

REPORT ON THE OUTCOME OF THE
AUTUMN 2017 FINCH LIVE-CAPTURING SEASON IN
MALTA

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WILD BIRDS REGULATION UNIT
MINISTRY FOR THE ENVIRONMENT, SUSTAINABLE DEVELOPMENT AND CLIMATE
CHANGE

TABLE OF CONTENTS

1. Introduction.....	1
2. Legal and policy basis for the application of a derogation in 2017.....	2
3. Discussion within Malta Ornis Committee leading up to application of derogation in 2017.....	12
4. Consideration of the conservation status of the seven finch species.....	13
5. Issuance of Autumn 2017 finch live-capturing licences.....	17
6. Single-use rings.....	22
7. Real-time game reporting system.....	23
8. Finches migration study.....	29
9. Comparison of estimated migration with reported catches.....	50
10. Enforcement and strict supervision.....	62
11. Conclusions.....	80

ENCLOSURES

Annex I	Conservation status of the seven finch species – 2017 update
Annex II	Licence for the Autumn 2017 finch live-capturing season
Annex III	Report on a survey of the influx of migratory finches over the Maltese Islands, made between October and December 2017 (Ecoserv, 2018)

1. INTRODUCTION

1.1 This report provides full account of the outcome of the derogation allowing a live-capturing season for seven finch species in Malta during Autumn 2017. It has been compiled in addition to Malta's formal derogation report submitted annually pursuant to Malta's reporting obligation under Article 9 of Directive 2009/147/EC of the European Parliament and of the Council of 30 November 2009, on the Conservation of Wild Birds (hereinafter the Birds Directive). In this regard, this report considers various relevant aspects of the application of this derogation, including:

- an assessment of the conservation status of the seven finch species: Common Linnet (*Linaria cannabina*), European Goldfinch (*Carduelis carduelis*), European Greenfinch (*Chloris chloris*), Eurasian Siskin (*Spinus spinus*), Hawfinch (*Coccothraustes coccothraustes*), Common Chaffinch (*Fringilla coelebs*) and European Serin (*Serinus serinus*);
- the decision-making process leading up to the decision to apply derogation;
- the special licensing process undertaken prior to application of derogation;
- the reported catches by the licensed live-capturers through a real-time game reporting system;
- the enforcement efforts in place to ensure the strict supervision of live-capturing during the season;
- the illegalities detected and corresponding enforcement action taken; and,
- the legal and other management aspects of relevance.

2. LEGAL AND POLICY BASIS FOR THE APPLICATION OF A DEROGATION PERMITTING AN AUTUMN FINCH LIVE-CAPTURING SEASON IN 2017

GENERAL BACKGROUND

- 2.1 Traditional live-capturing (alternatively referred to as 'trapping') of seven species of finches, namely Common Chaffinch (*Fringilla coelebs*), Common Linnet (*Linaria cannabina*), European Goldfinch (*Carduelis carduelis*), European Greenfinch (*Chloris chloris*), Hawfinch (*Coccothraustes coccothraustes*), European Serin (*Serinus serinus*), and Eurasian Siskin (*Spinus spinus*) is a deeply-rooted traditional practice in Malta that represents significant socio-cultural value for a sizeable proportion of Maltese population. This practice consists of several elements, including preparation of the live-capturing site, meticulous husbandry of live-decoys, targeted capturing of finch specimens and their subsequent husbandry and keeping for various recreational purposes.
- 2.2 Prior to Malta's accession to the EU, this long-standing practice of live-capturing was virtually unregulated: trapping took place between September and May, without any temporal or spatial restrictions and without any bag limits or quotas.
- 2.3 Prior to its accession to the EU in 2004, Malta examined the possibility of allowing the live-capturing, including the keeping for recreational purposes of the seven finch species within the framework of EU law. During pre-accession negotiations with European Commission in 2001, Malta suggested including the seven species of finches in Annex II/2 of EU Birds Directive.
- 2.4 This proposal was however rejected. Instead, the Commission proposed to grant Malta a transitional period during which it had to implement a series of measures aimed at establishing a potential alternative solution to the unrestricted live-capturing of the aforementioned species, in the form of a captive breeding programme. This captive breeding programme would purportedly allow the limited capture of finches from the wild, to the extent that their capture was necessary to ensure genetic diversity of the captive-bred species (i.e. a consanguinity-related derogation).
- 2.5 Malta accepted this proposal on the understanding that even under the breeding programme, the limited live-capture of finches would still be

