

C8. Reveal threats during migration



2017

Report

Bulgaria, Serbia, Cyprus

and

Israel



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The status of the European Roller in Bulgaria



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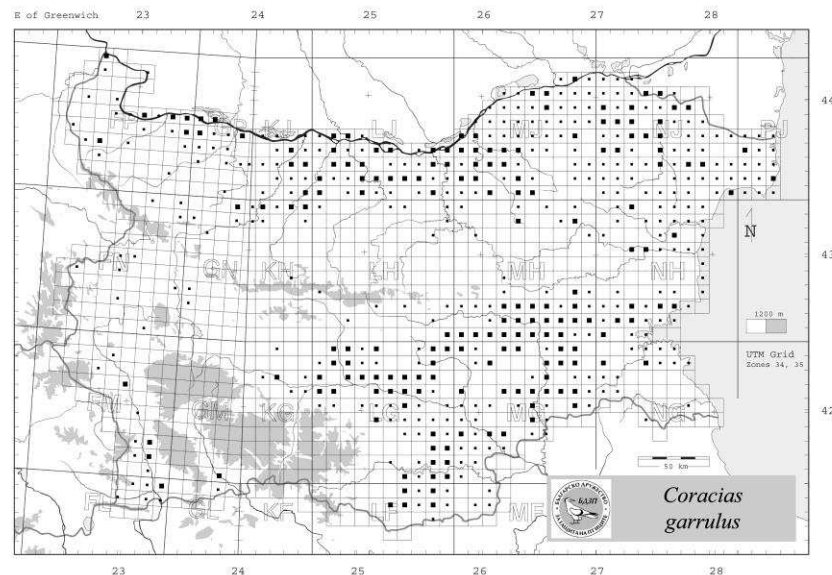
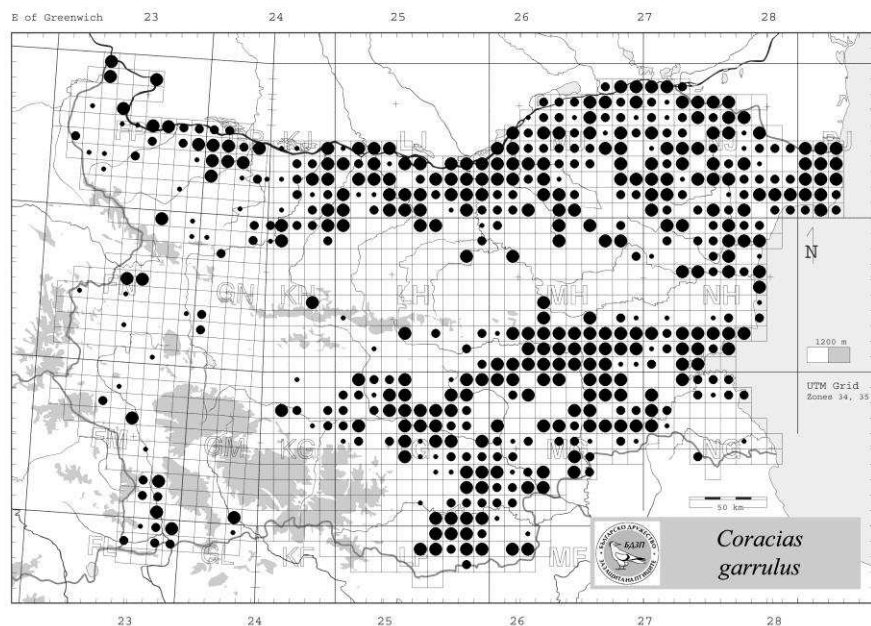
**Petar Iankov, Bulgarian Society for the
Protection of Birds – BirdLife Bulgaria**





Do you have breeding rollers in your country? If not, please specify the year of the last breeding activity.

Yes. Distribution and numbers of the breeding population in Bulgaria (1990-2005) is shown on the maps (Iankov, P. (ed.) 2007. *Atlas of the Breeding Birds in Bulgaria*. Bulgarian Society for the Protection of Birds, Conservation Series, Book 10. Sofia, BSPB, 679 pp.).





Range states	Breeding	Migration	Wintering
Albania	yes	No	no
Armenia	yes	No	no
Austria	yes	Yes	no
Azerbaijan	yes	No	no
Belarus	yes	No	no
Bosnia and Herzegovina	yes	No	no
Bulgaria	yes	Yes	no
Croatia	yes	No	no
Cyprus	yes	Yes	no
Czech Republic	extinct	No	no
Estonia	extinct	No	no
France	yes	Yes	no
Georgia	yes	No	no
Greece	yes	Yes	no
Hungary	yes	Yes	no
Italy	yes	No	no
Latvia	yes	Yes	no
Lithuania	yes	No	no
Macedonia, the former Yugoslav Republic of	yes	No	no
Montenegro	yes	No	no
Moldova	yes	Yes	no
Poland	yes	Yes	no
Portugal	yes	Yes	no
Romania	yes	Yes	no
Russia (European)	yes	No	no
Serbia	yes	Yes	no
Slovakia	yes	Yes	no
Slovenia	extinct	No	no
Spain	yes	Yes	no
Turkey	yes	Yes	no
Ukraine	yes	Yes	no

Please check the table on the left, and update the information if necessary.

No update needed for Bulgaria.

Table 1. European range states of the European Roller. Member states of the EU in bold (BirdLife International 2008).





Country	Breeding pairs.	Quality	Year(s) of the latest estimate	Breeding Population trend in the last 15 years (= 3 generations)	Quality
Albania	10-50	M	2002	decline	P
Armenia	300-650	M	2000-2002	stable	M
Austria	10-18	G	2001-2008	stable	G
Azerbaijan	1000-5000	P	1996-2000	stable	P
Belarus	20-50	M	2008	large decline	M
Bulgaria	2500-5500	M	1990-2005	small increase	M
Croatia	0-5	M	2002	large decline	P
Cyprus	2000-4000	P	1994-2000	small increase	P
Czech Republic	0	G	2000	extinct	
Estonia	1-5	G	2003-2007	moderate decline	M
France	800-1000	M	2007	moderate increase	M
Georgia	present				
Greece	200-300	P	1995-2000	small decline	P
Hungary	1000	G	2007	stable	G
Italy	300-400	P	2003	stable	P
Latvia	20-30	G	2005	large decline	M
Lithuania	35-50	G	2007	large decline	G
Macedonia, the Former Republic of Yugoslav	300-1000	P		moderate decline	P
Moldova	50-80	M		large decline	P
Poland	60-80	G	2007	moderate decline	M
Portugal	80-150	M	2001-2005	moderate decline	P
Romania	4600-6500	P	2002	small decline	P
Russia (European)	6000-6500	P	1990-2000	moderate decline	M
Serbia	70-120	M	2007-2008	small increase	M
Slovakia	1-20	P	2008	large decline	P
Slovenia	0	M	2008	possibly extinct	M
Spain	2000-6000	M	2006	moderate decline	P
Turkey	30 000-60 000	P	2001	moderate decline	P
Ukraine	4000-5000	M	1990-2000	large decline	G
Total EU (27)	13,000 – 25,000			decline	
Total Europe	55 000 – 113 000			decline	

Population size and trend between 2000-2016 in your country. Please check and update the table if necessary.

For the period mentioned in the table correction needed: Bulgaria – 2500-5500 pairs;

The numbers for the period 2000-2016 has not been estimated. Informed guess about the figure is 2500-4000 pairs (some decline suggested).

There will be better estimation after completing the BSPB work on the European Atlas in 2017.

Population size and trend by country (BirdLife International 2008).

Notes: G – Good; M – Medium; P – Poor.



What are the main threats for rollers in your country?

No specific studies, informed guess

- Please list in the order of critical, high, medium.

Critical - a factor causing or likely to cause very rapid declines and/or extinction;

Cr1. Increasing habitat homogeneity (loss of field margins and increased field size);

Cr2. Intensification of crop management, especially use of pesticides (loss of prey);

Cr3. Conversion of permanent grassland to other land use (loss of both habitat and food);

High - a factor causing or likely to cause rapid decline leading to depletion;

H1. Clearing of riverbank trees and riparian forests;

H2. Clearing the solitary trees and groups of trees in open lowland habitats;

Medium - a factor causing or likely to cause relatively slow but significant declines.

M1. Lack of nesting sites in the lowland open habitats;

M2. Roadkills;

- Please list any long term threats that have no solution yet? **Cr1., Cr2., Cr3., H2., M2.**
- Please list any threats that started fairly recently? **Cr1., Cr3.**
- Please list any threats that have been solved/or gotten better since the last ISAP (2008). **M1.**



Have there been any changes in your country regarding the policies and legislations relevant to the management of the species? What percentage of the breeding territories are protected?

- No significant changes regarding the policies and legislation relevant to the management of the species, BUT: 1) designation of protected areas under the national legislation virtually halted, and 2) process of development and implementation of Management Plans for the SPAs virtually not started yet;
- About 25-30% of the breeding territories are protected, mainly as SPAs.



What is the main goal in your country regarding the roller population?

- Halting the probable (slight?, moderate?) decline and stabilizing the breeding population (short-term);
- Increasing the breeding population and downlist the species from the National Red Data Book.



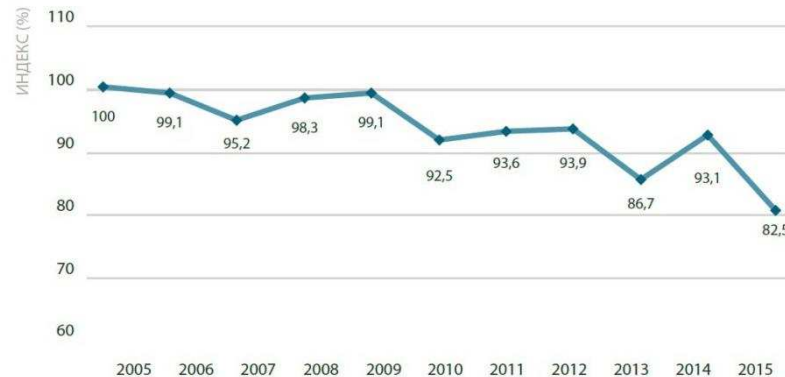
Please list the recent conservation activities (national species action plans, monitoring programmes, habitat restorations, research programmes) that are relevant to the species within your country.

- **Virtually no recent direct conservation activities for the species;**
- **Exception – very limited nest box scheme (BSPB);**
- **A number of indirect measures, mainly on habitat level (see below on slide 11).**





Please list any new scientific findings that could affect the conservation of the species.



The overall trend of the index of the birds in agriculture lands is negative: -13% during 2005-2014, and -18% during 2005-2015 (Hristov, I. 2015. *Common birds in Bulgaria: trends for the period 2005 – 2015. Bulgarian Society for the Protection of Birds, Conservation Series, Book 32, BSPB, Sofia, 29 pp.*) (No specific data about the Roller in the results of the CBM scheme in Bulgaria).



