



## UPDATE on illegal bird trapping activity in Cyprus

Covering the autumn 2013 findings of BirdLife Cyprus' continuing monitoring programme for illegal bird trapping in Cyprus and providing an overview of the latest developments regarding the problem

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Date: January 2014

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## Περίληψη

Η παρούσα αναφορά παρουσιάζει τα τελευταία ευρήματα του συνεχόμενου και συστηματικού προγράμματος παρακολούθησης της παράνομης παγίδευσης πουλιών του Πτηνολογικού Συνδέσμου Κύπρου για το φθινόπωρο 2013, ενώ παράλληλα κάνει και μια ανασκόπηση της κατάστασης που επικρατεί για αυτό το θέμα στο νησί. Επισημαίνεται ότι η αναφορά αυτή έχει ως κύριο στόχο τους υπεύθυνους στα κέντρα λήψης αποφάσεων και τους πολιτικούς, με σκοπό την ενημέρωση, την ευαισθητοποίηση και την κινητοποίηση για πιο αποτελεσματική δράση για αντιμετώπιση αυτού του χρόνιου οικολογικού προβλήματος, το οποίο έχει αυξηθεί δραματικά τα τελευταία χρόνια.

Η ανάλυση των δεδομένων από την έρευνα πεδίου δείχνει ότι καταγράφηκαν συνολικά 13 χιλιόμετρα διαδρομών για δίκτυα που ήταν ενεργά το φθινόπωρο 2013 - ένα μεγάλο ποσοστό από αυτά βρέθηκαν στη Βρετανική Βάση της Δεκέλειας. Με αυτά τα επίπεδα παγίδευσης εκτιμάται ότι ως και 1,1 εκατομμύρια πτηνά μπορεί να θανατώθηκαν εντός της περιοχής έρευνας. Η χρήση δικτύων αυξήθηκε κατά 54% σε σύγκριση με το έτος 2002 σύμφωνα με την ανάλυση που έγινε στο πρόγραμμα TRIM, και τα φετινά επίπεδα ήταν από τα ψηλότερα που καταγράφηκαν από την αρχή του προγράμματος παρακολούθησης. Όσο για τα ξόβεργα, καταγράφηκαν συνολικά πάνω από 9 000 σύμφωνα με τα στοιχεία πάταξης των αρμοδίων αρχών και άλλες ΜΚΟ, κατά πλειοψηφία σε περιοχές της Δημοκρατίας, δείχνοντας έτσι την εκτεταμένη χρήση των ξοβέργων που γίνεται πλέον.

Ως συμπέρασμα, τα στοιχεία της έρευνας πεδίου επιβεβαιώνουν ότι η παράνομη δραστηριότητα παγίδευσης πουλιών, τόσο με δίκτυα όσο και με ξόβεργα, είναι εκτός ελέγχου, ανατρέποντας όλα τα (συγκριτικά) θετικά αποτελέσματα που επιτεύχθηκαν πριν από το 2007.

Τόσο η Κυπριακή Δημοκρατία όσο και η Διοίκηση των Βρετανικών Βάσεων αδυνατούν να εκπληρώσουν τις υποχρεώσεις τους σύμφωνα με την Οδηγία για τα Πτηνά. Η Δημοκρατία έχει κυρίως να ασχοληθεί με την χρήση ξοβέργων που παρουσιάζει μια συνεχιζόμενη μεγάλη αύξηση και τα εστιατόρια που σερβίρουν παράνομα παγιδευμένα πουλιά, ενώ η Βάση της Δεκέλειας έχει γίνει μια περιοχή όπου η χρήση δικτύων για παγίδευση πουλιών είναι εκτεταμένη, όπου οι φθινοπωρινές καταγραφές για τη χρήση δικτύων έδειξαν για άλλη μια φορά τα επίπεδα να είναι πολύ υψηλότερα στις Βρετανικές Βάσεις σε σύγκριση με τη Δημοκρατία.

Ο Πτηνολογικός Σύνδεσμος Κύπρου αναγνωρίζει τις προσπάθειες πάταξης από την Υπηρεσία Θήρας & Πανίδας και από το Κλιμάκιο Πάταξης Λαθροθηρίας των Βρετανικών Βάσεων, ιδιαίτερα της Υπηρεσίας Θήρας η οποία αυτό το φθινόπωρο ήταν πιο αποτελεσματική στην σύλληψη παγιδευτών και στην δίωξη τους. Όσο για το Κλιμάκιο Πάταξης Λαθροθηρίας της Αστυνομίας Κύπρου, οι προσπάθειες πάταξης ήταν πολύ περιορισμένες αυτό το φθινόπωρο, με ελάχιστες συλλήψεις και κατασχέσεις από μέρους του, ιδιαίτερα όταν συγκριθούν με τα αποτελέσματα των προσπαθειών για την ίδια περίοδο του 2012. Επιπλέον, η πάταξη κατά των εστιατορίων που σερβίρουν αμπελοπούλια ήταν περιορισμένη, κάτι ιδιαίτερα ανησυχητικό μια και τα εστιατόρια αποτελούν το

κυριότερο οικονομικό κίνητρο αυτής της παράνομης δραστηριότητας, ένα ζήτημα το οποίο και οι δύο αρμόδιες αρχές της Δημοκρατίας θα πρέπει να αντιμετωπίσουν επείγοντως.

Η πολιτική βούληση βρίσκεται στα χαμηλότερα επίπεδα των τελευταίων ετών και ο Πτηνολογικός Σύνδεσμος πιστεύει ότι η περιορισμένη διωκτική δράση της Αστυνομίας Κύπρου φέτος έχει άμεση σχέση με αυτή. Από διάφορα συμβάντα που έγιναν και τη δημοσιογραφική κάλυψη του περασμένου έτους, είναι ξεκάθαρο ότι η παράνομη παγίδευση πουλιών δεν αποτελεί προτεραιότητα για τη σημερινή κυβέρνηση, ενώ παράλληλα φαίνεται να υπάρχει μια στάση συμπάθειας ορισμένων υπουργών προς την αποκαλούμενη 'παραδοσιακή παγίδευση'. Αυτό είναι πολύ απογοητευτικό ιδιαίτερα μετά την 'Διακήρυξη της Λάρνακας' το 2011, όταν όλοι οι συμμετέχοντες συμφώνησαν ότι θα πρέπει να υπάρξει 'μηδενική ανοχή' κατά της παράνομης θανάτωσης πουλιών, συμπεριλαμβανομένου και του Υπουργείου Δικαιοσύνης και Δημοσίας Τάξεως. Δυστυχώς μόλις 2 χρόνια μετά εξακολουθεί να μην υπάρχει πραγματική πολιτική βούληση για την εφαρμογή αυτής της διακήρυξης ή την ουσιαστική αντιμετώπιση της παράνομης παγίδευσης πουλιών.

Από τη θετική πλευρά, ο Πτηνολογικός Σύνδεσμος Κύπρου συνέχισε την πρωτοβουλία του για την εκπόνηση ενός Στρατηγικού Σχεδίου Δράσης (ΣΣΔ) για την αντιμετώπιση της παράνομης παγίδευσης πουλιών στην Κύπρο, με χρηματοδότηση από το Ίδρυμα MAVΑ. Διοργανώθηκε ένα δεύτερο εργαστήριο στα μέσα Νοεμβρίου 2013, όπου προσκαλέστηκαν όλοι οι ενδιαφερόμενοι φορείς για να συζητήσουν λεπτομερώς μια κοινή στρατηγική για την αντιμετώπιση αυτού του ζητήματος. Το εργαστήριο ήταν πολύ εποικοδομητικό και ο Πτηνολογικός στοχεύει να ολοκληρώσει το τελικό κείμενο στις αρχές του 2014, το οποίο θα αποσταλεί στους διάφορους ενδιαφερόμενους φορείς με στόχο την επίτευξη συμφωνίας για την υιοθέτησή του από όλους.

