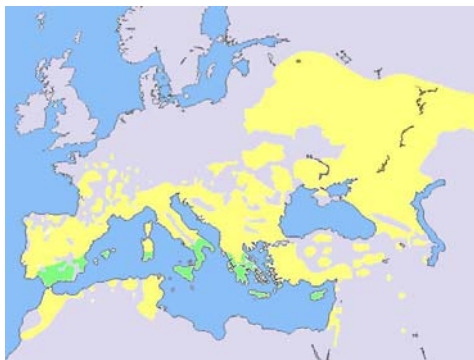


## Scops owl *Otus scops*

*Birds Directive (not listed in Annexes)*



*Otus scops* has a large range that extends from Europe and North Africa to central Russia and Asia as far as Japan<sup>1</sup>.

	AT	BE	BU	CY	CZ	DE	DK	EE	EL	ES	FI	FR	HU	IR
Present														
Present	IT	LV	LT	LU	MA	NL	PL	PT	RO	SL	SV	SE	UK	
Present														

### SPECIES INFORMATION

#### ECOLOGY

- At 20 cm, scops owl is one of the smallest owls in Europe;
- It is largely a nocturnal species and generally solitary, although loose colonies of 2-7 individuals have also been observed;
- Scops owl is generally monogamous, it nests in cavities in old trees and sometimes in abandoned buildings;
- The female lays 2-6 eggs and raises the chicks alone. The young leave the nest after 21-33 days;
- Its diet consists almost entirely of insects, especially crickets, grasshoppers, moths and beetles;
- Due to the small size of the prey and their low energetic content, an important quantity of prey is necessary, especially whilst the young birds are fledging;
- It is mostly a migratory species, northern populations tend to overwinter in southern Europe, whilst other populations overwinter in sub-Saharan Africa.

#### HABITAT REQUIREMENTS

- Scops owl is a typical species of traditional extensive agri-pastoral systems which contains a mosaic of habitats consisting of large old trees, semi-natural grassland and small patches of scrub;
- It inhabits all types of open woodland, cultivated land with trees, orchards and other fruit plantations, olive groves, unimproved meadows, riverine forests and ramblas (temporary rivers) as well as town parks, gardens and trees along the roadside;
- It requires low vegetation (e.g. unimproved meadows or pasture) for foraging and old trees with hollows for nesting;
- Grassy road side verges and grassy strips are also attractive as foraging sites for owls as they are often very rich in grasshoppers and other insects;

<sup>1</sup> Map: Perrins, C.M & Ogilvie, M.A. Drawing courtesy of [http://en.wikipedia.org/wiki/Eurasian\\_Scops-owl](http://en.wikipedia.org/wiki/Eurasian_Scops-owl)

- Breeding territories may be clustered which could be either the result of a clumped distribution of suitable areas for breeding or foraging, or eventually because other individuals are present which could be interpreted as an indicator of suitable habitat.

## THREATS

The causes of decline in scops owl populations are more or less the same across the species range in Europe (only the most critical threats are listed here):

- Loss of suitable habitats through land abandonment leading to the spread of rank vegetation and invading scrub which renders the habitat unsuitable for scops owls;
- Intensification of agricultural or forestry practices: Especially the intensification of orchards, olive groves, vineyards and other fruit plantations; intensive orchards are of little or no conservation value for scops owl as they lack old trees, have intensively managed understorey vegetation and are heavily fertilised or sprayed with pesticides which kills off the insects upon which the owl feeds;
- Removal of semi-natural elements in traditional landscapes: Hedges, walls, grassy patches, individual tree lines or clusters are sometimes removed to make room for crop expansion;
- Pesticides: The use of pesticides is a major cause of scops owl decline as it greatly reduces the number of insects available to the birds. Residues also accumulate in the birds and these may reach fatal levels when the birds fat reserves are depleted on migration;
- Traffic: Collision with vehicles is a problem as the birds have a low-flight and tend to frequent road side verges for foraging.

## FARMING PRACTICES FAVOURABLE TO SCOPS OWL

The scops owl still has a relatively healthy global population although in Europe it is considered depleted due to its large historical decline between 1970 and 1990. The species is closely associated with traditional low intensity agro-pastoral systems and its decline is directly linked to the loss of such activities. The poor economic viability of traditional orchards/ agro-forestry systems compared with intensive plantations, the difficulties associated with mechanizing work in traditional orchards, the market demand for more homogenous fruit production are all contributing factors to their decline.