necessary and permissible to ensure sufficient genetic diversity. The proposal was then crystallised in Malta's Act of Accession, which granted Malta a transitional derogation from the general protection regime of the Directive, outside of the framework of Article 9 of the Birds Directive.

- 2.6 In December 2008, the transitional period granted to Malta came to an end and the practice of finch live-capturing was terminated. On the basis of the various assessments conducted¹, Malta reached the conclusion that the transitional measures could not provide a satisfactory alternative solution for both the capturing and the keeping of finches.
- 2.7 Between 2004 and 2014, Malta conducted a series of in-depth assessments of the results of captive breeding, as well as of various other potential alternatives (such as ring and release schemes, live-capturing of other species, the continuation of the ban on finch capturing and keeping). In 2014, it was concluded that no other satisfactory solution exists except by virtue of a derogation within the parameters of Article 9(1)(c) of the Birds Directive.
- 2.8 A derogation regime was subsequently drafted following several months of debate with stakeholders and a series of in-depth legal, technical and scientific assessments. This derogation did not aim to continue or re-instate the finch live-capturing practice as it was not exercised prior to 2004, nor did it entail a consanguinity-related derogation.
- 2.9 Following a detailed legal assessment, coupled with consideration of related technical and legal analyses, as well as following advice from the Malta Ornithological Committee, in 2014 the Maltese Government decided to apply a derogation under Article 9 of the Birds Directive allowing live-capturing (trapping) of the seven species of finches in Malta.
- 2.10 To this effect, on 15 July 2014, the Government published a legislative package consisting, *inter alia*, of a new Framework Regulation (Legal Notice 253 of 2014²) establishing the parameters for live-capturing derogations for finches in Malta, and of another legal instrument (Legal Notice 250 of 2014³) declaring the opening of the 2014 live-capturing season for finches in

¹ These assessments and other technical and scientific information is summarised in a Technical Memorandum, annexed with Malta's report on the outcome of the 2014 finch live-capturing derogation. This report and its annexes are available online under the following link: <http://environment.gov.mt/en/Pages/WBRU/livecapturingder.aspx>

² S. L. 504.124 (now S.L. 549.93), available at: <http://www.justiceservices.gov.mt/DownloadDocument.aspx?app=lom&itemid=12211&l=1>

³ S. L. 504.122, available at: <http://www.justiceservices.gov.mt/DownloadDocument.aspx?app=lom&itemid=12209&l=2>

accordance with the above-mentioned new Framework Regulations and in line with the recommendations of the Malta Ornithology Committee. In 2016, the Framework Regulations were further updated through Legal Notice 319 of 2016⁴ which reflected the phasing out of paper-based *Carnet de Chasse* reporting requirement and its substitution with a mandatory real-time telephonic reporting requirement.

