

Electrocution of
birds of prey
– a real threat
to Saker Falcon



Janusz Sielicki
IAF Conservation Officer







- There were plenty of symposia, conferences, meetings, resolutions about electrocution around the world. But that needs actions.
- My first „experience with electrocution was like that. My Peregrine had more luck – she lost 2 fingers, but survived. Here a Saker of Janos Toth, Hungarian falconer
- Sometimes you even do not see the electrocuted bird. It is somewhere there at the top. Here a dead Saker in Hungary



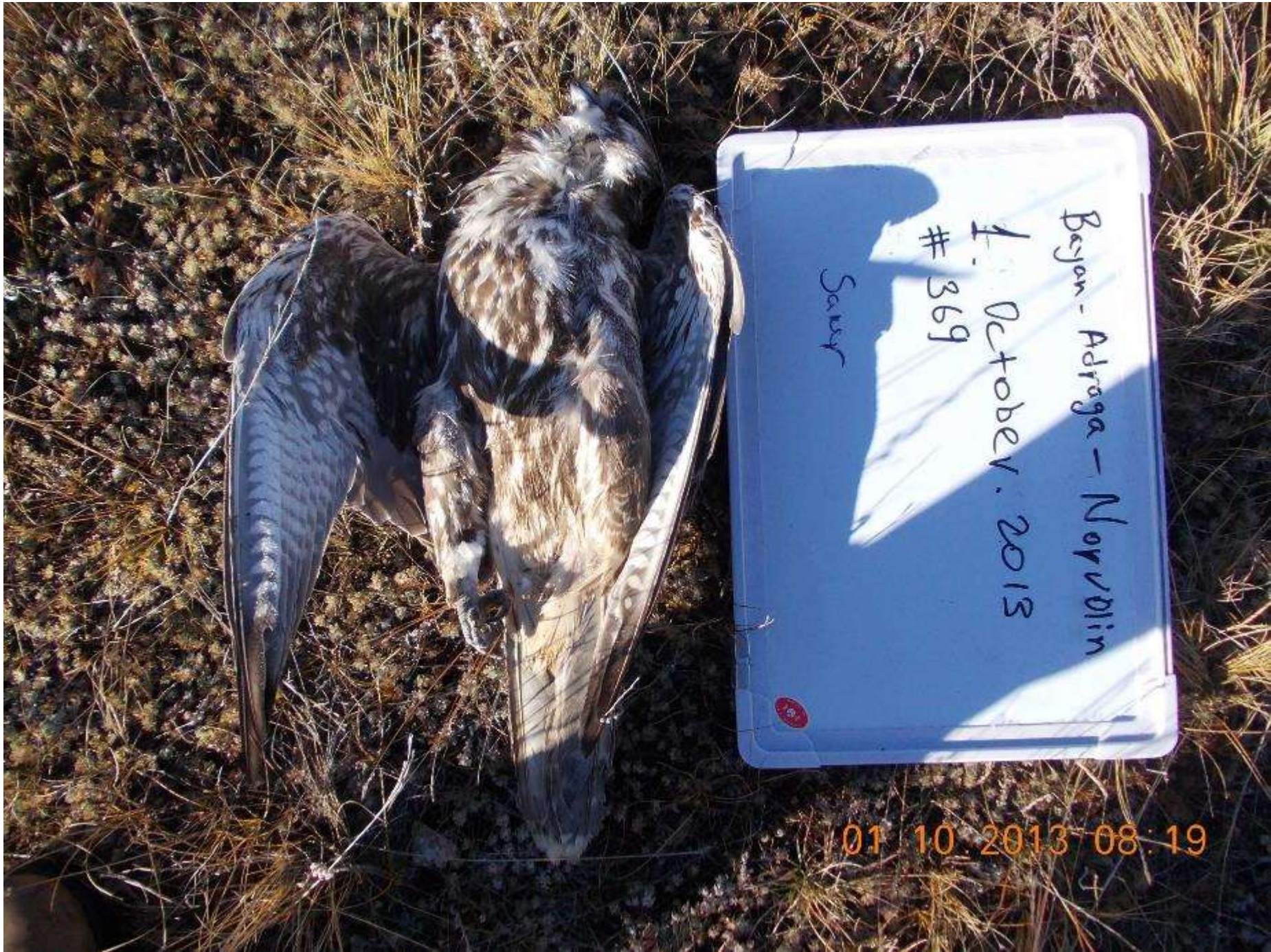
Bayan-Adraga - Novolin

1. October, 2013
361

Sawyer

01 10 2013 07:57





Bayan - Adraga - Novodin

1. October. 2013

369

Savvy

01 10 2013 08:19

Pole 332
Uhtit-Khud.
29. Sep. 2013



29.09.2013 10:30



30.09.2013 13:38



- Some are more visible.
- This is in Mongolia
- Sometimes they are on the ground
- And again
- And again
- Sakers are not the only victims. Ravens, Stepe Eagles, and many other species are killed there on the mid-voltage lines
- Some are eaten by other predators and scavengers. That means the birds we accidentally see are a portion of real problem. Some birds are not killed immediately and fly away to die in distance. So how big is the problem? Somehow we feel that was underestimated.

15 kV 'dangerous' lines

Line poles



Anchor poles



2009-12 line surveys



12-13 May 2009

7 September 2011

8 March 2012

Monkhkhaan-Uulbayan

15 kV

56 km

N poles: 493 line, 35 anchor

111 carcasses

2012 line monitoring



11 May

25 May

04 June

16 June