Measures beneficial to scops owl include:

- Maintaining traditional agro-pastoral mosaic landscapes: that provide a suitable mix of old trees for nesting, open semi-natural meadows or pastureland for foraging and small pockets of scrub for day roosting;
- Preserving traditional orchards: and avoiding grubbing out or replacing these with intensive fruit production plantations which are of little or no interest for owls;
- Retaining semi-natural elements in traditional landscapes: like hedges, walls, grassy patches, strips and verges as well as individual tree lines or clusters;
- Maintaining appropriate grazing or mowing levels: to keep the vegetation low but still rich in insects and grasshoppers in particular;
- Restricting or prohibiting the use of pesticides and fertilisers: to ensure that insect populations remain healthy and to avoid that toxic substances accumulate within the owls;
- Encourage organic farming.

## OTHER SPECIES BENEFITING FROM THESE CONSERVATION MEASURES

Like every species, the scops owl has particular habitat requirements that are unique to its lifecycle and to its long term survival. However, as the owl is essentially a species of traditional agro-pastoral systems and orchards, several of the measures mentioned above would also benefit other species protected under the Birds Directives that are typical of these habitats.

Roller, *Coracias garrulous*  
Woodlark, *Lullula arborea*  
Masked shrike, *Lanius nubicus*  
Little Owl, *Athene noctua*  
Woodchat Shrike, *Lanius senator*

Syrian woodpecker, *Dendrocopos syriacus*  
Olive-tree warbler, *Hippolais olivetorum*  
Ortolan bunting, *Emberiza hortulana*  
Collared Flycatcher, *Ficedula albicollis*.  
Grey-Headed Woodpecker, *Picus canus*

A variety of bat species forage over traditional orchards, as the greater horseshoe bats (*Rhinolophidae*) and species inside the groups Pipistrelles (*Vespertilionidae*) and noctules (*Nyctalus*).

## OBLIGATIONS ARISING FROM THE BIRDS DIRECTIVE

The scops owl is protected under the EU Birds Directive 79/409/EEC. It is not listed in Annex I (therefore no Natura 2000 sites are required to be designated for its conservation) but the provisions of Articles 2 and 3 still apply as regards habitat conservation. Member States must take the following measures to ensure its conservation.

### General requirements

Member States are required to take the requisite measures to maintain the population of the scops owl at a level which corresponds in particular to its ecological, scientific and cultural requirements, or to adapt the population of the species to that level (cf Article 2).

To achieve this, Member States are required to preserve, maintain or re-establish a sufficient diversity and area of habitats for the scops owl which should include primarily the following (cf Article 3):

- creation of protected areas;
- upkeep and management in accordance with the ecological needs of habitats both *inside* and *outside* protected area;
- re-establishment of destroyed habitats;
- creation of habitats.

### Protecting the species

Member States should take the requisite measures to establish a general system of protection for the scops owl throughout its natural range within Europe, and in particular to prohibit the following (cf Art 5):

- deliberate killing or capture by any method;
- deliberate destruction of, or damage to, their nests and eggs or removal of their nests;
- taking their eggs in the wild and keeping these eggs;
- deliberate disturbance of these birds particularly during the period of breeding and rearing, in so far as this would have a significant negative effect on the birds;
- keeping birds, the hunting and capture of which is prohibited;
- sale, transport for sale, keeping for sale and the offering for sale of live or dead birds and of any readily recognizable parts or derivatives of these birds (cf Article 6).

Member States may derogate from these provisions under a number of circumstances (eg in the interest of public health, or judicious use) where there is no other satisfactory solution and where the derogations do not affect the overall conservation status of the species (cf Article 9).

## SCOPS OWL CONSERVATION THROUGH MEASURES UNDER CAP/RDPs

Obligations arising under the Birds Directive can be integrated into the CAP measures in the following manner:

### Cross compliance

Cross compliance is a horizontal CAP tool and applies to all direct payments (Pillar I), Pillar II payments (Less Favoured Area payments, Agri-Environment, Natura 2000 compensatory payments, and certain wine payments). The cross compliance requirements consist of 19 Statutory Management Requirements (SMR), and the requirements set to keep land in good agricultural and environmental conditions (GAEC).

