AGREEMENT ON THE CONSERVATION OF BATS IN EUROPE
Report on the implementation of the Agreement in MALTA
2010

A. General Information

Name of Party: MALTA

Date of Report: June 2010

Period Covered: 2001-2010

Competent Authority for the Agreement: Malta Environment and Planning Authority

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B. Status of Bats within the Territory of the Party

1. Summary Details of Resident Species

Eleven species of microchiropteran bats are currently recorded from the Maltese Islands covering three Families – Rhinolophidae (2 species), Vespertilionidae (8 species) and Molossidae (1 species). Records of additional species in literature have not been confirmed with reliability.

There are six known resident bat species: *Rhinolophus hipposideros* BECHSTEIN, 1800 *(*Lesser Horseshoe Bat), *Myotis punicus* FELTEN, 1977 (Lesser Mouse-eared Bat or Maghreb Bat), *Pipistrellus pygmaeus* LEACH, 1825 (Sorprano Pipistrelle), *Pipistrellus kuhlii* KUHL, 1817 (Kuhl's Pipistrelle), *Pipistrellus pipistrellus* SCHREBER, 1774 (Common Pipistrelle) and *Plecotus austriacus* FISCHER, 1829 (Grey Long-eared Bat). The Lesser Mouse-eared Bat is the largest bat found locally, whilst the Soprano Pipistrelle is the smallest. A new roosting site for the Lesser Mouse-eared Bat was discovered in 2007 in World War II shelters in Gozo. The occurrence of *Pipistrellus pipistrellus* was also only recently confirmed. Indeed it is currently only recorded on Malta (J.J. Borg, pers. com. 2010).

The other five species are considered to be rare and irregular migrants. *Tadarida teniotis* RAFINESQUE, 1814 (European Free-tailed Bat) was first reported in April 1993. This species is a rare winter visitor, and there is currently no information on its foraging grounds and on the exact location of its roosting sites. *Nyctalus noctula* SCHREBER, 1774 (Noctule) is a regular, albeit very rare, autumn migrant. Similarly for this species there is limited data on its occurrence in Malta.

Bat populations in the Maltese Islands have dwindled in some cases and most appear to be vulnerable. Unfortunately at least one species is possibly extinct as a resident bat, namely *Rhinolophus ferrumequinum* SCHREBER, 1774 (Greater Horseshoe Bat), the last confirmed report being from Buskett in 1987 (Borg, 2002). *Miniopterus schreibersii* KUHL, 1817 *(*Schreiber's Bat) has not been reported since the 1960s whilst *Eptesicus serotinus* SCHREBER, 1774 (Serotine) is probably a vagrant.

2. Status and Trends of Resident Species

Pipistrellus pygmaeus is still relatively common and is also found in inhabited areas. Similarly *Pipistrellus kuhlii* also seems to be stable in terms of trends. Both species are in fact assigned a favourable conservation status (following criteria of Article 17 Reporting under the Habitats Directive).

Pipistrellus pipistrellus is less common than *Pipistrellus pygmaeus* and has a limited distribution, presently recorded only on Malta. It is a threatened species and possibly in decline especially as it roosts in walls and thus is subject to disturbance from restoration projects (J.J. Borg, pers. com. 2010).

Myotis punicus is also relatively frequent in some areas, but has declined in abundance in many areas where it was formerly common. It roosts in cracks in walls and rock-faces and in winter lies dormant in caves and tunnels, which are, unfortunately, often disturbed or altered by man. Similar in habits and vulnerability is *Rhinolophus hipposideros*, which also remains dormant in deep caves during winter. There are also declining trends of *Plecotus austriacus* namely due to disturbance, however it is widespread in the Maltese Islands. Considering the IUCN threat categories, *Plecotus austriacus*, is in fact considered endangered. The other species are considered vulnerable, with only *Pipistrellus pygmaeus*, being considered of least concern.