Please explain your monitoring methods.

- **Standard CBM scheme methods** (Hristov, I. 2015. *Common birds in Bulgaria: trends for the period 2005 – 2015. Bulgarian Society for the Protection of Birds, Conservation Series, Book 32, BSPB, Sofia, 29 pp.*);
- **Checking known nest locations during the monitoring of some IBAs.**



Please list all the goals and actions from the last ISAP (2008) that are now considered complete.

You can use the tables on pages 20-26 of the 2008 ISAP as a baseline:

http://ec.europa.eu/environment/nature/conservation/wildbirds/action_plans/docs/coracias_garrulus_garrulus.pdf

- 1.1.2 Legally protect under national and/or international (e.g. Natura 2000) legislation the priority areas;
- 1.2.3. Define priority areas for Roller conservation;
- 2.1.1 Promote habitat heterogeneity through e.g. agro environmental schemes; (partly)
- 2.1.2 Promote legal restrictions to prevent the conversion of permanent grasslands to other land use; (partly)
- 2.1.3 Promote grazing livestock practices and hay mowing on meadows and grasslands by increasing the economic viability of livestock farming in high priority Roller areas through agro-environmental schemes or other rural development measures; (in some IBAs)
- 2.1.9 Ensure that cross-compliance requirements are strictly adhered to; especially avoid afforestation of pastures and other permanent grasslands; (partly)
- 2.2.1 Ensure that old cavity trees are not cut by forestry operations; (at initial stage)
- 2.2.2 Conserve riverbank trees and riparian forests as protected habitat types and features of the landscape; (at initial stage)
- 2.2.6 Install nest boxes including in areas with healthy populations but with likely shortage of nest sites. (at initial stage)



Please list new objectives that should be incorporated in the new ISAP.

- Clarify and monitor the current population status and trend of the species (in Bulgaria);
- Improve the current subsidies scheme of the EU CAP concerning mechanisms, leading to mass scale ploughing up the grassland lands and destruction of the Roller habitat in Bulgaria;
- Improve the current EU policies and mechanisms concerning pesticide use;
- Use EU mechanisms to increase heterogeneity in Roller habitats (in Bulgaria).



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Thank you!





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The status of the European Roller in Serbia and the conservation activities in Vojvodina province

Szekeres Ottó,
Riparia Association of Environmentalists
2017



Range states	Breeding	Migration	Wintering
Albania	yes	No	no
Armenia	yes	No	no
Austria	yes	Yes	no
Azerbaijan	yes	No	no
Belarus	yes	No	no
Bosnia and Herzegovina	yes	No	no
Bulgaria	yes	Yes	no
Croatia	yes	No	no
Cyprus	yes	Yes	no
Czech Republic	extinct	No	no
Estonia	extinct	No	no
France	yes	Yes	no
Georgia	yes	No	no
Greece	yes	Yes	no
Hungary	yes	Yes	no
Italy	yes	No	no
Latvia	yes	Yes	no
Lithuania	yes	No	no
Macedonia, the former Yugoslav Republic of	yes	No	no
Montenegro	yes	No	no
Moldova	yes	Yes	no
Poland	yes	Yes	no
Portugal	yes	Yes	no
Romania	yes	Yes	no
Russia (European)	yes	No	no
Serbia	yes	Yes	no
Slovakia	yes	Yes	no
Slovenia	extinct	No	no
Spain	yes	Yes	no
Turkey	yes	Yes	no
Ukraine	yes	Yes	no

Table 1. European range states of the European Roller. Member states of the EU in bold (BirdLife International 2008).

In Serbia the european roller (Coracias garrulus) is a regular breeding species.

- The table is accurate regarding Serbia.



Country	Breeding pairs.	Quality	Year(s) of the latest estimate	Breeding Population trend in the last 15 years (= 3 generations)	Quality
Albania	10-50	M	2002	decline	P
Armenia	300-650	M	2000-2002	stable	M
Austria	10-18	G	2001-2008	stable	G
Azerbaijan	1000-5000	P	1996-2000	stable	P
Belarus	20-50	M	2008	large decline	M
Bulgaria	2.5-5.5	M	1990-2005	small increase	M
Croatia	0-5	M	2002	large decline	P
Cyprus	2000-4000	P	1994-2000	small increase	P
Czech Republic	0	G	2000	extinct	
Estonia	1-5	G	2003-2007	moderate decline	M
France	800-1000	M	2007	moderate increase	M
Georgia	present				
Greece	200-300	P	1995-2000	small decline	P
Hungary	1000	G	2007	stable	G
Italy	300-400	P	2003	stable	P
Latvia	20-30	G	2005	large decline	M
Lithuania	35-50	G	2007	large decline	G
Macedonia, the Former Republic of Yugoslav	300-1000	P		moderate decline	P
Moldova	50-80	M		large decline	P
Poland	60-80	G	2007	moderate decline	M
Portugal	80-150	M	2001-2005	moderate decline	P
Romania	4600-6500	P	2002	small decline	P
Russia (European)	6000-6500	P	1990-2000	moderate decline	M
Serbia	230-270	G,M	2016	small increase	G,M
Slovakia	1-20	P	2008	large decline	P
Slovenia	0	M	2008	possibly extinct	M
Spain	2000-6000	M	2006	moderate decline	P
Turkey	30 000-60 000	P	2001	moderate decline	P
Ukraine	4000-5000	M	1990-2000	large decline	G
Total EU (27)	13 000 – 25 000			decline	

Population size and trend between 2000-2016 in your country. Please check and update the table if necessary.

*Population size and trend by country (BirdLife International 2008).
Notes: G – Good; M – Medium; P – Poor.*



What are the main threats for rollers in your country?

- Critical: a) the loss of the natural habitats; b) the agriculture is getting more and more intensive; c) the lack of the natural breeding cavities d) lack of old softwood trees.
- High: decrease of food supply (less and less natural possibilities for the rollers to find food)
- Medium: a) hunting; b) illegal bird trading; c) poisoning; d) electrocution e) road kills.
- Long term threats: the loss of the habitat is still a very big problem, for which we still not have a solution.
- The high increase of the agricultural activities have just recently emerged, for which we also do not have a solution.
- Nothing better than in 2008

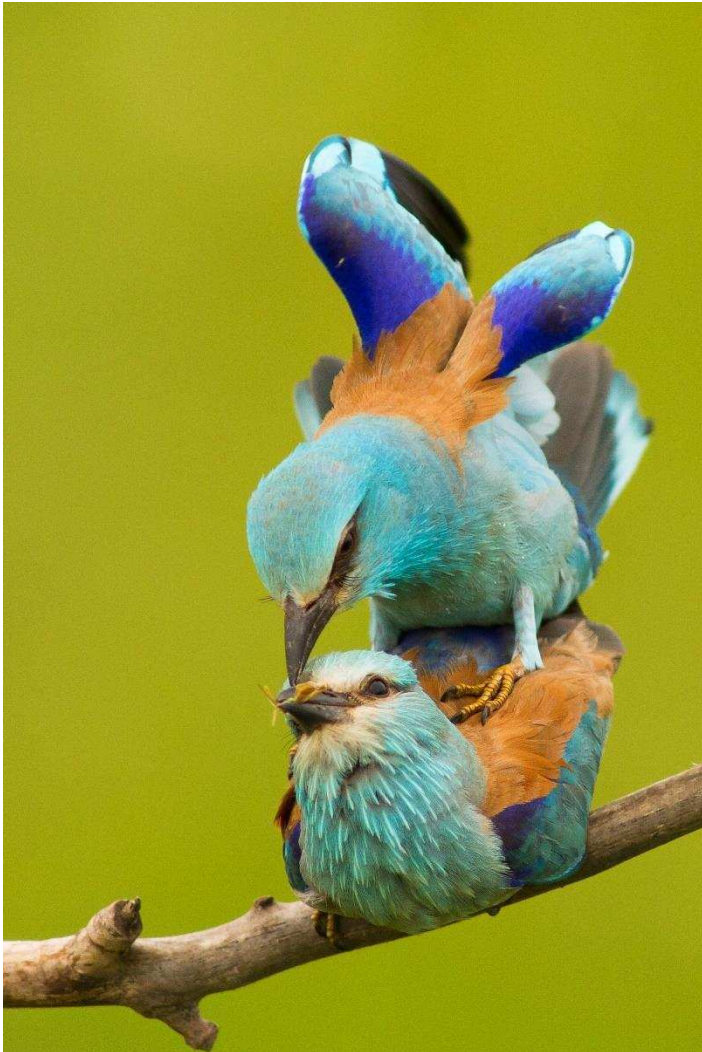


Have there been any changes in your country regarding the policies and legislations relevant to the management of the species? What percentage of the breeding territories are protected?

- The European roller is a strictly protected species in Serbia
- About 25% of the breeding territories are protected



What is the main goal in your country regarding the roller population?



- The main goal in Serbia regarding the roller is to increase the population, and the increase of the breeding area.



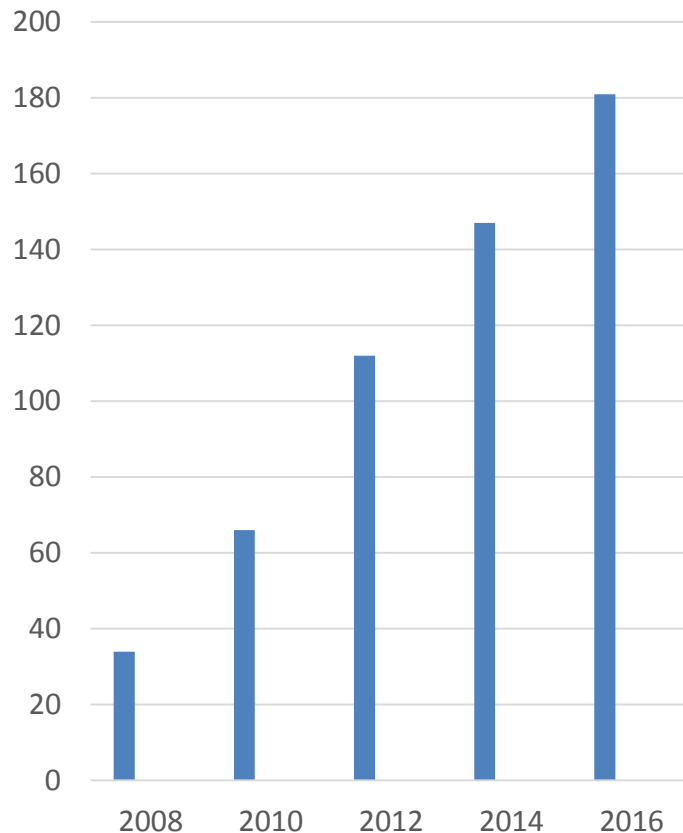
Please list the recent conservation activities (national species action plans, monitoring programmes, habitat restorations, research programmes) that are relevant to the species within your country.

