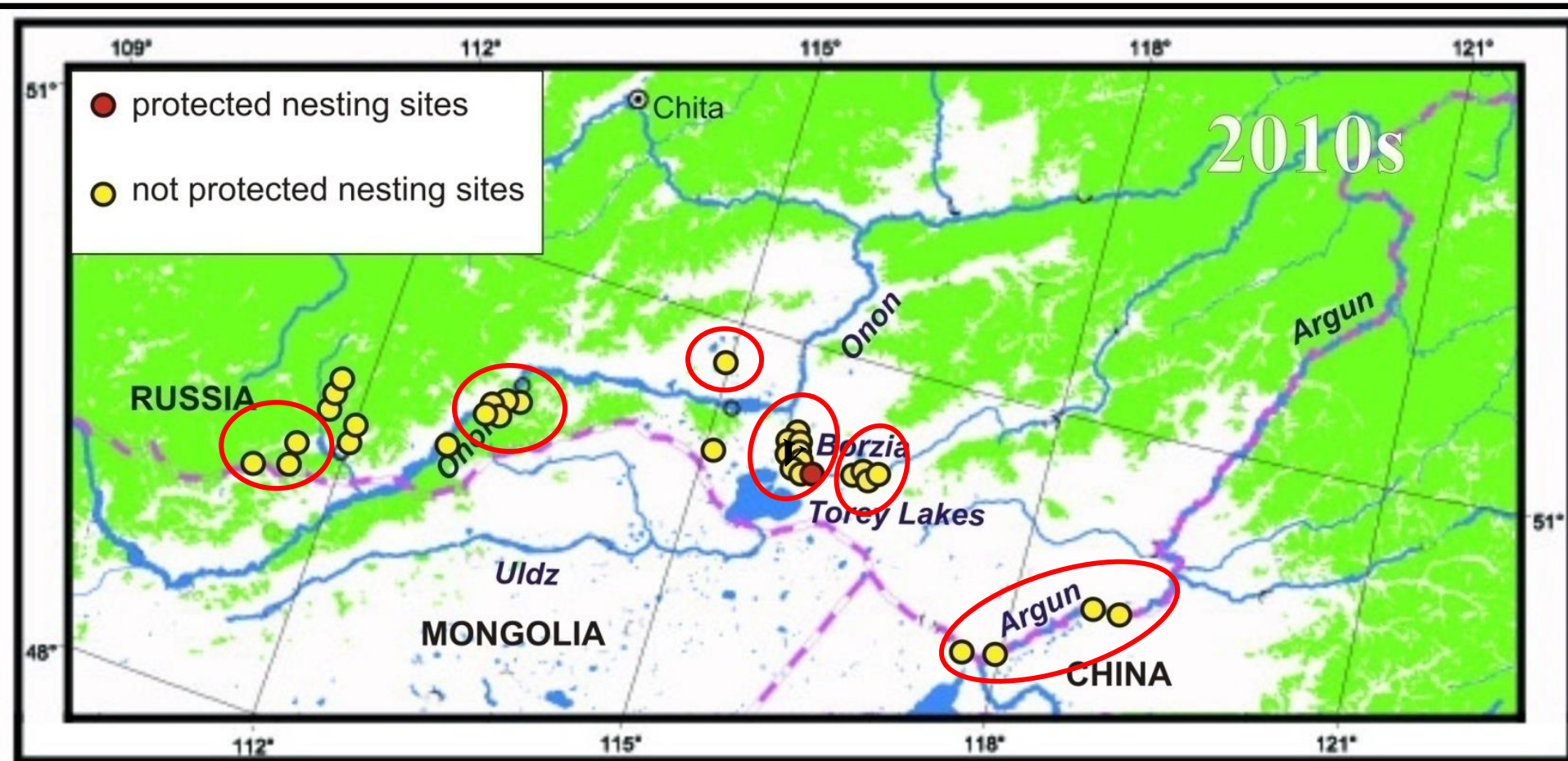
The main conclusions:

- 1) Existing many years duration dry climate period (2000-2016) is critically unfavorable for the western breeding population of WnC because of significant reduce of wetlands, significant reduce of of forage resources, significant increasing of disturbance and many other anthropogenic threats.
- 2) During 1995-2016, WnC population number in Russian Dauria was reduced twice; breeding success of remained pairs was reduced twice too;
- 3) 98% of WnC breeding habitats are not protected now;
- 4) The western WnC population needed urgent study and conservation actions.**



