Species Action Plan for the semi-collared flycatcher *Ficedula semitorquata* in the European Union

Prepared by:

BirdLife INTERNATIONAL

БЪЛГАРСКО ДРУЖЕСТВО ЗА ЗАЩИТА НА ПТИЦИТЕ БДЗП

On behalf of the European Commission

Species action plan for the semi-collared flycatcher *Ficedula semitorquata* in the European Union

The present action plan was commissioned by the European Commission and prepared by BirdLife International as subcontractor to the "N2K Group" in the frame of Service Contract N#070307/2007/488316/SER/B2 "Technical and scientific support in relation to the implementation of the 92/43 'Habitats' and 79/409 'Birds' Directives".

Compilers

Kostadin Georgiev, BSPB, kostadin.georgiev@bspb.org
Dr. Petar Iankov, BSPB, petar.iankov@bspb.org

List of Contributors

Boris Barov	BirdLife International	boris.barov@birdlife.org
Diyana Kostovska	BSPB	diyana.kostovska@bspb.org
Thanos Kastritis	HOS	tkastritis@ornithologiki.gr
Tasos Dimalexis	HOS	adimalexis@ornithologiki.gr
Venelin Koichev	Central Balkan National Park	orelcarski@abv.bg
Metodija Velevski	Macedonian Ecological Society	velevski@mes.org.mk

Milestones in the Production of the Plan

Experts workshop, 11-12 May 2009 in Sredetz, Bulgaria

First draft submitted for consultation with experts and Member States:	15 July 2009
Second draft submitted to EC for consultation with Member States:	31 October 2009
Final draft:	31 March 2010

International Species Working Group

n/a

Reviews

This Action Plan should be reviewed and updated every ten years (first review in 2019). An emergency review should be undertaken if there is a sudden major change liable to affect the populations or subspecies.

Recommended citation

Georgiev, K. & Iankov,P. (2009) International species action plan for the semi-collared flycatcher *Ficedula semitorquata* in the European Union, 19 pp. ISSN (…)

Photo Credits: © Mladen Gramatikov

Geographical scope

This action plan covers Bulgaria, Greece, FYR Macedonia and Turkey. No recent breeding was confirmed in Romania, while the information from the Caucasus and the non-breeding range is extremely limited.

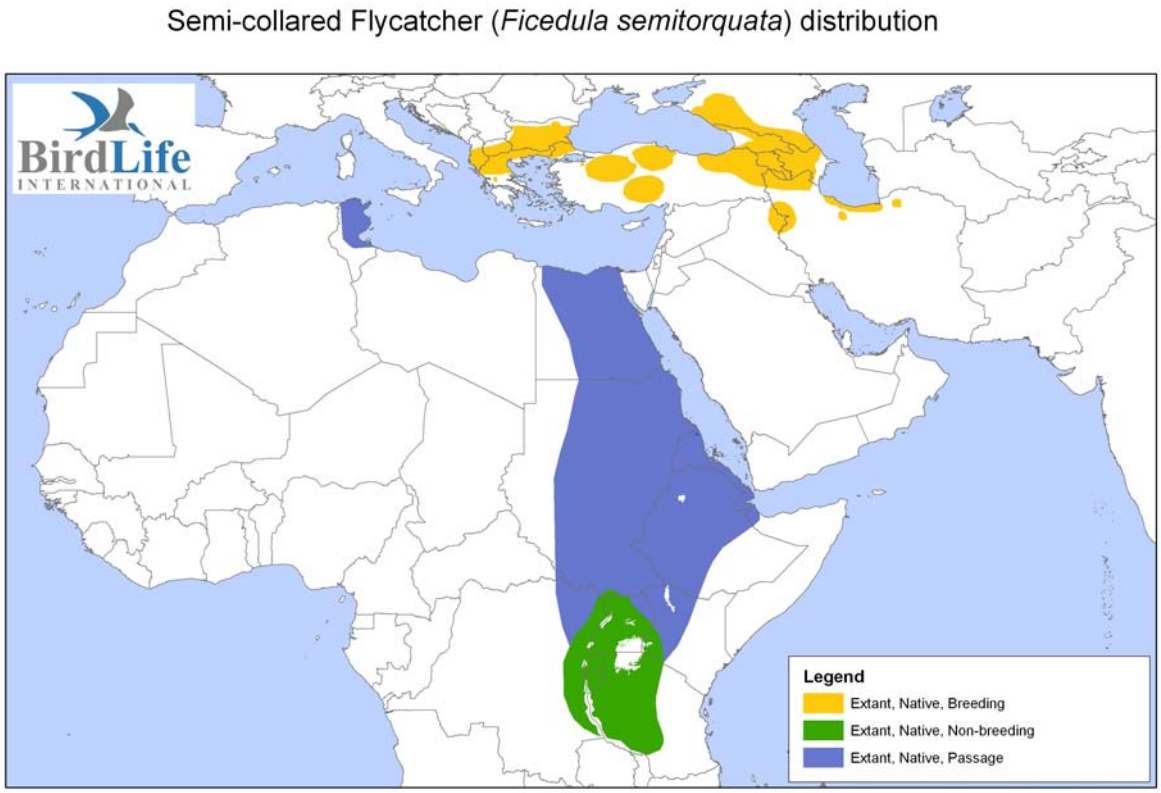


Figure 1. Distribution of the semi-collared flycatcher

Table of contents

0 - EXECUTIVE SUMMARY 5

1 - BIOLOGICAL ASSESSMENT *6*
Taxonomy and biogeographic populations *6*
Distribution throughout the annual cycle *6*
Habitat requirements *7*
Survival and productivity *8*
Population size and trend *8*

2 – THREATS *11*
General overview of threats *11*
List of critical and important threats *11*

3 - POLICIES AND LEGISLATION RELEVANT FOR MANAGEMENT *15*
International conservation and legal status of the species *15*
National policies, legislation and ongoing activities *16*
Ongoing activities for the conservation of the species *17*

4 - FRAMEWORK FOR ACTION *17*
Aim *17*
Objectives *17*
Results *17*
Actions *17*

5 - REFERENCES *22*

ANNEX 1 ..... *24*
Threats important at population/group of countries level *24*

ANNEX 2 ..... *25*
Key sites for conservation for the species (Important Bird Areas) and their protection status *25*
Key sites for the conservation of the species outside of the EU *28*

ANNEX 3 ..... *32*
National legal status *32*
Recent conservation measures *32*
Ongoing monitoring schemes for the species *33*
Overview of the coverage of the species in networks of sites with legal protection status *33*

0 - EXECUTIVE SUMMARY

The semi-collared flycatcher was upgraded from Least Concern to Near Threatened in the IUCN Red List due to the species undergoing a moderately rapid population decline across much of its range between 1990-2000.
The species is included in Annex I of the EU Wild Birds Directive, in Appendix II of the Bonn Convention and in Appendix II and Resolution 6 of the Bern Convention. Because of the significant decline in Europe the species is classified as Declining at the European and EU level.
The European Union population that is the subject of this action plan breeds across the Balkan Peninsula. The plan is also relevant for the population breeding in European Turkey.
The most important EU population is in Bulgaria and Greece with an estimated 2,500- 6,500 pairs. This population is believed to be relatively stable, while the populations in Turkey and Russia, with an estimated 12,500 – 45,000 pairs, has suffered a moderate decline.

