



# Satellite tracking of a female Great Bustard in Hungary

*Miklós Lóránt, nature conservation warden*

Kiskunság National Park Directorate

**Illmitz, Austria – 2017.03.09.**



# Which type of marking to use?

- Risk of catching wild bird (getting as many information as possible)
- Very few extra energy for the data collection
- Hope to get information about accidental winter migration



**Satelite transmitter**

# Which bird to tag?

- Wild (We want to get information about wild birds)
- Adult (More chance for long term monitoring)
- Female (Easier to catch)
  - Female caught on nest with dummies, in an obviously unsuitable buffer zone



2006.05.11. – catching area







**2006.05.12. 03:26**









**2006.05.12. 03:50**

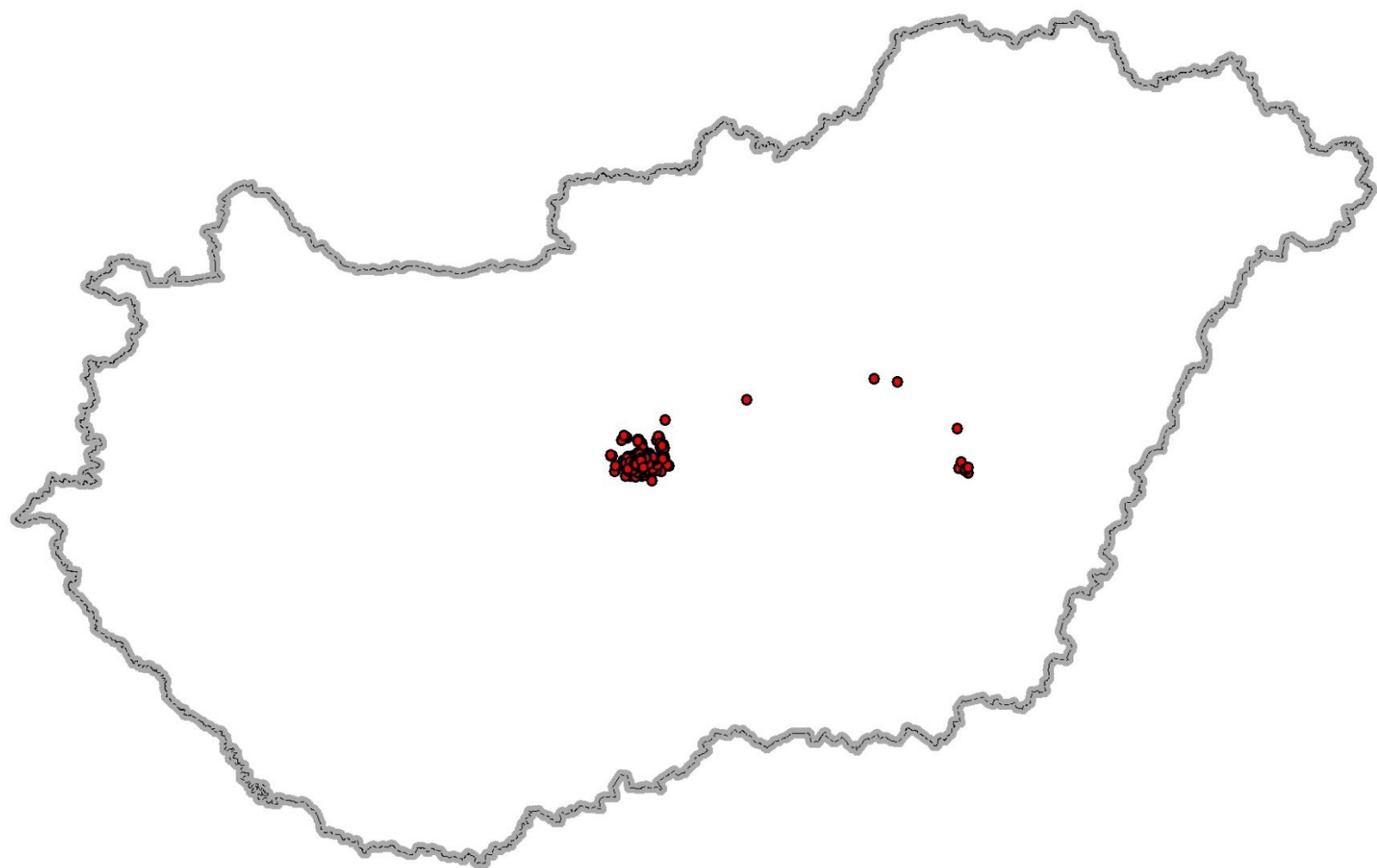


# Some details about the results

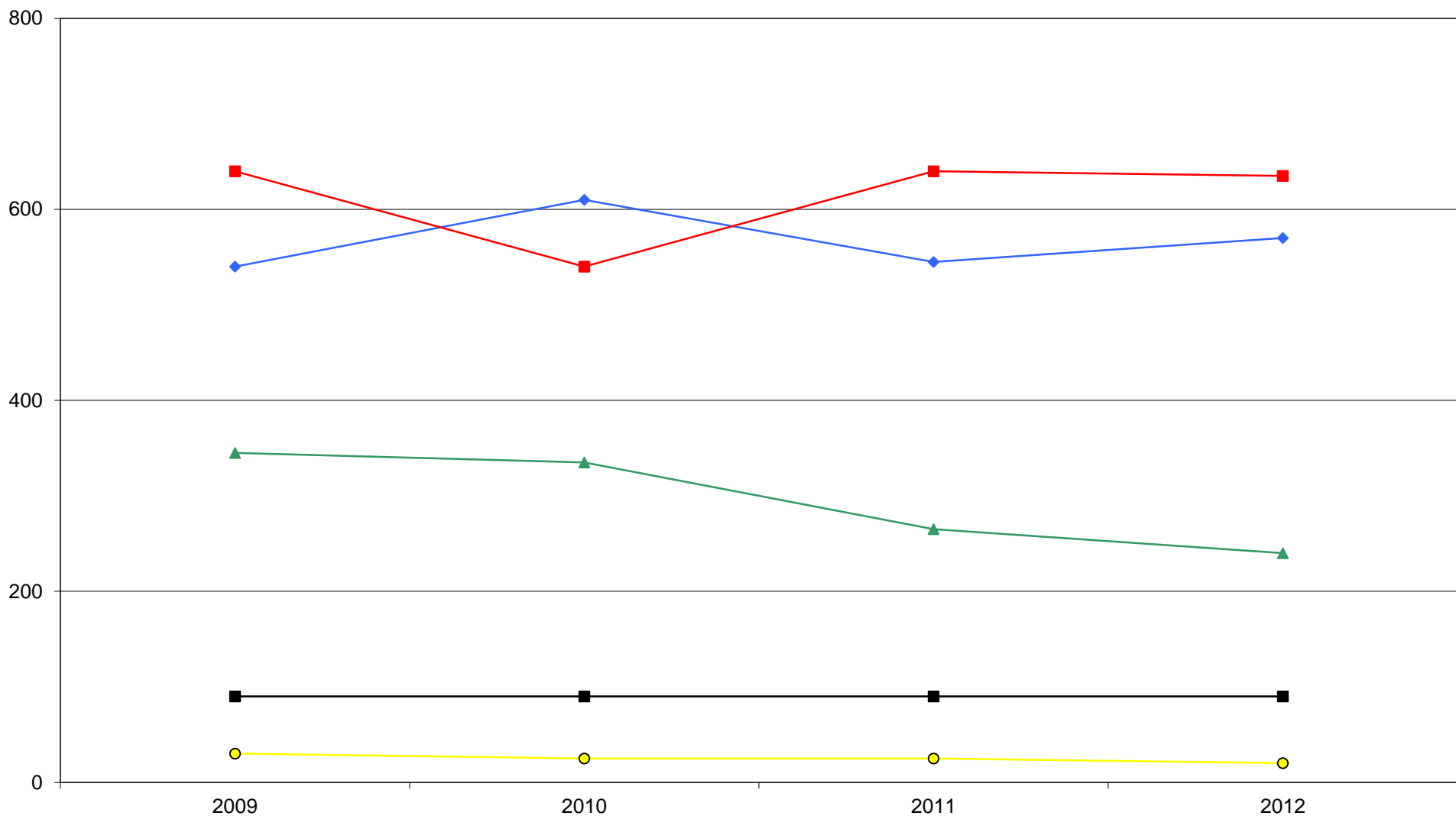
- Tagging: 2006.05.12.
- Last information: 2016.06.18.
- 10 years, 1 month and 6 days
- 3690 days in total!
- 2988 records in total (missing data)
  - 648 records on protected area (21,7%)
  - 2767 records on Natura 2000 area (92,6%)