- Recent conservation activities in Vojvodina:
 - A) installing artificial nestboxes
 - B) education
 - C) increasing the protected areas
 - D) restoring the breeding areas of the roller
 - E) monitoring programs
- Activities started in 2003, when the breeding population was under 20 pairs



RESULTS

Breeding pairs in artificial nest boxes in Vojvodina



- Average clutch size in nestboxes: 4,0
- Avg. 3,7 chicks fledged out of nestboxes (calculated from the successful pairs)
- 91% of the breeding pairs were successful
- Over 85% of the chicks, 223 Ad birds ringed
- Colour-ringing since 2010



Please list any new scientific findings that could affect the conservation of the species.

- The future increasing of the breeding area is possible with installing nestboxes not far (10-20 km) from the breeding area borders, because the young birds are preferring the nestboxes near their hatching area.



Please explain your monitoring methods.

- Our monitoring methods started with the installing and controlling of the artificial nestboxes.
- We monitor the breeding success.
- We try to ring as many chicks as we can and also trying to ring the adult breeding rollers.
- Since 2010 we also use colored rings.
- Since 2012 regional groups (NGO s) are working on the conservation, and monitoring programs, but we put all the data in a unified database.
- We are trying to put on maps all the breeding pairs.



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Thank you.

European Roller – status in central Serbia (South of Sava and Danube)

Dimitrije Radišić

Bird Protection and Study Society of Serbia

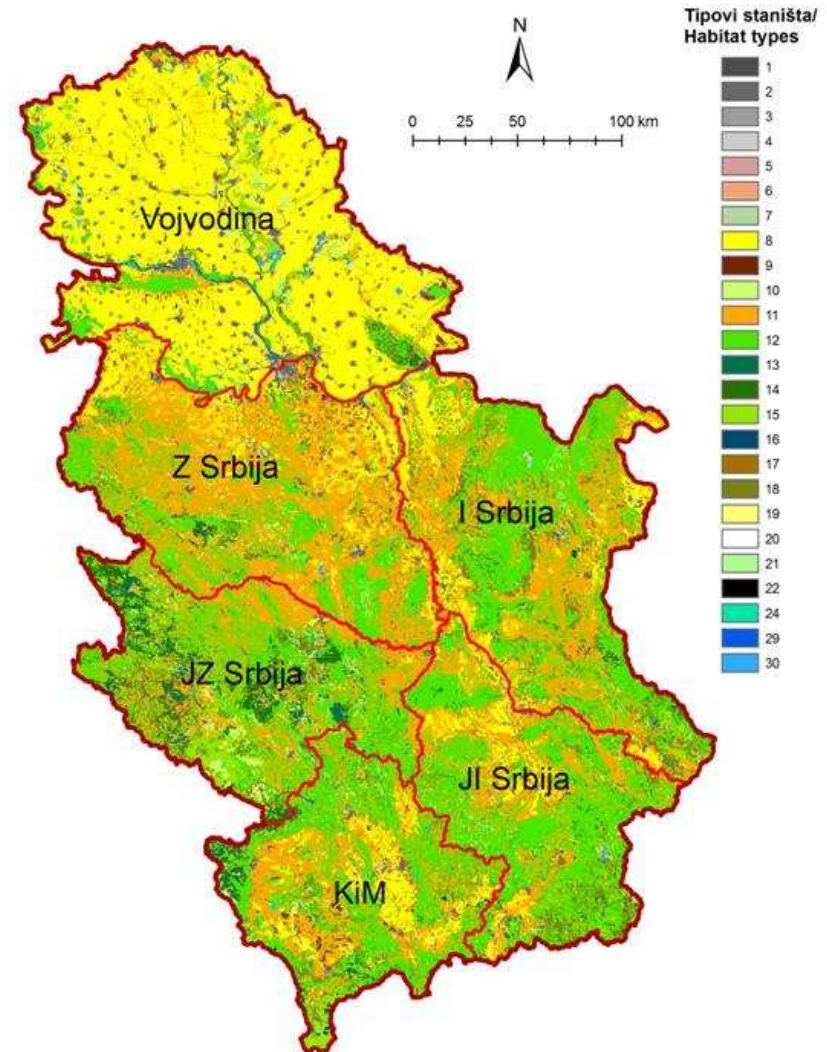


DRUŠTVO ZA ZAŠTITU I
PROUČAVANJE PTICA SRBIJE



Landscapes and Habitats

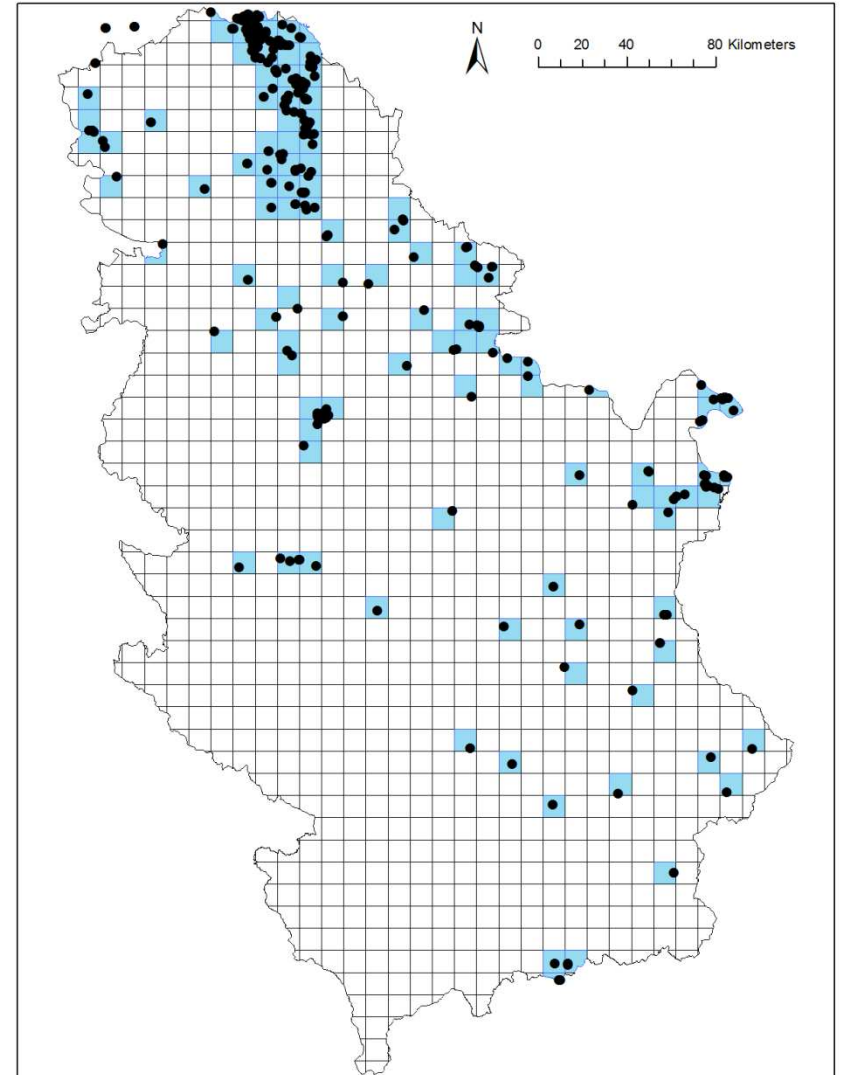
- Different elevation
- Habitat mosaic
- Farmland: 45%
- Heterogeneous farmland: 37%
- Grassland+ Pastures: 6%
- Low intensity agriculture
- Land abandonment





Roller population – hystorical data

- Once very common bird
- Present in lowland, valleys and foothills throughout the country
- Scarce precise data from the end of 19th century and first half of 20th century
- Population decline in second half of 20th century (especially during last 30 years)
- Despaired from many areas
- Local farmers are familiar with the species



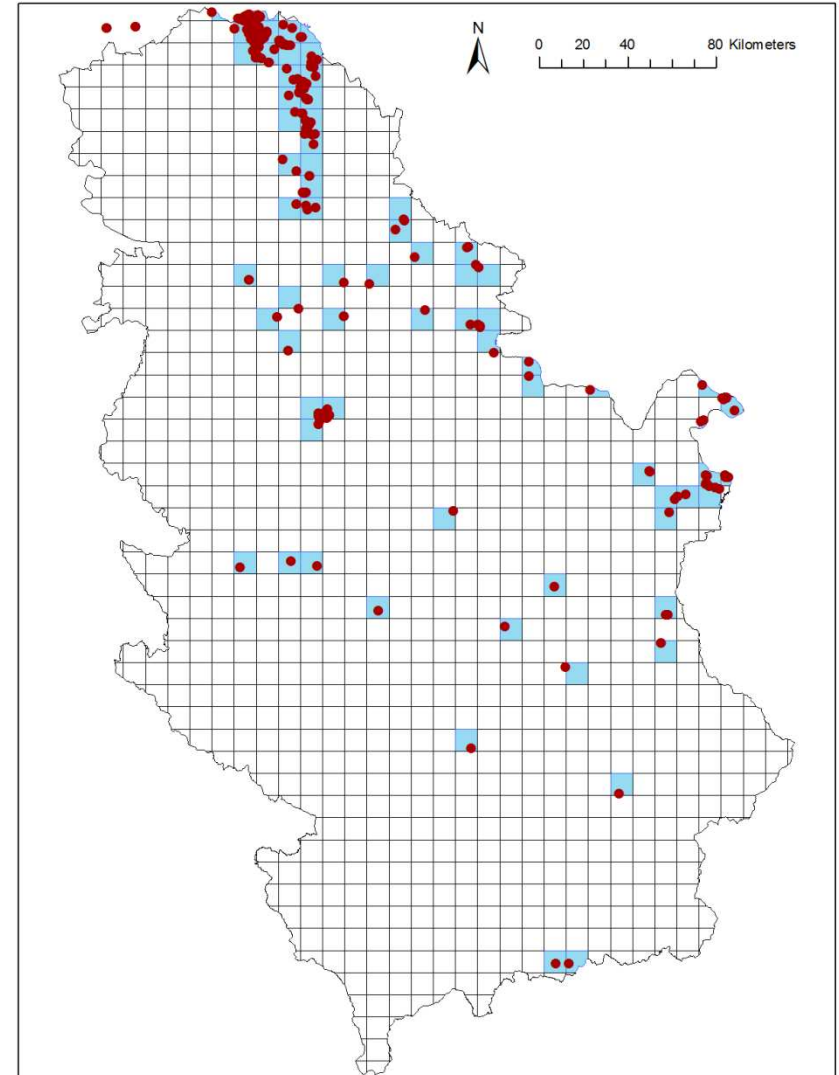
Current situation

- Only three areas with confirmed or probable breeding:

1. Negotinska krajina (E Serbia)
2. Timok valley (E Serbia)
3. Barajevo (Central Serbia)

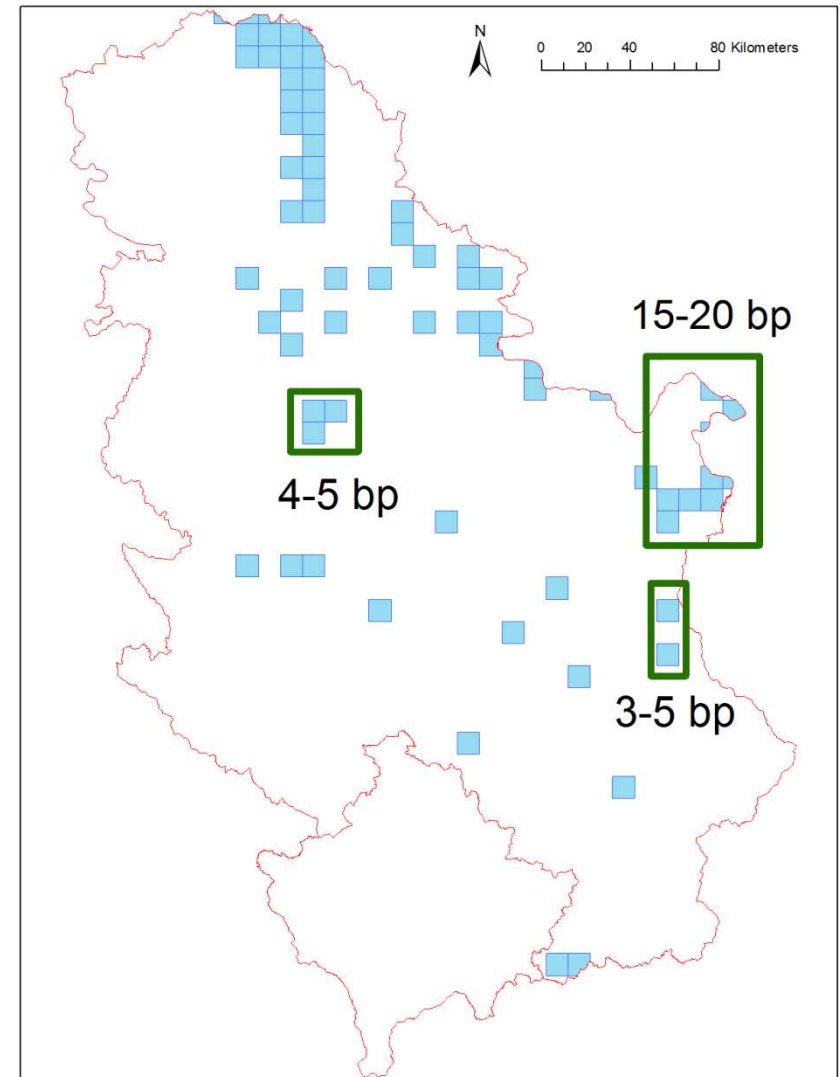
Possible breeding sites:

1. Preševo valley (South Serbia)
2. Ramski pesak (NE Serbia)
3. Donji Milianovac (NE Serbia)
4. Velika i Zapadna Morava Valley



Current situation

- No systematic research or population monitoring
- Negotinska krajina: 15-20 breeding pairs
- Timok valey: 3-5 breeding pairs
- Barajevo: 4-5 breeding pairs
- Total: 25-35 breeding pairs (+5-10 bp at Kosovo)
- Population is probably declining (unknown reason)

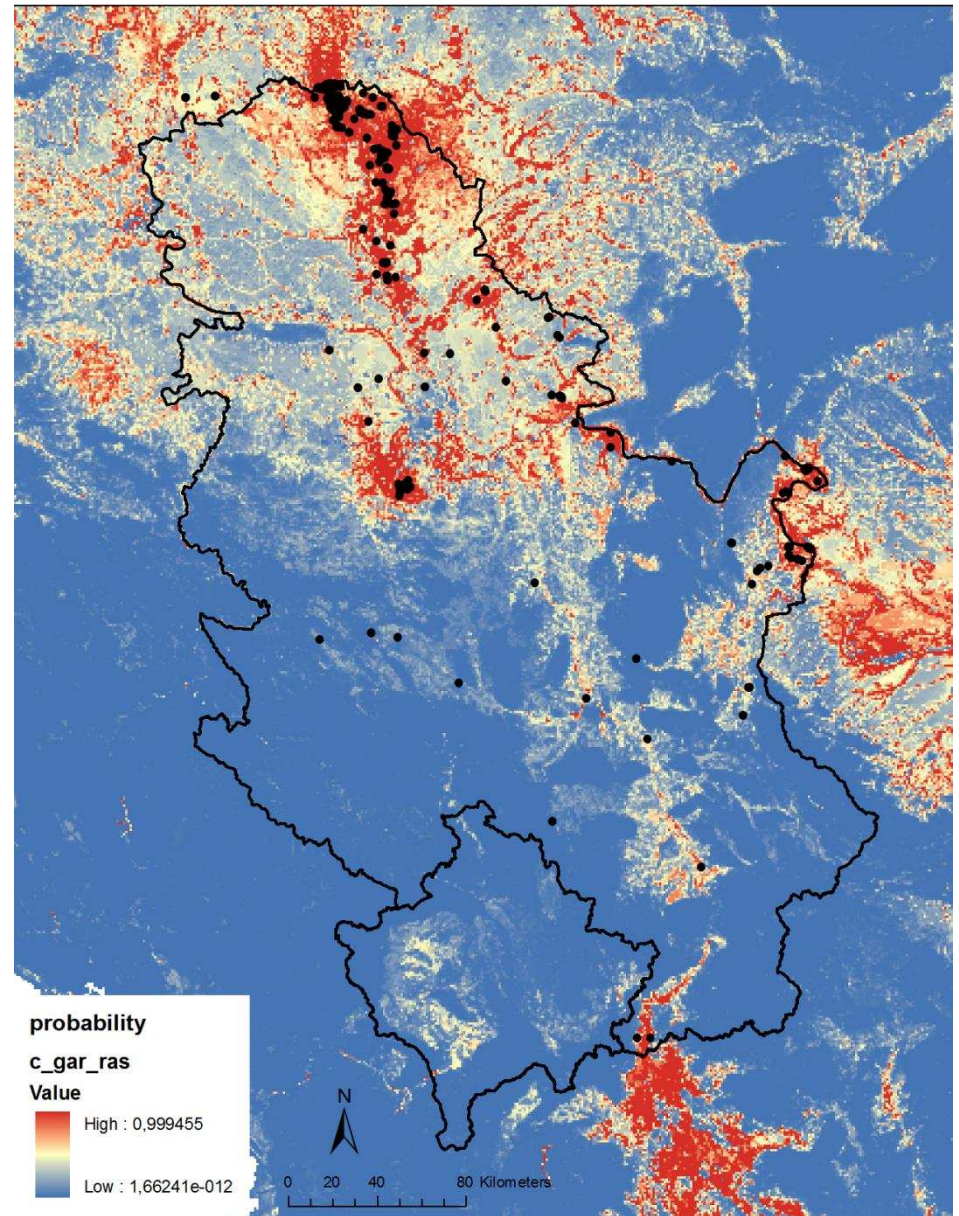


Species distribution modelling

- Goal: finding suitable habitats in Serbia
- Presence points from Serbia, Macedonia, Bulgaria, Romania
- Breeding period: 15.5.-15.8.
- 2000-2016
- Maxent
- Environmental data: topography, climate, land cover
- Background: 50 km buffer around each point
- Suitable habitats – 10 percentile threshold
- GAP analysis – IBA and NPA

Species distribution modelling- Results

- AUC value: 0,816 (good model performance)
- The most important variables: bio1, grassland, bio10
- Total number of suitable cells: 625 (+176 at Kosovo)
- 55 cells within NPA (8%)
- 78 cells within (12%)



Nest boxes

- 10 nest boxes installed in Negotinska krajina in 2011
- 2 were occupied in 2012
- At least one was occupied in 2013 and 2016
- 15 nest boxes installed in Barajevo surrounding since 2014 (still no occupied)



Conclusions

- Roller population in Serbia south of Sava and Danube exists
- Population is small, restricted to few areas, fragmented and declining
- No systematic research, monitoring and conservation measures
- Important for connection of Pannonian and SE Balkan population



Thank you for your attention!





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The status of the European Roller in Cyprus

Christina Ieronymidou

Research & Monitoring
Coordinator

BirdLife Cyprus



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Migrant breeder

1,000 – 3,000 b.p.
(2006-2015)