Με τα σημερινά επίπεδα παγίδευσης πουλιών είναι εξαιρετικά σημαντικό να υπάρξει μια κοινή στρατηγική σε αυτό το θέμα, όχι μόνο επειδή θα περάσει το μήνυμα της 'μηδενικής ανοχής' κατά της παράνομης παγίδευσης πουλιών, αλλά και το ότι θα αποτελέσει μια ένδειξη προς την Ευρωπαϊκή Επιτροπή και τα άλλα μέλη κράτη ότι τόσο η Κύπρος όσο και το Ηνωμένο Βασίλειο κάνουν προσπάθειες για να εκπληρώσουν τις υποχρεώσεις τους σύμφωνα με την Οδηγία για τα Πτηνά. Ως εκ τούτου, είναι πολύ σημαντικό όπως όλοι οι ενδιαφερόμενοι φορείς και οι υπεύθυνοι στα κέντρα λήψης αποφάσεων να εμπλακούν ενεργά στην έγκριση και την εφαρμογή αυτής της στρατηγικής, ώστε να εκλείψει μια οικολογικά επιζήμια πρακτική.

Η αναφορά χωρίζεται στα ακόλουθα κεφάλαια:

- Κεφάλαιο 1 παρουσιάζει μια σύνοψη της παγίδευσης πουλιών στην Κύπρο, δίνει κάποια ιστορικά στοιχεία αυτής της δραστηριότητας, κάνει αναφορά στην εθνική νομοθεσία όσον αφορά την προστασία των πτηνών και παρουσιάζει την τρέχουσα κατάσταση,
- Κεφάλαιο 2 παρουσιάζει το πρόγραμμα παρακολούθησης του Πτηνολογικού Συνδέσμου Κύπρου,

- Κεφάλαιο 3 παρουσιάζει τα αποτελέσματα της έρευνας πεδίου και την ανάλυση από το πρόγραμμα TRIM, τα στοιχεία από τις προσπάθειες πάταξης των αρμοδίων αρχών και το πολιτικό και κοινωνικό κλίμα που επικρατεί, και
- Κεφάλαιο 4 είναι η συζήτηση, όπου γίνεται μια σύνοψη της κατάστασης της παράνομης παγίδευσης πουλιών και τονίζεται η σημασία ενός ΣΣΔ, συμφωνημένο από όλους.

Τα έξοδα για την εργασία πεδίου του Πτηνολογικού (καύσιμα, το νέο αυτοκίνητο), καθώς και τα έξοδα των εκάστοτε εθελοντών, καλύπτει η οργάνωση του BirdLife International στη Γερμανία, NABU, καθώς και το Heinz Sielmann Stiftung Foundation, ενώ το RSPB καλύπτει τους μισθούς.

## Summary

This report presents the latest findings of the on-going and systematic BirdLife Cyprus surveillance programme on illegal bird trapping, relating to the autumn 2013 season, while also providing an overview of the current climate regarding this issue on the island. It is highlighted that this report is mainly aimed at top decision makers and politicians, with the aim of informing, raising awareness and generating momentum for more effective action to tackle this chronic ecological problem, which has grown dramatically in the last few years.

The analysis of the survey data shows that 13 km of net rides were active during the autumn of 2013 - a large proportion of these in the Dhekelia SBA. These trapping levels could have resulted in 1.1 million birds killed within the survey area. Mist netting activity has increased by 54% compared to 2002 based on analysis from the TRIM software, and was one of the highest ever recorded since the start of the surveillance programme. With regards to limesticks more than 9,000 in total were reported from enforcement agencies and other NGOs, mostly within the Republic, highlighting the extensive limestick use that is taking place nowadays.

In conclusion, the survey data and the analysis confirm that illegal bird trapping activity, both with mist nets and limesticks, is getting out of control, reversing all the (relatively) positive results achieved prior to 2007.

Both the Republic of Cyprus and the UK sovereign base areas (SBA) Administration are failing to meet their obligations under the Birds Directive. The Republic has in particular to deal with the continued resurgence in limesticks use and the restaurants that illegally serve the trapped birds, while the Dhekelia SBA area has become a mist netting hotspot, with autumn mist netting levels once again very much higher in the SBAs than the Republic.

The enforcement efforts of the Cyprus Game & Fauna Service and the SBA Police Anti-poaching unit are acknowledged by BirdLife Cyprus, in particular of the Game Service which has been more effective this autumn in using its resources for making arrests and prosecutions. With regards to the Cyprus Police Anti-poaching unit, its enforcement effort has been extremely limited this autumn, with very few arrests & confiscations taking place, particularly when it is compared with the same period in 2012. Furthermore, enforcement against restaurants serving *ambelopoulia* has been limited, something that is particularly worrying since they are the key economic driver of illegal activity, and an issue that both authorities of the Republic need to tackle urgently.

The lack of political will from the current government to take effective action against the problem of illegal bird trapping, is at its lowest level of the past few years and BirdLife Cyprus believes that the limited enforcement action of the Cyprus Police this year is closely linked to the lack of political will. From various incidents and the media coverage of the past year, it has become clear that illegal bird trapping is not a priority issue for the current government, whereas there seems to be a sympathetic attitude among some Ministers for 'traditional' trapping. This is very disappointing particularly after the '*Larnaca Declaration*' in 2011 when a 'zero tolerance' approach was pledged by all the participants, including the

Ministry of Justice and Public Order, but just 2 years after there is still no real political will to implement this declaration or tackle it in any significant way the illegal bird trapping issue.

On the positive side, BirdLife Cyprus continued its initiative to develop a Strategic Action Plan (StAP) to tackle illegal bird trapping in Cyprus with funding from the MAVA Foundation. A second workshop was organized in mid-November 2013, inviting all the key stakeholders to discuss in detail a common and joint strategy to tackle this issue. The workshop was very constructive and BirdLife Cyprus is aiming to produce a final document by early 2014, which will be passed on to the various stakeholders for their agreement and adoption.

It is very important with the current trapping activity levels in mind to have a common strategy on this issue, not only because it will pass the message of 'zero tolerance' approach towards illegal bird trapping but also it will be an indication to the EU Commission and the other Member States that both Cyprus and the UK are working hard to meet their obligations under the Birds Directive. Therefore it is critical that all stakeholders and decision makers are proactively engaged in the adoption and implementation of this strategy against an ecologically damaging practice.

The report is separated into the following sections:

- Section 1 provides an overview of the bird trapping in Cyprus, gives some historical background to this activity, makes reference to the national legislation regarding bird protection and presents the current situation,
- Section 2 describes the historical outline of the surveillance programme of BirdLife Cyprus, and
- Section 3 presents the survey data from the monitoring programme and the analysis from the TRIM software, summarises the enforcement data of the competent authorities and gives an outline of the political and social attitudes regarding this issue, and
- Section 4 is the discussion, giving an overview of the illegal bird trapping situation and highlighting the importance of a StAP, agreed by all.

All the running costs for the field work (fuel, new car), as well as all the volunteer costs were covered by the Partner of BirdLife International in Germany, NABU, together with the Heinz Sielmann Stiftung Foundation, while the RSPB covers salaries.

## 1. Overview of bird trapping in Cyprus

Bird trapping in Cyprus has been illegal since 1974, when legislation on hunting was introduced with Law 39/74 and non-selective methods such as mist nets, limesticks and traps were prohibited. Moreover, in 1988 Cyprus ratified the 1979 Bern Convention on the Conservation of European Wildlife and Natural Habitats, enlisting a long list of birds as protected, including the Blackcap (*Sylvia atricapilla*) (blackcaps are the main target species of illegal bird trapping in Cyprus). With Cyprus joining the EU, EU Birds Directive (2009/147/EC, formerly 79/409/EEC) was transposed into Cyprus Law N. 152(I)/2003, prohibiting anew the use of non-selective methods including mist nets, limesticks and calling devices but also the possession of trapping equipment, trapped birds and the trading and eating of trapped birds.

Historically, trapped birds – mostly Blackcaps - were a food supplement for the mostly poor island inhabitants living off the land. The practice of bird trapping in Cyprus has been recorded in historical documents from the Middle Ages and even earlier times. Trapping as practiced in Cyprus today bears no relation to the ‘traditional’ or historical situation.

Nowadays, bird trapping in Cyprus is widespread and extensive, contributing to the large scale killing of hundreds of thousands of migratory and wintering birds, and survey records show that 152 bird species have been found trapped in mist nets or limesticks, of which 78 are listed as threatened by the EU Birds Directive and / or BirdLife International (see the autumn 2012 report for the list of trapped bird species)<sup>1</sup>. This is a clear indication of the non-selective nature of these methods. This illegal activity has become a profitable business which is controlled to a large extent by the ‘big’ trappers who are also involved in organised crime, and the Cyprus Game & Fauna Service estimated this illegal business to be of the order of millions of euros.