- 2.11 The decision-making process, the contents of the legislation adopted in 2014 and other relevant aspects were presented as part of Malta's report on the application of derogation in 2014⁵. These will not be re-stated in this report.
- 2.12 The Commission disputed Government's interpretation of the legal basis for this derogation and in June 2014 initiated a Pilot procedure, to which the Government replied in August 2014. Subsequently, the Commission initiated a Letter of Formal Notice in October 2014, which was responded to in November 2014.
- 2.13 Throughout this correspondence Malta maintained that its application of finch live-capturing derogation fully respects the provisions of the Birds Directive and applicable EU policy. On 28 May 2015, the Commission escalated the procedure to the Reasoned Opinion stage, to which Malta responded in July 2015. In September 2015, the Commission referred the case to the Court of Justice of the European Union (CJEU). Malta submitted its detailed statement of defence in January 2016.
- 2.14 In March 2016, the Commission submitted its reply to Malta's statement of defence. On 10 May 2016, Malta submitted its final Rejoinder to the Court, thus closing the written submissions case. In May 2016, Malta also requested the Court to schedule a verbal hearing. This request was accepted and the hearing was held on 15 February 2017. On 26 July, the Advocate General Eleanor V. Sharpston delivered her Opinion to the Court. At the time of compilation of this report, the case was pending ECJ judgement, which is expected to be delivered in 2018.

⁴ Conservation of Wild Birds (Framework for Allowing a Derogation Opening an Autumn Live-Capturing Season for Finches) (Amendment) Regulations, 2016

⁵ S. L. 504.122, available at: <http://www.justiceservices.gov.mt/DownloadDocument.aspx?app=lom&itemid=12209&l=2>

- 2.15 The legal basis for the application of the autumn finch live-capturing derogation is provided by Article 9(1)(c) of the Birds Directive, which states that "Member States may derogate from the provisions of Articles 5 to 8, where there is no other satisfactory solution...", "to permit, under strictly supervised conditions and on a selective basis, the capture, keeping or other judicious use of certain birds in small numbers".
- 2.16 Prior to deciding to derogate, the Government ascertained that the above elements of Article 9 (1) (c) have been met as follows:

No other satisfactory solution

- 2.17 Prior to the decision to apply the finch live-capturing derogation, Malta meticulously assessed all potential alternatives, which were implemented in practice between 2004 and 2014, and in doing so it strictly followed the requirements of Article 9(1) of the Directive and the Commission's guidance document thereon⁶. In carrying out this assessment, the Maltese authorities followed strictly the methodology prescribed in the Commission's Guide to Sustainable Hunting⁷, resulting in: (i) the identification and definition of the precise problem for which a solution is being sought; (ii) the identification of potential alternative solutions to the said problem; (iii) ascertaining the applicability of Article 9 of the Directive to such alternative solutions; and iv) subjecting potential alternative solutions to the "satisfactory solution test".
- 2.18 The alternatives considered in this analysis included: (1) an assessment of the ban on finch live-capturing that was in force between 2009 and 2014; (2) an assessment of the results attained from the de-centralised and the centralised captive breeding programmes that were implemented between 2005 and 2010; (3) an assessment of the potential of ring-and-release and similar programmes such as those promoted through the EU-funded LIFE project on Bird Migration and Trapping⁸ implemented between 2009 and 2011; and (4) an assessment of the potential for live-capturing of species other than finches⁹.

⁶ European Commission, *Guide to Sustainable Hunting under the Birds Directive* (2008), para 3.4.2 ; available at http://ec.europa.eu/environment/nature/conservation/wildbirds/hunting/docs/hunting_guide_en.pdf

⁷ *ibid*, Section 3, pp. 41 – 69

⁸ LIFE07 INF/MT/000554.

⁹ such as the live-capturing derogation for Golden Plover and Song Thrush.

2.19 This assessment is presented in detail in the Technical Memorandum, annexed with Malta's report on the outcome of the 2014 finch live-capturing derogation¹⁰. Through this exercise the Maltese authorities concluded that, taking into account the unique socio-cultural context and the biogeographical circumstances of the Maltese Islands, as well as the practical experience gained in the implementation of all other potential alternative activities – including, but not limited to, the captive breeding programme – none of the alternatives assessed, except for a limited, strictly controlled and supervised live-capturing derogation for finches, would provide a satisfactory alternative solution to the long-standing traditional and recreational practice of live-capturing and keeping of the seven finch species.

