

Outcomes from fieldwork conducted for identifying the reason for the saiga mass die-off in May 2015



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Topics

1. Saiga mass die-off
2. Aerial survey of saiga
3. Interdisciplinary expedition
4. Investigation of control area
5. Ongoing and planned activities



1

Observations in May 2015

- Near Urpek/Amangeldy:
 - Start of die-off around 8./9. Mai
 - Only a few dead animals
 - Following days slightly increasing number
 - On 15./16. May about 80% of the calving aggregation died (peak of calving)
 - Die-off ended by 18th May (~99.9% dead)



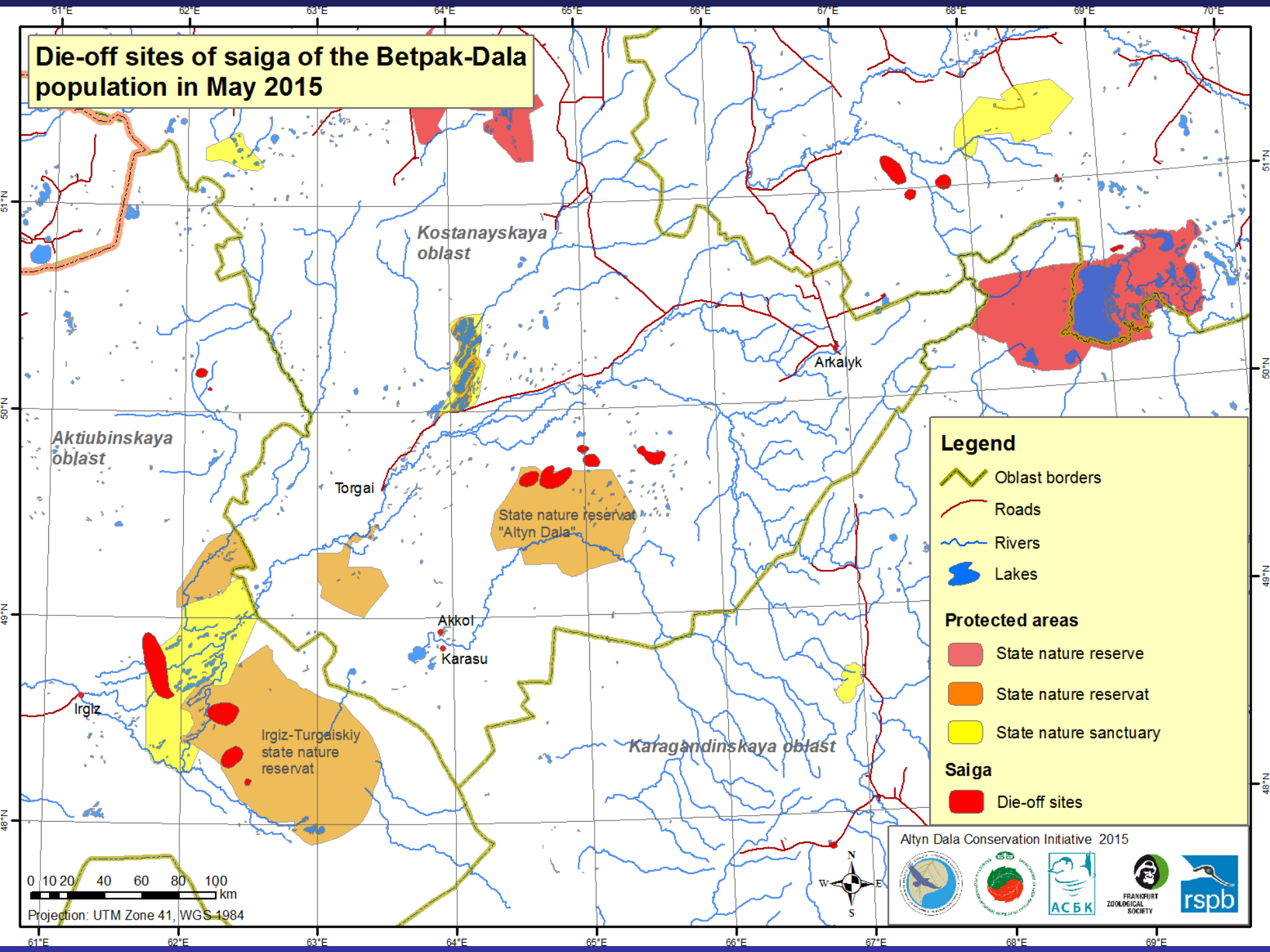
1

Symptoms

- Weakness
- Loss of coordination of movements
- Increased salivation
- Nasal discharge
- Immobility
- Diarrhoea (in late stages hemorrhagic)
- Respiratory problems



Die-off sites of saiga of the Betpak-Dala population in May 2015



0 10 20 40 60 80 100 km

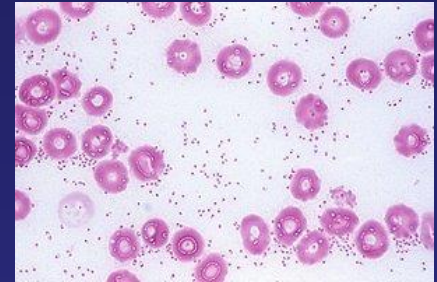
Projection: UTM Zone 41, WGS 1984

