



Methods and results of satellite telemetry of Great Bustards in Germany and Russia

MARCUS BORCHERT & HENRIK WATZKE

Society for the Protection of Great Bustard (Germany)

info@grosstrappe.de

www.grosstrappe.de

www.facebook.com/grosstrappe



FÖRDERVEREIN  e.V.
GROSSTRAPPENSCHUTZ



Tracking of Great Bustards

in Germany

- VHF-telemetry
- satellite telemetry

in Russia

- satellite telemetry

Satellite telemetry of Great Bustards in Russia



methods of capture

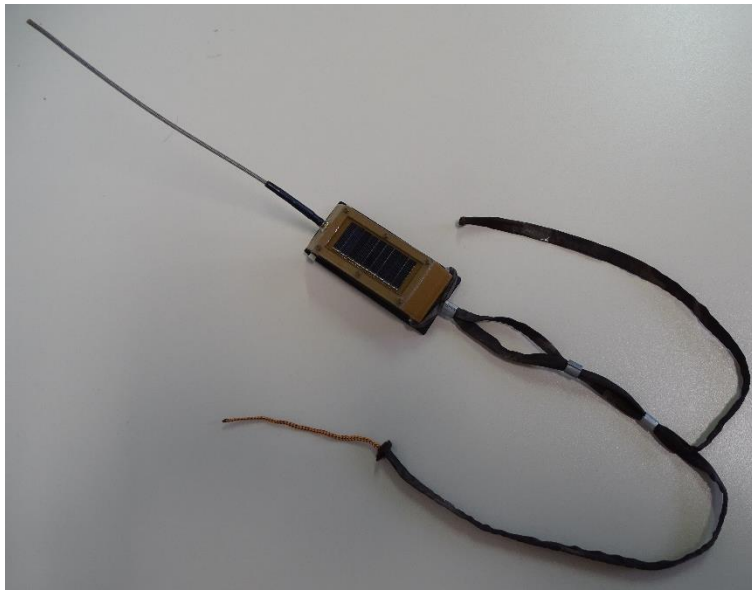
transportable net system (5 x 5 m)
with an automatic firing mechanism
and a radar sensor under the nest



throwing of a ring-mounted net
(diameter of 2,5 m) over a breeding female
from a moving car (in the darkness
in the early morning hours)



Satellite telemetry of Great Bustards in Russia



transmitter



50 g solar-powered PTT from
Microwave Telemetry Inc., USA
(with harness about 70 g)



Satellite telemetry of Great Bustards in Russia



results

Overview of the Great Bustard females fitted with transmitters in 1999 and 2000

Bird No.	Fitting date	Transmitter active
1/99	12.5.1999	138 days to 27.09.1999
2/99	17.5.1999	578 days to 15.12.2000
3/99	4.6.1999	957 days to 16.01.2002
1/00	9.5.2000	610 days to 09.01.2002
2/00	4.6.2000	1,479 days to 22.06.2004
3/00	5.6.2000	49 days to 24.07.2000

Satellite telemetry of Great Bustards in Russia



results

more than 1,000 km in 5 to 9 days

120 to 220 km per day
(max. 325 km)



H. Watzke (2007): Results from satellite telemetry of Great Bustard in the Saratov region of Russia. Bustard Studies 6: 83-98.

Location of all signals received from 6 females fitted with transmitters.