01 July

20 July

101 Carcasses

- The most dangerous are 15 kV lines. Two types of poles which kill birds are made of concrete and steel. In the old time wooden poles were used, which were much safer.
- How big is the problem. Some ad-hoc researches were conducted by team of Andrew Dixon, financed by Environment Agency Abu Dhabi. 3 days in 3 years and 111 Sakers found dead on a 56 km line. Can we somehow extrapolate this?
- 6 days of one year and 101 Sakers found dead on a 56 km line. Again these data cannot be extrapolated. These show the problem, but one cannot calculate how big that was.

Saker Falcon research and Conservation in Mongolia



- Batbayar Galtbalt¹, Nyambayar Batbayar¹ Andrew Dixon², Lutfor Rahman²,
 - ¹Wildlife Science & Conservation Center
 - ²International Wildlife Consultants



2013-14 line monitoring

- 56 km 15 kV line
- 12 months
- How many dead Sakers were found?



- The study conducted by team under lead of Andrew Dixon and financed by Environment Agency Abu Dhabi had the aim to check the real size of the problem
- The one line choosed for study and experiment
- These are 24/7 killing machines
- The survey was conducted by employed and trained local surveyors from the villages at either end of the **56 km line**, and they conducted daily line surveys on motorbikes logging and photographing all electrocution events and collecting the carcasses of Saker Falcons to be stored in large chest freezers that were provided to them. The trial ran for **12-months** and the field work was completed in August 2014