This report presents the latest survey results for autumn 2013, when trappers are after migratory birds, with the main target species being blackcaps (*Sylvia atricapilla*) and other migrant songbirds. Trapped birds are either served as expensive *ambelopoulia* delicacies in local restaurants or are used for home consumption.

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<sup>1</sup> ‘Update on illegal bird trapping activity in Cyprus’, December 2012. BirdLife Cyprus.  
<http://www.birdlifecyprus.org/upload/Trapping%20Reports/Autumn%202012%20Trapping%20Report.pdf>.



## 2. BirdLife Cyprus Surveillance programme

BirdLife Cyprus is a non-profit NGO working for the protection and conservation of birds, their habitats and wider biodiversity, and is the Partner of BirdLife International in Cyprus. With support from the RSPB (BirdLife partner in the UK), BirdLife Cyprus has undertaken a systematic surveillance programme of illegal bird trapping in Cyprus since autumn 2002, providing a long record of trapping activity and giving the NGO a very good measure of expertise on the issue. The surveillance programme follows a 'Bird Trapping Monitoring Protocol' that was developed by BirdLife Cyprus and the RSPB, in consultation with the Cyprus Game & Fauna Service and the British Sovereign Base Area (SBA) police at the start of the programme. Figure 1 shows a map where bird trapping takes place in Cyprus; monitoring is concentrated in the two areas (numbered 1 and 2) where extensive trapping takes place:

1. Kokkinochoria area (Eastern Larnaca/Famagusta area) – this area also includes the Dhekelia Eastern Sovereign Base (ESBA) area), and
2. Ayios Theodoros and Maroni area (Western Larnaca).



**Figure 1 Map of Cyprus showing the main trapping areas**

Although trapping is also an issue in other areas of Cyprus, the survey efforts focus on these two main areas due to resource limitations and because they hold the highest trapping activity.

The monitoring is undertaken by visiting a random selection of sample squares (1 km<sup>2</sup>) during daytime hours, with a focus on detecting mist netting activity. Limesticks are recorded if they are found while searching for mist nets. The number of squares has been stratified to ensure a representative coverage of areas under SBA administration and the Republic of Cyprus. For more details on the methodology of BirdLife Cyprus read Appendix 3.

The project is undertaken in close co-operation with the competent authorities of the Republic of Cyprus (the Game & Fauna Service and the Cyprus Police Anti-poaching unit) and the SBA Police. When trapping paraphernalia is found, the BirdLife Cyprus team immediately contacts the relevant enforcement authorities. It should be noted that the BirdLife Cyprus observers never confront suspected trappers and never remove trapping paraphernalia.

BirdLife Cyprus would like to note its particular thanks to the RSPB/BirdLife in the UK, for supporting the project financially since the beginning. Furthermore BirdLife Cyprus would like to thank NABU (partner of BirdLife International in Germany) and the Heinz Sielmann Stiftung Foundation for their financial support for the spring and autumn 2013 surveys. NABU and the Heinz Sielmann Stiftung Foundation cover the running costs and volunteer costs of the surveillance programme, whereas the RSPB covers salaries.

### 3. Results

#### **Survey results**

##### **Field survey data**

The field survey for autumn 2013 was carried out between September and October 2013 following the standard survey protocol. In total 50 squares<sup>2</sup> were surveyed during this period and BirdLife Cyprus reported all trapping finds to the relevant enforcement authorities, either the SBA Police, the Game & Fauna Service or the Cyprus Police Anti-poaching Unit, depending on the location of the finds.

A summary of the field data for autumn 2013 is presented in Appendix 1. In total the findings of the survey included 2,191 metres of active net rides (cleared “runs” in acacia plantations or other habitats e.g. orchards, olive trees, either holding nets or where there was clear evidence of preparation for the setting and/or use of nets) and 18 mist nets found *in situ* (either classified as Active Set Nets or Active Unset Nets<sup>3</sup>). Opportunistic checks outside the survey squares detected an additional 413 metres of active net rides and 11 mist nets *in situ* (see Appendix 1).

The total length of active mist net rides within the 406 km<sup>2</sup> survey area (Larnaka - Famagusta and Ayios Theodoros – Maroni areas) can be estimated at about 13 km (2,191 m x 301 / 50)<sup>4</sup>.

In terms of limesticks, BirdLife Cyprus detected 116 limesticks this autumn (compared to 275 limesticks from autumn 2012) within the surveyed squares and 61 limesticks during opportunistic checks (see Appendix 1). However, it is noted here that BirdLife Cyprus does not focus its field survey on the detection of limesticks, as other organisations do. For example, during a 3 week camp of the Committee Against Bird Slaughter (CABS) a total of 4,419 limesticks, 60 mist nets and 136 electronic decoy devices were detected for autumn 2013<sup>5</sup>. In addition another organisation, Migratory Birds Conservation in Cyprus (MBCC) detected during their 4-week survey a total of 464 limesticks, 4 mist nets and 7 decoys<sup>6</sup>. It is highlighted that nearly all the limesticks detected by CABS and MBCC were in areas controlled by the Republic of Cyprus.

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<sup>2</sup> Normally 60 squares are covered during the autumn surveys, however BirdLife Cyprus has optimised its surveillance programme to cover 50 squares but maintaining the validity of the field survey in order to have reliable trapping activity trends.

<sup>3</sup> Active Set Net (ASN) is a net ride where the mist net is *in situ* and is set and ready for catching birds. Active Unset Net (AUN) is a net ride where the mist net is *in situ* but is furled i.e. the mist net is not stretched up for catching birds but lowered down.

<sup>4</sup> There are 301.1 km<sup>2</sup> squares in the survey area that are classified as suitable for trapping activity (on the basis of vegetation characteristics) and 50 of these squares were surveyed in Autumn 2013.

<sup>5</sup> Survey data provided on 28<sup>th</sup> November 2013 via email correspondence with CABS representative.

<sup>6</sup> MBCC (November 2013) ‘Cyprus Annual report 2013 – Malice and Human Cruelty – Zero tolerance of illegal killing of wild birds’.

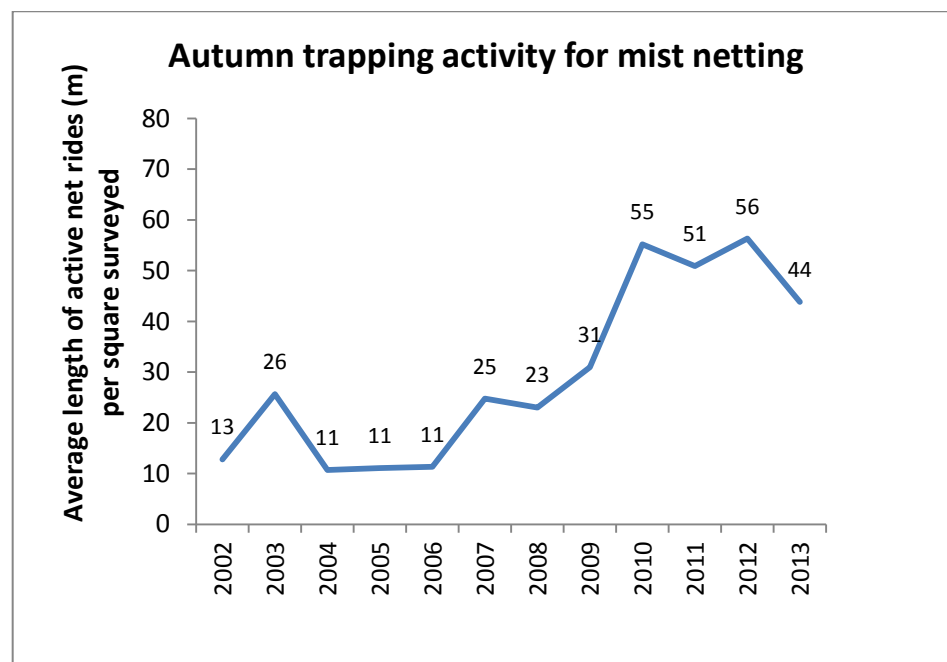
### ***Autumn netting activity and average net ride indicator***

Table 1 summarises the raw data from the survey work. It shows the number of squares surveyed, the total length (m) of net rides recorded from all the squares surveyed and the average net ride (m) per square for each autumn season since 2002. Figure 2 shows this data in a graphical form, indicating the average net ride per squared surveyed for each season. In previous years the analysis of the survey data was undertaken in Excel and the average net ride indicator was used to draw the trapping patterns and trends. For the first time this season BirdLife Cyprus has used a new analytical tool, the TRIM programme, which can draw a more reliable trend analysis as it takes into consideration the difference in sample size between the years (see next section).