Judicious Use

2.20 According to Article 9 (1) (c) of the Directive, both "capturing" and "keeping" elements of the derogation may qualify as "judicious use", since the Article provides that Member States may "...permit, under strictly supervised conditions and on a selective basis, the capture, keeping or other judicious use of certain birds in small numbers"¹¹. In this regard, reference may be made to the judgment of the Court in Case C-60/05 WWF Italia¹² and in Case C-76/08 Commission v Malta¹³, where the Court of Justice explicitly confirmed that hunting – of non-Annex II species in the first case – for purely recreational or leisure purposes can fulfil the conditions of Article 9(1)(c), including notably the criterion of "judicious use", without the need for any other 'final use' of the birds in question to be identified or invoked. Similarly, in Case C-507/04 Commission v Austria the Court held that: "the hunting of wild birds for recreational purposes during the periods mentioned in Article 7(4) of the Directive may, subject to compliance with the requirements laid down in Article 9(2), constitute a 'judicious use' within the meaning of Article 9(1)(c) (see, to this effect, *Ligue pour la protection des oiseaux sauvages and Others*, paragraph 11)."¹⁴

2.21 This reasoning therefore applies with even greater force to live-capturing activities which, by definition, do not involve the killing of birds. In such a context, the term "judicious use" applies to both the activity of live-capturing

¹⁰ Technical Memorandum, Part B, pages 1-7

¹¹ Emphasis added.

¹² EU:C:2006:378

¹³ EU:C:2009:535.

¹⁴ EU:C:2007:427, paragraph 197

and to the subsequent keeping of birds in captivity, which, on the basis of the case-law cited, may both be practiced for purely recreational reasons. Conversely, if under certain circumstances, the removal of a bird from the wild may be considered “judicious” in the first place, then it logically follows that its subsequent use is also judicious.

2.22 In Malta’s case, caught birds are tended and cared for meticulously by live-capturers, which enables them to thrive and survive longer in captivity, when compared to birds in the wild. Selective capture and keeping of certain species with a healthy conservation status, in the absence of another satisfactory solution and in small numbers, can be judicious. The only distinction which the Directive makes with regard to different bird species can be found in Article 7, which permits the hunting of Annex II birds within the conditions established therein, whereas Article 5 in principle prohibits the hunting of any other species. However the non-inclusion of a species in Annex II to the Directive does not in principle affect the assessment of the validity of a derogation from Article(s) 5 (and 8), pursuant to Article 9(1)(c).

2.23 Moreover, the Court has formally “accepted the possibility of derogating from the prohibition on hunting species of birds not listed in Annex II to the Directive, to which Article 7(1) refers, in particular for the reason set out in Article 9(1)(c) of the Directive”.¹⁵

2.24 Thus the Court in Case C-60/05 WWF Italia¹⁶ acknowledged that the hunting in Italy of the Chaffinch (*Fringilla coelebs*) and Brambling (*Fringilla montifringilla*) – both non-Annex II species – for purely recreational purposes could benefit from a derogation under Article 9(1)(c), provided it satisfied all the conditions stipulated therein. In that judgment the Court cited the principle, now echoed in the Commission’s Guide to Sustainable Hunting,¹⁷ that: “...‘small numbers’ are any sample of less than 1% of the total annual mortality rate of the population in question (average value) for those species which are not to be hunted and a sample in the order of 1% for those species which may be hunted...”¹⁸ This confirms the statement in the AG’s Opinion in that same case, namely that: “In accordance with the case-law of the Court, it is possible to derogate from the prohibition on hunting bird species not listed in Annex II to the Directive, to which Article 7(1) refers, in

¹⁵ Case [C-182/02 Ligue pour la protection des oiseaux and Others v. France](#), EU:C:2003:558, [para.10](#).

¹⁶ EU:C:2006:378.