Species	Overall Conservation Status - Article 17 of Habitats Directive	National Status[1]	Trends
Rhinolophus hipposideros	Inadequate	Updated National RDB Status as at 2005 = Vulnerable Estimate of population size: between 200 to 400 individuals	A sharp decline in numbers was noted up to the mid 1990's, but since then numbers appear to have stabilised. Population trend from 1995 to 2007 is stable (=)
Myotis punicus	Inadequate	Updated National RDB Status as at 2005 = Vulnerable Estimate of population size: between 250 to 450 individuals	Formerly very much common, large flocks reported leaving roosts during the summer months by Gulia (1914). Lanfranco (1969) recorded this species as common. A severe decline of about 50% in population levels was reported by Borg *et al* (1997). Population trend from 2002 to 2007 is increasing (+)

Species	Overall Conservation Status - Article 17 of Habitats Directive	National Status[2]	Trends
Pipistrellus pygmaeus	Favourable	Updated National RDB Status as at 2005 = Least Concern Estimate of population size: less than 1000 adults	Numbers formerly much more common (Lanfranco 1969); population decline noted in the 1990's, though population now appears to be stable or with a limited degree of decline. Population trend from 2002 to 2007 is stable (=)
Pipistrellus kuhlii	Favourable	Updated National RDB Status as at 2005 = Vulnerable Estimate of population size: probably less than 500 individuals	Recorded as rare by Gulia (1890, 1913), never recorded till 1990 when it was found to be frequent (Borg *et al* 1990). Population trend from 2002 to 2007 is stable (=)
Plecotus austriacus	Inadequate	Updated National RDB Status as at 2005 = Endangered Estimate of population size: Unknown, but estimated between 150 to 200 individuals	Never numerous, Lanfranco (1969) recorded it as quite frequent. Recorded only in single numbers. Population trend from 2004 to 2007 is decreasing (-) (due to disturbance)

Table 1: Status and Trends of the 5 Resident Bat Species
(Source: Malta's 2007 Article 17 Report – Species Datasheets; Borg 2002)

[1] RDB Status is based on the 2005 IUCN categories
[2] RDB Status is based on the 2005 IUCN categories

3. Habitats and Roost Sites

Local habitats for *Rhinolophus hipposideros* include caves and other subterranean habitats, in areas with relatively high humidity (more than 70%). Occasionally it is also found in buildings, roosting at heights from 0.5 to 4 metres from the ground. It has also been frequently noted feeding in overgrown areas, especially with running water (for instance at *Il-Buskett* (Malta), and at *Wied il-Lunzjata* (Gozo). Other potential habitats include overgrown fields in sheltered humid valleys and in large gardens with open water. Roosting takes place in caves and all sorts of hypogea, as well as inside man-made structures.

Myotis punicus is a cave-dwelling bat. It is also frequently found occupying human habitations, and is also found in open areas and agricultural land. Other potential habitats include valleys retaining freshwater throughout, or most part of, the year. Roosting habitats include caves and all sorts of hypogea, as well as inside man-made structures. Borg (1998) provides the following breakdown of roosting habitats: caves – 52%, World War II shelters – 14%, water tunnels– 14%, catacombs – 10%, human habitations – 7%, fortifications – 3%. Although underground habitats and other habitats like disused habitations are in themselves not rare, human disturbance often limits the suitability of such habitats for this species.

Pipistrellus pygmaeus is present in urban, sub-urban and rural areas, from small villages to large towns. It has been recorded in all types of habitats, especially urban ones, as well as valleys, cliffs and woodland. Other potential habitats include urban gardens, especially those with insect-attracting bushes. This species is also frequently noted feeding around white street lamps and floodlights. This species hibernates in all sorts of natural and man-made crevices, as well as wells. Apart from narrow cracks and cavities, it has also been encountered behind hanging objects and peeling paint, curtains, and occasionally clothing items. The species roosts in natural and man-made walls.

As regards *Pipistrellus kuhlii*, very little is known locally about this bat species. However, where it occurs, its ecology is very similar to that of *Pipistrellus pygmaeus*. It frequents same habitats, that is, valleys, gardens and urban, suburban and rural areas. Local habitats in fact include open fields, shallow valleys, gardens and streets. Other potential habitats include large private gardens with moderate sized ponds. With respect to the roost, in Gozo this species shows a tendency to rubble walls. It has also been recorded feeding along street lamps. Hibernacula include cracks in natural and man-made walls.

Local habitats for *Plecotus austriacus* include wooded areas, canals and valley bottoms with running waters, and over open waters. This species has been observed in valleys with dense vegetation, as well in open areas close to water near dense shrubs. It is seen quite often foraging in areas covered in vegetation like at *Il-Buskett* and *Girgenti* (Malta), and *Wied il-Lunzjata* (Gozo), as well as along cliffs. Occasionally it is also seen feeding along street lamps, such as at *Il-Buskett* and at *Girgenti*. Other potential habitats include overgrown and cultivated fields, and open reservoirs.