**Table 1 Number of squares surveyed each autumn period since 2002**

Autumn season	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
No of squares surveyed	60	60	59	60	80	100	100	100	98	60	58	50
Total length (m) of net rides	769	1,538	632	665	908	2,479	2,302	3,098	5,407	3,055	3,266	2,191
Average net ride (m) <sup>1</sup>	13	26	11	11	11	25	23	31	55	51	56	44

Note 1: Average net ride (m) per square surveyed



**Figure 2 Autumn bird trapping activity with the use of mist nets – average length of net ride (m) per square surveyed**

**It is clear that mist netting activity has increased sharply since 2007, as seen in the above graph, and has remained at very high levels for the last 4 years as indicated by the average net ride indicator. The extensive problem in limestick use is also true, based mostly on data from CABS and MBCC.**

Based on the data gathered in the field this autumn, we can estimate that over 1.1 million birds could have been killed within the survey area and over 1.5 million could have been killed across the whole of Cyprus<sup>7</sup> (see Appendix 2 for details). If one were to split the potential death toll estimate between jurisdictions within the survey area (1.1 million birds) based on the trapping paraphernalia found, then around 600,000 birds would be the potential killed in the Republic and 500,000 in the SBAs. Note however, that the limestick toll is not fully covered in this estimate, which would make the potential kill in the Republic even higher.

#### ***Trends in autumn netting activity using the TRIM software***

The TRIM software has been applied for the first time this autumn season to undertake the trend analysis for the netting activity. From the surveillance programme BirdLife Cyprus has been gathering field data in a systematic manner for over a decade and it is possible to use such programmes for the analysis. BirdLife Cyprus would like to thank the RSPB for their help and support in undertaking the TRIM trend analysis.

TRIM (TRends & Indices for Monitoring data) is a program for the analysis of time series of counts with missing observations. The program can be used to estimate indices and trends and to assess the effects of covariates on these indices and trends. TRIM analyses time series of counts, using Poisson regression and produces estimates of yearly indices and trends (Pannekoek & van Strien 2005)<sup>8</sup>. If observations are missing, TRIM estimates the missing values on the basis of changes observed on plots that were monitored.

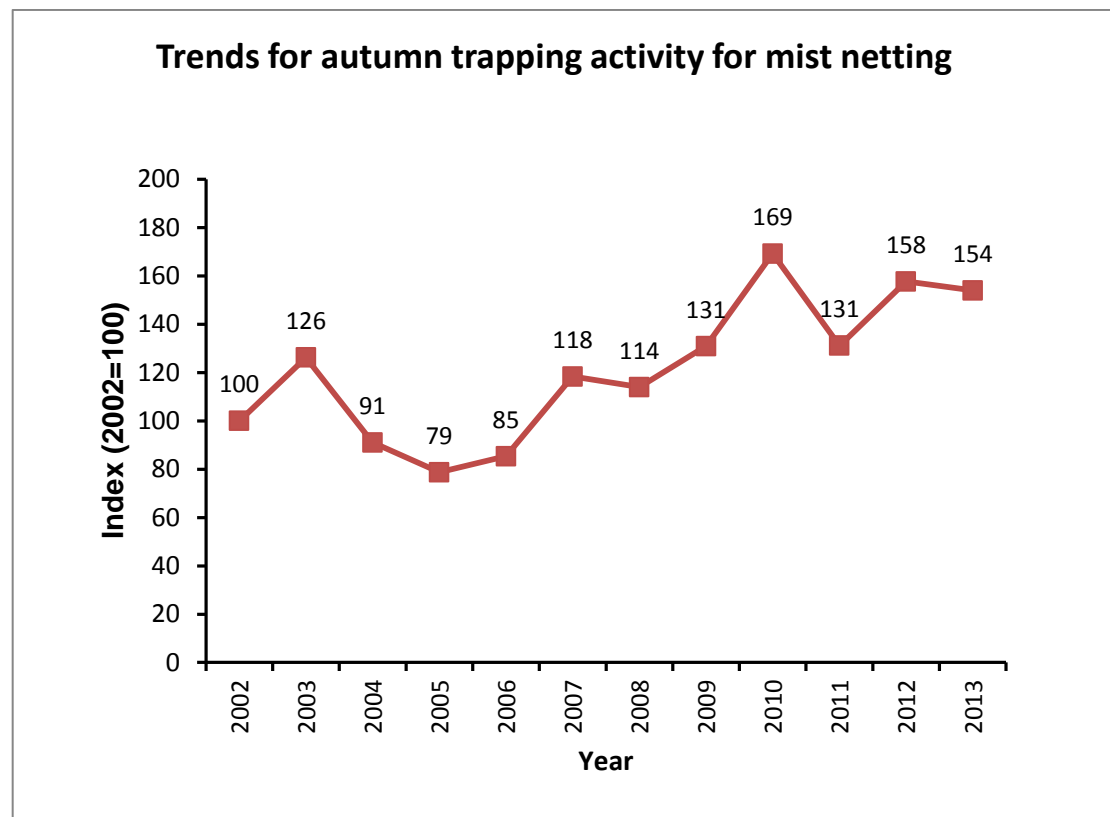
In other words, TRIM enables us to use the data from all the trapping survey squares ever surveyed under the BirdLife Cyprus surveillance programme during the autumn period, in total 104 squares, even though these squares were not all covered each autumn season. The programme 'fills in' missing values for squares that were not covered in a particular year on the basis of the general trend derived from the data as a whole. The TRIM software (freely available from <http://www.ebcc.info/trim.html>) is very widely used for analysis of field data from ecological or biological studies. It works as an index, setting the first year of a time series of data the value of 100 (in this case year 2002) and showing up or down changes in subsequent years relative to this value of 100.

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<sup>7</sup> The estimate also includes any bird trapping that takes place in the occupied parts of Cyprus, although trapping levels are relatively low based on information provided to BirdLife Cyprus by other organisations and our joint survey work in the occupied areas with the Turkish Cypriot bird protection society, KUSKOR. This is also the reason why the occupied areas are not presented as a main trapping area in Figure 1.

<sup>8</sup> Pannekoek, J. & van Strien, A. 2005. TRIM 3 Manual (TRends & Indices for Monitoring data). Statistics Netherlands

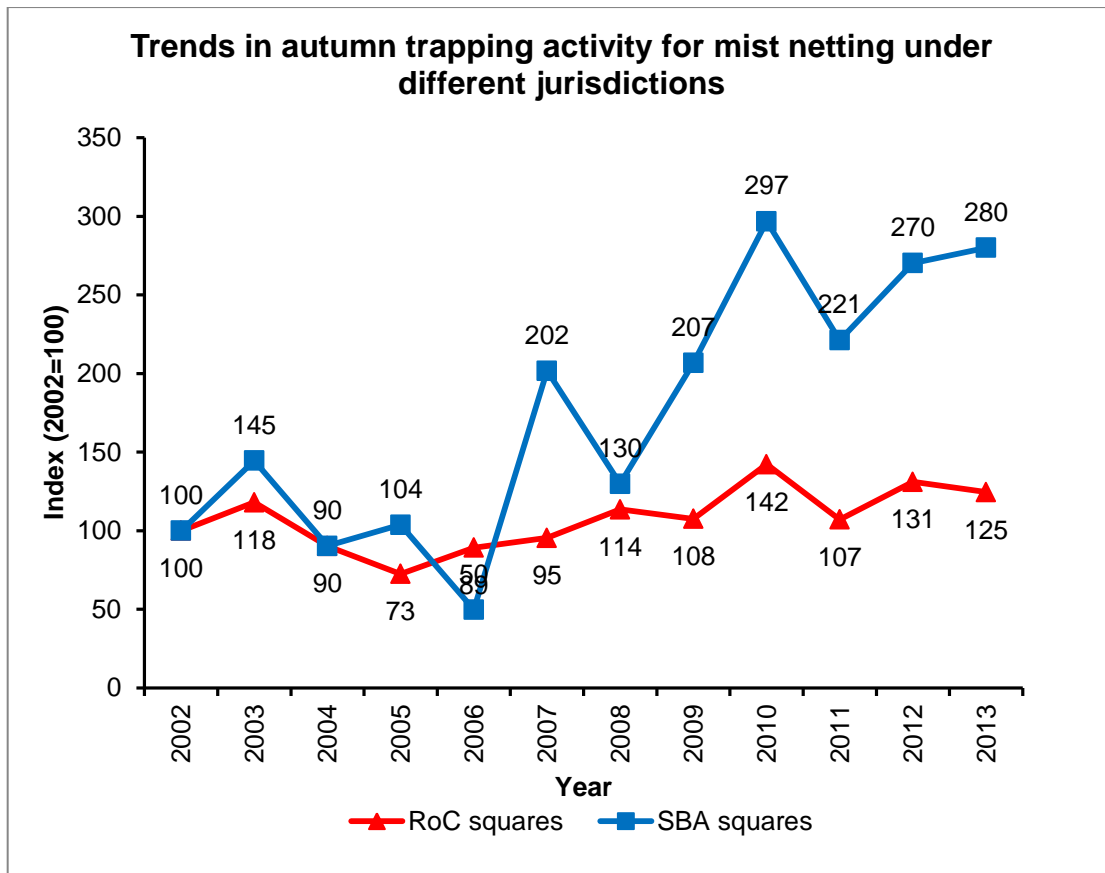
The trends in autumn netting activity from the TRIM analysis are shown in Figure 3.