¹⁷ Commission Guide to Sustainable Hunting under the Birds Directive, p. 62, paragraph 3.5.36

¹⁸ *ibid*, paragraph 26. See similarly Case C-344/03 *Commission v Finland*, EU:C:2005:770, para. 53

particular, on the grounds mentioned in Article 9(1)(c) of the Directive. Therefore, the hunting of wild birds for recreational purposes may constitute a judicious use authorised by Article 9(1)(c) of the Directive”.¹⁹

Selectivity

- 2.25 The clap-net method of capture, authorised for the finch live-capturing derogation allows the capture on a selective basis because the nets are manually operated by trained and licensed²⁰ live-capturers, who were required to pass a special examination that includes a rigorous bird identification test²¹. Moreover, the nets can only be triggered through direct human intervention when the operator physically activates the clap-net to momentarily close in on a bird that has been visually identified by the live-capturer within the range of the net. The use of this kind of net rules out the possibility of accidental or non-selective capture of any species other than the authorised species.
- 2.26 In the unlikely event that such a by-catch occurs, the live-capturer has a clear legal obligation²² to immediately release such bird unharmed. Moreover, given that the Maltese finch live-capturer is generally disinterested in non-target species, any by-catch is in practice invariably released back into the wild. The law furthermore explicitly prohibits the use of non-selective devices that are active at all times, without direct human intervention²³.
- 2.27 The deliberate targeting of any species other than the authorised finch species is expressly prohibited by Maltese law²⁴ and is subject to large penalties. The penalty for such an offence involving protected birds listed in Schedules I or IX of the Conservation of Wild Birds Regulations (SL 549.42)²⁵ on first conviction is a minimum €5,000 fine, permanent revocation of the licence and 12 months imprisonment; whilst for a second or subsequent offence the minimum penalty is a €10,000 fine, 24 months imprisonment and a life-time ban from obtaining any hunting and live-capturing licences²⁶.

¹⁹ Opinion of AG Geelhoed issued on 16 February 2006 in Case C-60/05 *WWF Italia*, EU:C:2006:116, para. 25

²⁰ See specimen 2017 finches special live-capturing licence (Annex II)

²¹ A visual illustration of the selective operation of clap nets method and other relevant factors can be seen in the video produced by the Maltese authorities and available under the following link: <http://environment.gov.mt/en/Pages/WBRU/livecapturingder.aspx> or <https://www.youtube.com/watch?v=JNeUffX6Uqc>

²² Regulation 7 (p) of subsidiary legislation 549.93

²³ Regulation 7(g) of subsidiary legislation 549.93

²⁴ Regulation 7(o) of subsidiary legislation 549.934

²⁵ SL 549.42 is available at: <http://www.justiceservices.gov.mt/DownloadDocument.aspx?app=lom&itemid=11548&l=1>

²⁶ Regulation 27(2) of the Conservation of Wild Birds Regulations (SL 549.42)

Small numbers

- 2.28 The approach followed by the Maltese authorities in estimating the criterion of “small numbers” in relation to the seven finch species at issue relied on the principles and methodology provided in Commission’s Guide to Sustainable Hunting under the Birds Directive. As a result, the bag limits of the derogation, provided for under Schedule II of S.L. 549.93, were set at levels that are significantly less than the 1% of annual mortality threshold, which the Commission recommends for estimation of “small numbers” in relation to non-Annex II species. This is further elaborated in the subsequent sections of this report.

Strict supervision

- 2.29 A strict supervisory and enforcement regime that comprises an elaborate system of legal and regulatory controls and deterrents against violations, as well as a robust field enforcement system on the ground, have been put into place. The details of the strict supervision regime are further elaborated in the subsequent sections of this report.