4. Threats

The main threats to bats in the Maltese Islands include habitat fragmentation and destruction, combined with loss and deterioration of feeding grounds, change in agricultural land use and the misuse of pesticides and insecticides. Vandalism and human disturbance to roosting sites and nurseries, and illegal killing is also a concern. Repeated disturbance to the wintering roosting grounds and the breeding areas of bats has, in certain cases, led to individuals deserting roosts. Such has been the case for *Għar il-Friefet* in the *Birżebbuġa* area (Malta).

Bats found in private dwellings may be killed or excluded from their roosts by home owners. Although in many cases discussions with home owners have proved positive with the result that the population of bats is allowed to remain or in some cases made to relocate, in very few cases, populations of bats have been blocked inside their roosts and left to perish. Disturbance and killings during restoration works on outside walls of buildings is also a threat.

Past misconceptions that bats are fearsome and disease-carrying pest, and other myths and housewife tales are gradually being dispelled by awareness-raising activities (see section 9 below).

5. Data collection, analysis, interpretation and dissemination

The then Environment Protection Department commissioned a study on threatened bats and important bat sites. This study (Borg, 2002) resulted in the compilation of a number of datasheets for every recorded species detailing *inter alia* data on: taxonomy, ecology, reproduction biology, migrations and movements between roosts, diet and feeding grounds, local habitats, roost sites, threats, population size and dynamics, conservation measures, legal protection, as well as research and study techniques. Data collected so far

has allowed the monitoring of bat populations in the Maltese Islands, and the comparison of the present status of the species with that noted in the Red Data Book of the Maltese Islands published in 1989, taking into account changes to IUCN classifications. The data gathered through this commissioned study will assist in drawing up the Red List of Threatened Bats in Malta. Indeed, the basis for this was considered in the State of the Environment Indicators 2006 (see also Table 1 under Section 2 of this report – third column).

The Malta Environment and Planning Authority issues a number of permits every year, allowing research and monitoring of bat populations. The results obtained from this research allow further analysis of the status of bats in the Maltese Islands, and directs conservation efforts.

Available information to date mostly relates to important roosting/breeding areas rather than foraging grounds, and as such the range of bat species cannot be determined at this stage. However, there is an ongoing study by bat workers/experts in Malta, initiated in 1987, with the aim of investigating the ecology and biology of all bats in the Maltese Islands. Data is being collected on roosting sites, roost counts, roost movements, ringing, morphometrics, diet and parasites. The study also comprises genetic analyses to determine the genetic identity of local species and to provide a scientific backing for conservation efforts. Data accumulated over a number of years is expected to shed light on population trends.

C. Measures Taken to Implement Article III of the Agreement

6. Legal Measures

All bats are afforded strict legal protection in line with requirements of the Convention on the Conservation of Migratory Species of Wild Animals and Eurobats, as well as other multilateral environmental agreements and also the EC Habitats Directive (92/43/EEC). The "Flora, Fauna and Natural Habitats Protection Regulations, 2006"(Legal Notice 311 of 2006 as amended) prohibits via Regulation 25 the pursue, taking or attempt to take, the deliberate capture or killing or attempt to kill as well the deliberate destruction, keeping, transport and sale of all bats species (being covered under Schedule V[a] to the Regulations). Deliberate disturbance of any species particularly during periods of breeding, rearing, hibernation and migration, as well as the destruction and deterioration of breeding sites or resting places is also prohibited. Indeed, such activities would require a permit from the Malta Environment and Planning Authority which is only issued if such activities do not threaten any specimen of the species. Permits are normally issued for *bona fide* studies and would be accompanied by a number of conditions which are to be adhered to by the holder of the permit. These regulations also require the designation of Special Areas of Conservation (SACs) for certain bat species, such as *Rhinolophus hipposideros* and *Myotis punicus.* The regulation of trade of certain bat species is also covered by the "Trade in Species of Fauna and Flora Regulations, 2004" (Legal Notice 236 of 2004 as amended), which transposes Council Regulation (EC) No. 338/97 on the protection of species of wild fauna and flora by regulating trade therein and also the required of CITES.