Satellite telemetry of Great Bustards in Germany



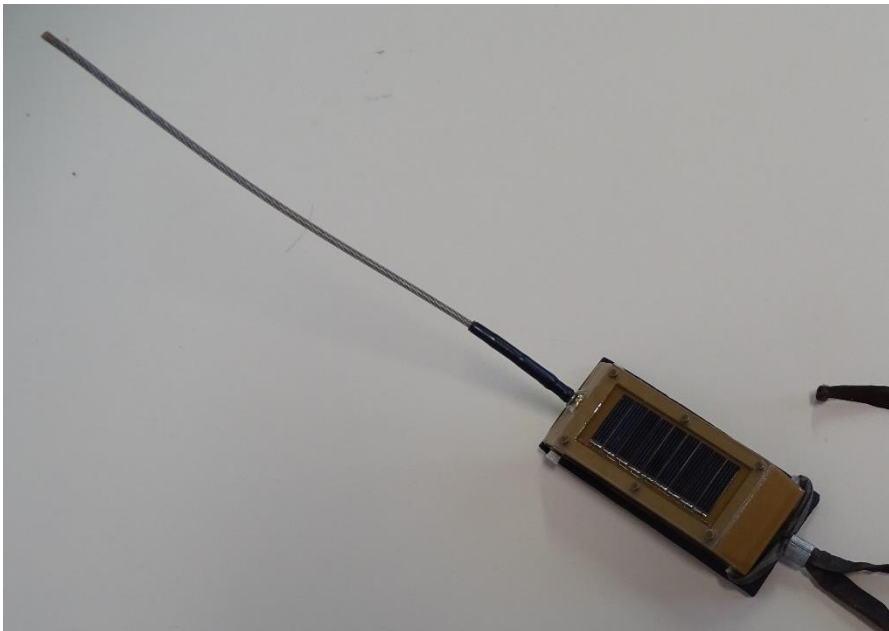
3 females were fitted with satellite transmitters (backpack-harness)

1 female with a solar PTT from Mircrowave

2 females with solar GPS-GSM-Transmitters from e-obs

all females from the release project, but lived already some years in the wild

captured by hand (2) or by ring-mounted net in the night



Satellite telemetry of Great Bustards in Germany



results

Great bustards from the release project did not fly (or had limitations) immediately after fitting a backpack-transmitter. Later they looked a little handicapped.

Because of these limitations they quickly got predated. There are always White-tailed Eagles in the breeding areas.



VHF-telemetry of Great Bustards in Germany



results

Similar experiences we had with backpack VHF-transmitters (from the Spanish project, harness with ribbon tape, 2008 to 2010) on young birds. These birds were fitted with transmitters before release und had a very low survival rate.