In the case of the **Birds Directive** one of the 19 SMRs concerns the requirements resulting from the following articles that must be respected by farmers:

- Article 3 (1) & (2)(b): preserve and maintain a sufficient diversity of habitats for wild birds; in particular introduce measures for their upkeep and management in accordance with the ecological needs of habitats inside and outside of protected zones;
- Article 4 (1), (2), (4): special conservation measures in Natura 2000 sites and taking appropriate steps to avoid pollution or deterioration of these areas;
- Article 5 (a), (b) & (d): obligations under the general system or protection for all wild birds, and in particular prohibitions of the deliberate killing or capture by any method, the deliberate destruction of, or damage to, their nests and eggs or removal of their nests and/or the deliberate disturbance of these birds particularly during the period of breeding and rearing, in so far as disturbance would be significant.

The exact requirements of the above mentioned SMRs vary between Member States and depend on the way the requirements of the Birds Directives are translated into their laws and administrative measures (e.g. management plans for Natura 2000 sites) applicable to farmers, and consequently cross compliance.

In addition to meeting the SMRs, farmers must also keep land in good agricultural and environmental conditions (GAEC) which sets a minimum level of maintenance through, for instance, compulsory standards for:

- Retention of landscape features including where appropriate, hedges, ponds, ditches, trees (in line, in group or isolated) and field margins;
- Avoidance of encroachment of unwanted vegetation on agricultural land;
- Protection of permanent pasture.

Member States can also voluntarily set standards, for example, for<sup>2</sup>:

- Minimum livestock stocking rates or/and appropriate regimes;
- Establishment and/or retention of habitats;
- Prohibition of the grubbing up of olive trees;
- Maintenance of olive groves and vines in good vegetative condition.

### Measures under Rural Development Programmes funded from EAFRD:

The following measures could be used to benefit scops owl:

- **Less Favoured Area payments:** (Article 37) linked to existing farming practices where they support upkeep of traditional low-input farming systems;
- **Agri-environmental schemes:** (Article 39) linked to voluntary measures such as regular grazing or mowing of the semi-natural grasslands in areas where scops owl are or could be present, reducing or prohibiting the use of pesticides, maintaining grassy strips as foraging areas on the farm, removing scrub, putting up nest boxes;
- **Reimbursement of non-productive investments:** (Article 41) can cover a range of investments from on-farm investments linked AE schemes or to measures identified in management plans such as converting to organic production methods, replanting traditional orchards, or which enhance the public amenity value of a Natura 2000 area;

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<sup>2</sup> These standards are however compulsory for those Member States who had already set a minimum requirements for these standards before 1 January 2009 or where national rules addressing the standard are applied in the Member State.

- **Conservation of rural heritage** (Article 57): for instance to cover the cost of drawing up management plans for sites hosting scops owl, undertaking habitat restoration measures in areas currently or potentially suitable for scops owl, launching awareness campaigns on scops owl conservation requirements amongst farmers.

In addition, the following could also be used:

- **Training and information** (Article 21): e.g. could help make AE schemes more effective and train farmers and experts in the Farm Advisory Services on conservation and management requirements linked to wildlife such as scops owl;
- **Farm Advisory Services (FAS)** (Articles 24 and 25): to advise farmers on how to apply cross compliance rules e.g. those based on the Habitats and Birds Directives that are beneficial, inter alia, for scops owl;
- **LEADER** (Article 61): integration of scops owl conservation into area-based local development strategies and enhancement of dialogue and collaboration between farmers, conservationists and other rural stakeholders in the area concerned.

## EXAMPLES OF SCOPS OWL FRIENDLY MEASURES UNDER RDP

The following provide some examples of how different countries have introduced scops owl friendly farming through the Rural Development Regulations for 2000-2006 and 2007-2013. No schemes were found that directly targeted the conservation of scops owl but a review of a selection of RDPs for 2007-2013 reveals several agri-environment measures of potential indirect benefit for the species.

These can be summarised as:

- Measures to support extensive grazing systems;
- Measures to maintain and create landscape features, such as hedges and farmland trees.
- Measures to maintain traditional orchards with spontaneous understorey managed by mechanical means or grazing.
- Organic farming.

However, it should be emphasised that these measures are only *potentially* beneficial. There are several critical questions which influence the extent to which this potential is realised on the ground. Further details are provided in the outputs of the Wildlife and Sustainable Farming Initiative:

[http://circa.europa.eu/Public/irc/env/swfi/library?l=/species\\_reports&vm=detailed&sb=Title](http://circa.europa.eu/Public/irc/env/swfi/library?l=/species_reports&vm=detailed&sb=Title)

### AUSTRIA

In the Austrian RDP for 2007-2013, measures of potential benefit to scops owl habitat are found under the general heading of agri-environment schemes (ÖPUL). There are three specific and one more general sub-measure of relevance to the species:

- **Organic Farming:** Because the use of agricultural pesticides is regarded one of the major threats to scops owl, their absence in organic farming makes this farming system beneficial to many species of wildlife. Promotion of organic farming is a major element of Austrian agricultural policy, and an estimated 17.5 % of the total agri-environment spending during 2007-2013, or c. 90 mil. EUR/year, will be used for supporting organic farming.