APPLICABLE PROVISIONS OF NATIONAL LAW

- 2.30 The Conservation of Wild Birds Regulations (S.L. 549.42) is the main legal instrument which transposes the Birds Directive. The following provisions of these Regulations are of particular relevance:
- Regulation 2 defines, *inter alia*, the geographical areas where live-capturing is prohibited.
 - Regulation 8 prohibits any live-capturing of wild birds, except where authorised through the derogation regime prescribed in Regulation 9, and lays down other conditions pertaining to any licences that may be issued pursuant to any live-capturing derogation regime.
 - Regulation 9 lays down parameters for consideration of any derogations, essentially transposing the corresponding provision (Article 9) of the Birds Directive. However the national Regulation goes further, by prescribing the precise decision-making procedure that must be followed in the course of

consideration of any such derogation, which includes a mandatory consideration by the Malta Ornithology Committee.

- Regulation 10 prescribes the role of the Malta Ornithology Committee, which includes an array of specific functions, including under sub-regulation 10(6)(c) the function “to make recommendations to the Minister on the authorization of derogations from the provisions of regulations 4,5,6,7,18 and 21” and “to verify at regular intervals that the conditions governing the granting of such authorization or authorizations continue to be fulfilled”. The fourth proviso to the same sub-regulation furthermore prescribes in detail the powers of the Minister, upon considering recommendations of the Committee, to decide on whether to authorize derogations, as well as the mandatory obligation upon the Minister to state in writing reasons for his decision where substantial divergence exists between the Committee’s recommendations and the Minister’s decision.
- Regulation 11 provides the Wild Birds Regulation Unit with a range of legal powers to enforce provisions of these regulations in conjunction with the Police.
- Regulation 27 prescribes the manner in which offences under these Regulations are to be dealt with, and provides for an array of punishments that, in the case of breaches under derogations, range from a minimum of €500 fine and immediate revocation of the special licence, to €15,000 fine, two years imprisonment, revocation of all licences issued under these regulations for life, as well as the confiscation of corpus delicti. Regulation 27 also provides for a set of gravity factors which the judiciary takes into consideration in determining the seriousness of the offence and the applicable level of penalty.
- The Conservation of Wild Birds (Framework for Allowing a Derogation Opening an Autumn Live-Capturing Season for Finches) Regulations, 2014 (S.L.549.93²⁷), hereafter referred to as the ‘Framework Regulations’ empowers the Minister, provided that there is no satisfactory solution in terms of Article 9(1) of the Birds Directive, to open an Autumn live-capturing season for the seven finch species by means of a notice in the Government Gazette. According to these regulations, an Autumn live-capturing season may only be opened for a maximum period of seventy-

²⁷ S.L. 549.93 available at: <http://www.justiceservices.gov.mt/DownloadDocument.aspx?app=lom&itemid=12211&l=1>

three days from October to December of the same year with a maximum bag limit for any season of 12,000 Linnets, 800 Goldfinches, 4,500 Greenfinches, 2,350 Siskins, 500 Hawfinches, 5,000 Chaffinches and 2,350 Serins. The Framework Regulations further provide the criteria for eligibility for a special licence for live-capturing and set a procedure for the application stage, including an application fee, and the conditions that are to be included in the licence issued. These Regulations also establish the means of capture, that is, by means of traditional clap nets on sites that had been previously approved by the Wild Birds Regulation Unit and registered with the Commissioner of Police. The Regulations also stipulate a special licensing requirement and a set of binding special licence conditions which include, *inter alia*:

- The dates and permitted hours of the season;
- Provisions related to location and configuration of live-capturing sites and live-capturing stations;
- Restrictions pertaining to mesh size to be used, the maximum footprint of each live-capturing station (maximum of 38 square metres for a pair of clap nets);
- Provisions related to authorised method of capture and prohibition for leaving armed nets during hours when live-capturing is not permitted;
- Seasonal and individual bag limits (10 birds of the relevant species per licensee);
- Requirements concerning the use of live decoys (maximum of 21 live-decoys per live-capturing site; all decoys must be ringed with a special single-use ring supplied by the Wild Birds Regulation Unit);
- Requirement to immediately ring with a single-use ring provided by the Unit, and report birds caught through telephonic game reporting system;
- Requirement to immediately report any scientific ring recoveries and to immediately release birds fitted with scientific ring;
- Requirement to immediately release birds not of the relevant species should accidental capture occur;
- Requirement to immediately release birds that may be accidentally caught over one's bag limit;
- Requirement to keep relevant documentation, including approved site plans, General Licence, Special Licence and ID Card at all times

whilst practicing live-capturing activity or travelling to and from live-capturing site;