Altyn Dala Conservation Initiative 2015



1 Theories about potential causes

- Pasteurellosis
- Tick-born disease (theileriosis)
- Other vector born disease (mosquitoes?)
- Poisonous vegetation
- Too lush vegetation
- Saiga took up *Clostridia* with soil
- Bloom of toxic algae
- Poisoning through rocket fuel
- General pollution of the environment
- Something new, unknown?



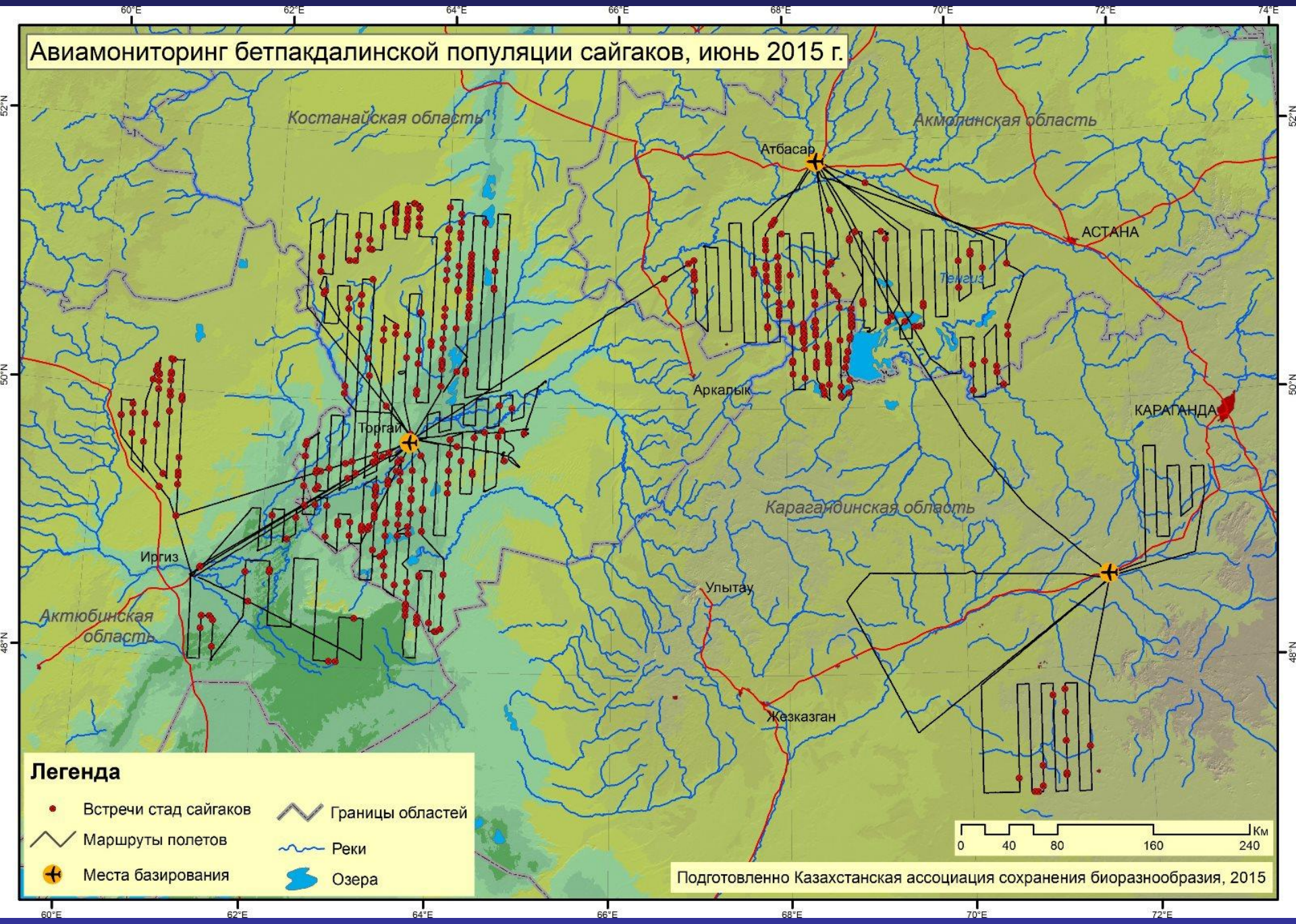
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Special aerial census