**Have you ever seen
over 300 Sakers
in one room?**



2013-14 line monitoring



439 surveys

01 April 2013

to

14 August 2014

434 Sakers
carcasses

IAF Statement, 2014

A shocking fate for thousands of endangered falcons

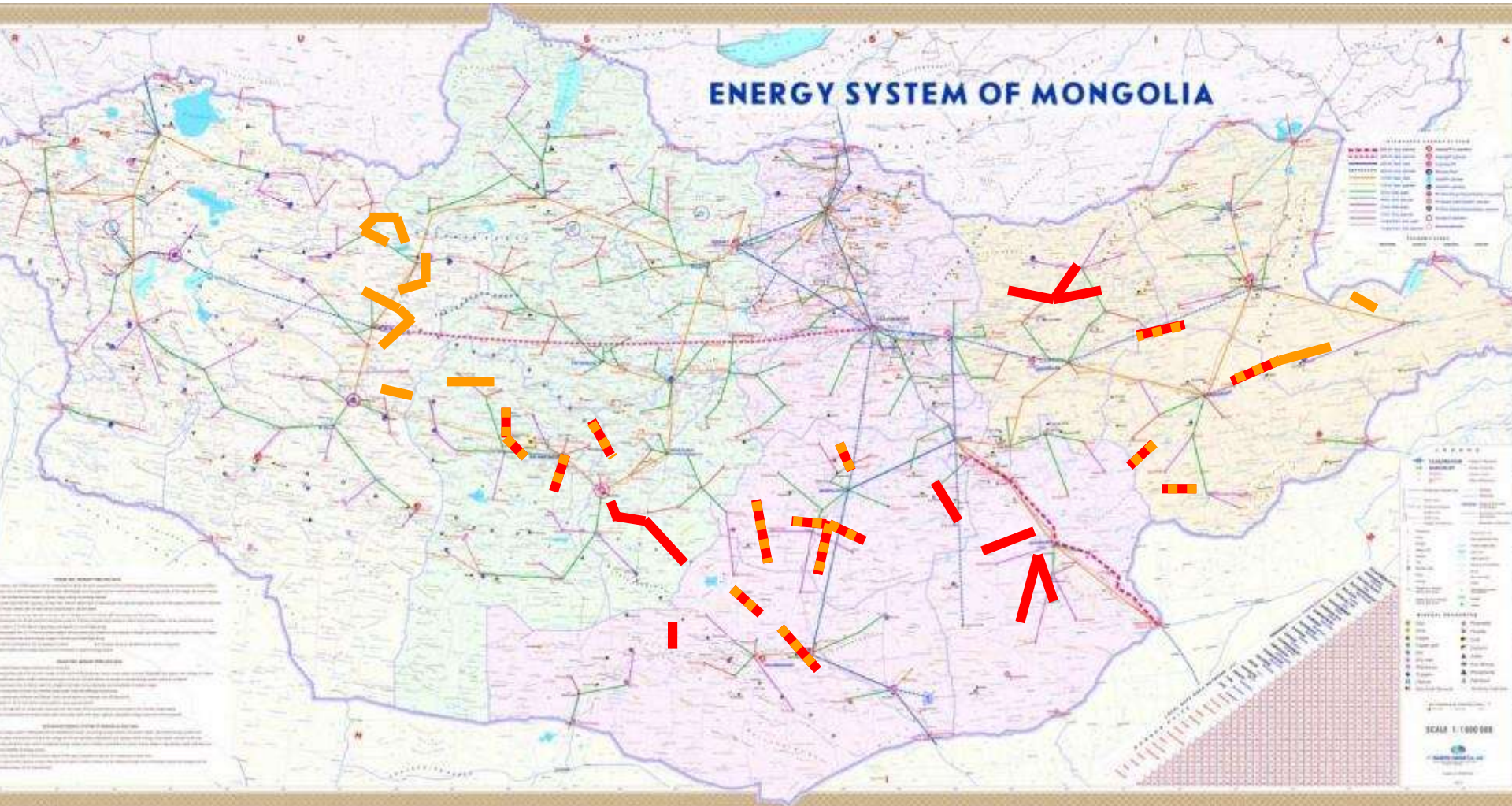
Tens of thousands of birds of prey are electrocuted at power lines worldwide every year. The situation is especially bad in Central Asia where an estimated 4000 globally endangered Saker Falcons are killed each year along with thousands of other birds of prey including eagles. The Saker Falcon is the focus of an extensive programme to provide artificial nesting sites, producing over 2500 young falcons last year, but the number of young produced in this conservation project is dwarfed by those are electrocuted when they perch on poorly designed power poles.