**Figure 3 Trends for autumn bird trapping activity with the use of mist nets since 2002 across 104 squares – TRIM analysis.**

Mist netting activity for autumn 2013 remained at very high levels, maintaining the pattern of the past few years when we have been observing a dramatic increase in this illegal activity, as shown in the graph above. Overall **mist netting levels this autumn were 54% higher than in 2002** (index value of 100) and was one of the highest ever recorded since the start of the surveillance programme. In comparison to the findings of last year, trapping activity in autumn 2013 was similar to autumn 2012 (with a small decrease of 2% by comparing index points difference from 158 to 154).

Figure 4 summarises autumn mist netting activity under different jurisdictions using the TRIM analytical programme.



**Figure 4 Trends in trapping activity for mist netting within the Republic of Cyprus and within the UK Sovereign Base Area – TRIM analysis.**

The sample of 104 squares includes 80 squares within the Republic of Cyprus, 19 within the Dhekelia SBA and 5 squares that cover areas in both jurisdictions (referred to as 'Joint' squares). In autumn 2013, 35 squares within the Republic of Cyprus, 12 squares within the SBA and 3 'Joint' squares were covered. However, for the analysis and the graph shown above, we have excluded the 5 'Joint' squares that are part of the total sample of 104 squares, in order not to skew the account for neither the RoC nor the SBAs, i.e. any mist netting activity found in 'Joint' squares has not been included.

- For the Republic areas, autumn 2013 mist netting activity showed a slight decrease of 5% compared to autumn 2012 (by comparing index points difference from 131 to 125). **In comparison to 2002 there has been an increase of 25% for autumn 2013.**
- For the SBA areas, autumn 2013 mist netting activity showed an increase of 4% compared to autumn 2012 (by comparing index points difference from 270 to 280 values). **In comparison to 2002 there has been an increase of 180% for autumn 2013.**
- Overall it is clear from Figure 4 that mist netting activity has increased in both jurisdictions compared to the reference year of 2002. Particularly for the Eastern SBA areas, the mist netting activity is much higher compared to the Republic, a pattern that has held in recent years, primarily due to the mist netting hotspot of Cape Pyla.

On the other hand the Republic has seen a resurgence in limestick use, as confirmed by the survey data of other environmental NGOs (CABS and MBCC) and by the enforcement data provided from competent authorities (see section below).

## **Enforcement**

There are 3 competent authorities that are responsible for enforcement against illegal bird trapping in Cyprus: the Game & Fauna Service and the Cyprus Police Anti-Poaching unit that are responsible for areas controlled under the Republic of Cyprus, and the SBA Police Anti-Poaching unit responsible for areas within the UK sovereign base areas. The resources of the above-mentioned enforcement bodies are as follows:

- Game & Fauna Service, the responsible body for the implementation of the Birds Directive, has about 90 wardens in total across the whole of island. The Larnaca & Famagusta district, where most of the bird trapping takes place in Cyprus and where the survey area of BirdLife Cyprus is focused, has in total 20 game wardens.
- Cyprus Police Anti-Poaching Unit has 5 officers (used to be 10 police officers in 2011-2012 but resources have been reallocated)
- SBA Police Anti-Poaching Unit is a team of 4 officers to cover the Eastern Dhekelia Sovereign Base Area.

Table 2 summarises the enforcement data of the 3 competent authorities regarding illegal bird trapping for the months of August, September and October, the main period for bird trapping in Cyprus, for years 2011 - 2013.

**Table 2 Summary of illegal bird trapping statistics of the competent authorities for the months of August, September and October for years 2011 - 2013**

	<b>Game &amp; Fauna Service – Larnaca &amp; Famagusta district<sup>2</sup></b>			<b>SBA Police Anti- Poaching Unit<sup>3</sup></b>			<b>Cyprus Police Anti- Poaching Unit<sup>4</sup></b>		
<b>Years</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>
<b>No of prosecutions</b>	54	58	76	23	21	22	NA	22	NA
<b>No of trappers arrested</b>	57	70	78	23	22	22	NA	NA	NA
<b>No of mist nets<sup>1</sup></b>	204	311	287	361	275	227	NA	116	NA
<b>No of limesticks<sup>1</sup></b>	2,550	5,372	3,830	290	314	516	NA	4,799	NA

Note 1: The total number includes both trapping paraphernalia (mist nets and limesticks) collected as court evidence when an arrest takes place and confiscations.

Note 2: Data provided from the District Officer of Game & Fauna Service of the Larnaca & Famagusta district (December 2013).

Note 3: Data provided from Intelligence analyst of SBA Police (November 2013).



Note 4: No data was provided from the Cyprus Police Anti-Poaching Unit regarding its anti-trapping action for autumn 2013.

- Game & Fauna Service – Larnaca & Famagusta district: From the enforcement data it is clear that for this autumn there has been a significant increase in the number of prosecutions, which also resulted in more trappers being arrested. In terms of mist nets confiscated the number is similar to last year whereas with regards to limesticks the number is lower than last year (but higher than 2011). It is clear from these data that the Game & Fauna Service, with the same personnel as last year, has improved their effectiveness on the field in arresting trappers and making prosecutions, particularly in terms of mist netting activity. This is an encouraging outcome that BirdLife Cyprus acknowledges and congratulates the Game and Fauna Service for. But it must be noted that in terms of limesticks, the Republic has become a hotspot for limestick use, confirmed both by the enforcement data in Table 2 but also from other organisations (CABS and MBCC) – the data from all the stakeholders located nearly 9,000 limesticks within the Republic for autumn 2013.
- SBA Police Anti-Poaching Unit – Dhekelia Sovereign Base: The enforcement data show that a similar number of trappers have been arrested, a lower number of mist nets and a higher number of limesticks were confiscated for autumn 2013 compared to the previous autumn seasons. It is clear from the enforcement data of the last few years that the personnel of the SBA Police anti-poaching unit are stretched, particularly in terms of making prosecutions. BirdLife Cyprus acknowledges the efforts of the enforcers on the ground, however more resources are needed to tackle effectively illegal bird trapping.
  - It is also apparent that the total number of mist nets confiscated over the years has been decreasing whereas arrests have remained the same. The SBA Police strategy utilises a combination of arrests / clearance operations and confiscations. This year 4 clearance operations were undertaken during the period of August to October, 3 in August and 1 in late October. BirdLife Cyprus believes that clearance operations should be undertaken during the main trapping period of September and early October in order to have a greater impact on mist netting activity, which is still very high within the ESBA (see Figure 4).
- Cyprus Police Anti-Poaching Unit: BirdLife Cyprus tried to contact the anti-poaching unit but there was no response or feedback with regards to enforcement data. However the enforcement action of the Cyprus Police on illegal bird trapping during this autumn was very poor and communication / cooperation between this unit and BirdLife Cyprus was very limited, although BirdLife gave information to this unit regarding trapping sites. To our knowledge and up to this date, the unit has not undertaken any raids on restaurant serving illegally birds in the past months, whereas in previous years this unit was focusing on the 'big trappers' and on the restaurants. A similar experience was reported by the organisation CABS, which cooperated very closely in autumn 2012 with this unit and resulted in numerous

arrests and hundreds of mist nets and thousands of limesticks confiscated (see Table 2).