# Missing data

- Lack of suitable software
- Lack of personnel
  - Needs regular work in office
  - Needs regular work on field
- Long period
  - Battery dies
  - Solar panel worked further on
  - Last period the data collection and transmitting depended on weather





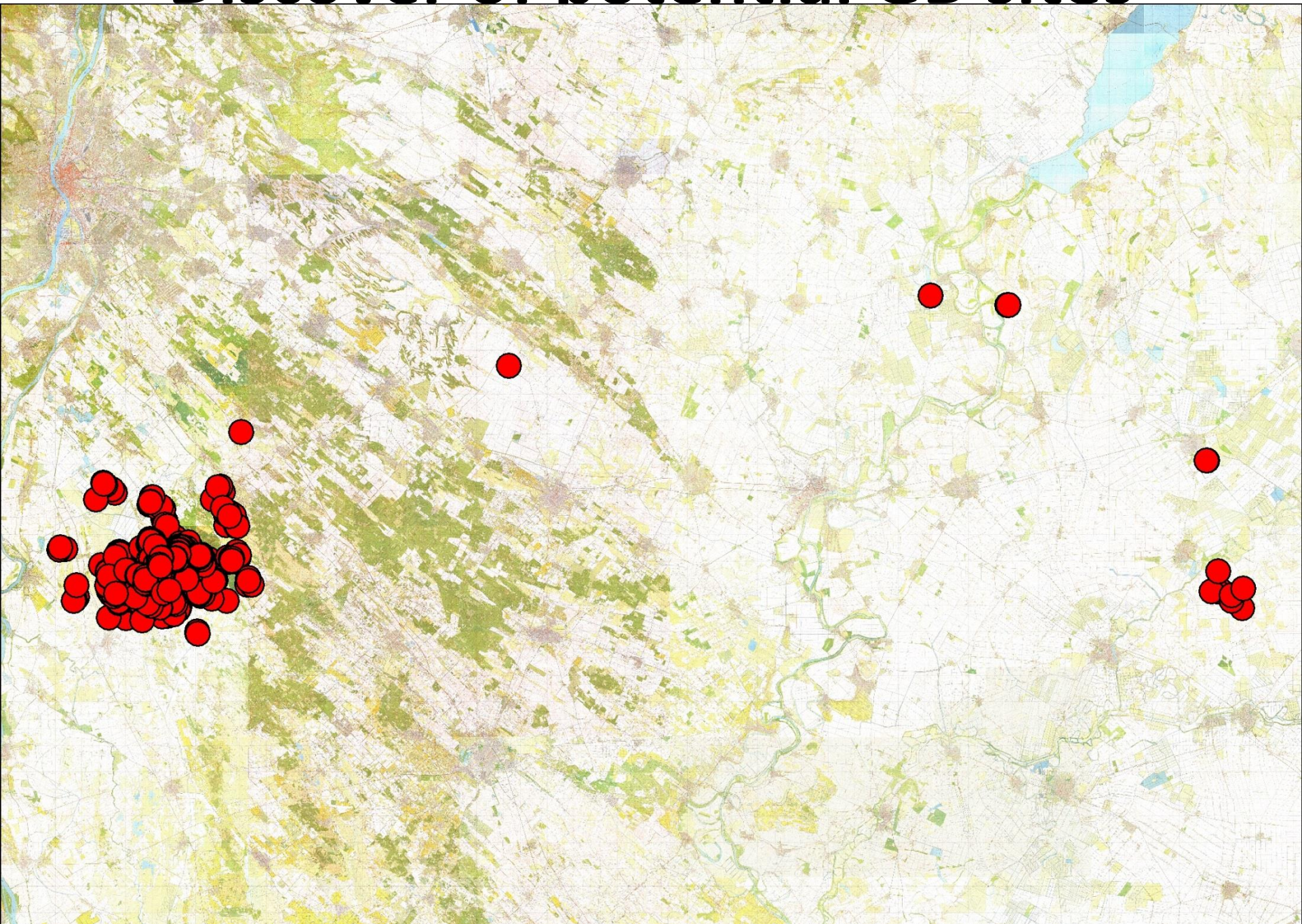


# Only once left the Kiskunság

- 2009.11.17. Kiskuság (missing data)
- 2010.01.09. – 2010.03.23. Túrkeve
- 2010.03.23. Túrkeve (120 km)
- 2010.03.23/24. Kisújszállás (roosting)
- 2010.03.24/25. Tiszagyenda (roosting)
- 2010.03.25. Tiszasüly
- 2010.03.26. Tápiószentmárton
- 2010.03.27. Kakucs/Inárcs