- These are 24/7 killing machines
- Have you ever seen so many Sakers together?
- Estimation of at least 4 000 Sakers killed annually in Mongolia alone

**Saker Falcons were killed
by a 15 kV line
at an annual rate of
55 dead birds per 10 km of line***

*** And that number could still be
underestimated**

How widespread is Saker Falcon electrocution in Mongolia?



What is the number of electrocuted Sakers in Mongolia?

It is estimated that 20 most dangerous lines kill circa 4100 Saker per annum

There is another 50 less dangerous lines, which can kill another 1000 Sakers.

There are also lines which kill a small number of birds only, but they also count.

**The number of electrocuted Saker in Mongolia can be at least
5 000 birds per year!**

- The most dangerous are the lines in the area of high density of rodents. These are the known most dangerous 15 kV lines in Mongolia. There are some 20-25 extremely dangerous lines, followed by another ca 50 of secondary importance
- Estimation of 5 000 Sakers killed annually in Mongolia alone

SAKER ELECTROCUTION IN MONGOLIA

**Widespread
Large numbers**

**Prey abundance
Prey distribution**

**Spatial variation
Temporal variation**

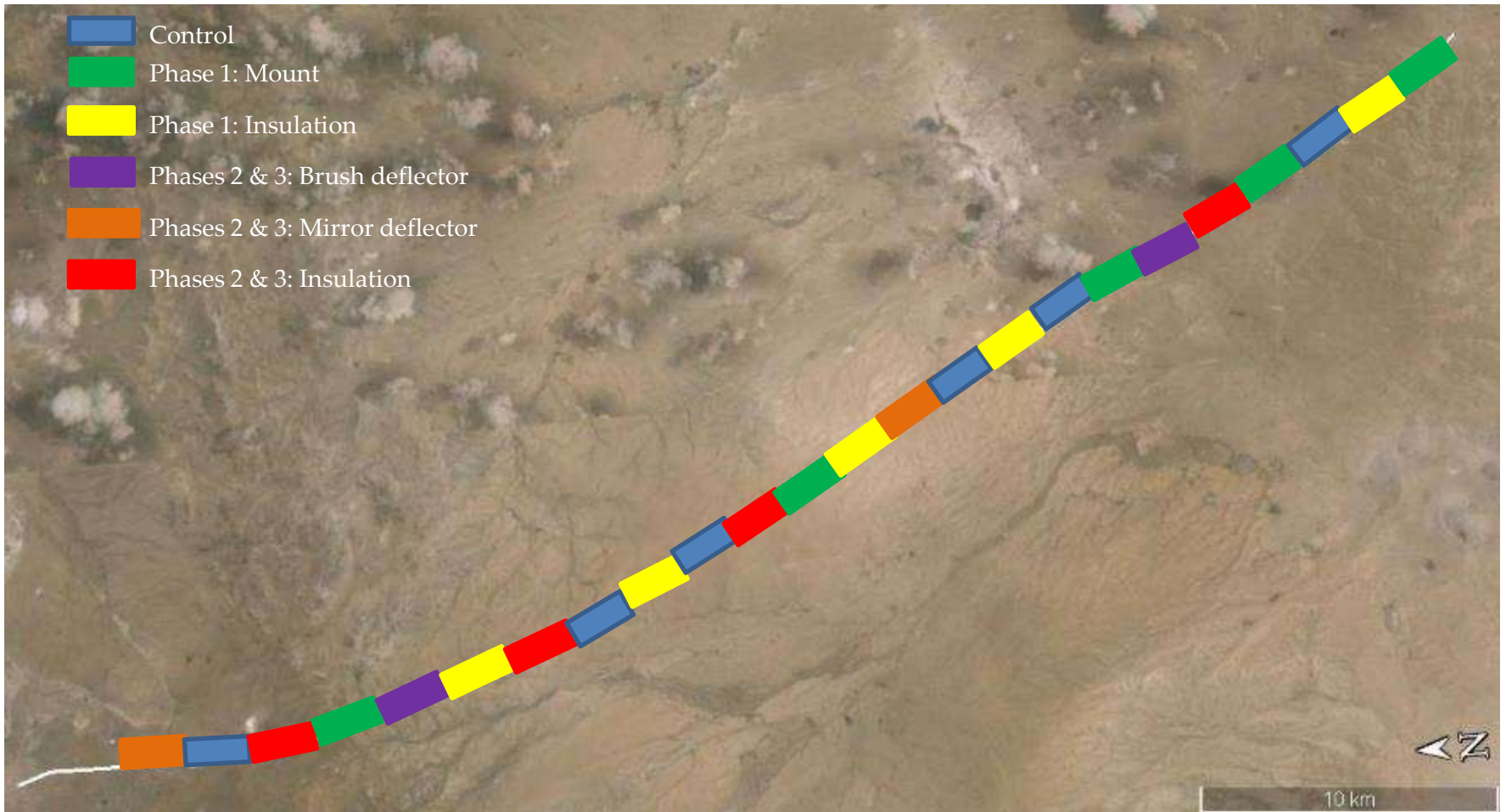
**Predictive models –
Prioritization**



1-year mitigation trial

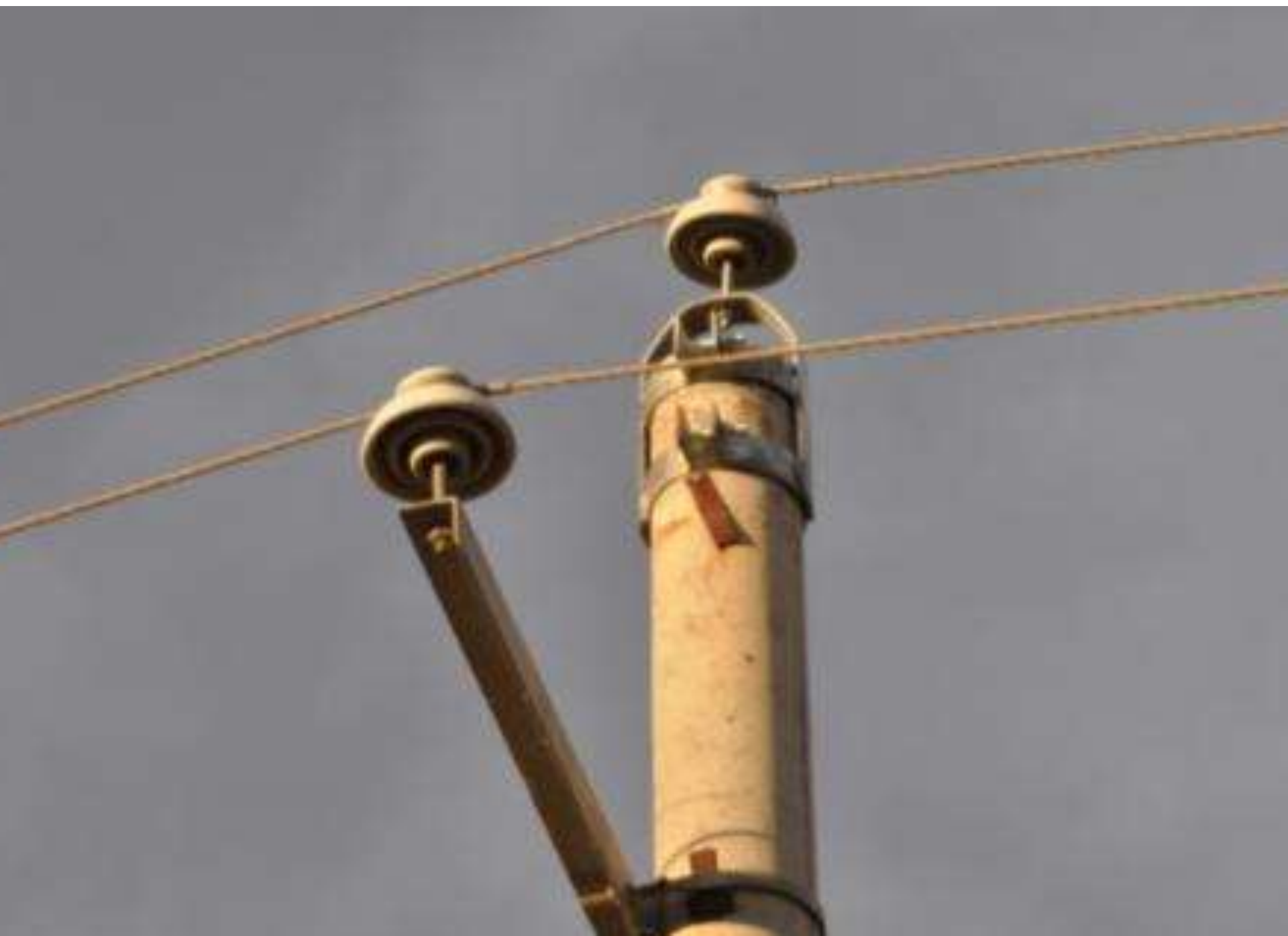
(21 Aug 2013-15 Aug 2014)