**From the enforcement data it is clear that nowadays illegal bird trapping is taking place on an industrial scale, with confiscated limesticks between the 2 competent authorities of Cyprus and the located ones reported from environmental NGOs exceeding 9,000, with the majority of them found in the Republic. The large number of confiscated mist nets is also alarming, more than 500 mist nets, and particularly within the Dhekelia SBA and the Cape Pyla area, which has become a real mist netting hotspot.**

Table 3 summarises the number of reports that BirdLife Cyprus provided to the competent authorities regarding active trapping sites and the overall feedback given by the competent authorities. It is noted that the information presented in the table below refers to active trapping sites as recorded by the survey team (this includes all net codes, P, ANN, AUN and ASN – see Appendix 3 for net classification - and sites where limesticks were found) and were reported to the competent authorities for further action.

**Table 3 Summary of trapping reports provided to competent authorities from BirdLife Cyprus during Autumn 2013**

	<b>Game and Fauna Service – Larnaca &amp; Famagusta</b>	<b>SBA Anti-Poaching Police Unit</b>	<b>Cyprus Police Anti-Poaching Unit<sup>2</sup></b>
Number of reports	43	38	3
Prosecutions / Arrests	19	8	1
Confiscations	8	18	N/A
Nothing found <sup>1</sup>	16	12	N/A

Note 1: 'Nothing found' refers to cases where the competent authority checked the trapping location but reported it inactive (no nets or limesticks in situ) upon its visit, therefore no prosecution or confiscation has taken place or no feedback was provided.

Note 2: From oral conversation with the head of the Cyprus Police Anti-poaching unit on the 18<sup>th</sup> November 2013 it was mentioned that the unit responded to only 1 report of BirdLife Cyprus.

The above table highlights that the cooperation and information exchange between the Game & Fauna Service and BirdLife Cyprus has been very successful, with nearly 65% of the reports given resulting in either prosecutions of trappers (44%) or confiscations of trapping paraphernalia (19%) (last year the success rate was around 55% - 34% were prosecutions and 20% were confiscations). The fact that prosecutions have increased (from 34% to 44%) is a clear indication that the Game Service has been utilising more effectively its resources and manpower for catching trappers instead of undertaking confiscations. This is acknowledged by BirdLife Cyprus. However it should also be noted that the response time could still be much shorter, as it ranges from 1 day to more than 1 month; a quicker response time might lead to more arrests / confiscations and reduce the 'nothing found' reports.

With regards to the Dhekelia SBA Police Anti-poaching unit, over 65% of the reports BirdLife Cyprus provided resulting in prosecutions (21%) or confiscations (47%). From the feedback provided it is clear that a large proportion of the BirdLife Cyprus reports resulted in confiscations rather than prosecutions, revealing a different strategy to the Game & Fauna Service (which focuses more on prosecutions), with more focus given on the removal of paraphernalia and the undertaking of clear up operations (4 were undertaken between August to October). BirdLife Cyprus believes that in mist netting hotspots such as Cape Pyla, the SBA Police should put more focus on making arrests, in conjunction with clearance operations during September and early October (rather than in August and late October as it happened this year). The response time of the SBA Police unit varied from a few days to a month, a clear indication that resources are stretched and under sourced.

As for the Cyprus Police Anti-poaching police unit, BirdLife Cyprus reported 3 cases of large scale / organised trapping sites. During the meeting with the Minister of Justice and Public Order, Mr Ionas Nicolaou, on the 23<sup>rd</sup> September 2013, it was mentioned that the Anti-poaching unit will focus its enforcement action on the 'big and organised' trappers and on the illegal trade of wild birds aspect of the bird crime chain, which BirdLife Cyprus agreed with. However to our knowledge and to this date the enforcement action of the Cyprus Police Anti-poaching unit was very limited during the autumn trapping period, with very few arrests & confiscations taking place. This is particularly evident when it is compared with the hundreds of mist nets and thousands of limesticks confiscated for the same period in 2012 (see Table 2), when the Cyprus Police worked closely with environmental NGOs and particularly with the organisation CABS. BirdLife Cyprus believes that the limited enforcement action of the Cyprus Police this year is closely linked to the lack of political will from the current government to take effective action (read more in the section *Social and political attitudes* below).

BirdLife Cyprus received many reports from the general public of active trapping sites, and in some cases of *ambelopoulia* being served in restaurants, during the past months. All the reports were provided to the competent authorities and were followed up accordingly.

### ***Social and political attitudes***

Illegal bird trapping was covered quite extensively by the media in the last few months, both at a national and international level. At the national level bird trapping was covered in newspaper articles and radios, most of them supportive of the anti-trapping effort and highlighting the non-selective and large scale killing of birds. Alternatively, other articles reported on the issue in a neutral manner, providing an update on this illegal activity as reported by BirdLife Cyprus and other environmental NGOs. The issue of bird trapping was also on the spotlight at the national TV, showing a cover story on the truth of illegal bird trapping in Cyprus during a main news broadcast<sup>9</sup> and highlighting the bad image of Cyprus

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<sup>9</sup> RIK main news broadcast on 2<sup>nd</sup> January 2014 presented illegal bird trapping as part of a 3 minute story titled 'The truth regarding the trapping of *ambelopoulia*', during which a BirdLife Cyprus spokesperson was also interviewed.

abroad regarding this issue and the significant impact it has on the tourism industry of the island<sup>10</sup>.

Bird trapping in Cyprus was on the focus of international media too, with the international known TV channel Al Jazeera and the world famous magazine National Geographic covering the issue extensively. Al Jazeera journalist, Phil Lavelle, visited Cyprus in early October 2013 with a crew and managed to get footage of the entire bird crime chain of illegal trapping in Cyprus, getting video footage from the trapping fields, all the way to law breaking restaurants serving ambelopoulia<sup>11</sup>. BirdLife Cyprus was interviewed by the Al Jazeera journalist, and highlighted the clear lack of political will for tackling the problem, the need for greater enforcement on the ground and against the restaurants and the need for deterrent court fines.

In the July 2013 edition of National Geographic an article written by Jonathan Franzen with title "Last song for Migrating Birds" covered the issue of songbird killing and bird poaching in Egypt and Albania. The article included revealing and disturbing pictures of bird trapping in Cyprus, taken by David Guttenfelder<sup>12</sup>, and a brief mention of Cyprus trapping in the text<sup>13</sup>. Moreover a documentary about bird trapping in the Mediterranean with title 'Emptying the Skies' premiered at the Sheffield Documentary Festival, which took place between 12-16 June 2013 in Sheffield, England<sup>14</sup>. Illegal bird trapping in Cyprus is covered quite extensively in the documentary and BirdLife Cyprus is also interviewed as part of the documentary, describing the large scale killing of migratory birds that is taking place today in Cyprus.