# Discover of potential GB sites

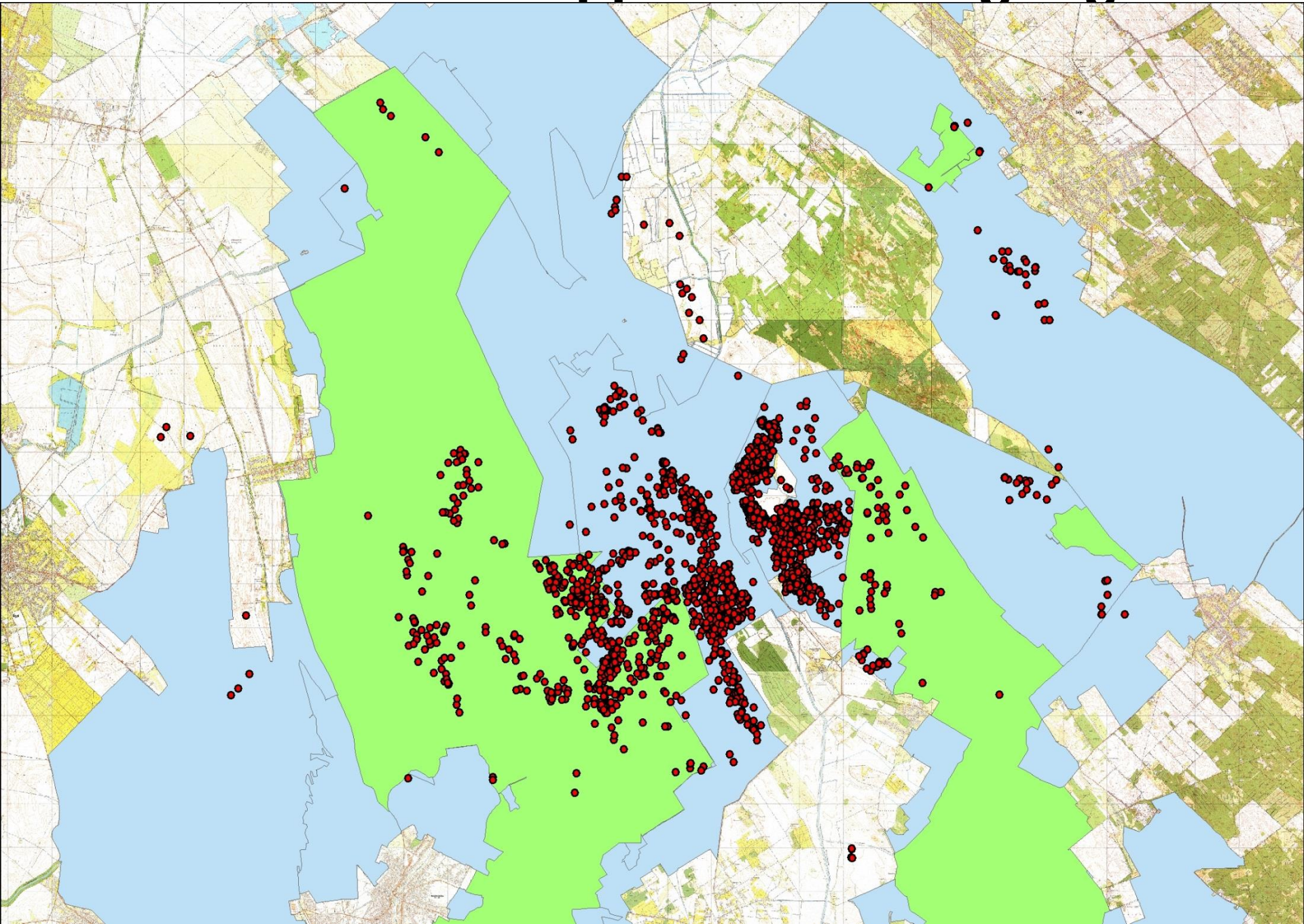