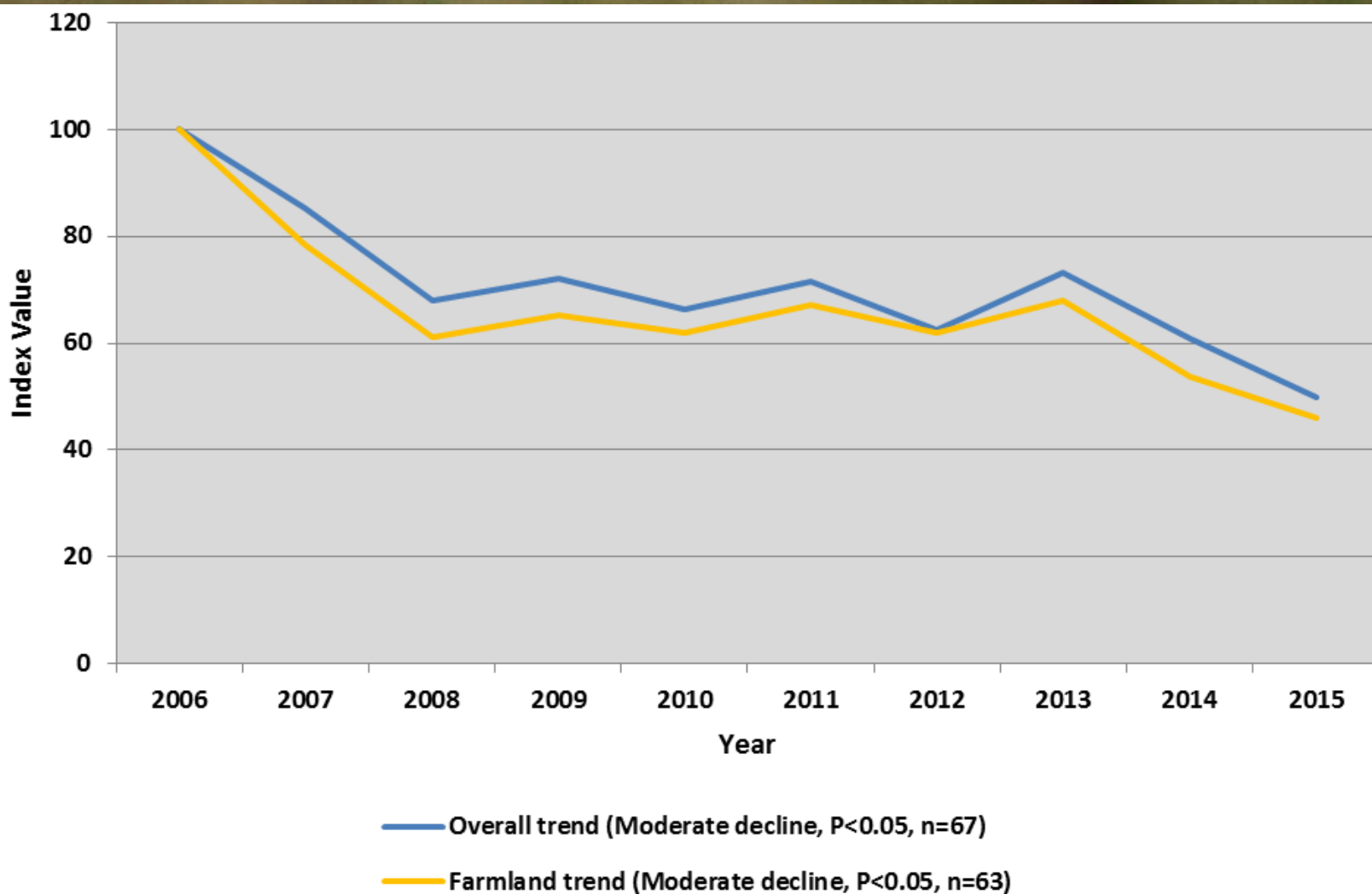




- Do you have breeding rollers in your country? If not, please specify the year of the last breeding activity.
- Yes, European Rollers still breed in Cyprus.
- Check the range states table.
- Information from 2008 Action Plan is correct: They are present during breeding and migration, but not wintering.
- Population size and trend between 2000-2016 in your country. Please check and update the table if necessary.
- Breeding pairs: 1000-3000; Quality: Medium; Years: 2006-2015
- Trend: Moderate decline; Quality: Medium



Population trend 2006 – 2015





Threats (critical)





Threats (high)





Threats (medium)





Long-term threats as
yet unsolved





Relatively new threats





- What are the main threats for rollers in your country?

- Please list in the order of critical, high, medium.

Critical - a factor causing or likely to cause very rapid declines and/or extinction;

Intensification of agriculture (monocultures, pesticide use, loss of landscape features, overgrazing).

Abandonment of agriculture (loss of mosaic).

Habitat degradation, fragmentation, loss (development: isolated housing, tourism, golf courses, wind and solar energy).

High - a factor causing or likely to cause rapid decline leading to depletion;

Illegal trapping and killing of birds.

Spraying of insecticides in streams and pools.

Medium - a factor causing or likely to cause relatively slow but significant declines.

Disturbance from recreation activities and high road density.

Disturbance from quarry activity.

Disturbance from training of hunting dogs.

Inappropriate water management (abstraction, dam building, changes to river beds).

- Please list any long term threats that have no solution yet?

Changes in agricultural practices. Habitat loss.

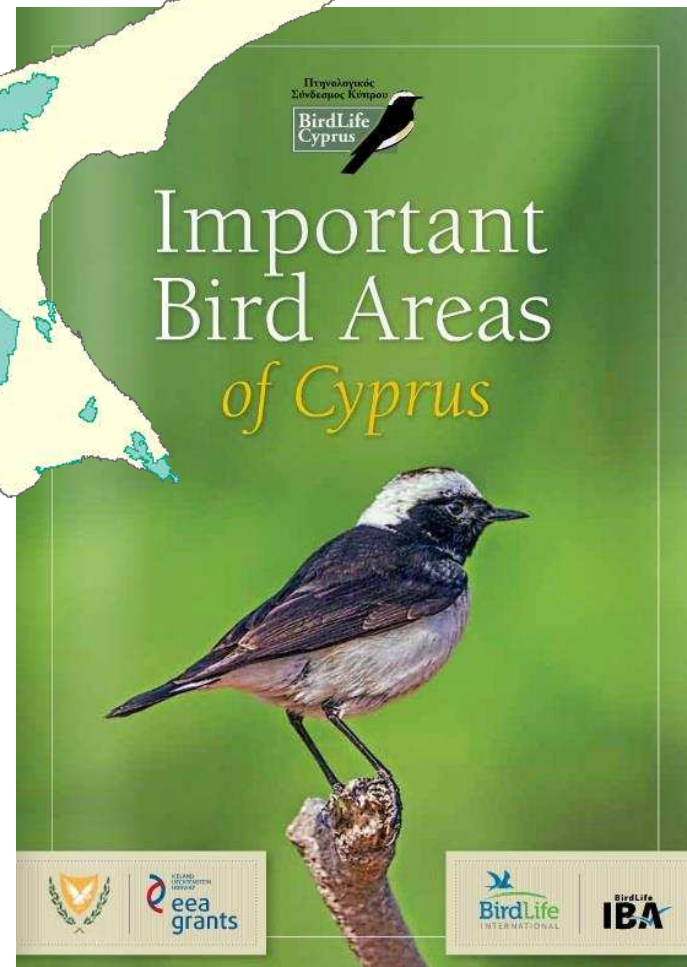
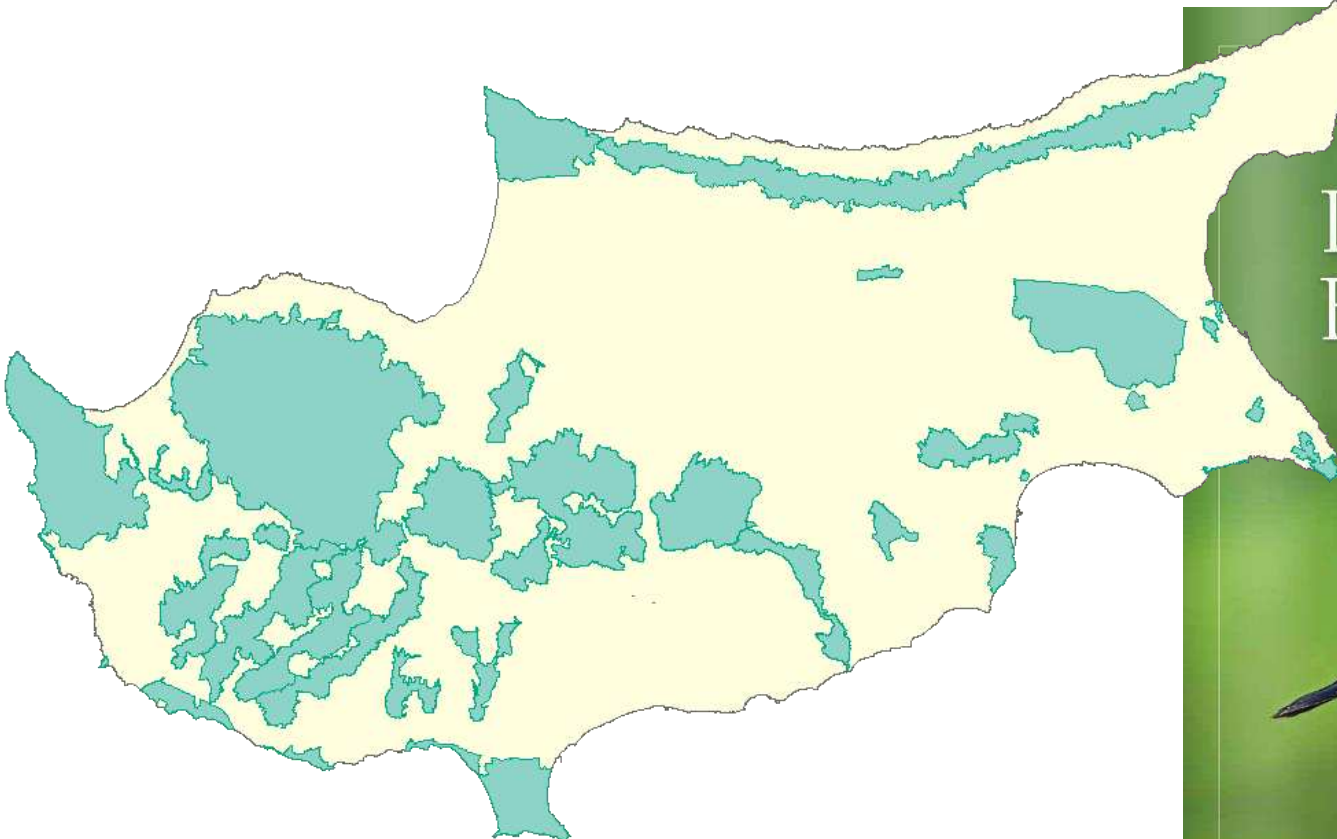
- Please list any threats that started fairly recently?

Development for wind and solar. Massive tourism (golf resort) developments.

- Please list any threats that have been solved/or gotten better since the last ISAP (2008).



Updated IBA inventory (2014)