- Restrictions pertaining to permitted size of cages in which birds can be kept during live-capturing activity, and other restrictions and prohibitions.

2.31 In addition to these conditions, licensed live-capturers were also to abide with the provisions laid down in the Conservation of Wild Birds Regulations (S.L. 549.42). Offences against any provision of the Special Licence are subject to harsh penalties as set out in Regulation 27 of the Conservation of Wild Birds Regulations (S.L. 549.42). Except where the offence consists solely of an administrative or minor violation listed in Schedule VIII of the said Regulations, any other offences or breaches of licence conditions trigger automatic seizure of Special and General Licences, seizure of rings, birds and equipment prior to criminal proceedings being initiated in terms of Regulation 27.

2.32 The Conservation of Wild Birds (Declaration on a derogation for a 2017 Autumn live-capturing season for Finches) Regulations, 2017 (Legal Notice 294 of 2017²⁸) declared the opening of the 2017 live-capturing season for finches from 20 October to 31 December 2017, inclusive of both days.

3. DISCUSSION WITHIN MALTA ORNIS COMMITTEE LEADING UP TO APPLICATION OF DEROGATION IN 2017

3.1 The Malta Ornis Committee discussed the proposed derogation during two sessions on 26 April 2017²⁹ and 10 May 2017³⁰. During these sessions, the Committee discussed the outcome of the previous season, considered an updated assessment of the population status of the seven finch species, enforcement arrangements and other scientific and technical parameters of relevance. Following its deliberations, the Committee recommended the application of a derogation in 2017, subject to the same parameters as in 2016. On 18 October 2017, the Ornis Committee discussed issues related to the special licence application procedure and the number of licences issued³¹.

²⁸ LN 294 of 2017 is available at <http://justiceservices.gov.mt/DownloadDocument.aspx?app=lp&itemid=28721&l=1>

²⁹ Meeting of the Malta Ornis Committee held on 26 April 2017. Minutes available at: <http://msdec.gov.mt/en/Document%20Repository/WBRU/2017/ornisCommittee/Minutes%2026-04-2017.pdf>

³⁰ Meeting of the Malta Ornis Committee held on 10 May 2017. Minutes available at: <http://msdec.gov.mt/en/Document%20Repository/WBRU/2017/ornisCommittee/Minutes%2010-05-2017.pdf>

³¹ of the Malta Ornis Committee held on 18 October 2017. Minutes available at: <http://msdec.gov.mt/en/Document%20Repository/WBRU/2017/ornisCommittee/Minutes%2018-10-2017.pdf>