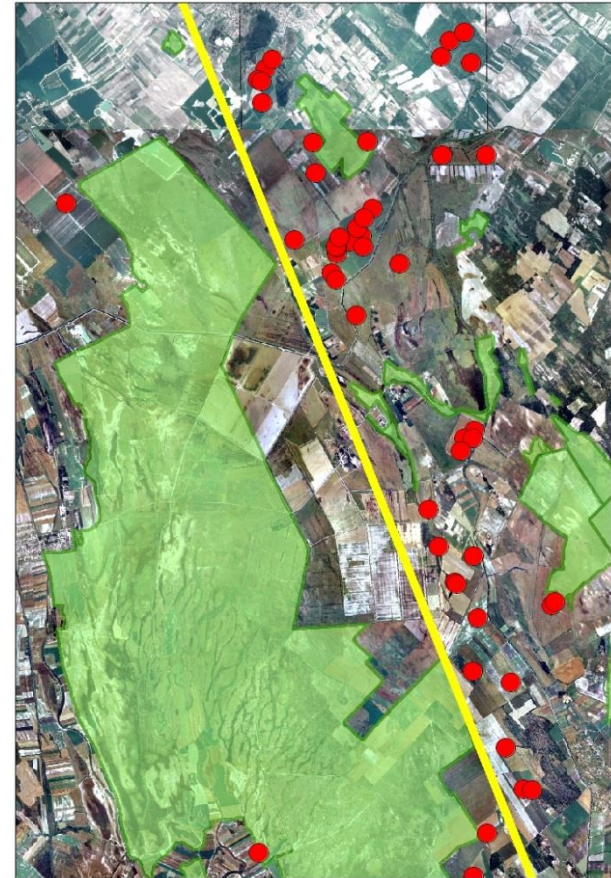
# Situation in the Upper-Kiskunság region