The yield in organically farmed orchards is significantly lower than in conventional orchards, typically only 50-60 % of the conventional yield, and the labour costs are usually higher. The lower yield and higher costs are only partly compensated by higher prices for organically grown fruit. The annual support payment in orchards is therefore relatively high (750 EUR/ha).

- **Integrated Production:** Integrated production incorporates several of the elements of organic farming and thereby also delivers some of its benefits, first of all through a general reduction of the use of pesticides and

an emphasis on using the most environmentally benign products. The use of plant protection products is minimized through prophylactic measures, e.g. by improving conditions for natural enemies of pests. Only biological and chemical plant protection products that are approved for integrated production may be applied, and there are additional restrictions on the number and frequency of applications.

Yields and prices are comparable to those of conventionally farmed orchards. Financial support compensates the higher costs associated with mechanical weed control and the necessary monitoring of pests and diseases, as well as the training costs. The annual payment is 300 EUR/ha. The sub-measure also existed during the previous programming period (2000-2006), when c. 8,000 ha of orchards (including hop gardens) were covered by the scheme.

- **Protection of grassland areas with scattered fruit trees:** (*Streuobstbestände*). This sub-measure aims at protecting meadows with scattered fruit trees (*Streuobstwiesen*) as well as permanent grassland areas with rows of fruit trees (*Streuobstreihen*). In a traditional *Streuobstwiese*, various kinds of fruit trees (usually of old types) are scattered across a meadow. Such areas are very important landscape elements and may also be of great importance to biodiversity. They also constitute an almost ideal habitat for scops owl.

Because the yields of the trees are usually lower than in more modern orchards and the mix of different types, as well as the distribution of the trees, makes the use of efficient harvest techniques difficult, continued use and management of such *Streuobstbestände* is often not profitable. To be eligible for support, a *Streuobstwiese* must hold at least 30 fruit trees per ha and an area with *Streuobstreihen* must have at least 5 fruit trees per row and a maximum of 20 m between the rows. Areas as small as 0.10 ha may be included under the scheme. Trees may not be cut unless they are hit by disease or old age, and the minimum tree density must be retained through re-planting with indigenous types. The area must be grazed or shall be mown at least once a year with removal of the harvest.

The annual payment is 120 EUR/ha. The sub-measure also existed during the previous programming period, when c. 13,000 – 15,000 ha of *Streuobstbestände* (somewhat short of the goal of 18,000 ha) were covered by the scheme.

- **Protection and sympathetic management of *Streuobstwiesen*:** may also be funded under the more general sub-measure 28, which aims at conservation and management of areas of particular importance for nature and water protection. It is a framework scheme, under which management aims and prescriptions for the target area(s) are laid down based upon individual assessment and advice. An estimated 7 % of the total agri-environment spendings during 2007-2013, or c. 36 mil. EUR/year, will be used for payments under this sub-measure. Standard packages with aims and prescriptions are defined by the authorities of each Federal State.

In the state of Kärnten, which holds one of the two major populations of scops owl in Austria, conservation and management of *Streuobstwiesen* may be funded under this sub-measure. The following conditions apply:

- Dead or dying trees, or parts of trees, must be retained.
  - Re-planting (in case of gaps in the tree stand) shall be with tall standard fruit trees, chosen from a list of approved types.
- No pruning, except for conservation purposes (e.g. removal of mistletoe).
- The area shall be extensively grazed or mown, with a maximum of two cuts per year.
- No mowing before 1 June (or later, depending on the region).
- No application of pesticides, fertilizer or manure (except from *in situ* grazing livestock).
- No burning.

The annual payment is 292 EUR/ha (or higher if, e.g., the configuration of the ground makes use of the area difficult).

## ITALY

Several regional RDPs (2007-2013) in Italy include some measures that may benefit the scops owl. Although not intended specifically for this species, the land uses (e.g. low-intensity grazing systems) and landscape elements (e.g. lines of trees) that are promoted in various ways by these measures are of potential benefit for scops owl.