Despite all this media attention on Cyprus regarding illegal bird trapping, there has been a clear lack of political will to tackle this issue at its root, particularly since the election of the new government in February 2013. This has become more evident from the following events and incidents that have taken place over the last few months:

- 27<sup>th</sup> April 2013: The incident that happened in Paralimni village, a trapping hotspot within the Republic, with protesters demanding that the cooperation between the Cyprus Police anti-poaching unit and the CABS activists is terminated immediately (upto that point the cooperation was very successful, resulting in many trappers' arrests and confiscations of mist nets and limesticks). Later that same day the cooperation was terminated (read more on this incident in the BirdLife Cyprus Spring 2013 trapping report -

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<sup>10</sup> Midday show at TV channel Sigma on 4<sup>th</sup> November 2013:

[https://www.youtube.com/watch?v=W72QSk4uERM&feature=youtube\\_gdata](https://www.youtube.com/watch?v=W72QSk4uERM&feature=youtube_gdata)

News at TV channel Sigma on 4<sup>th</sup> November 2013:

[https://www.youtube.com/watch?v=5iS\\_Gy6\\_0E0&feature=youtube\\_gdata](https://www.youtube.com/watch?v=5iS_Gy6_0E0&feature=youtube_gdata)

<sup>11</sup> 'Cyprus police tackles bird poaching' cover story, 4<sup>th</sup> October 2013 -

<http://www.aljazeera.com/video/europe/2013/10/cyprus-police-tackles-bird-poaching-201310417233309702.html>

<sup>12</sup> Photographs by David Guttenfelder - <http://lens.blogs.nytimes.com/2013/07/09/the-sweet-sounds-of-endangered-birds/>

<sup>13</sup> National Geographic article in July 2013 edition

[http://ngm.nationalgeographic.com/2013/07/songbird-migration/franzen-text?rptregcta=reg\\_free\\_np&rptregcampaign=20131016\\_rw\\_membership\\_r1p\\_intl\\_dr\\_w#](http://ngm.nationalgeographic.com/2013/07/songbird-migration/franzen-text?rptregcta=reg_free_np&rptregcampaign=20131016_rw_membership_r1p_intl_dr_w#)

<sup>14</sup> <http://www.hollywoodreporter.com/news/jonathan-franzen-support-emptying-skies-520181>

[http://www.birdlifecyprus.org/upload/PDFs/Trapping/BirdLife%20Cyprus\\_Spring%202013%20trapping%20report\\_FINAL\\_for%20public%20use.pdf](http://www.birdlifecyprus.org/upload/PDFs/Trapping/BirdLife%20Cyprus_Spring%202013%20trapping%20report_FINAL_for%20public%20use.pdf).

- May 2013: In Paralimni village an announcement is made regarding the creation of an organisation named 'Association of traditional hunting practices', which is claiming limestick use as a traditional practice and aims to legalise it.  
<http://www.cna.org.cy/webnews.asp?a=479025dc244546e295c684cdc724b1df>.
- 7<sup>th</sup> October 2013: A Member of the Parliament of the current government, Mr Rikkos Mappourides, admits openly on a midday show titled 'For You' at MEGA TV channel that he eats ambelopoulia despite the fact that he is aware that it is illegal - <http://www.tothemaonline.com/politiki/vouleftis-paradexthike-oti-paranomi-dimosia>.
- September – October 2013: Despite the fact that the Cyprus Police anti-poaching unit cooperated with the CABS activists in previous trapping seasons, in autumn 2013 there was no cooperation although several letters were sent to the Minister of Justice requesting a possible cooperation (information provided from CABS organization to BirdLife Cyprus via personal communication).
- 2<sup>nd</sup> October 2013: 6 CABS activists were beaten up by two trappers when they found them taking down limesticks from pruned trees. The 6 activists were admitted to a nearby hospital, with one of them having a punctured eardrum. There is currently an ongoing court case between the activists and the trappers regarding this incident.
- 11<sup>th</sup> October 2013: CABS activists were arrested by Game and Fauna Service for confiscating nets and freeing trapped birds in an open field area that the Game Service was also monitoring. Two activists were later prosecuted in a nearby police station - <http://www.youtube.com/watch?v=-WJAelc45IU>. BirdLife Cyprus expressed its opposition to this action by the Game Service as it believes that prosecuting activists, even over-eager ones, whose aim is to deter an illegal activity, gives the wrong message, both abroad since the Cyprus authorities have been ridiculed in the international media for their unprecedented reaction, but also locally since the trappers will view this incident as a victory for them in their pro-trapping lobbying, resulting to even more blatant disrespect for the law in the future – read more on our online e-newsletter - <http://birdlifecyprus.org/en/news-337-Political-will-to-tackle-illegal-bird-trapping-at-its-lowest-for-the-last-few-years.html>.
- September – October 2013: the enforcement action by the Cyprus Police anti-poaching unit has been extremely limited, in comparison to previous years (see Table 2 and Table 3).

The lack of political will is currently at its lowest level of the past few years and it is clear that illegal bird trapping is not a priority issue for the current government, while at the same time there seems to be a sympathetic attitude among some Ministers for 'traditional' trapping. This is very disappointing particularly after the 'Larnaca Declaration' in 2011 when a 'zero tolerance' approach was pledged by all the participants, including the Ministry of Justice and Public Order, but just 2 years after there is still no real political will to implement this declaration or tackle in any significant way the illegal bird trapping issue.

## 4. Discussion

Illegal bird trapping activity with the use of mist nets and limesticks has seen a dramatic increase in the last few years based on the survey data from the systematic surveillance programme of BirdLife Cyprus and other data sources (enforcement data from competent authorities, survey data of other environmental NGOs). Mist netting activity for autumn 2013 remained at very high levels, a pattern that has been observed in the last few years. In comparison to 2002 (reference year for the TRIM analysis) autumn 2013 survey data showed an increase of 54% in mist netting activity, while limestick use has also been on a steep rise, with more than 9,000 limesticks located by competent authorities and environmental NGOs this past autumn. Given that trapping levels had decreased significantly in the period 2004-2006, in the past few years there has been a disastrous loss of conservation ground.

BirdLife Cyprus had meetings with the relevant ministers and called on the competent authorities to take greater action to reverse this increasing trapping trend, asking for the 'zero tolerance' approach, agreed by all in the 'Larnaca Declaration' in 2011, to be truly implemented. However this year the political will to effectively tackle illegal bird trapping has been even more lacking than in previous years, which has translated into the limited enforcement action undertaken by the Cyprus Police anti-poaching unit this autumn and the overall 'acceptance' climate towards bird trapping from certain political groups, with a politician stating openly on public TV that he is eating ambelopoulia despite the fact that he is aware that it is illegal.

On the positive side, BirdLife Cyprus organized on the 18<sup>th</sup> November the 2<sup>nd</sup> workshop for the 'Finalisation of the Strategic Action Plan (StAP) for tackling illegal bird trapping in Cyprus', an initiative led by BirdLife with funding from the MAVA Foundation that has engaged all key stakeholders in a common, joint effort to develop and implement an action plan to eliminate bird trapping in Cyprus (see Appendix 4). The workshop was very successful and a draft action plan was discussed in detail, having identified the key areas for actions at the previous workshop. It is noteworthy to mention that the Cyprus draft StAP has many key areas in common with the Tunis Action Plan to tackle illegal bird killing in Europe, which was adopted in early December this year (led by the Bern Convention Standing Committee).

The key actions identified and highlighted in the StAP document include: enforcement, courts, policy, awareness raising, habitat management, economic consequences and monitoring & coordination. Bird trapping in Cyprus has become a complicated and chronic problem and without such action, the large-scale illegal bird killing witnessed in Cyprus in recent years will continue. Of this there can be little doubt. Work on producing a Strategic Action Plan against illegal bird trapping in Cyprus, is funded by the MAVA Foundation, through BirdLife International.

The next important step to make progress on in order to tackle this chronic problem is for the key stakeholders to agree on a final StAP and to start implementing it. BirdLife Cyprus is aiming to produce a Final document by early 2014, which will be passed on to the various stakeholders for their agreement and adoption. It is very critical with the current trapping activity levels in mind to have a common strategy on this issue, not only because it will pass

the message of 'zero tolerance' approach towards illegal bird trapping but also it will be an indication to the EU Commission and the other member states that both Cyprus and the UK are working hard to meet their obligations under the Birds Directive for the protection of wild birds and the prohibition of methods that contribute to non-selective and / or large scale killing of birds.

## **Appendix 1**

**Survey data for autumn 2013**

**Evidence of illegal bird trapping activity within survey squares**

Confidential data – provided upon request



### **Evidence of illegal bird trapping activity outside survey squares**

Confidential data – provided upon request

## Appendix 2

### Estimation of numbers of birds caught during autumn 2013

The following key assumptions are applied for the estimation of the birds killed:

- 12 metres is the assumed average length for a mist net
- 20 birds are caught per 12-m net per day (Magnin, 1986 )
- 0.5 birds are caught per limestick per day
- 60 days is the duration of the trapping period for spring and autumn seasons
- 50% scaling factor – applied for springs to account for a lower number of migrating birds passing via Cyprus compared to the autumn
- 301 are the possible bird trapping squares within the survey area as identified from the surveillance programme in 2007 (the random sample of squares surveyed by BirdLife Cyprus is taken from these 301 squares)
- 75% of illegal trapping activity for all of Cyprus takes place within the survey area (based on input from enforcement authorities and other experts)
- For P (prepared) nets it is assumed that they are active every other day while for ANN (Active No Nets), ASN (Active Set Nets) and AUN (Active Unset Nets) nets it is assumed that they are active every day during the trapping season

Using the above assumptions the bird death toll is estimated as follows for autumn:

For nets = [(Total length of P category net rides/2) + (Total length of ANN+AUN+ASN rides)] / (average length of a net) x (20 birds per net per day) x (total number of 'possible bird trapping area' squares / number of squares surveyed) x (length of trapping season in days)  
= [(584/2) + 1,272 + 190 + 145] / (12) x (20) x (301/50) x (60)  
= **1,143,198 birds** could have been caught within the survey area in **mist nets**.