The semi-collared flycatcher breeds in broad-leaved deciduous forests (*Quercus, Fagus, Fraxinus* and *Carpinus* forests), but in Greece it is also present in forests of *Platanus orientalis.*

The most important threats for the species are habitat loss and degradation due to unsustainable forest management and conversion of forest land to other uses, leading to their destruction.

The **aim** of the action plan is to remove the semi-collared flycatcher from the IUCN Red List category Near Threatened by 2019. **Objective 1** of the plan is to obtain precise population estimates and trend data by 2014 from a representative population sample and monitor the trend onwards. **Objective 2** of the plan is to maintain favourable habitat conditions throughout the species' range with the most important breeding sites effectively protected.

The successful implementation of the action plan should lead to the following results:

Result 1: Forest management practices within the distribution area of the species adapted to take into account the habitat requirements of the species.

Result 2: Natura 2000 sites and protected areas that include populations of the species protected from damage and have management plans under implementation.

Result 3: All relevant knowledge gaps filled and information available to inform the status assessment of the species by 2014 and 2019.

1 - BIOLOGICAL ASSESSMENT

Taxonomy and biogeographic populations

Phylum: Chordata
Class: Aves
Order: Passeriformes
Family: Muscicapidae
Genus: *Ficedula*
Species: *Ficedula semitorquata* (Homeyer, 1885)

The semi-collared flycatcher *Ficedula semitorquata* is a monotypic species with scattered distribution across its range. In the past the species was wrongly regarded as subspecies of the Collared Flycatcher *F. albicollis* but recent genetic studies confirmed its taxonomic status as a separate species (Hogner, 2008).

Distribution throughout the annual cycle

In all of its breeding range the semi-collared flycatcher occupies only specific breeding habitats, which are now highly fragmented. It breeds on the Balkan Peninsula (Albania, Bulgaria, Greece and FYR Macedonia), through Turkey and the Caucasus (Armenia, Georgia, and Russia) to north-eastern Iran. In parts of its range the exact distribution is poorly documented and is deduced from sporadic observations of (possible) breeding pairs in suitable habitat (Fig. 1).

Migration routes of the semi-collared flycatcher are also not studied. They are most likely on a wide front in spring and more congregated in autumn (Cramp et al., 1994). The birds breeding in Greece, FYR Macedonia, western Bulgaria and Albania may cross the Mediterranean Sea and enter Africa near the Nile Delta. The populations from central to eastern Bulgaria, Turkey and the Caucasus region probably follow a more easterly route along the Mediterranean coast through Syria, Lebanon and Israel. Migrating birds are recorded in Cyprus (Flint and Stewart, 1983). The population in Iraq is thought to migrate diffusely through the Arabian Peninsula to Africa above the Red Sea.

Normally, the spring migration is protracted, with the first birds arriving from the beginning to mid April in the northernmost breeding grounds. Males arrive first to the breeding sites, followed by females several days later. Autumn migration begins as early as July and continues until late September. In Bulgaria, birds disappear from their breeding territories in late June but it is unclear whether they make short- or long-distance movements. In Turkey, autumn passage commences in late July/early August to late September, but problems inherent in identification of all black-and-white flycatchers at this season obscure passage dates. In Greece autumn passage takes place from late August to late September.

Little information is available regarding wintering behaviour of the species. Winter records occur in central-east Africa from southern Sudan, through western Uganda, Rwanda, Burundi, and Tanzania to western Kenya (Cramp et al., 1994).
As a vagrant the species has been recorded in France, Switzerland, Italy, Croatia, Malta, and Morocco.

Habitat requirements

On the Balkans the semi-collared flycatcher breeds in lowland temperate broad-leaved deciduous forests of oaks *Quercus* spp., Oriental beech *Fagus orientalis*; in temperate riverine and swamp forests of *Fraxinus oxycarpa*; and in plane *Platanus orientalis* galleries (Handrinos, 1997). The species also occurs in mountainous beech, mixed beech and pine *Pinus* forests up to 1500 m, especially in Greece. Occasionally, the species breeds in old or abandoned orchards, groves and tree plantations, urban parks and large gardens or forested peripheral parts of towns, villages and industrial sites (Iankov, 2007). In Turkey deciduous woodland, plantations, groves, riverine forests and orchards are used (Kirwan, 2008). The Caucasian population inhabits old deciduous oak and beech forests as well as spruce *Picea abies* forests and fruit orchards, with a preference for tall, older trees, with little undergrowth (Adamian & Klem, 1999).

The semi-collared flycatcher depends entirely on the availability of natural tree hollows for nesting. These are often provided by woodpeckers, such as the middle-spotted woodpecker (*Dendrocopos medius*) in oak forests, and the white-backed woodpecker in beech forests.

A study in managed high-stand oak forests in eastern Bulgaria revealed that the semi-collared flycatcher has a patchy breeding distribution within the forest, with territories being aggregated in small colonies. The most frequently selected breeding sites were in:

- stands older than 100 years;
- forests with uneven canopy structure;
- forests containing very old trees from previous tree generations;
- forests on slopes along small brooks.

Additional information (Georgiev, K. unpubl. data) from the same study area mentions:

- average tree density of 1269 per ha;
- relatively tall trees, with dry lower branches as a result of tree growth;
- significant amount of deadwood and dry branches.

The species readily utilises nest-boxes (Cramp et al., 1994), however, nest boxes cannot compensate for the loss of suitable habitats and especially as terminal stages of the logging rotation is reached.