7. Sites identified and protected

In 2002, sites which are important for the conservation status, including for the shelter and protection, of bats in the Maltese Islands, with the aim of further increasing the level of protection afforded to bats, started being identified. Known bat sites and roosts are being assessed in order to determine the appropriate way forward for management and protection. To date, the most important bat sites have been designated as Natura 2000 sites under the EC Habitats Directive[3]. These sites include *Il-Buskett*, *Iċ-Ċittadella*, *L-Għar tal-Iburdan*, *Għar Dalam*, *Il-Miżieb*, the *Rdumijiet ta' Malta* and *Ix-Xlendi*.

Name of Site	Location	Natura 2000
Buskett Cave	Wied il-Luq	Il-Buskett/Girgenti
Iċ-Ċittadella	Gozo	Iċ-Ċittadella
Għar fl-inħawi ta' Ġebel Ċiantar	Rabat	Rdumijiet ta' Malta
Għar Dalam	Birżebbuġa	Għar Dalam
Għar Ħasan	Ħal-Far	Rdumijiet ta' Malta
Għar in-Nagħaġ	Ħal-Far	Rdumijiet ta' Malta

[3] COMMISSION DECISION of 22 December 2009 adopting, pursuant to Council Directive 92/43/EEC, a third updated list of sites of Community importance for the Mediterranean biogeographical region *(notified under document C(2009) 10406)* (2010/45/EU)

Għar Iswed	Miġra Ferħa	Rdumijiet ta' Malta
Għar ta' l-Iburdan	Rabat	L-Għar tal-Iburdan
Għar ta' l-Inkwiżitur	Girgenti	Il-Buskett/Grigenti
Tunnel	Lunzjata, Gozo	Ix-Xlendi/Wied tal-Kantra
Water Pump	Mġarr ix-Xini	Ta'Ċenċ
Wied il-Lunzjata	Fontana	Ix-Xlendi/Wied tal-Kantra
Wied ix-Xaqqa	Ħal-Far	Rdumijiet ta' Malta

Table 2: Important Bat sites covered by Natura 2000 Sites

Some other roosts have been scheduled under the Development Planning Act as Sites of Scientific Importance (SSIs) and/or Areas of Ecological Importance (AEIs). In this case, however, protection levels do not refer exclusively to the presence of bats in the area.

8. Consideration given to important bat habitats

Malta's small size and high population density means that there is significant competition for land use between development and conservation of natural areas. Bats have adapted to roosting in man-made structures in addition to roosting in natural areas. Some species such as *Pipistrellus pygmaeus* can also be found feeding near street lights in urban areas, in addition to natural areas and agricultural land. The small territory of the Maltese Islands signifies that bats living in caves in natural areas can quite easily be found foraging in urban areas, since distances are relatively small. This therefore tends to complicate matters when applications for development are assessed. Bats are given due consideration when applications for the demolition of old buildings, the installation of wind turbines, or any developments expected to affect agricultural areas are being assessed.

9 Activities carried out to promote the awareness of the importance of the conservation of bats

The Malta Environment and Planning Authority published two posters on bats as part of the Parks Network Project (funded by the European Regional Development Fund - Interreg IIIC South Zone). One poster depicts the Bats of Malta, showing the different species and the level of protection afforded by law. A smaller poster provides specific information on *Myotis punicus*.

Malta has joined other countries in celebrating the International Year for Biodiversity. Celebrations at a national level were officially launched on 18 May 2010. Prior to this day, activities aimed at raising awareness on biodiversity primarily included biodiversity-related articles written by the Malta Environment and Planning Authority, amongst which those published under the section entitled "One World" in a local newspaper. One article published on 8 April 2010 was on the bats in Malta.

10. Responsible bodies, in accordance with Article III.5 of the Agreement, nominated for the provision of advice on bat conservation and management

The Malta Environment and Planning Authority is the competent authority for national legislation affording protection to bats on a national level and is assisted by bat workers/experts.

11. Additional action undertaken to safeguard populations of bats

Nothing else to report on.

12. Recent and ongoing programmes (including research and policy initiatives) relating to the conservation and management of bats. In the case of research, summaries of completed projects should be provided, giving references where possible and acknowledging the sources of funding

There is ongoing research by local bats workers/experts on bat in the Maltese Islands and involves both scientific data collection on the ecology of resident bats and genetic analyses. Such research is covered by a permit issued by the Malta Environment and Planning Authority.