- 110 flight hours (funded by state budget)
- Covering the whole population range
- 15.-27. June 2015
- Used same methodology as for annual spring census



Авиамониторинг бетпақдалинской популяции сайгаков, июнь 2015 г.



Легенда

- Встречи стад сайгаков
- ↔ Маршруты полетов
- ★ Места базирования
- ▭ Границы областей
- ~ Реки
- Озера

Подготовлено Казахстанская ассоциация сохранения биоразнообразия, 2015

2

Census results

- Estimated number of animals found in covered area:
25,200
- Added non-counted area results in total of:
31,300
- Sex ratio 2 : 3 (n=750)
- From spring population (242,500), an estimated number of about 211,200 died

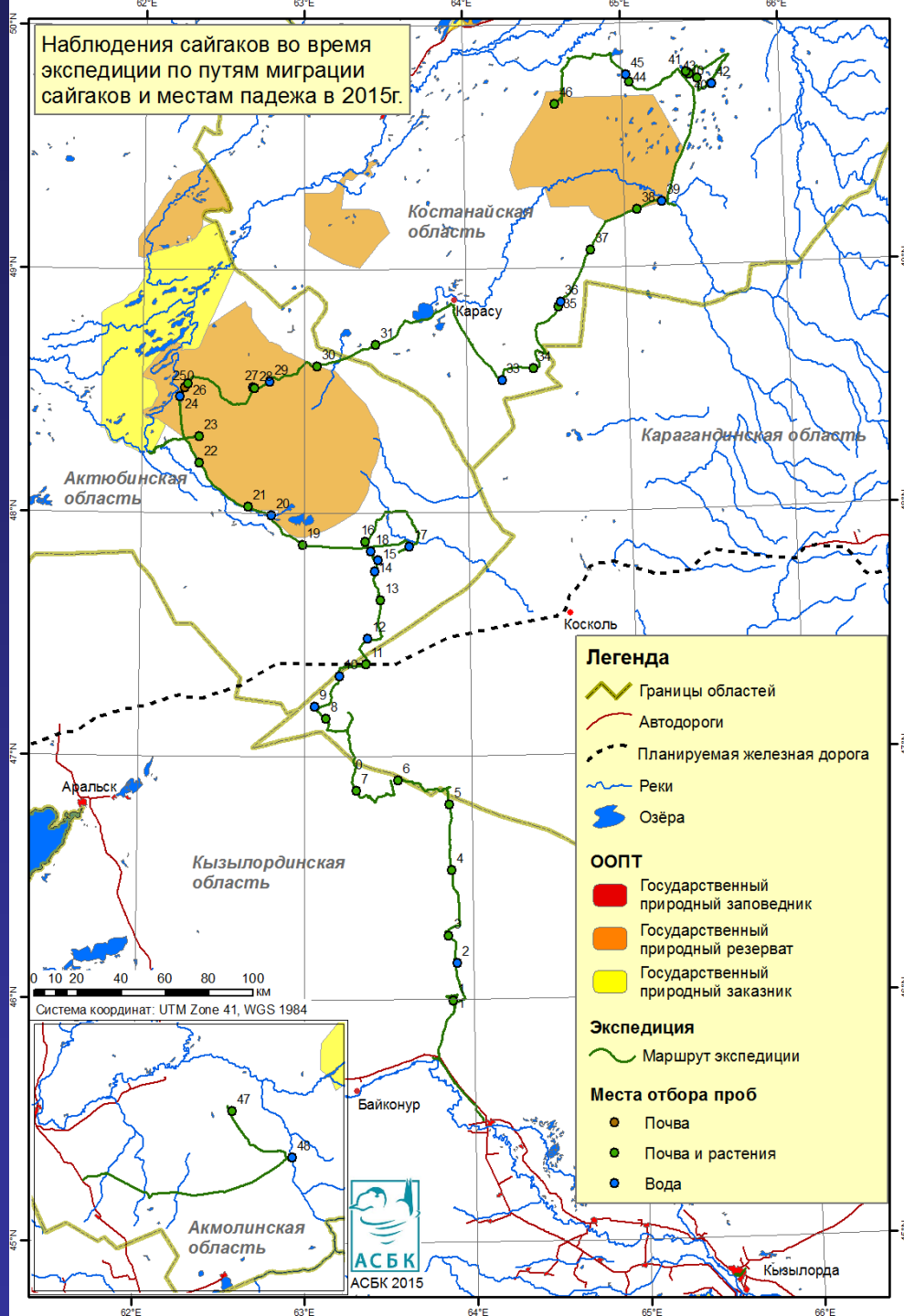
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Interdisciplinary expedition