Survival and productivity

One clutch is normally laid but a second may follow if the first one is lost in the beginning of the breeding season. Clutch size varies between 4-7 eggs, with 13-14 days incubation period. Juveniles are fed by both parents but only the female broods. The fledging period lasts around 15 days (Cramp et al., 1994, Peklo, 1987). There are no studies on the survival and mortality rates, nor are demographic data available.

Population size and trend

The size of the European breeding population is estimated to be less than 53,000 pairs (BirdLife, 2004). Turkey (2,500 - 25,000) and Russia (10,000-20,000) contain the largest proportion of the population, but these estimates are to be considered provisional due to poor data.

A partially updated population estimate with data from 11 countries was prepared for this action plan, giving an estimate of between 15,400 and 53,400 pairs (Table 1). The most important breeding populations in the European Union are found in Bulgaria and Greece. The size of the Russian, Armenian and Georgian populations are still only provisionally estimated due to a lack of reliable data (BirdLife, 2004).

The Bulgarian and Greek populations are considered to be stable but the key populations in Turkey and Russia have suffered moderate decline (>10%) (BirdLife, 2004). There are no data available on the trend in Macedonia and for the rest of the breeding range.

Due to the unreliability of the total population estimates, breeding density can be used as a measure for population trend. Information from Greece is published by Lurnberg (1997), based on a study by Curio (1959) in Central Macedonia (in *Fagus sp.* forest), recording ca. 0.6-0.7 pairs/ha. A more recent study in eastern Bulgaria was conducted in a managed high-stand oak forest and revealed an average breeding density of 1,23 pairs/10 ha (or 0,12 pairs/ha) (Georgiev, K. unpubl. data).

Table 1. Population size and trend by country of the semi-collared flycatcher (BirdLife, 2004, except where indicated)

Country	Breeding numbers	Quality	Year(s) of estimate	Breeding population trend in the last 10 years (or 3 generations)	Quality	Maximum size of migrating or non breeding populations in the last 10 years (or 3 generations)	Quality	Year(s) of estimate
Albania	0-100	Poor	2002	n/a	Poor	unknown		
Armenia	300-800	Poor	1998 - 2002	Decline	Poor	unknown		
Azerbaijan	Present	No data	No data	No data	No data	unknown		
Bulgaria[1]	1,500-3,500	Medium (inferred)	2007	Stable	Medium (inferred)	unknown		
Georgia	Present	No data	No data	No data	No data	unknown		
Greece	1,000-3,000	Poor (suspected)	1995-2000	Stable (A small decline in the last 20 years in the northeast part of the range (Thrace))	Poor (suspected)	unknown		
Iran	Present	No data	No data	No data	No data	unknown		
Iraq	No data	No data	No data	No data	No data	present		
Macedonia, FYR	(200-2000)	Poor	2009	No data	Poor	unknown		
Turkey	2,500-25,000	Poor	2001	Small decline	Poor	unknown		
Russia	(10,000-20,000)	Poor/unknown	1990-2000	Small decline	Poor/unknown	unknown		
Totals	**15,500-54,500**							

[1] Iankov (2007)

Notes

✓ ***Quality:*** ***Good (Observed)*** = *based on reliable or representative quantitative data derived from complete counts or comprehensive measurements.*
Good (Estimated) = *based on reliable or representative quantitative data derived from sampling or interpolation.*
Medium (Estimated) = *based on incomplete quantitative data derived from sampling or interpolation.*
Medium (Inferred) = *based on incomplete or poor quantitative data derived from indirect evidence.*
Poor (Suspected) = *based on no quantitative data, but guesses derived from circumstantial evidence.*

2 – *THREATS*

General overview of threats

The semi-collared flycatcher is a habitat specialist that depends on mature forests, with presence of suitable biotope trees essential for nesting. With the transformation of most forests to younger and structurally simplified stands as a result of modern forestry, suitable habitats for the species are becoming increasingly rare across its range. Generally, they continue to exist where forest management has been less intensive - such as in protected areas (e.g. beech forests in national and nature parks, protected riparian forests) or in parts of extensive forest complexes that contain remnant pockets of old growth stands, set aside areas or where it is not profitable to extract timber. Habitat loss due to conversion for development (construction, hydro-electric projects) has also affected the lowland oak forests along the Black Sea coast and the riverine forests in Greece and Turkey. Thus two major classes of threat affecting the species' habitat were identified during the preparation of this plan: habitat degradation and habitat loss.

Therefore, conservation of the species depends on firstly, identifying and preserving suitable areas of forest through mapping, preserving and managing as Natura 2000 sites, in such a way that avoids or mitigates habitat degradation. Secondly, since site based measures cannot ensure favourable conditions in a wider area and maintain the distribution and exchange of individuals among the meta-populations, conservation of the species also depends on biodiversity-friendly forest management methods being promoted across the board in lowland oak, beech and montane mixed forests.

List of critical and important threats

Habitat degradation

The majority of logging practices used in standard forest management throughout the range of the species lead to a reduction in the average age of forest stands, total loss or degradation of old-growth forests, removal of suitable biotope trees and reduced availability of nest sites. The following direct threats have been identified:

Selective extraction of deadwood and hollow trees from managed stands

This threat of selective extraction predominantly affects oak and beech forests in the lowland and mountainous parts of the range. Although deadwood is increasingly recognized by modern forestry as an essential component of the forest ecosystem, the retention of standing and fallen deadwood in the forests is not ensured through standard management practices. The view that deadwood and hollow trees are not valuable in forest management terms has not yet been overcome. In fact, there still are incentives in place that lead to the depletion of deadwood from forests. For example, in Bulgaria, municipalities and forest holdings encourage the extraction of dry mass by the local rural population, often for free.

Another cause of this extraction is the timber-oriented management of forests that predominates even in SPAs. No measures have yet been implemented to change this, as

forests in Natura 2000 sites and protected areas in the range countries are still managed as any other forest.

Impact: High

Management plans for the SPAs designated for the species not yet developed or implemented

The existing forest management plans are not adapted to biodiversity needs. As a result, Natura 2000 sites are not managed favourably for the species. The reasons for this threat are two-fold: Firstly, there is institutional resistance to biodiversity-friendly forest management by state forest managers due to the perceived to costs generated by such management; and secondly, there is insufficient knowledge and capacity to develop and implement such measures.

Impact: High

Intensification of logging due to increased demand for timber and biomass (firewood and charcoal)

Although the total increment in the forests of Bulgaria and Greece has been positive, the pressure on the most accessible lowland oak forest has been high due to economic factors. For example, in Bulgaria, firewood and charcoal production has been growing steadily in previous decades (Ratarova 2009). In Greece, forestry is largely insignificant in economic terms, except in the mountains of Northern Greece (beech and mixed beech-spruce-fir forests) which partly overlap with the distribution of the species.