Research on bats has also been undertaken by students reading for a Bachelors of Science degree in biology with the University of Malta. Those carried out to date include the following:

- Baron, B. (2006). 'Preliminary Analysis of Population Genetics of *Myotis* cf. *punicus* in the Maltese Islands: Implications for its Conservation'. B.Sc. Dissertation. University of Malta (unpublished)

- Falzon, K. (1999). 'Biological analyses for the conservation of pipistrelles (*Pipistrellus* spp.) in Malta'. B.Sc. Dissertation. University of Malta (unpublished).
- Jones C. (1999). 'Distribution and abundance of bat species in Malta: implications for their conservation'. B.Sc. Dissertation. University of Malta (unpublished).

See also information provided under Section 5.

13. Consideration being given to the potential effects of pesticides on bats, and their food sources and efforts to replace timber treatment chemicals, which are highly toxic to bats

Current research involves the collection of data on the diet of bats in Malta. A paper was published by Schinelli *et al* (1993) on the presence of contaminants in bat species from Sicily and Malta. Tissues from *Rhinolophus hipposideros* and *Myotis blythii* (= *punicus*) were examined.

D. Functioning of Agreement

14. Cooperation with other Range States

Malta cooperates with other Range States and other Member States of the EU in conservation matters.

15. Measures taken to implement MoP Resolutions

2nd Session of the Meeting of Parties (Bonn, Germany, 1 - 3 July 1998)	
Resolution 2.2 Consistent Monitoring Methodologies	The Guidelines on the recommended methodologies to be employed for the monitoring of bat species in Europe are followed accordingly.
Resolution 2.4 Transboundary Programme: Habitat Proposals	National activities have been carried out via the commissioned study including collection of data on sites according to species and nature of site, occurrence and abundance of bat species in underground habitats, status of species, population trends, human uses of site (if any) and conservation/protected status of sites
Resolution 2.5 Geographical Scope of the Agreement	The commissioned study provides information on which species are irregular migrants in Malta.
Resolution 2.8 Implementation of the conservation and management plan	Malta has adopted measures to fully implement Article III.1 of the Agreement. Important roosts, particularly of rare species have been identified and some are even protected or scheduled. Public awareness is also promoted. Although the impact of pesticides warrants study, implementation of the EC Nitrates Directives, the Code of Good Agricultural Practice and uptake of relevant agri-environment measures would contribute to improve the effective use of pesticides. Population surveying is currently being undertaken as part of a study in order to generate further data on species distribution and population trends. The conservation of bat habitats is taken into consideration in cases of land development where bat roosts might be affected.
3rd Session of the Meeting of Parties (Bristol, United Kingdom, 24 – 26 July 2000)	
Resolution 3.2 Financial and Administrative Matters (Budget 2001 – 2003)	Malta paid its annual contributions at the scale agreed upon by the Meeting of Parties in accordance with Article V (1) of the Agreement
Resolution 3.8 Implementation of the Conservation and Management Plan	See reply to Res 2.8 above
4th Session of the Meeting of Parties (Sofia, Bulgaria, 22 - 24 September 2003)	
Resolution 4.1 Financial and Administrative Matters (Budget 2004 – 2006)	Malta paid its annual contributions at the scale agreed upon by the Meeting of Parties in accordance with Article V (1) of the Agreement
Resolution 4.3 Guidelines for the Protection and Management of Important Underground Habitats	Important underground habitats have been identified; some are fully protected by law and, where appropriate, are physically protected against unauthorised entry (using