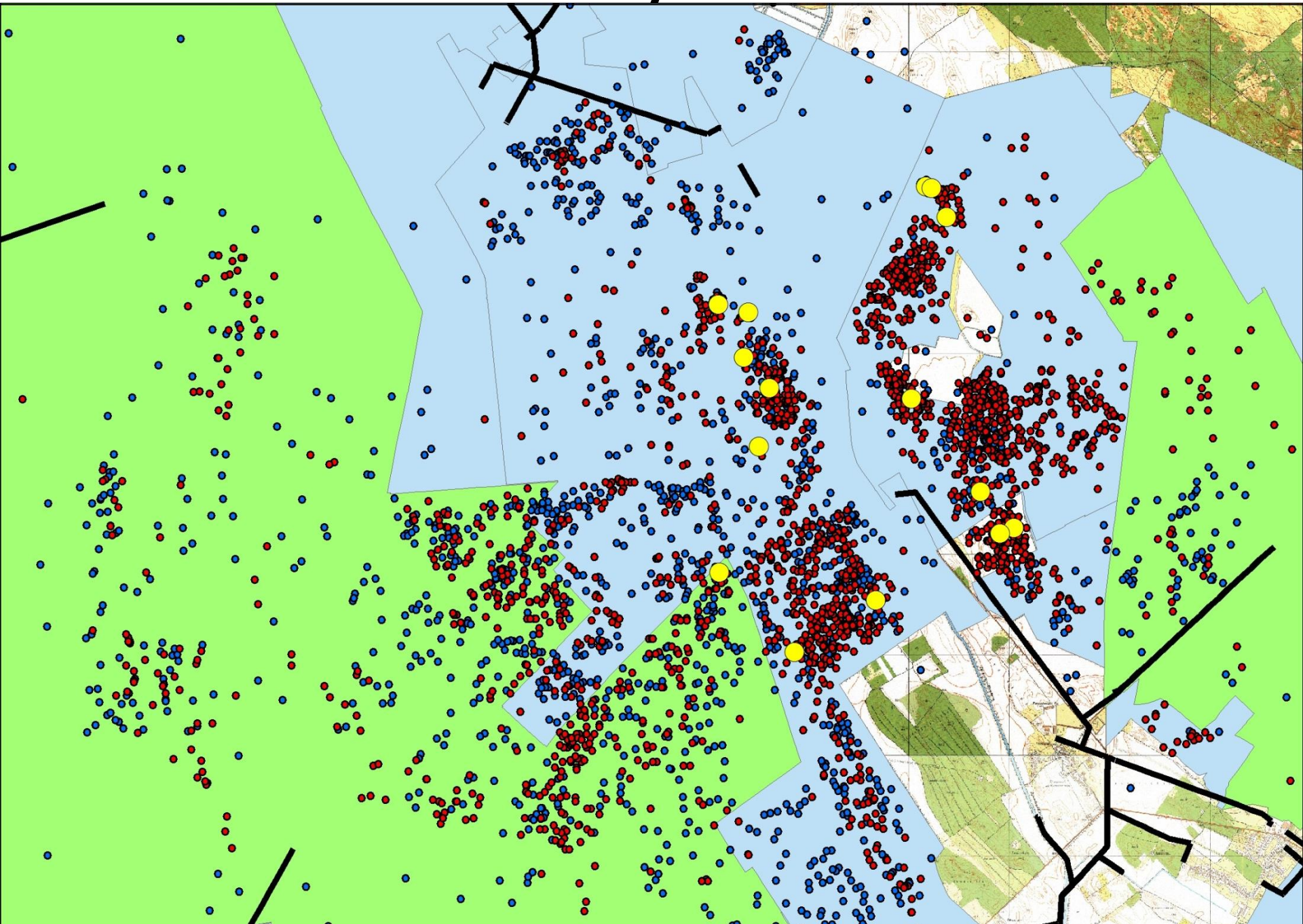
# „Dual theory”

- Separation of displaying and breeding sites
- Different management
- Question of protection
  - Border of National Park
    - Soil quality
    - Observation of birds