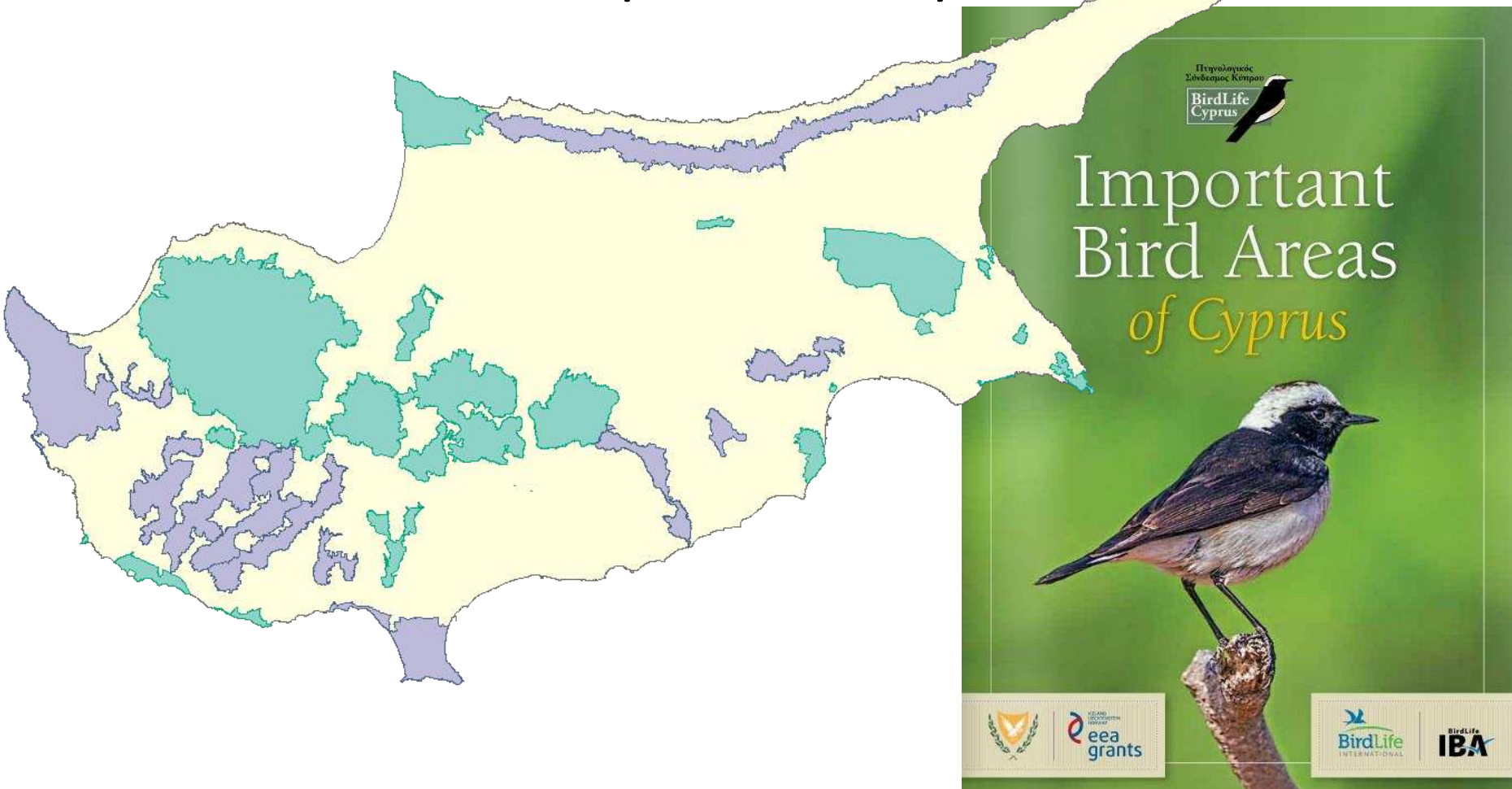




- Have there been any changes in your country regarding the policies and legislations relevant to the management of the species? What percentage of the breeding territories are protected?
- No changes in legislation
- Updated IBA Inventory (2014)
- c. 70% of area of IBAs in non-occupied territory triggered by Roller (top 5 breeding sites [C6/B2] + sites that regularly hold significant numbers [A1/C1]) covered by SPAs

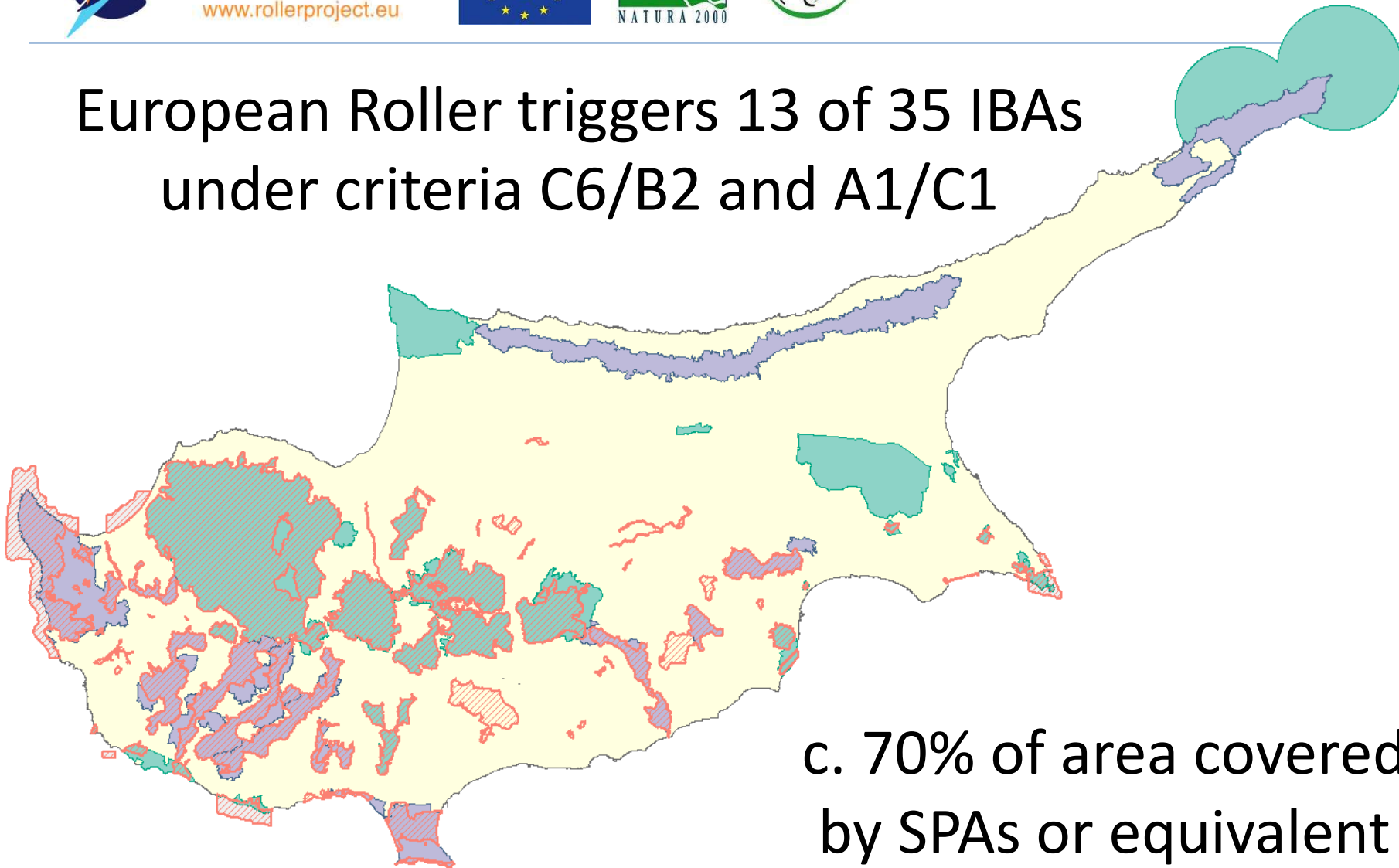


European Roller triggers 13 of 35 IBAs under criteria C6/B2 and A1/C1





European Roller triggers 13 of 35 IBAs under criteria C6/B2 and A1/C1



c. 70% of area covered
by SPAs or equivalent



Roller goals

- Halt population decline.
- Increasing population over long term





Conservation activities



- BirdLife Cyprus monitoring programmes
- Game & Fauna Service monitoring programme
- Game & Fauna Service nest boxes in SPA Potamos Paramaliou
- Turkish-Cypriot Society for the Protection of Birds and Nature (KUŞKOR) nest boxes in IBAs Mesaoria Plain and Mia Milia



- Please list the recent conservation activities (national species action plans, monitoring programmes, habitat restorations, research programmes) that are relevant to the species within your country.
- **Monitoring by BirdLife Cyprus (species-specific and as part of Common Bird Monitoring Scheme)**
- **Monitoring by Game and Fauna Service (also shows decline)**
- **GFS Nest boxes in SPA in south: Potamos Paramaliou (IBA triggered by Roller)**
- **Turkish-Cypriot Society for the Protection of Birds and Nature (KUŞKOR) installed nest boxes in IBAs Mesaoria Plain and Mia Milia (areas with not typical habitat, but potentially high food availability)**
- **LIFE – FORBIRDS: 'Improving lowland forest habitats for Birds in Cyprus' (LIFE13 NAT/CY/000176)**

SPAs in southeast: Koshi – Pallourokampos, Potamos Panagias Stazousas and Kavo Greko

Actions: Installation of nest boxes. Creation of traditional agricultural fields (no-input food plots and orchards) and water provision. Removal of invasive non-native species (acacia) and habitat restoration creating clearings. Intensive patrol programme for enforcement of legislation against illegal trapping and killing of birds.



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Conservation activities

- LIFE – FORBIRDS
(LIFE13 NAT/CY/000176)



'Improving lowland forest habitats for Birds in Cyprus'

- SPAs in southeast:
Koshi – Pallourokampos, Potamos
Panagias Stazousas and Kavo Greko



Conservation activities

- LIFE – FORBIRDS
(LIFE13 NAT/CY/000176)
 - Actions:



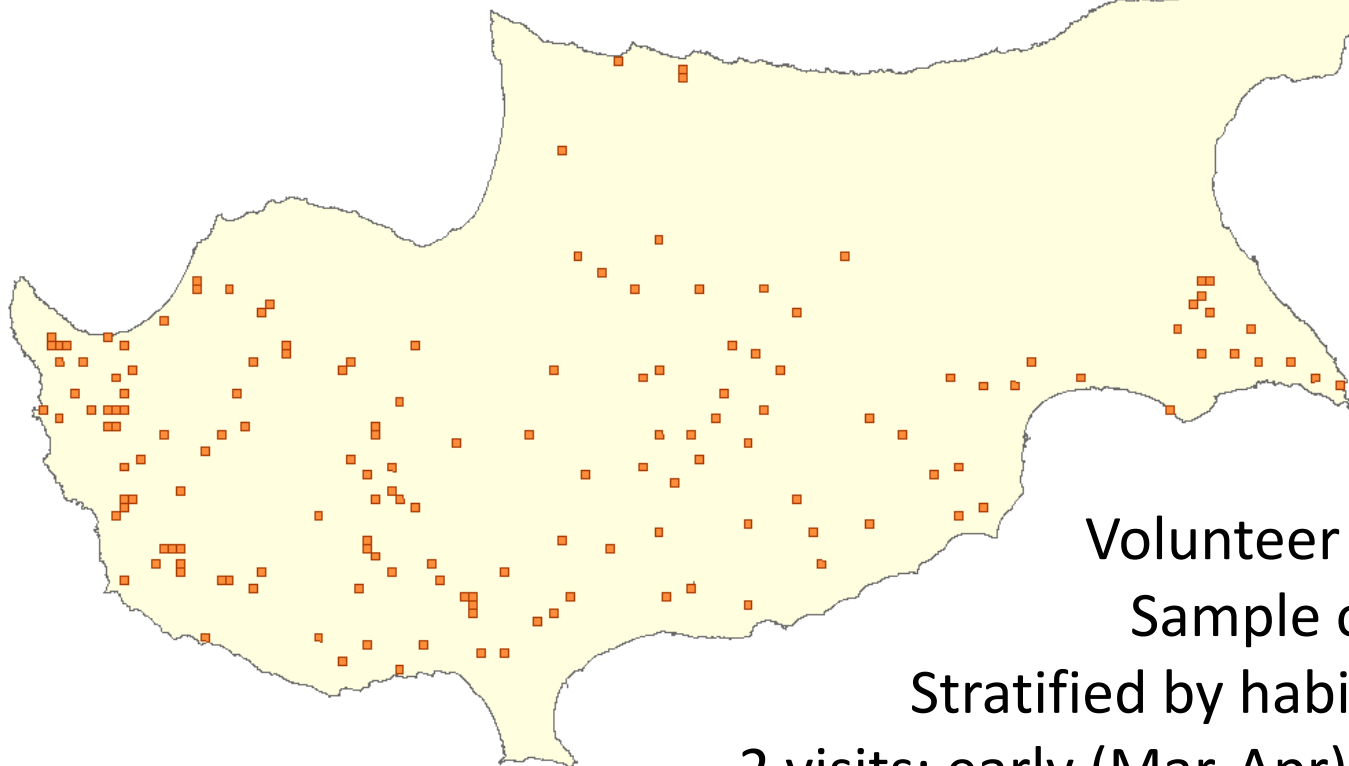
- Installation of nest boxes.
- Creation of traditional agricultural fields (no-input food plots and orchards) and water provision.
- Removal of invasive non-native species (acacia) and habitat restoration creating clearings.
- Intensive patrol programme against illegal killing of birds.