In Bulgaria, despite the vast majority of forests being state owned, market forces have more pronounced influence on forest use. For example, private companies and municipalities are affecting the timber market by acting as concessionaires or by contracting out the harvesting to private operators. Subsidies (such as lower taxation on municipal forest use) distort the market and put even higher pressure on the state forests to generate more profit (R. Zhelev, *pers. com.*). The management of state forests is also profit-oriented as the state budget cannot pay for forest administration. Therefore, operations in the state-owned forests are oriented to maximizing the profits, and as a result, biodiversity and ecosystem functions of the forest become lower priority.

The demand for timber has been growing due to construction development and saw wood production (now temporarily halted); dependence on firewood for heating in rural areas, which is likely to further increase with rising alternative energy prices; and promotion of woody biomass installations for heating and electricity.

The intensification of logging also leads to the effects of habitat degradation described earlier. Although the effects of these threats are not easy to accurately quantify, their impact is expected to increase in the future.

Impact: Medium

Illegal logging

Although a widespread problem, illegal logging is considered to have a relatively lower impact than standard legal forest management practices, as it is carried out on a smaller scale. It may have significant effects locally, but its overall impact on the population is believed to be insignificant.

Impact: Low

Land-use change

Land-use changes and construction cause habitat loss which is permanent and irreversible. There are two main drivers that lead to habitat loss:

Clearance and destruction of riparian and gallery forests

This threat has been reported to affect the species' habitat in Greece and Turkey. In Bulgaria, the distribution of the species in riparian forests largely coincides with protected areas. This threat is caused by:

- Extraction of gravel and sand from river beds for the purposes of construction, without proper control and impact assessment
- Construction of hydropower facilities and servicing roads, promoted by political and economic incentives
- Development of large scale irrigation and hydropower projects (especially relevant in Turkey)
- Riverbed modification and embankment as flood protection measures in response to temporarily increased flooding risk

Impact: High (mainly in Greece and Turkey)

Urban development of coastal and mountainous areas.

The construction of new resorts and facilities in, or close to, suitable breeding sites of the semi-collared flycatcher is well documented in Bulgaria. The direct loss of breeding pairs due to this threat has not been estimated, due to recent developments and lack of information on numbers of breeding pairs. It is likely to be locally significant. This threat is caused by:

- Real estate and tourism development booms at the Black Sea coast that are not subject to environmental and territorial planning.
- Short-term profit oriented decision-making on the side of major land owners (municipal, private) which has lead to unchecked mass development of environmentally sensitive areas (e.g. sea coast, mountains).
- Environmental impact assessment (EIA) procedures not accounting for the effects of forestry and land-use change on the species in decision making.
- Territorial planning being driven by the growing property market, often without strategic considerations of biodiversity needs.

Impact: Medium (locally high)

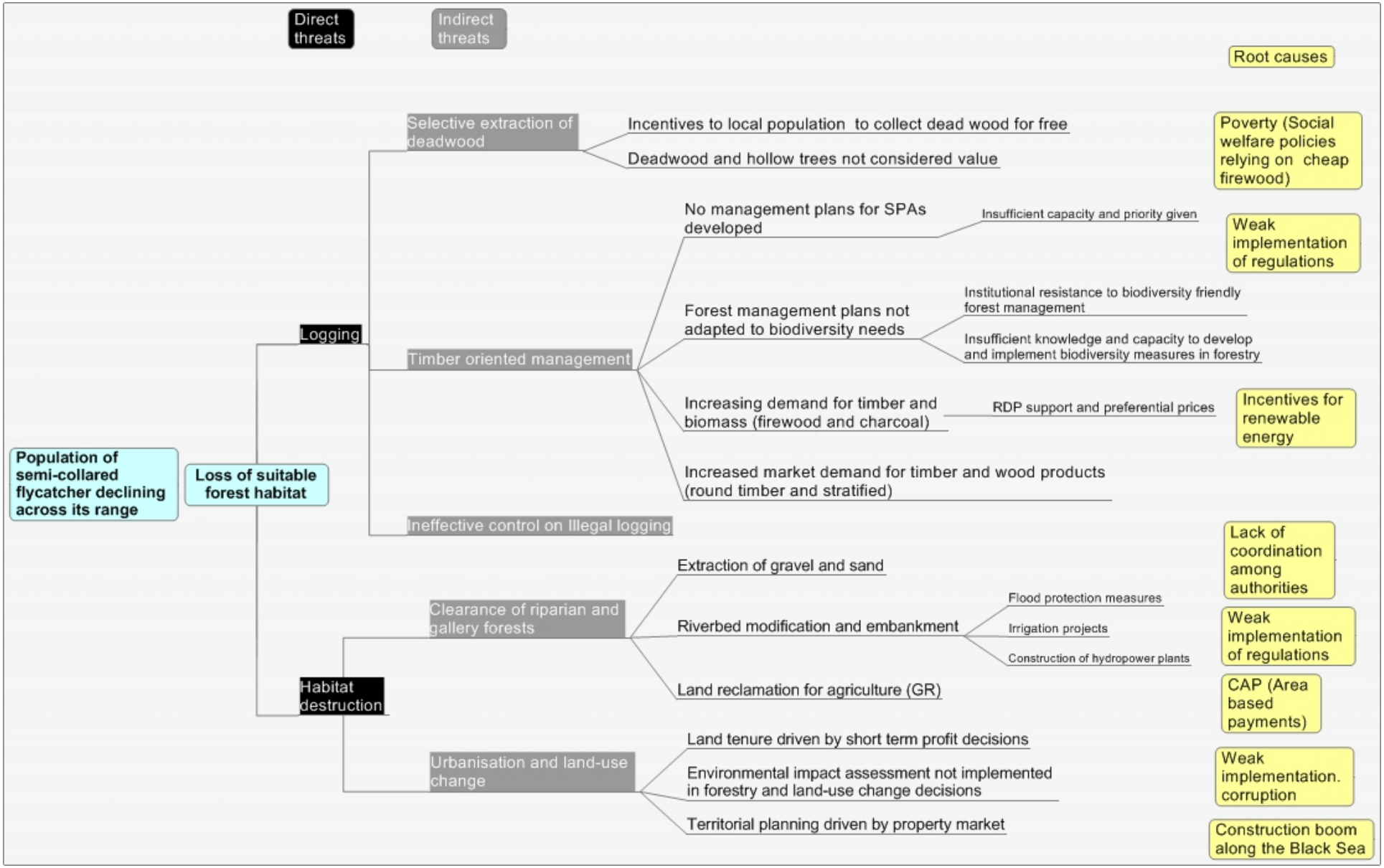
Knowledge gaps

Knowledge on the distribution, population size and trends of the semi-collared flycatcher is insufficient and the few available data are from the EU part of the range only. In order to implement meaningful conservation action for the species, it is necessary to fill in at least the basic knowledge gaps. The highest priority information for collection is:

- Actual distribution and occupancy within the breeding range;
- Population size and trends;
- Development of suitable monitoring methods to cover the above parameters as well as availability of suitable habitats (e.g. mapping of suitable forest patches).