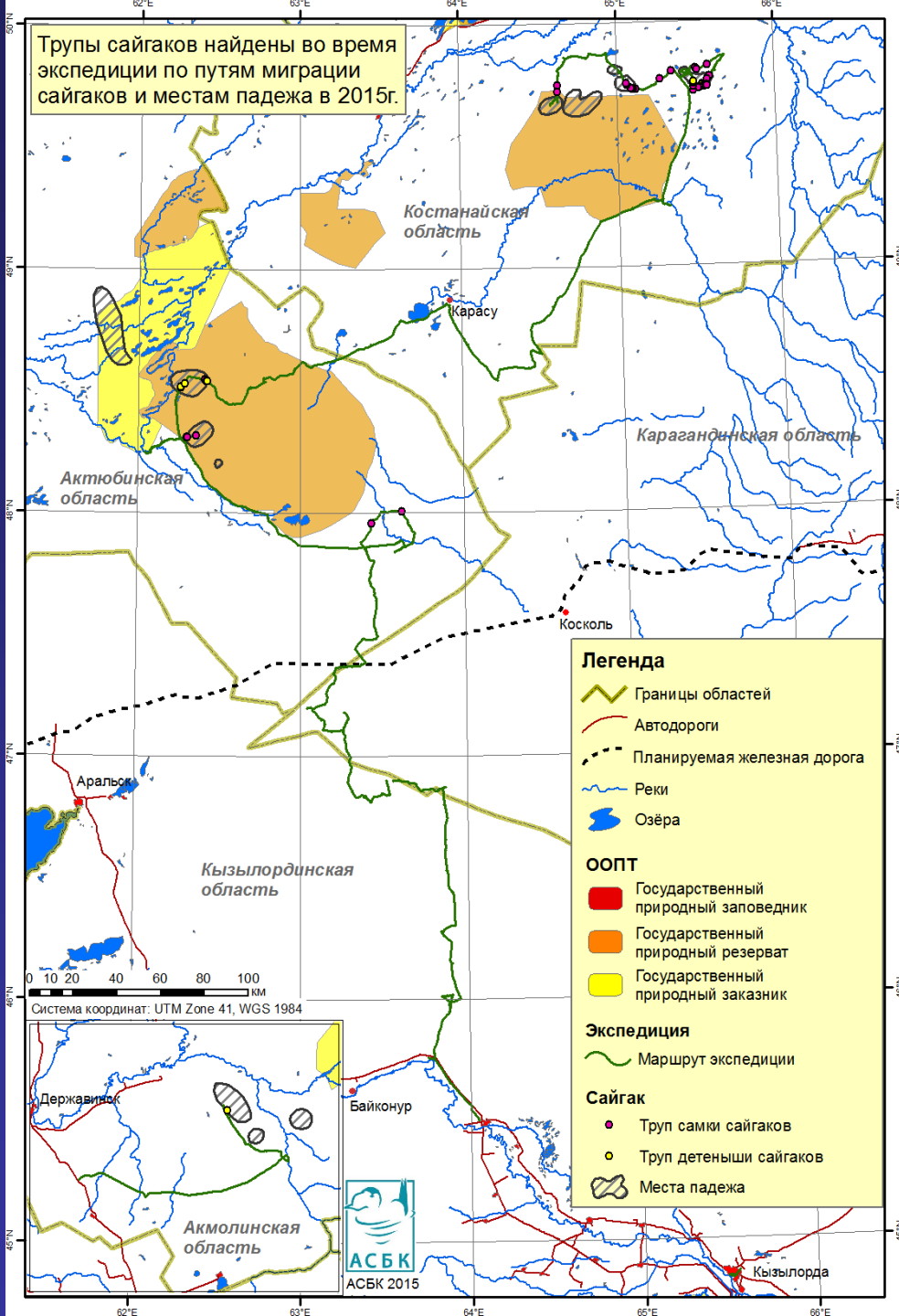
- 27.06.2015 – 08.07.2015
- 9 people of 4 national institutes, 1 international institute, 1 NGO, wildlife service
- Goal:
Complex, interdisciplinary investigation of the areas, where saiga have been since winter
 - botanical description
 - environmental sampling
 - investigation of abnormalities in animals and plants
 - domestic livestock screening