VHF-telemetry of Great Bustards in Germany

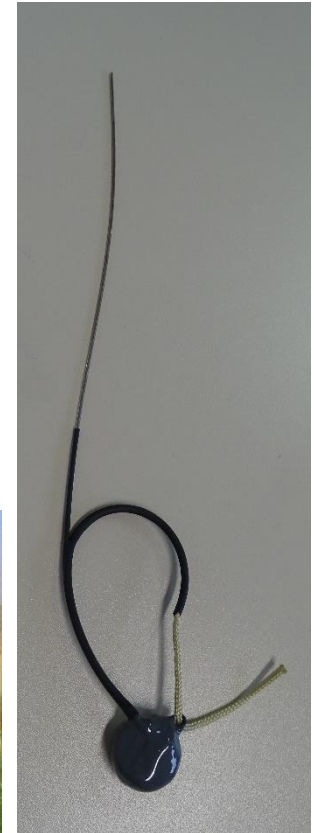


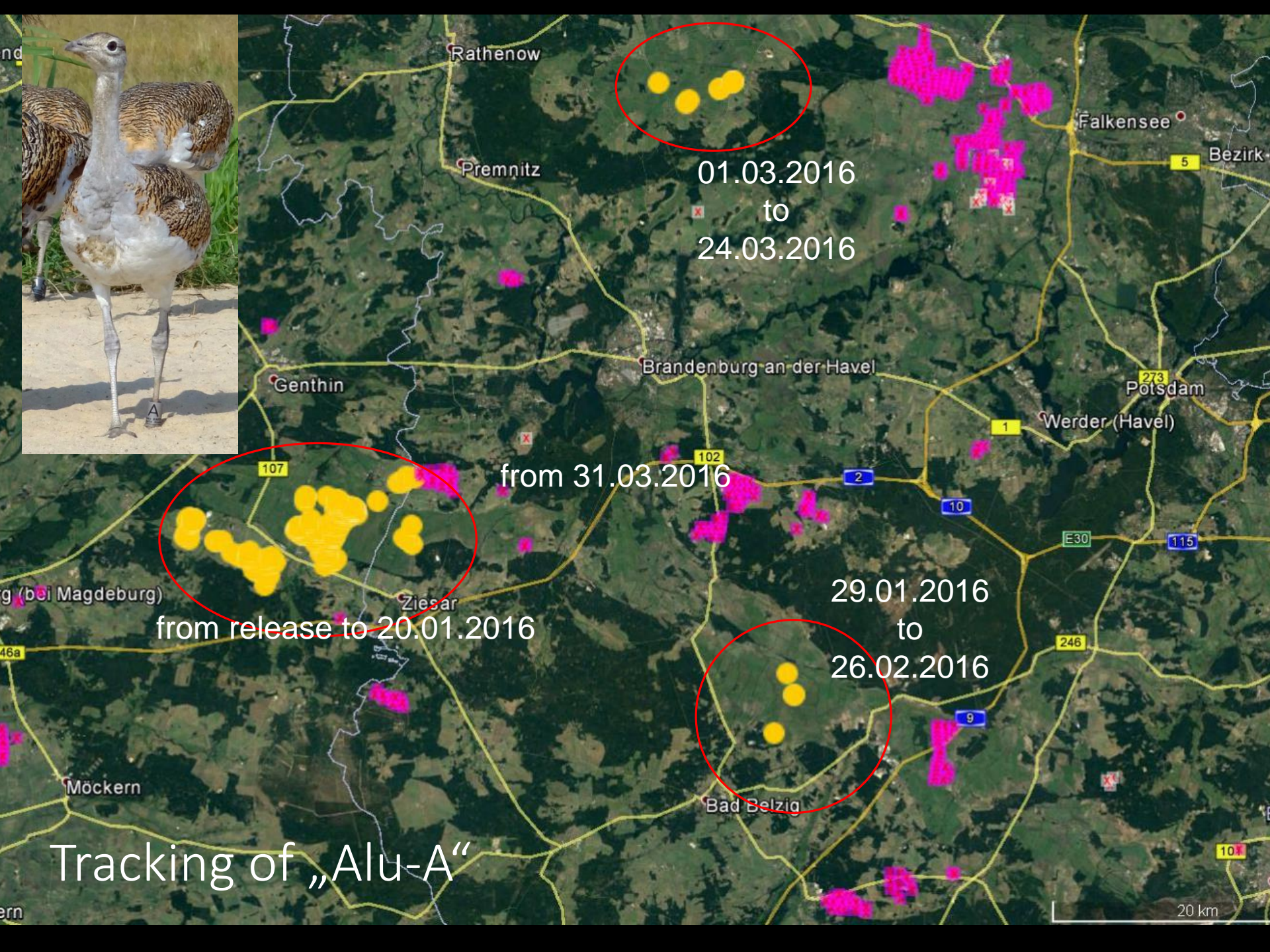
Transmitters used in the release project



tail (feather)
for males
1999 to 2012
Birds lose the feathers
with the transmitters
after three to four
weeks while moulting.