Line divided into 24 sections of 14-18 poles















- Each colour part is one experimental part – with a certain type of mitigation or without any for comparison
- Restructuring is one option, but difficult and more expensive
- There are few possible ways of mitigation. One is isolation with the plastic
- Another way - Arch pin – mount
- Mirror rotating deflectors
- Brush deflectors
- The control part was left in original stage. And continued to kill birds

Preliminary results

- There is a difference in efficiency of different mitigation methods
- Some of them need a longer test period, to see how long they are effective
- The results can be used in other countries

SAKER GAP

Flagship proposal No 4

**Install or Retro-fit 1,000,000 New or Existing 'Bird-safe' Electricity Poles
(Phase I)**

Install or Retro-fit 1,000,000 New or Existing 'Bird-safe' Electricity Poles (Phase I)

- The goal of the proposal is to make safe 1 million existing or new electricity poles for the Saker Falcon in priority breeding and wintering areas as well as along migration flyways in the long term (by 2024).
- The objectives of Phase I are to
 - a) identify priority areas for action;
 - b) ensure that new and fully reconstructed electric line sections are safe for birds by design in target areas from 2017 onward;
 - and c) ensure that existing killer poles (e.g. switch, strain and transformer poles) are gradually reduced by 20% by 2024.



Convention on Biological Diversity (CBD)