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Common Bird Monitoring Scheme



Volunteer effort since 2006

Sample of 1x1km squares

Stratified by habitat type & region

2 visits: early (Mar-Apr) & late (May-Jun)

Walked line transect c. 1km long

Distance sampling: all birds seen/heard recorded in distance bands



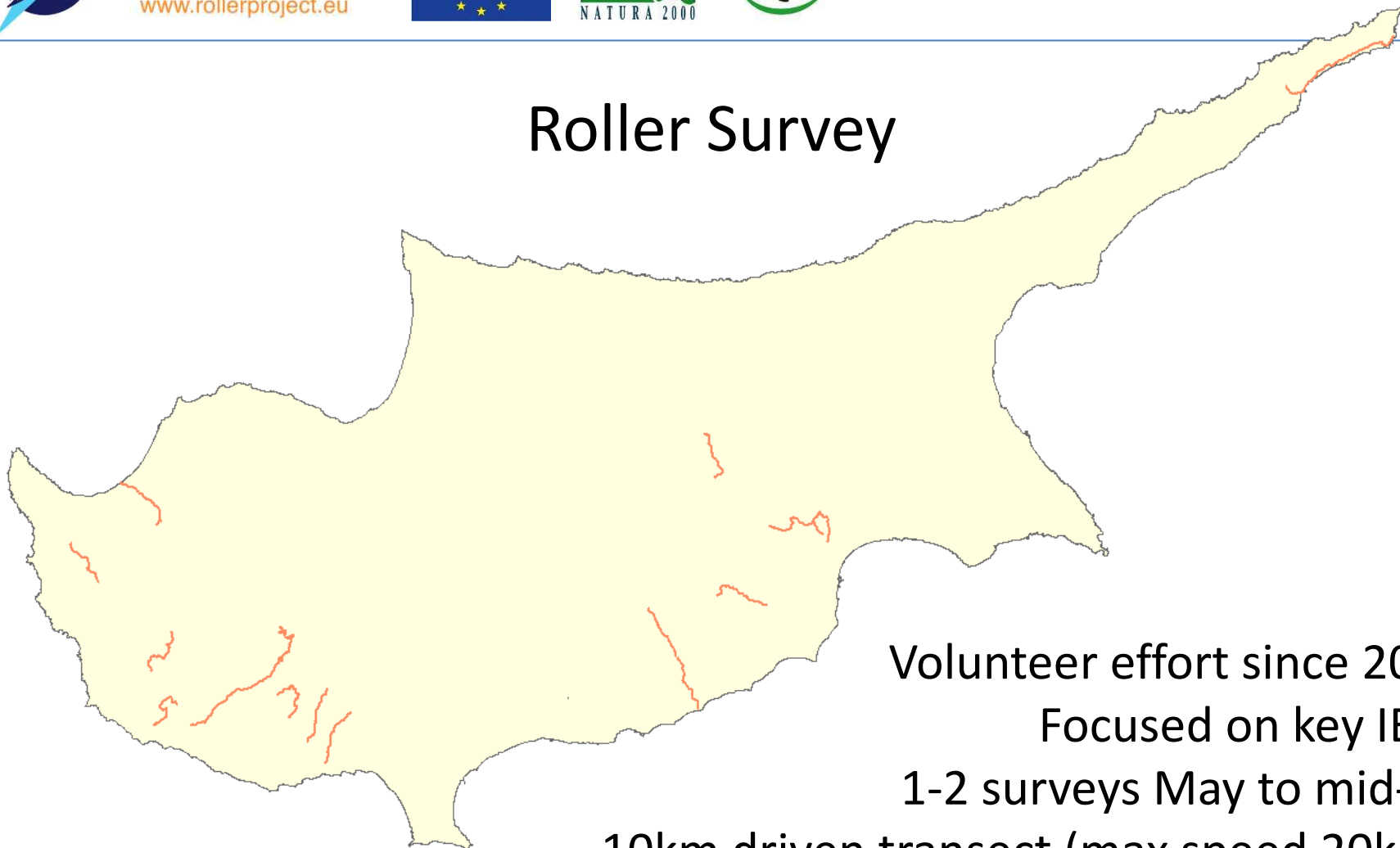
- Please explain your monitoring methods.
- Common Bird Monitoring Scheme: Volunteer effort since 2006
- Sample of 1x1km squares stratified by broad habitat category (Forest, Scrub, Phrygana, Groves, Mosaic, Vines, Cereals and Towns) and with even geographical coverage.
- Early (Mar-Apr) & late (May-Jun) surveys, in the 4 hours after sunrise
- Walked line transect c. 1km long
- All birds seen or heard recorded within distance bands.



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Roller Survey



Volunteer effort since 2013

Focused on key IBAs

1-2 surveys May to mid-Jul

10km driven transect (max speed 20kph)

Stop every 2km for 5min point count in distance bands



- Roller surveys: volunteer effort since 2013
- Focused on key IBAs, but also outside IBAs
- 10km driven transect (max speed 20kph)
- Stop (switch off engine) every 2km for 5min point count in distance bands
- 1-2 surveys May to mid-Jul (at least 2 weeks between surveys), starting at least 1 ½ hours after sunrise and ending at least 1 hour before sunset



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New science



Habitat change and climate effects on the European Roller (*Coracias garrulus*), implications for conservation

Philip Saunders, PhD (2016)



- Please list any new scientific findings that could affect the conservation of the species.
- Phil Saunders' PhD:
- The first slide details the results of the Nanofix GPS loggers we deployed in 2015. We tagged 10 birds, but only got data from 6 due to nest predation and abandonment. The figures show the 90% MCPs of the 6 birds, with the tag/MCP data tabulated in the next figure. It's worth pointing out that Androlikou area (Birds 2,3, and 4) possibly has the highest breeding density of Rollers anywhere in the world too. The final figure on the first slide depicts the Manley selection ratios (based upon fix locations within the MCPs). Any value non-overlapping one indicates selection (>1) or avoidance (<1) of a particular habitat type. Only those ratios with $n \geq 5$ can be completely trusted, and any error bars overlapping 1 indicate no clear consensus. The Rollers in the study therefore strongly avoided urban areas, ploughed fields, and scrubland, and used grassland as available (no clear preference/avoidance). There are indications of preference for fallow, and potentially cereal and woody fruit crop, areas, but we can't be sure based on the results.



Fig. 1: Chick-rearing period 90% MCPs of 6 GPS-tagged Rollers in western Cyprus in 2015

Bird ID	Tracking period	No. data-days	No. of fixes	Buffered 90% MCP area (ha)	Maximum Foraging Extent (MFE) from nest site to buffered 90% MCP boundary (m)
1	24th May to 7th June	8	26	20.56	421.21
2	6th June to 13th June	8	38	43.22	835.21
3	10th June to 16th June	6	37	33.84	653.32
4	12th June to 4th July	21	42	13.89	604.04
5	9th June to 19th June	10	30	38.25	643.21
6	8th June to 18th June	10	46	22.72	297.61
Mean		10.5	36.5	28.75	575.77