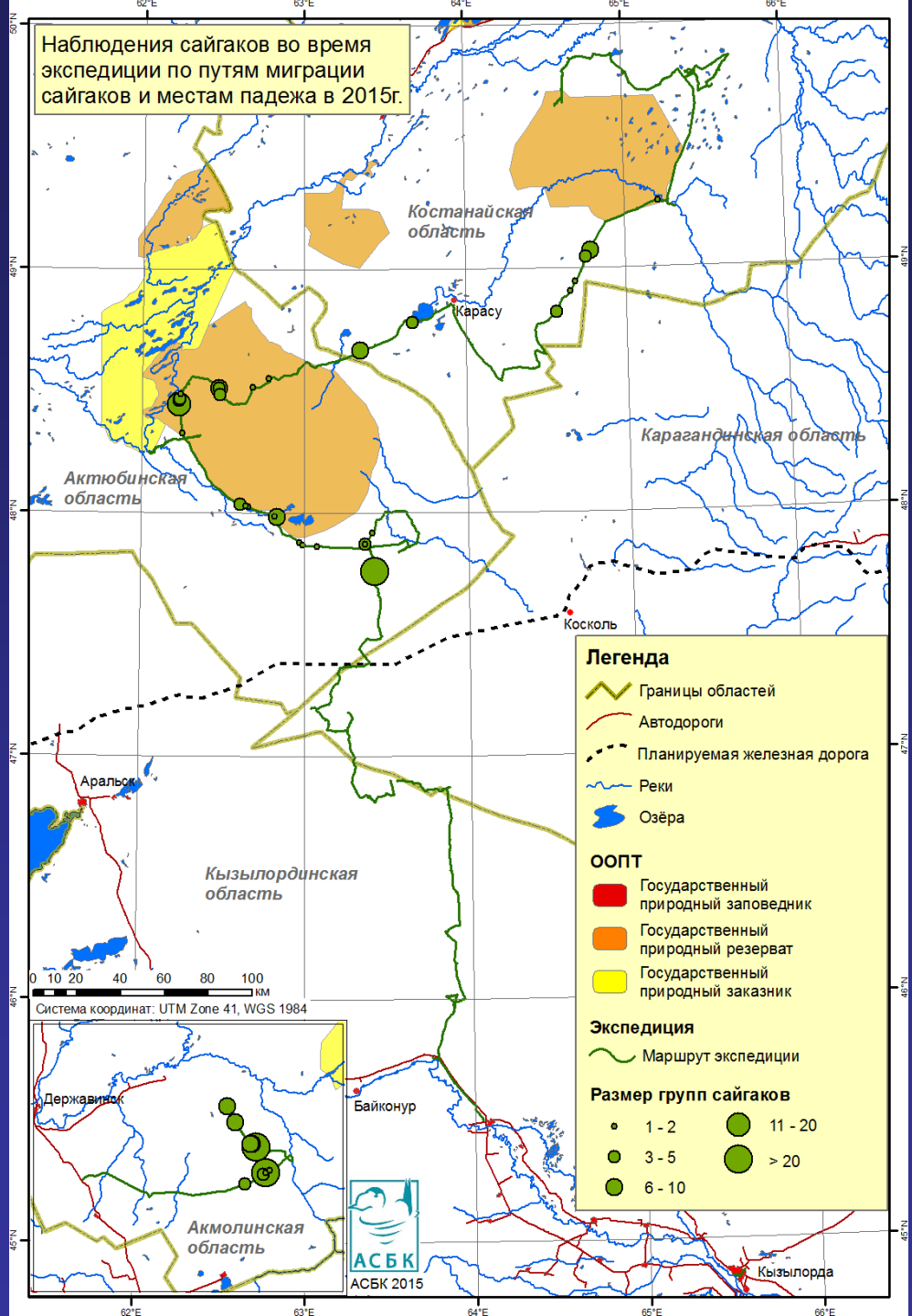
Наблюдения сайгаков во время экспедиции по путям миграции сайгаков и местам падежа в 2015г.



Трупы сайгаков найдены во время экспедиции по путям миграции сайгаков и местам падежа в 2015г.



Наблюдения сайгаков во время экспедиции по путям миграции сайгаков и местам падежа в 2015г.



3

Botanical results

- Very different vegetation communities at different die-off sites
- Some areas after fire in 2014, others not
- No big numbers of poisonous plants at die-off sites, only some places along migratory routes with higher densities
- Vegetation the same as in previous years

4

Survey of control area

- Botanical survey of the 2015 calving area of the Ural population
- Approximate comparison with a “no die-off” calving area
- Results are being processed



5 Ongoing and planned activities

- Processing of results of intensive fieldwork, report compilation
- Analysis of stored samples as soon as needed and appropriate
- Telemetry of saiga
- Support for development of effective monitoring and research programme

Thank you for your attention!



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