1. Sustainable use of wildlife resources
2. Fair & equitable distribution of benefits
3. Conservation of biodiversity

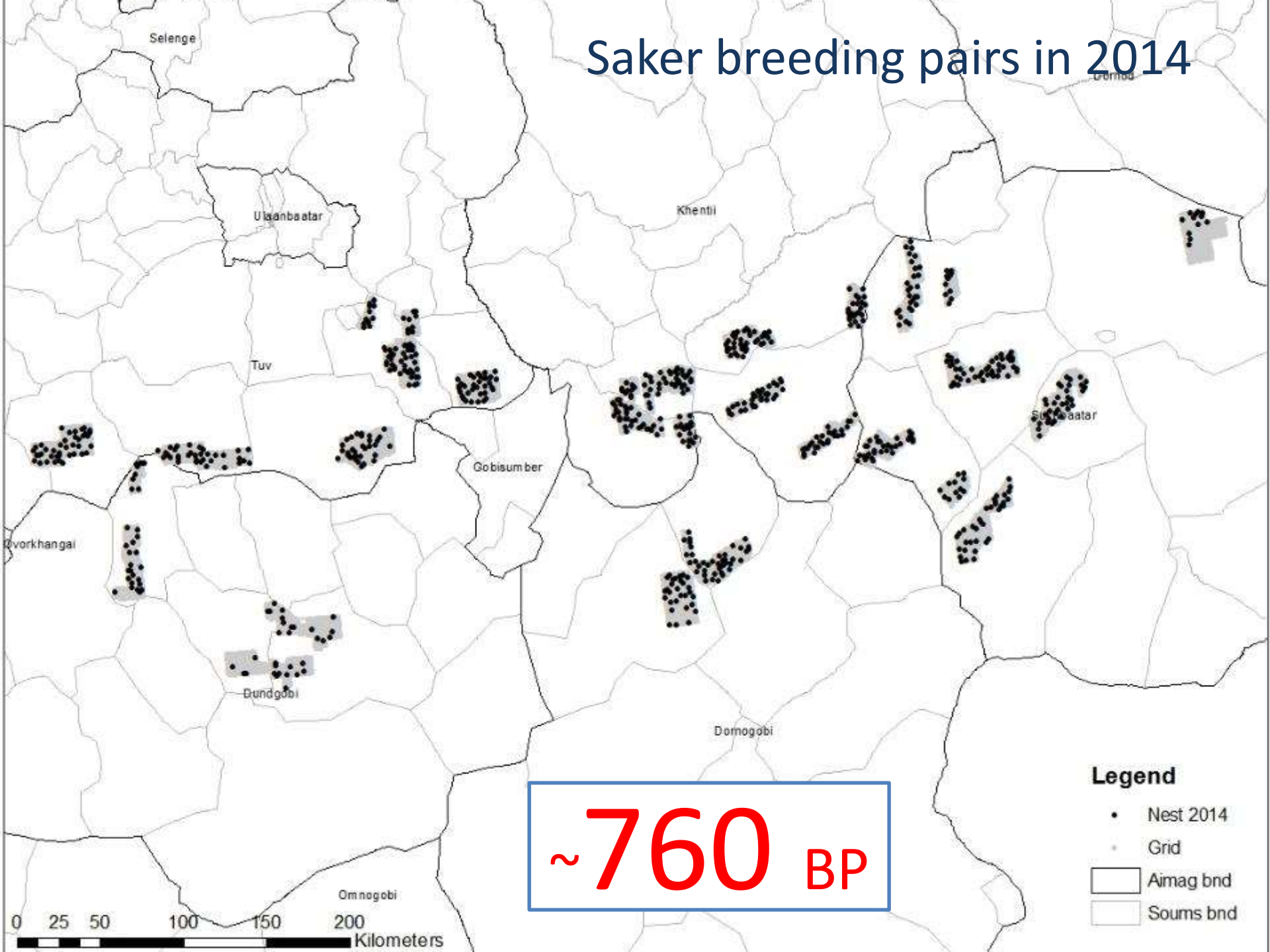
MONGOLIAN PROJECT

1. Managed & monitored population (basis of harvest quota)
2. Regulated & monitored harvest
3. Equitable community benefits (income, employment, education)
4. Conservation benefit (compensate off-take, excess productivity)
5. Sustainable (income from falcon trade)





Saker breeding pairs in 2014



Also in Hungary



20.1°C 2013.06.01 14:17:09



- The project to build 5 000 artificial nests for a new Saker population in Mongolia
- Increasing number of nests used year by year
- Circa 3000 chicks produced in artificial nests in 2014
- Pylons can have also a good role – in Hungary artificial nests are placed there with increasing number of pairs