Threat importance for the countries is in (Annex 1).

Figure 2. Problem tree



3 - POLICIES AND LEGISLATION RELEVANT FOR MANAGEMENT

International conservation and legal status of the species

EU Birds Directive - Council Directive on the conservation of wild birds (79/409/EEC)

Category: Annex I

Aim: to protect wild birds and their habitats, e.g. through the designation of Special Protection Areas (SPA). The directive states that species listed in Annex I 'shall be subject of special conservation measures concerning their habitat in order to ensure their survival and reproduction in their area of distribution' and that 'Member States shall classify in particular the most suitable territories in number and size as special protection areas for the conservation of these species, taking into account their protection requirements in the geographical sea and land area where this Directive applies '.

Bern Convention - - Convention on the Conservation of European Wildlife and Natural Habitats

Category: Appendix II

Aim: to maintain populations of wild flora and fauna with particular emphasis on endangered and vulnerable species, including migratory species. Each Contracting Party shall take appropriate and necessary legislative and administrative measures to ensure the special protection of the wild fauna species specified in Appendix II.

Bonn Convention - Convention on the Conservation of Migratory Species of Wild Animals

Category: Appendix II

Aim: to conserve terrestrial, marine and avian migratory species throughout their range. Appendix II refers to migratory species that have an unfavourable conservation status or would benefit significantly from international co-operation organised by tailored agreements. The Convention encourages the Range States to conclude global or regional Agreements for the conservation and management of individual species or, more often, of a group of species listed in Appendix II.

Table 2. Conservation listings and legal status of the species

Global status[1]	European threat status[2]	SPEC category[2]	EU status[3]	EU Bird Directive Annex[4]	Bern Convention Annex[5]	Bonn Convention Annex[6]
NT	D	SPEC 2	NT	Annex I	Appendix II, RES 6	Appendix II

[1] IUCN 2008. 2008 IUCN Red List of Threatened Species. *Categories: EX = Extinct; EW = Extinct in the Wild; CR = Critically endangered, EN = Endangered; VU = Vulnerable; LR = Lower Risk, CD = conservation dependent, NT = near threatened, LC = least concern; DD = data deficient, NE = Not Evaluated.*

[2] *BirdLife International (2004a) Birds in Europe: population estimates, trends and conservation status. Second edition. Wageningen, The Netherlands: BirdLife International. (BirdLife Conservation Series No. 12). Categories: EX = Extinct; EW = Extinct in the Wild; CR = Critically endangered, EN = Endangered; VU = Vulnerable; LR = Lower Risk, CD = conservation dependent, NT = near threatened, LC = least concern; DD = data deficient, NE = Not Evaluated.*

[3] *BirdLife International (2004b) Birds in the European Union: a status assessment. Wageningen, The Netherlands: BirdLife International same categories as above*

[4]*The species shall be subjected to special conservation measures concerning their habitat in order to ensure their survival and reproduction in their area of distribution.*

[5] *Give special attention to the protection of areas that are of importance (Article 4) and ensure the special protection of the species (Article 6). For more details see the Convention text.*

[6] *Animals for which agreements need to be made for the conservation and management of these species. For more details see the Convention text.*

National policies, legislation and ongoing activities

In Bulgaria the species is listed in the Biodiversity Act as a species requiring special measures for the conservation of its habitats. There is a 40 BGN (~20 EUR) penalty for collecting or killing the birds, destroying the nests or otherwise damaging specimens.

Although there are no special provisions for the conservation of the species, the following documents give general guidelines on the management of forests:

- Forestry Law; A draft Regulation for the environmentally sensitive management of beech forests under preparation.
- National Environment Strategy (2005-2014);
- National Plan for Biodiversity Conservation (2005-2010);

In Greece the species is also protected by law:

- National strategy for sustainable development.

The bylaw on protected species in FYR of Macedonia still does not exist, although it has been foreseen by the Law on Protection of Nature (Official Gazzete of RM 67/2004). The species is omitted from the Law (and bylaws) on Hunting (Official Gazette of RM, 26/2009):

- Strategy for sustainable development of forestry in the Republic of Macedonia (Ministry of Agriculture, Forestry and Water Economy of RM, 2008)

The status of the semi-collared flycatcher in the National Red Books of the countries are:

- Bulgaria – VU (Vulnerable);
- Greece – DD (Data Deficient);
- Turkey – VU (Vulnerable);
- No Red Data Book exists for Macedonia.

Ongoing activities for the conservation of the species

Apart from some local and small scale nest box provision initiatives, there have not been any specific projects aimed at the species. There are currently no national species action plans or working groups established in any of the range countries.

A BirdLife International project for the mapping of Biologically Important Forests in Bulgaria and Romania (www.forestmapping.net) used the semi-collared flycatcher as one of the target species that identified priority forest areas for conservation in the former. The results of this project have been communicated to the national forest services for consideration. A similar project was implemented in Greece in 2008, identifying forests of High Natural Value. The results of this project have not yet been used to change forest management in the country.

4 - FRAMEWORK FOR ACTION

Aim

The aim of the action plan is to remove the semi-collared flycatcher from the IUCN Red List category 'Near Threatened' by 2019.

Objectives

Objective 1: To maintain favourable habitat conditions throughout the species' range with the most important breeding sites effectively protected.

Objective 2: To obtain precise population estimates and trend data by 2014 from a representative population sample and monitor the trend onwards.

Results

Result 1: Forest management practices within the distribution area of the species adapted to take into account the habitat requirements of the species.

Result 2: Natura 2000 sites and protected areas that include populations of the species protected from damage and have management plans under implementation.

Result 3: All relevant knowledge gaps are filled and information is available to inform the status assessment of the species by 2014 and 2019.

Actions

Table 3 Presents the actions arranged by objective and result.