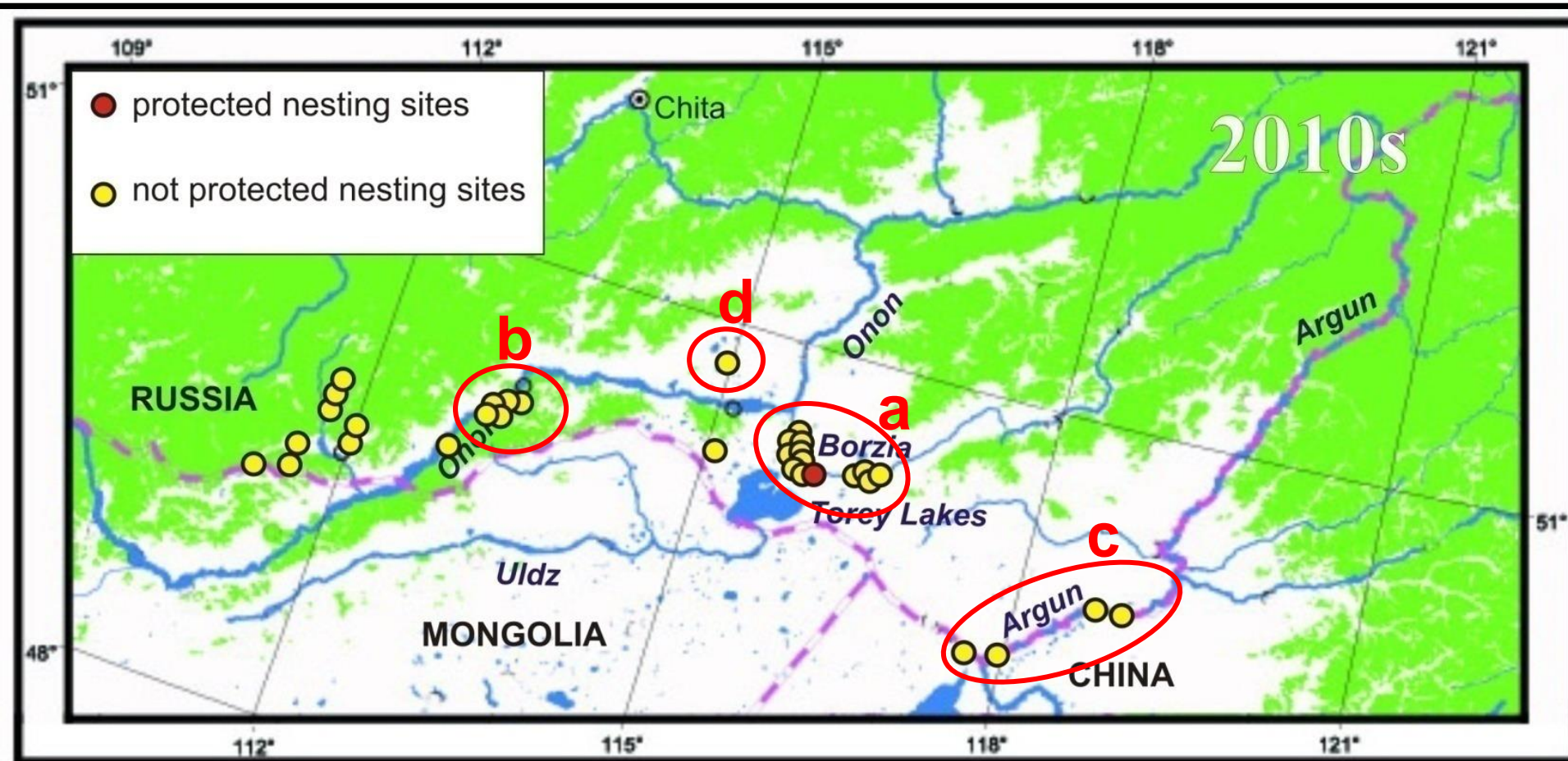
Needed conservation actions:

- 1) **Establishment of special “Peace areas”** on the key breeding sites of WnC in Dauria (spring hunting will be prohibited on these sites). We started to discuss this with local Government.



2) Establishment of new nature protected areas in Dauria (it is difficult work for many years duration):

- a) expansion of the buffer zone of the Daursky NR and including of nesting sites on the Borzia River;
- b) Onon Nature Refuge;
- c) Argun Nature Reserve;
- d) Small Aginsk Nature Refuge



3) Ecological education of local people (hunters, shepherds, farmers) using calendars, posters, brochures, etc.

4) Fire prevention and stop:

a) education of people;

b) acquisition of fire-stop equipment and presenting this equipment to Nature Protected Areas and to local people.