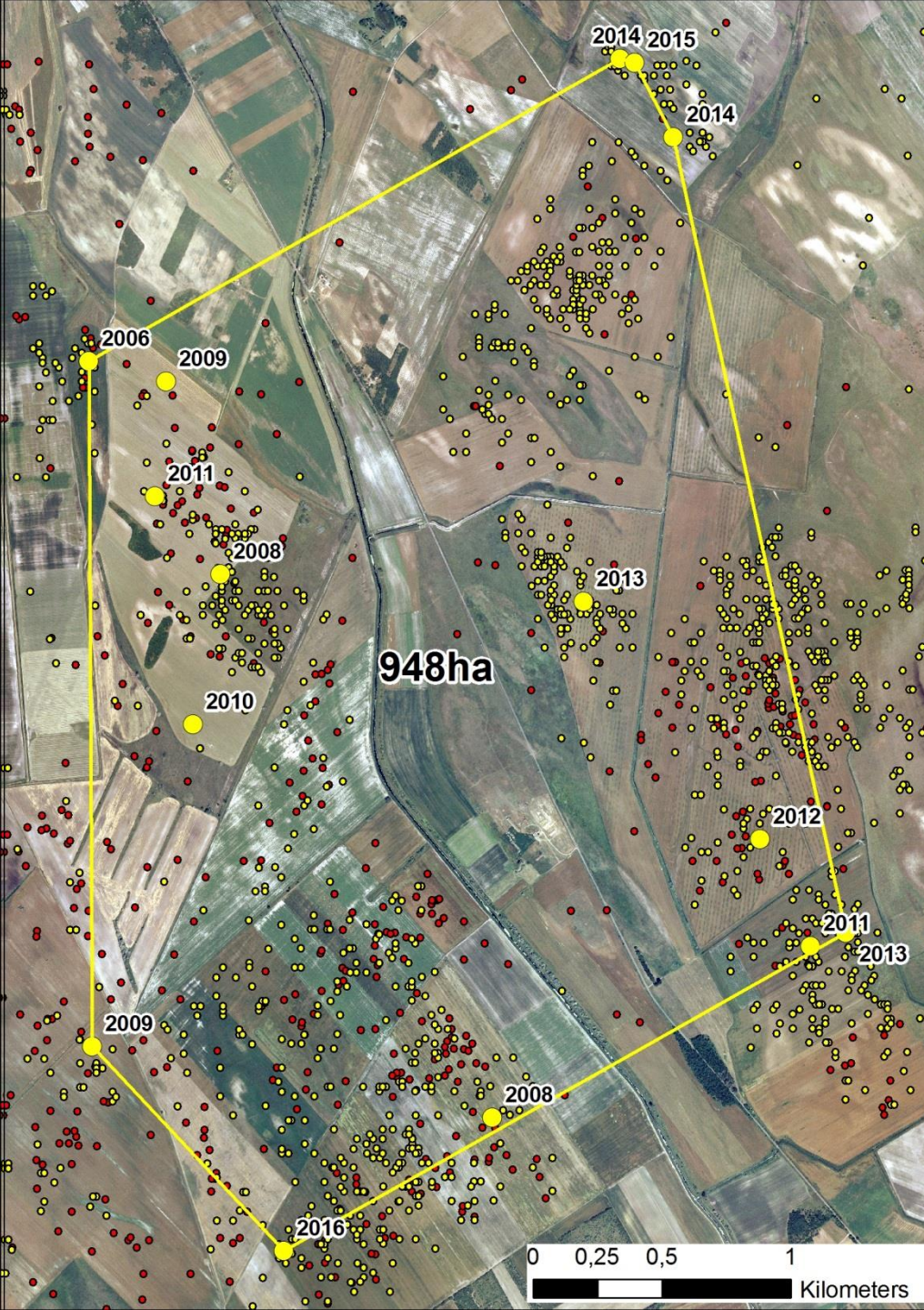




# Identification of key sites to focus on...







- The most frequently used area
- GB observations
- Tagged female
- Nest locations
- Breeding range
- Size of the breeding range

# Breedings of the bird

- A total of 15 nest locations from 10 years (2007. is missing!)
- Only 1 nest (6,7%) within the protected area!
- 4 times „successful” breeding (hatching detected)
- All „successful” breeding from replacement clutches of the given year
- Replacement clutches minimum 6 times (minimum 60%!)
- Minimum twice the chick has not grown up!

# Success of the breedings

• Year	1st	2nd	notes
• 2006	failed		mowing alfalfa
• 2007	missing data	missing data	
• 2008	failed	failed	overgrown veg.
• 2009	failed	<b>hatched</b>	
• 2010	failed	missing data	
• 2011	failed	<b>hatched</b>	
• 2012	failed		predation
• 2013	failed	<b>hatched</b>	overgrown veg.
• 2014	failed	<b>hatched</b>	overgrown veg.
• 2015	failed		
• 2016	failed		



# 2008 - overgrown, dense vegetation





# 2012 - predation





**2013 – E-grass, predation**





**2014 – overgrown, dense vegetation**





**2014 – hatched clutch**





2015 - failed







**2016.06.19. 15:54**

# Tasks to do

- Get missing data if possible
- Analysis of:
  - Pre breeding behaviour
  - Post breeding behaviour
  - Behaviour in case of replacement clutches
- Publish in Aquila





**LIFE GREAT BUSTARD**