Table 3. Actions corresponding to the results and ranked according to their importance, following from the problem tree.

Objective 1: To maintain favourable habitat conditions throughout the species' range with the most important breeding sites effectively protected.

Result	*Action*	*Priority*	*Time scale*	*Responsible institutions*
1.0 Forest management practices within the distribution area of the species are adapted to take into account the habitat requirements of the species.	1.1. Develop and promote guidelines for the management, conservation and restoration of the ecological value of broadleaved forests **Applicable to: all range states**	High	Medium	Scientific institutions, NGOs and Ministries of environment
	1.2. Introduce obligatory minimum standards for deadwood for the different forest types as a baseline for forest management. **Applicable to: all range states**	Low	Medium	Forestry administration, Scientific institutions
	1.3. Publish suitable studies and promotional materials for forest managers in Bulgarian, Greek and Turkish language. **Applicable to: BG, GR, TR**	Medium	Short	NGOs, Forestry administration
	1.4. Revise forest felling guidelines for the target habitats (lowland oak, montane beech, riparian; non-intensive forest management, game stations) **Applicable to: BG, TR**	High	Short	Forestry administration
	1.5. Promote certification (where applicable) under FSC for all	Medium	Long	Forestry administrations, NGO

Result	*Action*	*Priority*	*Time scale*	*Responsible institutions*
	commercial forests where the species breeds in significant numbers (e.g. IBAs) and where this issue is not addressed through management plans (e.g. SPAs) **Applicable to: all range states**			
	1.6. Ensure that National Renewable Energy Plans do not lead to additional threats to the species' habitats. **Applicable to: BG, GR**	High	Medium	Ministries of environment, Forestry agencies
2.0 Natura 2000 sites and protected areas that include populations of the species are protected from damage and have management plans under implementation.	2.1. Prevent local extinctions of the species caused by habitat destruction (e.g. hydropower projects, urban development projects in coastal and mountainous areas) **Applicable to: all range states, esp.BG, GR, TR**	Essential	Short	Ministries of environment, Municipalities
	2.2. Improve the implementation and enforcement of cross compliance rules and GAEC in farm areas, close to riparian forests. **Applicable to: BG, GR**	Medium	Medium	Ministries of agriculture
	2.3. Develop and adopt management plans for all SPAs containing key populations by 2014 (see Annex 2). **Applicable to: BG, GR**	High	Short	Ministries of environment
	2.4. Fill in gaps in legal protection and conservation of riparian forests under environmental legislation (WFD, HD, EIA and Cross Compliance).	Medium	Medium	Ministries of environment

Result	*Action*	*Priority*	*Time scale*	*Responsible institutions*
	Applicable to: all range states			
	2.5. Identify through gap analysis all unprotected riparian forests and ensure their strict protection as priority habitats under the Habitats Directive. **Applicable to: BG, GR, TR**	High	Medium	Research institutions, NGOs, Ministries of environment
	2.6. Restore riparian habitats damaged by infrastructure and hydropower (through compensation measures). **Applicable to: all range states**	High	Long	Ministries of environment
Objective 2: To obtain precise population estimates and trend data by 2014 from a representative population sample and monitor the trend onwards				
3.0 All relevant knowledge gaps filled and information available to inform the status assessment of the species by 2014 and 2019	3.1. By 2014 monitoring should be in place to cover: • population size and trends, based on sampling • density in different habitats/sites • distribution and range within country • basic demographic parameters (recruitment rate, productivity, dispersal). **Applicable to: all range states**	Essential	Short	Ministries of Environment, NGOs
	3.2. Undertake mapping surveys of suitable breeding habitats (e.g. BIF mapping project methods). Develop a GIS based tool for assessing available habitat extent in TR and	High	Medium	Research institutions, NGOs

Result	*Action*	*Priority*	*Time scale*	*Responsible institutions*
3.0 All relevant knowledge gaps filled and information available to inform the status assessment of the species by 2014 and 2019.	Caucasus. **Applicable to: GR, TR, Caucasian countries**			
	3.3. By 2019 improve knowledge on ecology and habitat management: • Migration, arrival and productivity in selected sample plots • Size of the forest patch, isolation of forest stand • Food and habitat availability and its relation to climate changes • Micro habitat selection: amount of standing deadwood, humidity, slope • Identification of suitable habitat through forest databases and field checking • Densities and habitat use, aiming to calculate FRV extrapolations • Study the productivity of the population **Applicable to: all range states**	Medium	Long	Research institutions, Ministries of environment, Research institutions, NGOs

5 - REFERENCES

Adamian M., Klem D. (1999) *Handbook of the Birds of Armenia.* American University of Armenia, California, pp. 497-499. (In English).

Armenia Birding (2009) Birds in Armenia (www.armeniabirding.info) Accessed 2009.

BirdLife European Forest Taskforce (2009) *Bulgarian-Romanian Forest Mapping project. Final Report.* 68 pp.

Birdlife International/ European Bird Census Council (2000) *European bird populations: estimates and trends.* Cambridge, UK: Birdlife International (Birdlife Conservation Series No. 10).

Birdlife International (2004) *Birds in Europe: population estimates, trends and conservation status.* Cambridge, UK: Birdlife International (Birdlife Conservation Series No. 12).

BirdLife International (2008) Ficedula semitorquata. In: IUCN 2009. *IUCN Red List of Threatened Species. Version 2009.1.* (www.iucnredlist.org) Accessed 26/06/2009.

BirdLife International (2009) *Species factsheet: Ficedula semitorquata.* (http://www.birdlife.org) Accessed 26/06/2009.

Cramp, S., C. M. Perrins (eds.). (1994) *The Birds of the Western Palearctic.*

Curio, E. (1959) Beobachtungen am *Halbringschnäpper* (*Ficedula semitorquata*) im mazedonischen Brutgebiet; *Journal of Ornithology.* **100:** 176-209. (In German).

E J M Hagemeijer and M J Blair (Editors). (1997) *The EBCC Atlas of European Breeding Birds: Their Distribution and Abundance.* T & A D Poyser, London

Eken, G., Bozdoğan, M., İsfendiyaroğlu, S., Kılıç, D.T., Lise, Y. (edt). (2006) *Turkiye'nin Önemli Doğa Alanları*. Doğa Derneği, Ankara. (in Turkish).

Flint P.R and P.F. Stewart (1983) *The Birds of Cyprus B.O.U. Check list No. 6*. British Ornithologists' Union. 174 pp.