Mongolian Saker Falcon exports

Year	Saudi Arabia	Kuwait	Qatar	UAE	Syria	USA	Germany	Total
1997	116	29	0	5	0	0	0	150
1998	0	25	0	0	0	0	0	25
1999	0	40	0	21	0	0	0	61
2000	0	50	0	0	0	0	0	50
2001	0	102	0	75	10	0	0	187
2002	87	121	15	0	75	5	15	318
2003	85	171	82	10	54	0	0	402
2004	77	180	49	30	49	0	0	385
2005	151	131	5	0	73	0	0	360
2006	100	41	26	0	0	0	0	167
2007	60	141	40	0	0	0	0	241
2008	30	185	51	0	0	0	0	266
2009	25	151	81	35	0	0	0	292
2010	0	105	88	44	0	0	0	237
Total	731	1472	437	220	261	5	15	3141

Compare the figures for Mongolia

- **the 14 year export quota:
3100 - ca 220 per year**
- **1 year productivity of
artificial nest project – ca
3000 chicks**
- **electrocution per annum
of minimum 5000 Sakers**

- The 14 year export quota for Mongolia (ca 220 per year)
- We are lucky that Mongolian Saker population is very strong, but how long can it resist this hecatombe?

More problems?

- The problem of the new type poles arises in many countries
- They are widely used in China and Central Asia
- They are exported also to Africa

Solutions?

- IAF is actively seeking sponsors for mitigation of power lines in Mongolia and other countries of Central Asia and Africa
- We call other partners to join these efforts
- Funding through sustainable use is a long term solution

Solutions?

IAF seeks partners to support
our resolution to be proposed
to IUCN

Solutions?

- IAF will propose resolution to IUCN asking to introduce rule of allowing only bird-safe poles in new construction.
- Both banks and governments are asked to introduce the necessary rules
- The role of banks in funding investments is crucial – national, global and international, private and state institutions

Banks are usually involved in all infrastructure investments \on the globe, even if it financed by governments, etc.

Some light in the tunnel

- We would like to continue experiments on mitigation. Hungarian Falconry Club will donate another type of insulation covers for testing.
- A few types of mitigation will be tested longer term to estimate the optimal solution

**Peregrine on rubber insulated pole
in Hungary**



Some light in the tunnel

- At the Falconry Festival in Abu Dhabi in 2014 there was a round table discussion on Saker electrocution organised by Environment Agency Abu Dhabi, International Wildlife Consultants and IAF
- IAF discussed the Saker electrocution issue with leaders of falconry clubs of UAE and Qatar

Great news from Mongolia

In September 2015 engineers working in Adaatsaag district have contacted the EAD project team that they will be switching all upright insulators to suspended insulators.

Such a simple conversion will be a cheap and permanent fix for two of the three phases.

**The safe construction will
save thousands of Sakers**





**We do not want
to see such pictures**

5000 such nest erected in Mongolia
We prefer to see those pictures



Latest news !!!!!

The Qatari's have signed a MoU with the Mongolian Ministry of Environment, and under this agreement they will apparent fund the remediation of ca. 20 power lines. The exact number will depend on cost per pole, which in turn depends in mitigation method. If we can switch upright insulators on crossarms to suspended insulators and replace all dangerous insulator mounts on top of the poles with safe mounts, then cost might be relatively cheap and more than 20 lines could be fixed.

In litt from Andrew Dixon

Solution

Saker GAP Objective 2:

- Ensure that where trapping and other forms of taking Saker Falcons from the wild are legal, they are controlled, and sustainable, thereby encouraging population growth and eventual stabilisation.
- **Sustainable and legal use is a key to success of Saker conservation**

Next steps

- Saker population in Mongolia is the healthiest one.
- The real problem is in other countries of its Asiatic range. Killing even a small number of Sakers in Kazakhstan, Russia or China can have a much higher impact on populations.
- We **MUST** prevent the electrocution massacre in all countries of the Saker range.



**Special thanks to
Environmental Agency Abu Dhabi,
Andrew Dixon and International
Wildlife Consultants,
Wildlife Science & Conservation Center
(Mongolia)
Janos Toth, Hungarian Falconers Club**



Thank you for your attention