collar
for females
since 1990





01.03.2016
to
24.03.2016

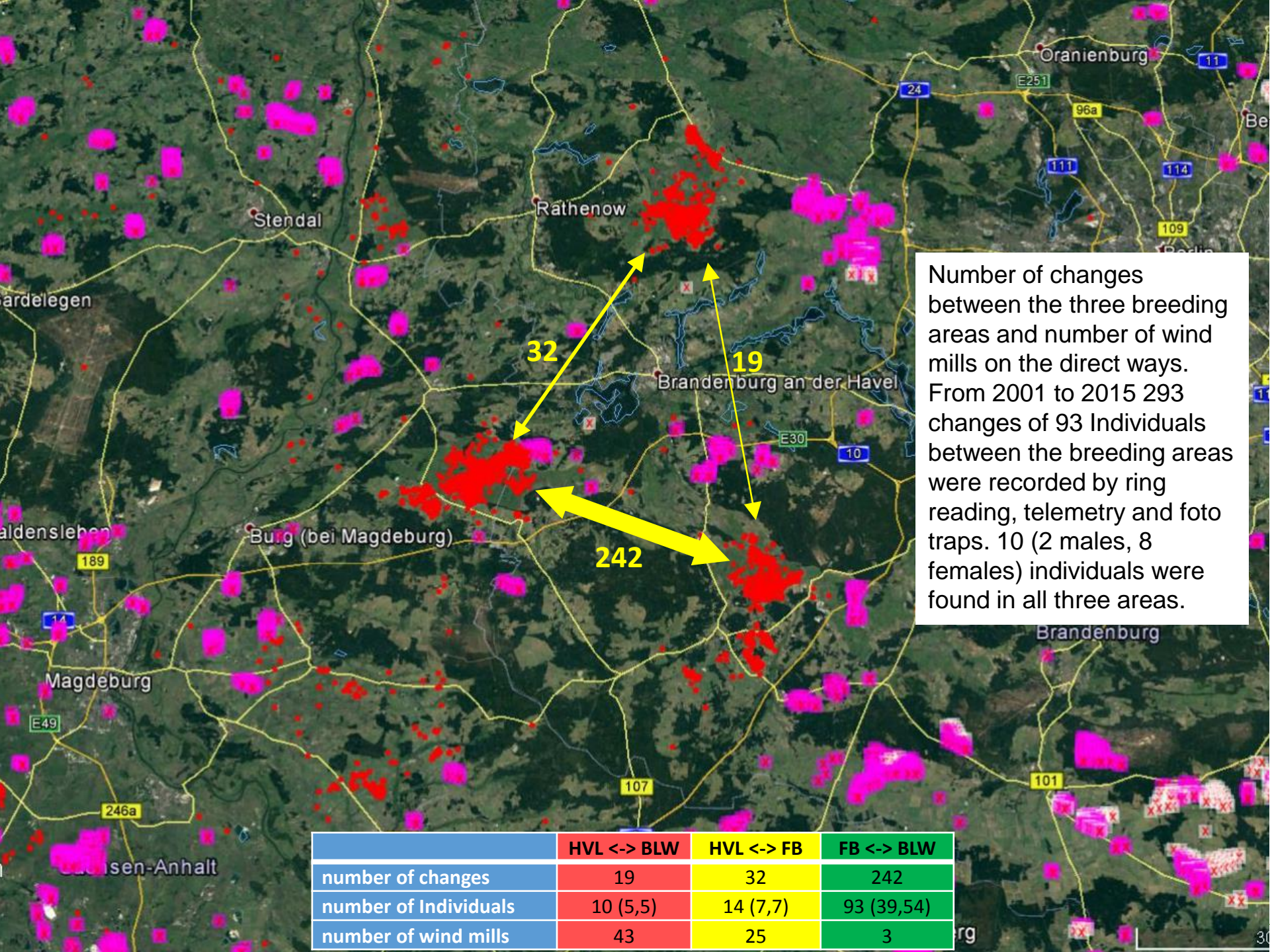
from 31.03.2016

from release to 20.01.2016

29.01.2016
to
26.02.2016

Tracking of „Alu-A“

20 km



Number of changes between the three breeding areas and number of wind mills on the direct ways. From 2001 to 2015 293 changes of 93 Individuals between the breeding areas were recorded by ring reading, telemetry and foto traps. 10 (2 males, 8 females) individuals were found in all three areas.

	HVL <-> BLW	HVL <-> FB	FB <-> BLW
number of changes	19	32	242
number of Individuals	10 (5,5)	14 (7,7)	93 (39,54)
number of wind mills	43	25	3

Thank you for your attention!