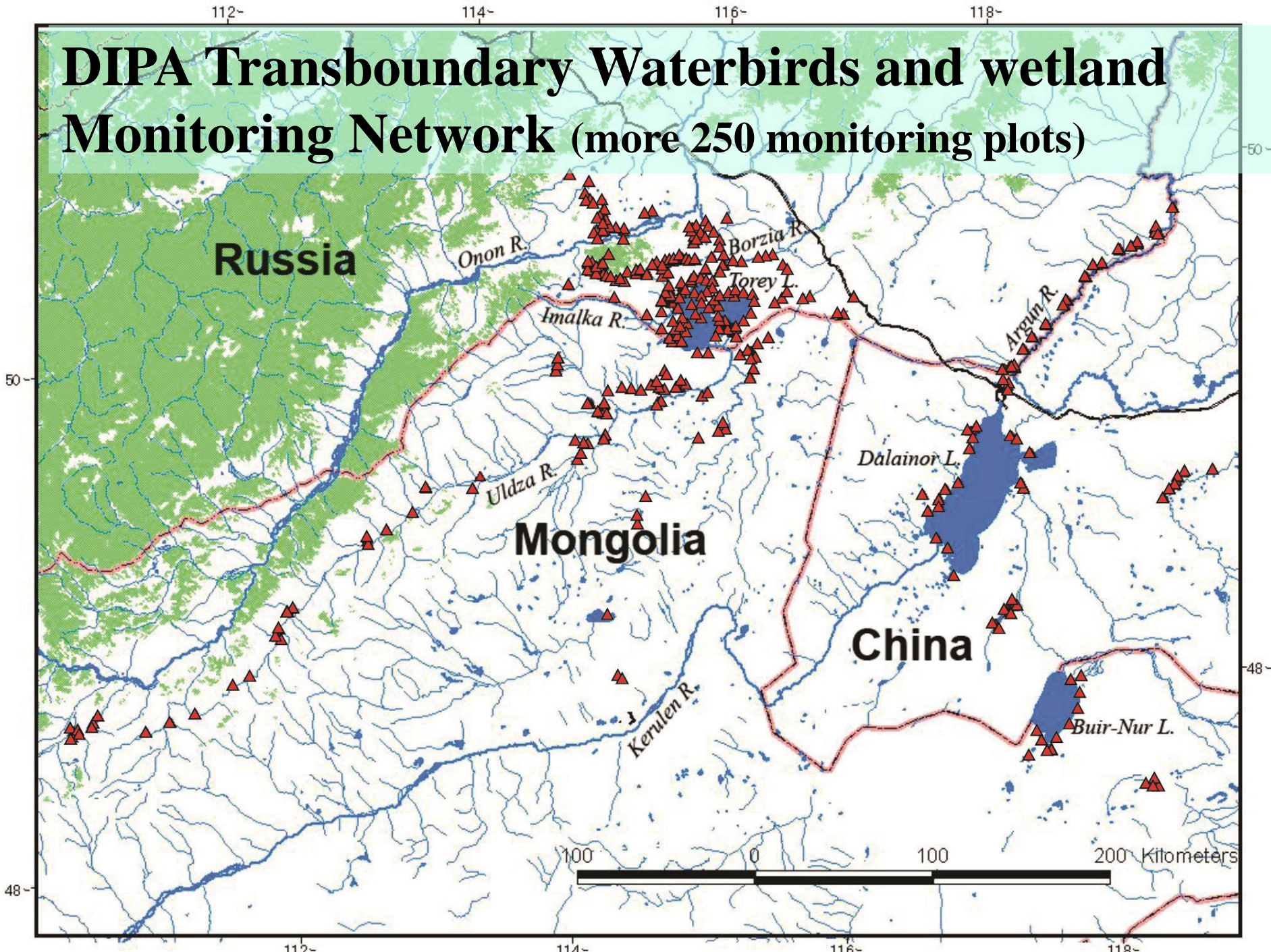
5) Monitoring (WnC status, number, distribution, breeding success):

Support activity of the Transboundary Waterbirds and wetland Monitoring Network. This Monitoring Network was established on the base of the Dauria International Russian-Mongolian-Chinese Protected Area (DIPA). According to the Plan of joint activity of the DIPA, staff of the DIPA make ground monitoring annually.

Ground monitoring should be annual, aerial monitoring should be at least one time during each 5 years.



DIPA Transboundary Waterbirds and wetland Monitoring Network (more 250 monitoring plots)



- 6) Study and monitoring population, distribution, migration and study ecology, threats, limiting factors using GPS\GSM loggers and PTT.**
- 7) Work for reduction of crop depredation by cranes (for reduction of illegal shooting of cranes by farmers).**
- 8) Study and prevention of collision cranes on the electric power lines.**



Thank you for your attention!