For limesticks = (Total number of limesticks found) x (0.5 birds per limestick per day) x (total number of 'possible bird trapping area' squares / number of squares surveyed) x (length of trapping season in days)  
= 116 x 0.5 x (301/50) x 60  
= **20,950 birds** caught within the survey area on limesticks

**In total 1,164,148 birds** could have been killed in mist nets within the survey area during autumn 2013. Assuming that the survey area accounts for 75% of the trapping activity in Cyprus, the bird death toll across Cyprus is:  
= 1,164,148 / 75%  
= **1.552.197 could have been killed in nets and limesticks across all Cyprus during autumn 2013.**

## Appendix 3

### Methodology of the trapping surveillance programme

#### Survey area and sampling strategy

The surveillance project began in 2002 with the coverage of 60 sample squares (each 1x1 km) chosen at random from within a 261 km<sup>2</sup> study area, which covered most of the Famagusta/Eastern Larnaca area and the Ayios Theodoros – Maroni area.

In 2005, the monitoring became more targeted, focusing on habitat suitable for trapping. Each 1 km square within the study area was classified as either a 'possible bird trapping area' or 'unlikely bird trapping area' based solely on the presence or absence of vegetation suitable for setting limesticks or nets. Surveillance subsequently took place in 'possible' squares only. Some 44 of the original 60 sample squares were 'possible bird trapping area' squares under the new classification. These 44 squares were kept, with another 16 new squares chosen randomly to bring the total sample to 60 again.

Then, in 2007, the survey area was expanded to cover 295 km<sup>2</sup> for Famagusta/Eastern Larnaca area and 111 km<sup>2</sup> for Ayios Theodoros – Maroni area, bringing the total survey area to 406 km<sup>2</sup>. This was done after preliminary surveys in autumn 2006 found evidence of extensive trapping on the margins of the original (261 km<sup>2</sup>) survey area. The sample size was expanded to 100 squares (40 new squares were randomly chosen) to allow for this extension of the survey area. Out of the 406 1 km<sup>2</sup> squares of the expanded survey area, 301 have been classified as 'possible bird trapping area' squares.

The random selection of sample squares is stratified to ensure representative coverage of areas under SBA, Republic of Cyprus and "Joint" jurisdiction (squares where the two jurisdictions meet). In terms of the analysis of the survey data BirdLife Cyprus is using the TRIM (Trends & Indices for Monitoring data) programme, which enables the analysis of time series of counts with missing observations. The program can be used to estimate indices and trends and to assess the effects of covariates on these indices and trends. TRIM analyses time series of counts, using Poisson regression and produces estimates of yearly indices and trends (Pannekoek & van Strien 2005)<sup>15</sup>. If observations are missing, TRIM estimates the missing values on the basis of changes observed on plots that were monitored.

In other words, TRIM enables us to use the data from all the trapping survey squares ever surveyed under the BirdLife Cyprus surveillance programme during the autumn period, in total 104 squares, even though these squares were not all covered each autumn season. The programme 'fills in' missing values for squares that were not covered in a particular year on the basis of the general trend derived from the data as a whole. The TRIM software (freely available from <http://www.ebcc.info/trim.html>) is very widely used for analysis of field data from ecological or biological studies. It works as an index, setting the first year of a time series of data the value of 100 (in this case year 2002) and showing up or down changes in subsequent years relative to this value of 100

#### Surveying for trapping activity

Surveying consists of a two-man team systematically searching for evidence of illegal trapping activity in the randomly selected one by one kilometre squares. The time taken to

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<sup>15</sup> Pannekoek, J. & van Strien, A. 2005. TRIM 3 Manual (Trends & Indices for Monitoring data). Statistics Netherlands

survey each square is recorded, as are weather patterns and the presence or absence of large numbers of migrant birds.

For safety reasons (avoidance of possible confrontation with trappers) the BC observers do not go out in the field at dawn, which is the main period of trapping activity, but carry out surveys between 09:00 and 17:00. Each sample square is surveyed only once each season, partly for safety reasons (minimising the risk of the observers becoming known to trappers) and partly because repeat sampling of each square has no particular value when it comes to analysis of the collected data. Opportunistic observations are also made in the surroundings of squares where mist netting is suspected. Trapping activity includes:

- mist netting activity, which is the main focus of the surveillance programme of BirdLife Cyprus. This is calculated using the total length of active net rides recorded within the survey area; and
- limesticks, using the total number of active limesticks found within the survey area.

#### Mist nets

The two observers carry out a thorough search of all habitat patches suitable for the setting of mist nets (i.e. all areas with bushes and/or trees) within each sample square. The observers record all direct and indirect evidence of mist net and tape lure use and of net ride preparation and use (e.g. cleared corridors within vegetation for putting up nets, presence of pole bases). The codes used for the various categories of mist netting activity and tape lure use are given below, as are the codes used for recording the type of habitat where trapping activity is detected. The surveyors note cases where they come across enclosed (fenced) areas that they cannot see into at all, or cannot see into well enough to survey fully.

<b>Box 1 Key to survey codes used for the field</b>		
<u>Net code</u>	<u>Habitat code</u>	<u>Tape lure code</u>
O – old ride	A – acacia	P – tale lure present, playing
P – ride recently prepared	C – citrus	L – loudspeakers present
ANN – active no nets present	E – eucalyptus	Y – tape lure present, not playing
AUN – active unset net present	F – fig	U – unknown
ASN – active set net present	J – mulberry	W – electrical wires associated with tape lures
IUN – inactive unset net present	O – olive	B – car battery present
	M – maquis	
	P – pomegranate	
	K – carob	
	Cy – cypress	
	L – lentisk	
	S – syrian plum	

The main net classifications are described below:

- Prepared (P): A net ride that is clearly ready to be used but there is no evidence e.g. bird feathers, blood stains, thrown pebbles, to suggest illegal activity was taking place the previous night / morning (see Figure 4),

- Active No Net (ANN): A net ride that from the evidence found e.g. bird feathers, blood stains, thrown pebbles, indicates that illegal activity was taking place the previous night / morning but no net is present (see Figure 5),
- Active Unset Net present (AUN): A net ride where the trapper has left the mist net on the poles but it is furled i.e. the mist net is not stretched up for catching birds but lowered down (or the net is placed e.g. under a tree) (see Figure 6), and
- Active Set Net present (ASN): A net ride where the trapper has left the mist net set on the poles and it is ready for catching birds (see Figure 7).



**Figure 5: Prepared (P) net ride**



**Figure 6: Active No Net ride (ANN) with blood stains found next to pole bases**



**Figure 7: Active Unset Net present (AUN) in acacia plantations managed extensively for mist netting**



**Figure 8: Active Set Net present (ASN) –corridors in orchards are often used for mist netting**

#### Limesticks

While the main effort of the observers is to locate evidence of mist netting, all evidence of limestick activity is also recorded. Limesticks are much harder to locate in the field than mist nets and are often set in a different habitat to mist nets. In addition, incidental evidence for limestick use is hard to detect (though trees pruned to hold limesticks are readily identifiable). It is impractical to search entire 1 km<sup>2</sup> sample squares for limesticks due to the time consuming nature of the task. The protocol is therefore for the observers to look out for limesticks while concentrating on surveying for mist netting activity.

## Appendix 4

Pictures from the 2<sup>nd</sup> workshop for the 'Finalisation of the Strategic Action Plan for tackling illegal bird trapping in Cyprus', undertaken on the 18<sup>th</sup> November 2013 in Nicosia, Cyprus.



Figure 9 Picture from 2<sup>nd</sup> workshop – Presentation of the draft action plan document



Figure 10 Picture from 2<sup>nd</sup> workshop – Discussion between stakeholders for the finalisation of a StAP document.