Emilia Romagna, for instance, provides financial support under the agri-environmental measures for conserving existing natural and semi-natural elements that are typical of the agrarian landscape inside cultivated areas, such as tree lines or isolated trees, hedgerows and small woodland areas, ponds, pools and springs (*Action 9 - Conservation of natural and semi-natural areas and the agrarian landscape*).

All existing features must be surrounded by an external protective strip of 2-5 m that will not be cultivated, where the use of fertilizers, herbicides and pesticides will not be allowed, and vegetation could be controlled only manually or with mechanical means between 1st August and 20th February. The beneficiary is committed to preserve the targeted natural elements over 10 years on a minimal surface of at least 5% of the utilisable agricultural area (UAA) in its farmland (but less than 10% of UAA)

Priority is given to Natura 2000 sites and natural parks, particularly in plains (where natural elements have disappeared and biodiversity is impoverished) and hills, in areas considered vulnerable in relation to the Nitrates Directive (91/676/EEC) and in important areas for water recharge.

Extensive grazing is also supported under agri-environmental measures in the Emilia-Romagna Region (*Action 8 - Extensive grazing*), with the aim of increasing pastureland in areas where forests and bushes are under expansion (e.g. Apennines) and permanent grasslands are disappearing or have become very rare owing to agriculture intensification (e.g. in plains). The measure aims to contribute to the preservation of biodiversity and in particular certain species of fauna that are present in hills and mountain areas surrounding the forests.

The action supports the conversion of arable land into pastureland and the maintenance of permanent grassland and meadows, including the recovery of abandoned mountain pastureland. It must be implemented over a 5 year period. The beneficiary commits not to use herbicides, pesticides and other phyto-sanitary products, to use a grazing load below 1 LU/ha, to mow at least once a year where the grassland is not grazed and to remove invasive bush and tree species in the natural protected areas and in Natura 2000 sites.

Support to non-productive investments (measure 216) is also available in the Emilia-Romagna Region (*Action 3 - Restoration of natural and semi-natural areas and the agrarian landscape*) for the recovery of natural and semi-natural elements that are typical of the agrarian landscape. The natural and semi-natural elements targeted are: hedges and tree lines; small woods <0,5 ha separated from other woodland by an herbaceous strip of at least 10 m width.

The species to be used for planting must be tree and bush species belonging to the native local flora or that have been historically present in the area. Where fruit trees are used, they must belong to the ecotypes that are locally threatened. A protective strip of 2-5 m must be created along the hedgerows. The latter must be formed by at least five different species (from those included in an annex to this action). Small woodlands must be formed by at least four different tree species and one bush species.

The action is to be implemented in plains and hills. In hills, the action can be carried out exclusively in land that is also subject to "organic production" (Action 2 of agri-environmental measures in Emilia Romagna). Priority is given to agricultural land included in vulnerable areas according to the Nitrates Directive (91/676/EEC), Natura 2000 sites and other important areas for surface and ground water protection.

## PORTUGAL

In the RDP 2007-2013 for Portugal, in addition to Integrated and Organic Production there is a series of agri-environment measures called Integrated Territorial Interventions (ITI) that are implemented according to 9 priority zones (Natura 2000 sites and natural parks). These are aimed at supporting the management of farmland and forest areas of high natural value.

The measures include:

- Agri-environmental measures aimed at:
  - Conserving cultivated land of high nature value and the characteristic landscape elements;
  - Preserving the habitats of certain threatened fauna and flora species;
- Forest-environment payments;
- Non-productive investments necessary to fulfil the agri-environment and forest-environment objectives;
- Creation of the capacity for the promotion and monitoring of the relevant measures;
- Elaboration of the planning tools necessary for an appropriate management of Natura 2000.

Among the measures included are the following of potential relevance for scops owl:

- Support for almond and olive orchards on terraces, including conservation of features such as walls, hedges and tree lines (implemented in 2 of the 9 zones);
- Support for grazing of HNV permanent pastures (implemented in 4 zones);
- Management of grazing in Mediterranean scrublands (implemented in 1 zone);
- Conservation of riparian forests;
- Maintenance of trees, stone walls and other elements that are typical of the agrarian landscape, as well as the hedges with autochthonous tree and scrub species between cultivated plots or in their borders, not using herbicides;
- Maintenance of water points accessible to the fauna during the critical period of the summer;
- Maintenance of tree and bush vegetation along freshwater courses.