<table>
<tr><td></td><td colspan="2">bat grills).</td></tr>
<tr><td>Resolution 4.6
Guidelines for the Issue of Permits for the Capture and Study of Captured Wild Bats</td><td colspan="2">The capture and possession of wild bats for research and conservation purposes is licensed, whereby a permit is required by the Malta Environment and Planning Authority and is fixed for maximum of one calendar year. Permit conditions are applied, including the requirement that the permit holder must comply with national legislation. Other requirements include inter alia the submission of a detailed report on activities carried out under the permit and a copy of any published results and other publications related to the permit, within a stipulated timeframe. The issuance of a permit can be refused especially if the permitted activities are deemed to threaten the species. The following are permits that have been issued:
<table>
<tr><td>Permit Number</td><td>Description</td></tr>
<tr><td>NP00069/09</td><td>Permit to carry out activities on all microchiropteran species found in the wild in Malta as part of an ongoing study to obtain ecological and genetic information on bats with special regard to Myotis punicus.</td></tr>
<tr><td>NP00068/09</td><td>Permit for the disturbing and capturing of live specimens, and taking, keeping and transporting of tissues from the chiropatagium from live specimes, of microchiroptera species found in the wild in Malta – the main aim was to genetically study the Pipistrellus pipistrellus/pygmaeus complex as part of a detailed phylogeographic analysis in the Mediterranean region.</td></tr>
<tr><td>NP00035/08</td><td>Permit for the capturing of live specimens and the taking, transporting and keeping of tissues of all microchiroptera species found in the wild in Malta as part of the ongoing study initiated in 1987 to investigate the ecology and biology of bats in the Maltese Islands.</td></tr>
<tr><td>NP00022/08</td><td>Permit for the capturing of live specimens and the taking, transporting and keeping of tissues of all microchiroptera species found in the wild in Malta – Collection of morphometric measurements and tissue samples (wing membrane) from bats in different roosts around the Maltese Islands and molecular genetic techniques including microsatellites, sequencing and tissue culture. The data is intended to determine the genetic identity of local species and to provide a scientific backing for conservation efforts.</td></tr>
<tr><td>NP00025/07</td><td>Permit for the handling of bat species (chiroptera fauna) as part of an ongoing study of the ecology and breeding biology of the local bat fauna.</td></tr>
<tr><td>NP00018/07</td><td>Permit for taking, handling, possession of tissue and hair samples of all local bats species - Collection of morphometric measurements and tissue samples from bats in different roosts around the Maltese Islands to determine the genetic identity of local species and to provide a scientific backing for conservation efforts.</td></tr>
<tr><td>NP00010/06</td><td>Permit for the handling and ringing of bat species in the Maltese Islands, for research purposes.</td></tr>
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	NP00006/05	Permit for the handling of bat species as part of an ongoing study of the ecology and breeding biology of the local bat fauna.
Resolution 4.7 Wind Turbines and Bat Populations (Annex 10)	Nothing to report on as there were no erect wind turbines or wind farms during the reporting period. Nonetheless should there be applications for such installations these will be assessed according to national legislation, namely the 'Flora, Fauna and Natural Habitats Regulations, 2006' as amended (Legal Notice 311 of 2006 as mended) and the 'Environmental Impact Assessment Regulations, 2007' as amended (Legal Notice 114 of 2007 as amended). A temporary wind monitoring mast was erected at *Rdum tal-Madonna* to measure wind flow. Monitoring is being carried out, however this relates essentially to assess whether any bird collisions occur, noting that the site is in a Special Protection Area.	
Resolution 4.9 Implementation of the Conservation and Management Plan	See replies to Res 2.8 and 3.8 above	
Resolution 4.12: Priority Species for Autecological Studies	DNA studies are being carried on *Rhinolophus hipposideros*. Population data is being collected on *Rhinolophus hipposideros*	
5th Session of the Meeting of Parties (Ljubljana, Slovenia, 4 - 6 September 2006)		
Resolution 5.1 Financial and Administrative Matters (Budget 2007 – 2010)	Malta pays its annual contributions at the scale agreed upon by the Meeting of Parties in accordance with Article V (1) of the Agreement	
Resolution 5.2 Bats and Rabies in Europe	No rabies reports documented in Malta.	
Resolution 5.4: Monitoring Bats across Europe	There is an ongoing study by bat experts in Malta to obtain the necessary data to strengthen knowledge on population trends for bat species. Site condition monitoring of protected sites for bats would also fall part of the management plan for a protected area.	
Resolution 5.6 Wind Turbines and Bat Populations	See reply to Res 4.7 above	
Resolution 5.7 Guidelines for the Protection of Overground Roosts, with Particular Reference to Roosts in Buildings of Cultural Heritage Importance	Data on important overground roosts has been collected via the commissioned study (Borg 2002). Important roosts in buildings of cultural heritage are also known, and in certain cases access to the public is restricted.	

Table 3: Measures taken to implement MoP Resolutions

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