Handrinos, G., & Akriotis, T., (1997). *The birds of Greece.* C. Helm, A & C Black, London. (In English).

Hogner, S. (2008). *Mulitlocus sequence analyses of the near threatened Semi-collared flycatcher (Ficedula semitorquata) and a comparison with three other Ficedula flycatcher species.* Master of science thesis. Center for Ecological and Evolutionary Synthesis. Oslo

Iankov, P. (ed.) (2007) *Atlas of Breeding Birds in Bulgaria. Bulgarian Society for the Protection of Birds, Conservation Series, Book 10.* Sofia, BSPB, p. 526-527 (In Bulgarian and English)

Kılıç, D.T. and G. Eken. (2004) *Turkiye'nin Önemli Kuş Alanları - 2004 Güncellemesi.* Doğa Derneği, Ankara, Turkey. (In Turkish).

Kirwan, GM., Boyla, KA., Castell, P., Demirci, B., Özen, M., Welch, H., Marlow, T. (2008) *The Birds of Turkey.* Christopher Helm, London. (In English).

Kostadinova, I., M. Gramatikov (eds.) (2007) *Important Birds Areas and Natura 2000 sites in Bulgaria. Bulgarian Society for the Protection of Birds. Conservation Series. Book 11*. Sofia, BSPB (In Bulgarian and English)

KuşBank database, Erciyes Üniversitesi, Doğa Derneği (2009) Royal Society for the Protection of Birds and BirdLife International. (www.kusbank.org) Accessed 2009.

OSME (2009) Ornithological Society of the Middle East, the Caucasus and Central Asia. (www.osme.org) Accessed 2009.

Pederson, T. (2009) UAE Birding: The eastern hotspot of the Western Palearctic. (www.uaebirding.com) Accessed 2009.

Peklo, AM (1987) *The flycatchers of the USSR fauna.* Naukova Dumka, Kyiv (in Russian)

Ratarova, V. (2009). Mapping of biologically important forests in Bulgaria – Final Report. BSPB. Conservation series No. 15. Sofia. 80 pp (in Bulgarian)

Surf Birds.com (2009) Middle East Bird Net (http://www.surfbirds.com/birdingmail/Group/MEBirdNet) Accessed 2009.

Tanzania Bird Atlas Project (2009) Tanzania Bird Atlas - Distribution and Seasonality. (www.tanzaniabirdatlas.com) Accessed 2009.

Tucker, G. M., M. F. Heath (1994). Birds in Europe: their conservation status. Birdlife international, BirdLife Conservation Series No. 3, Cambridge, UK. 600 p.

ANNEX 1

Threats important at population/group of countries level

Threats	BG	GR	MK	TR	Overall
Logging for woodchips for stratified wood	x	x		x	High but probably decreasing
Logging for round wood for construction industry	x	x	x		High, especially in beech forests
Logging for firewood and charcoal (increasing in BG and GR)	x	x	x		High, especially in oak and beech
Construction of forest roads	x	x	x		Potentially very high, may lead to increase in other threats
Illegal logging	x		x		Low, local
Selective removal of damaged and over-mature trees (GR especially of beech)	x	x			High
Sanitary fellings	x		x		High
Clearance and degradation of riparian forests	x	x		x	High in GR, lower in BG due to their inclusion in protected areas in the species range
Land use changes and transformation to urban development	x	x			Medium
Land reclamation for agriculture		x			Low

Notes

- ✓ *The description of threats should reflect the actual understanding of the situation with the species, according to the latest available knowledge and the workshop participants' best judgement. It is not necessary to follow a formal threat classification system. The logical problem analysis and cause-effect relationships among the main threats are presented as a problem tree.*
- ✓ *Threats are not hierarchical, but clustered according to type of effect.*
- ✓ *Threat score: Critical, High, Medium, Low, Local, Unknown.*

ANNEX 2

Key sites for conservation for the species (Important Bird Areas) and their protection status

Country	IBA code	IBA International and national name	Latitude	Longitude	Pop. Min	Pop. Max	Year	Season	Quality	IBA Area (km²)	SPA code	SPA name and code	SPA Area (km²)	% of IBA protected/ overlap
Bulgaria	BG002	Western Balkan	43°27′60″ N	22°49′36″ E	400	600	2007	breeding	good	14,682	BG0002002	Western Balkan	1,468	99.96
	BG011	Central Balkan	42°43′2″N	24°58′2″E	140	280	2007	breeding	medium	16,668	BG0000494	Central Balkan	718	43.05
	BG029	Kotlenska Mountain	42°51′54″ N	26°25′25″ E	95	615	2007	breeding	good	9,926	BG0002029	Kotlenska Mountain	992	99.97
	BG040	Strandzha	42°4′21″N	27°38′52″ E	-	100	2007	breeding	good	1,154	BG0002040	Strandzha	1,154	99.98
	BG041	Ropotamo Complex	42°18′8″N	27°45′7″E	-	110	2007	breeding	good	387	BG0002041	Ropotamo Complex,	39	99.92
	BG043	Emine	42°44′40″ N	27°43′54″ E	28	275	2007	breeding	medium	6,881	BG0002043	Emine	666	96.77

Country	IBA code	IBA International and national name	Latitude	Longitude	Pop. Min	Pop. Max	Year	Season	Quality	IBA Area (km²)	SPA code	SPA name and code	SPA Area (km²)	% of IBA protected/ overlap
	BG044	Kamchiyska Mountain	42°56′35″ N	27°35′30″ E	173	556	2007	breeding	medium	8,888	BG0002044	Kamchiyska Mountain	888	99.97
	BG045	Kamchia Complex	43°0′5″N	27°49′0″E	390	550	2007	breeding	good	1,008	BG0002045	Kamchia Complex	101	99.91
	BG060	Galata	43°7′5″N	27°53′33″ E	-	40	2007	breeding	medium	814	BG0002060	Galata	80	99.97
	BG082	Batova	43°21′11″ N	27°57′33″ E	60	150	2007	breeding	medium	3,813	BG0002082	Batova	381	99.97
Greece	GR003	Dadias-Dereiou-Aisimis forest	41°7' N	26°0' E	Unknown		2009	breeding	poor	506	GR1110002		1.7	90.16
											GR1110010		457	
											GR1130011		0.4	
	GR008	Filiouri river valley and east Rodopi	41° 10' N	25° 45' E	Rare	Rare	1990	Breeding	poor	770	GR1110010		5	45.22