Fig. 2: Tag data and MCP area for each of the 6 Rollers

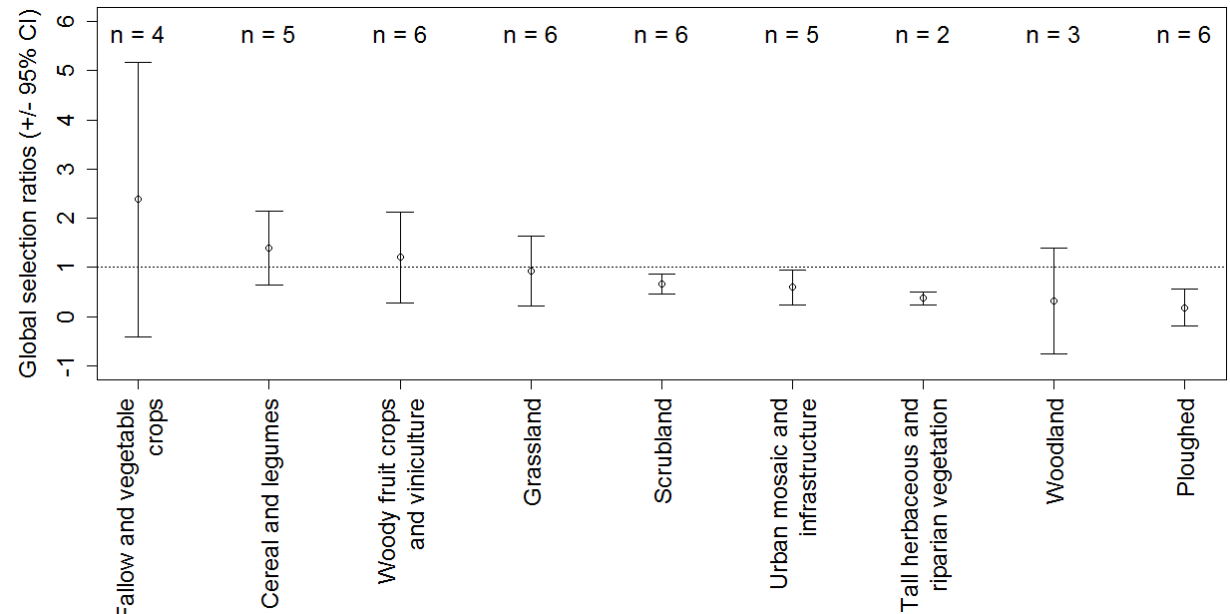


Fig. 3: Manly Selection Ratios for 9 habitats located within the 6 Roller MCPs

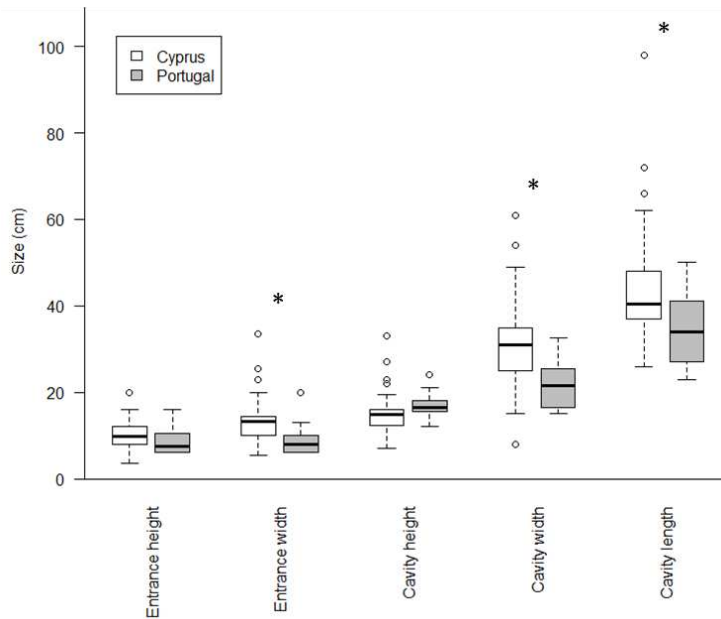


Fig. 4: Comparison between internal parameters of Roller occupied nest cavities in western Cyprus and southern Portugal (* indicate a significant difference between the parameters of the 2 locations at $p < 0.05$).

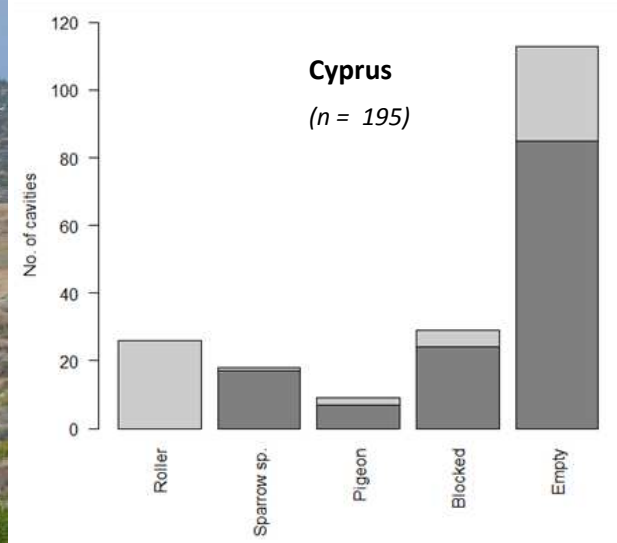
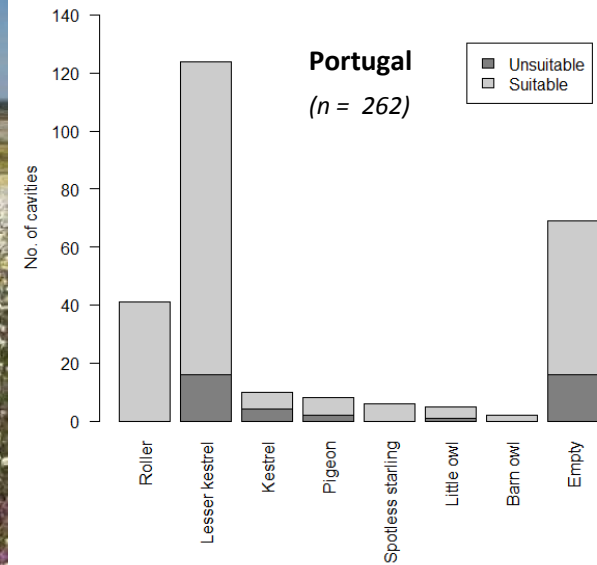


Fig. 5: Cavity occupation by species within southern Portugal and western Cyprus. All non-Roller occupied cavities were identified as suitable for use by Rollers if all internal and external parameters fell within the range of those exhibited by Roller-occupied cavities within the respective study area.



- The second slides details the results of a comparison study between nest site selection by Rollers in western Cyprus and southern Portugal in 2014/15. A range of internal and external parameters were measured, with Cypriot birds utilising nest holes with wider entrances, and wider/longer internal cavities, than Rollers in Portugal (the first figure). The second figure details the results of cavity occupancy surveys for both sites, listing the number of Roller and competitor occupied cavities. Each cavity is identified as being either suitable or unsuitable for use by Rollers based upon whether it's full range of measured parameters fall within the range of confirmed Roller occupied holes within the respective study location (a relatively broad brush criterion, admittedly). Results suggest that nest site competition may be an issue in Portugal, whereas nest site limitation is of potential importance in Cyprus.
- Modelling data suggests that rural villages may be acting as ecological traps for Rollers.



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**Horizontal measures
needed to address
threats across Cyprus
and enable European
Roller population
recovery**

... LIFE project?





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Objective:

Stop the decline of the European population by 2020 and promote conditions that will help populations to recover to favourable conservation status and will allow for range expansion in Europe



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Thank you



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The status of the European Roller in Israel



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Do you have breeding rollers in your country? If not, please specify the year of the last breeding activity.

- Yes



Range states	Breeding	Migration	Wintering
Albania	yes	No	no
Armenia	yes	No	no
Austria	yes	Yes	no
Azerbaijan	yes	No	no
Belarus	yes	No	no
Bosnia and Herzegovina	yes	No	no
Bulgaria	yes	Yes	no
Croatia	yes	No	no
Cyprus	yes	Yes	no
Czech Republic	extinct	No	no
Estonia	extinct	No	no
France	yes	Yes	no
Georgia	yes	No	no
Greece	yes	Yes	no
Hungary	yes	Yes	no
Italy	yes	No	no
Latvia	yes	Yes	no
Lithuania	yes	No	no
Macedonia, the former Yugoslav Republic of	yes	No	no
Montenegro	yes	No	no
Moldova	yes	Yes	no
Poland	yes	Yes	no
Portugal	yes	Yes	no
Romania	yes	Yes	no
Russia (European)	yes	No	no
Serbia	yes	Yes	no
Slovakia	yes	Yes	no
Slovenia	extinct	No	no
Spain	yes	Yes	no
Turkey	yes	Yes	no
Ukraine	yes	Yes	no

Please check the table on the left, and update the information if necessary.

- Israel is not listed on the table
- Breeding – **yes**
- Migration – **yes**
- Wintering - **no**

Table 1. European range states of the European Roller. Member states of the EU in bold (BirdLife International 2008).



Country	Breeding pairs.	Quality	Year(s) of the latest estimate	Breeding Population trend in the last 15 years (= 3 generations)	Quality
Albania	10-50	M	2002	decline	P
Armenia	300-650	M	2000-2002	stable	M
Austria	10-18	G	2001-2008	stable	G
Azerbaijan	1000-5000	P	1996-2000	stable	P
Belarus	20-50	M	2008	large decline	M
Bulgaria	2.5-5.5	M	1990-2005	small increase	M
Croatia	0-5	M	2002	large decline	P
Cyprus	2000-4000	P	1994-2000	small increase	P
Czech Republic	0	G	2000	extinct	
Estonia	1-5	G	2003-2007	moderate decline	M
France	800-1000	M	2007	moderate increase	M
Georgia	present				
Greece	200-300	P	1995-2000	small decline	P
Hungary	1000	G	2007	stable	G
Italy	300-400	P	2003	stable	P
Latvia	20-30	G	2005	large decline	M
Lithuania	35-50	G	2007	large decline	G
Macedonia, the Former Republic of Yugoslav	300-1000	P		moderate decline	P
Moldova	50-80	M		large decline	P
Poland	60-80	G	2007	moderate decline	M
Portugal	80-150	M	2001-2005	moderate decline	P
Romania	4600-6500	P	2002	small decline	P
Russia (European)	6000-6500	P	1990-2000	moderate decline	M
Serbia	70-120	M	2007-2008	small increase	M
Slovakia	1-20	P	2008	large decline	P
Slovenia	0	M	2008	possibly extinct	M
Spain	2000-6000	M	2006	moderate decline	P
Turkey	30 000-60 000	P	2001	moderate decline	P
Ukraine	4000-5000	M	1990-2000	large decline	G
Total EU (27)	13,000 – 25,000			decline	
Total Europe	55 000 – 113 000			decline	

Population size and trend between 2000-2016 in your country. Please check and update the table if necessary.

1. Breeding pairs= **150**
2. Quality-**M**
3. Year(S) OF the latest estimate: **2016**
4. Breeding population trend in the last 15 years: **decline**
5. Quality: **M**

Population size and trend by country (BirdLife International 2008).

Notes: G – Good; M – Medium; P – Poor.



What are the main threats for rollers in your country?

- Please list in the order of critical, high, medium.

Critical - a factor causing or likely to cause very rapid declines and/or extinction;

Human disturbance, development around breeding sites. Aforestation.

High - a factor causing or likely to cause rapid decline leading to depletion;

Pesticide Poisoning .

Medium - a factor causing or likely to cause relatively slow but significant declines.

decrease in food supply (insects) from large scale intensive agriculture and pesticide use.

Please list any long term threats that have no solution yet? Agricultural and residential expansion. Aforestation of open grasslands and steppelands. Infrastructure including wind turbine farms

- Please list any threats that started fairly recently? **Wind turbines are relatively new and expanding development.**
- Please list any threats that have been solved/or gotten better since the last ISAP (2008).



Have there been any changes in your country regarding the policies and legislations relevant to the management of the species? What percentage of the breeding territories are protected?

- The majority of the breeding areas are not in protected areas. No significant changes in policies. The species is protected nationally.



What is the main goal in your country regarding the roller population?

- This is not a priority species and thus no goals have been set. National Redlist from 2002 listed as NT, possible increase to Vulnerable for the 2017 update.



Please list the recent conservation activities (national species action plans, monitoring programmes, habitat restorations, research programmes) that are relevant to the species within your country.

- There are no programs for this species at present.



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Please list any new scientific findings that could affect the conservation of the species.

- None



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Please explain your monitoring methods.

- None



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Please list all the goals and actions from the last ISAP (2008)
that are now considered complete.

You can use the tables on pages 20-26 of the 2008 ISAP as a baseline:

http://ec.europa.eu/environment/nature/conservation/wildbirds/action_plans/docs/coracias_garrulus_garrulus.pdf

- We were not part of the 2008 effort



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Please list new objectives that should be incorporated in the new ISAP.

- na



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Thank you.