Country	IBA code	IBA International and national name	Latitude	Longitude	Pop. Min	Pop. Max	Year	Season	Quality	IBA Area (km²)	SPA code	SPA name and code	SPA Area (km²)	% of IBA protected/ overlap
											GR1130011		368	
	GR009	Kompsatos valley	410' N	25° 7' E	Rare	Rare	1990	Breeding	poor	160	GR1130012		111	54.12
	GR058	Mounts Kato Olympos and Ossa, and Tembi ravine	39° 54' N	22° 30' E	uncommon	uncommon	1996	Breeding	poor	690	GR1420005		13	65.71
											GR1420007		233	
											GR1420008		215	
	GR064	Mount Pilion	39° 27' N	23° 2' E	0	0	1996	Breeding	unknown	318	No SPA. Only partial national protection (1100 ha)			

Key sites for the conservation of the species outside of the EU

Country	IBA Code	IBA International name	Latitude	Longitude	Pop. min	Pop. max	Year	Season	Quality	IBA Area (km²)	Protected Areas	Type of protected area	Coverage
Georgia	GE007	Eastern Caucasus	42º 10' N	45º 10' E	5	0	1998	breeding	good	374	Zapovednik: Akhmeta, Kazbegi, Lagodekhi	Nature Reserves	National: Partial International: None
Russia	RU401	Bolchoi Tkhach mountain	44º 3' N	40º 23' E	200	300	2007	breeding	good	20			
	RU282	Kayakentski reserve	42º 15' N	47º 40' E	100	0	2002	breeding	good	273			
	RU153	Lower Urushten river	43º 57' N	40º 40' E	30	50	2006	breeding	good	55			
	RU398	Sochinsky National Park	43º 42' N	39º 50' E	300	500	2007	breeding	good	1,937			

Country	IBA Code	IBA International name	Latitude	Longitude	Pop. min	Pop. max	Year	Season	Quality	IBA Area (km²)	Protected Areas	Type of protected area	Coverage
	RU309	Sources of Kuna and Shisha rivers	44º 4' N	40º 22' E	20	30	2007	breeding	good	20	Sources of Kuna and Shisha rivers	UNESCO-MAB Biosphere Reserve	National: High
	RU318	Vicinity of Dakhovka	44º 14' N	40º 12' E	30	50	2006	breeding	medium	27			
Turkey	TR002	Igneada forests	41º 83' N	27º 96' E	unknown	unknown	unknown	breeding	unknown	82	Igneada	Nature Reserve	National: High International: None
	TR008	Uludag	39º 96' N	29º 5' E	unknown	unknown	unknown	breeding	unknown	1,251	Uludag	National Park	National: High International: None
	TR048	Ilgaz mountains	41º 08' N	33º 75' E	unknown	unknown	unknown	breeding	unknown	1,409	Ilgaz Daðý	National Park	National: Low International: None
	TR0990	Terkos basin	41º 41' N	28º 35	unknown	unknown	unknown	breeding	unknown	1,321			National: None International: None

Country	IBA Code	IBA International name	Latitude	Longitude	Pop. min	Pop. max	Year	Season	Quality	IBA Area (km²)	Protected Areas	Type of protected area	Coverage
	*	Karçal mountains	41 º 35′ N	41 º 98' E	unknown	unknown	unknown	breeding	unknown	1,402			National: None International: None
	*	Küre mountains	41 º 71′ N	32 º 78' E	unknown	unknown	unknown	breeding	unknown	1,298			National: None International: None
	*	Munzur mountains	39 º 38′ N	39 º 21' E	100	0	unknown	unknown	unknown	5,515			National: None International: None
	*	Eastern Black Sea mountains	40 º 88′ N	40 º 93' E	unknown	unknown	unknown	breeding	unknown	16,030			National: Low (Partially protected) International: None
	*	Yenice forest	41 º 183′ N	32 º 41' E	unknown	unknown	unknown	breeding	unknown	1,302			National: None International: None

Notes

- ✓ ***Population Min - Max.*** *For breeding ('season' column), figures are usually given in pairs; for other seasons, figures are given in individuals*
- ✓ ***Season:*** *Breeding, Migration, Non breeding visitor (wintering)*
- ✓ ***Accuracy: Good (Observed)*** *= based on reliable or representative quantitative data derived from complete counts or comprehensive measurements.*

  Good (Estimated) *= based on reliable or representative quantitative data derived from sampling or interpolation.*
  Medium (Estimated) *= based on incomplete quantitative data derived from sampling or interpolation.*
  Medium (Inferred) *= based on incomplete or poor quantitative data derived from indirect evidence.*
  Poor (Suspected) *= based on no quantitative data, but guesses derived from circumstantial evidence.*
- ✓ ***Protected Area name =*** *Nature Reserve, National Park, Ramsar site, etc.*
- ✓ **Type of protected area**: IUCN Category
- ✓ ***Protection status****: level of overlap between the IBA and a National protected area or International designation.*
- ✓ * **Recently proposed IBAs**

ANNEX 3

National legal status

Country	Legal protection	For game species, give opening/closing dates of hunting season
Bulgaria	Protected	-
Greece	Protected against hunting through national hunting legislation	-
Turkey	Protected against hunting through national hunting legislation.	-
Macedonia	Not protected	-

Recent conservation measures

Country	Is there a national action plan for the species?	Is there a national project / working group?
Bulgaria	*No*	*No*
Greece	*No*	*No*
Turkey	*No*	*No*
Macedonia	*No*	*No*

Ongoing monitoring schemes for the species

Country	Is there a national survey / monitoring programme?	Is there a monitoring programme in protected areas?
Bulgaria	*No*	*No*
Greece	*No*	*No*
Turkey	*No*	*No*
Macedonia	*No*	*No*

Overview of the coverage of the species in networks of sites with legal protection status

Country	Percentage of national population included in IBAs	Percentage of population included in Ramsar sites	Percentage of population included in SPAs[2]	Percentage of population included in protected areas under national law
Bulgaria	98-100%	0-10%	98-100%	40-60%
Greece	0-10% but probably more	0-10%	0-10%	10-50%
Turkey	Unknown	0-10%	Not applicable (no SPAs in Turkey)	unknown
Macedonia	Unknown	0	Not applicable (no SPAs in Macedonia)	unknown

✓ *This table can be generated automatically by BirdLife WBDB on request. SSAP compilers may use classes instead of real figures: 0-10% (almost none), 10-50% (less than half), 50-90% (more than half), 90-100% (all)*

[2] This is relevant only for European Union member states. Any other regional (legal) protection should be mentioned in next column.