4. CONSIDERATION OF THE CONSERVATION STATUS OF THE SEVEN FINCH SPECIES

- 4.1 Taking into consideration the provisions of Article 9(1)(c) of the Birds Directive, the Government assessed the latest scientific data regarding the conservation status of the seven finch species in question. In line with the “judicious use” requirement, this review of scientific data was undertaken in April 2017 in order to ascertain that the conservation status of the finch species would not be threatened by the application of a limited Autumn 2017 live-capturing season. This assessment was presented to the Malta Ornis Committee in April 2017³².
- 4.2 The assessment was based on the previous review of the conservation status of the seven finch species undertaken in 2016, which was further updated with the latest available scientific data. The 2017 update focused on the changes in the short-term and long-term trends of the seven finch species on the basis of Article 12 reports (EEA, 2014) for the period 2008–2012 and the latest European Bird Census Council (EBCC) update. The assessment reviewed data presented as part of EU Member States’ Article 12 reports, wherein it was noted that although a number of Member States reported a decrease in some of the finch populations, such magnitude change was not reflected in the number of breeding pairs reported ten years earlier in Birds in Europe II (BirdLife International, 2004). In particular, it was noted that despite a reported decline, the number of breeding pairs as reported in Article 12 reports is actually higher than those reported ten years earlier. This was also the case in terms of reported increases, since the corresponding number of pairs in Birds in Europe II was either exactly the same or indeed higher than those in Article 12 reports. The values for the number of breeding pairs in 2004 was thus revised using an online percentages calculator to provide a more realistic number of breeding pairs based on the percentage changes as reported by each Member State in the current Article 12 reports.
- 4.3 The final analysis showed that in the **short-term trend**, the **EU populations** of Common Chaffinch, Common Linnet, European Goldfinch, Hawfinch, European Serin and Eurasian Siskin are classified as **Stable**, whereas the European Greenfinch population is classified as **Moderate Increase** at all levels of the population (minimum and maximum pairs and their geomean). **In terms of long-term trends, all seven finch species have been shown to be**

³² The assessment is enclosed as Annex I to this report.

Stable at all three levels of their population (min/max/geomean), the Eurasian Siskin being the only exception since it **increased** in the number of minimum pairs.

- 4.4 At EU level, the latest EBCC update has shown that the long-term trend of the Common Chaffinch, European Goldfinch and Hawfinch is classified as **Moderate Increase**, the European Greenfinch as **Stable** whereas the Common Linnet, European Serin and Eurasian Siskin as **Moderate Decline**. This report has shown that when compared with the previous EBCC update, the Common Linnet increased by 5% in the long-term trend and increased by 8% in the short-term trend, the European Serin decreased by 1% in the long-term trend and increased by 8% in the short-term trend, whereas the Eurasian Siskin increased by 1% in the long-term trend and increased by 13% in the short-term trend.
- 4.5 The same methodology discussed above (review of the 2004 baseline population) was used to determine the trend classifications at **reference population level**. It was shown that the short-term and long-term trends of the European Goldfinch and the short-term trend of the Eurasian Siskin are classified as **Moderate Increase**. Furthermore, the long-term trend of the Eurasian Siskin and the short-term and long-term trends of the Common Chaffinch, Common Linnet, European Greenfinch, Hawfinch and European Serin are **Stable**.
- 4.6 Table 1 below illustrates an overall update on the conservation status using a three-arrow set to differentiate between decreasing, stable and increasing trends. The upper table compares the trends at EU level with those at ring recoveries level whereas the lower part of the table compares the trends reported by EBCC at pan-European as well as at EU level with those reported by Member States in their Article 12 reports.

Table 1 – Population trends of the seven finch species

Species	EU Population						Ring Recoveries					
	Short-term Trend			Long-term Trend			Short-term Trend			Long-term Trend		
	Min Pairs	Max Pairs	Geomean	Min Pairs	Max Pairs	Geomean	Min Pairs	Max Pairs	Geomean	Min Pairs	Max Pairs	Geomean
Chaffinch	→	→	→	→	→	→	→	→	→	→	→	→
Linnet	→	→	→	→	→	→	→	→	→	→	→	→
Goldfinch	→	→	→	→	→	→	↑	↑	↑	↑	↑	↑
Greenfinch	↑	↑	↑	→	→	→	→	→	→	→	→	→
Hawfinch	→	→	→	→	→	→	→	→	→	→	→	→
Serin	→	→	→	→	→	→	→	→	→	→	→	→
Siskin	→	→	→	↑	→	→	↑	↑	↑	↑	→	→

Data Sources: EBCC (2016); European Environment Agency (2014)

Species	Short-term Trend			Long-term Trend			
	EBCC 2016 (pan-European)	Article 12 (2008–2012) [EU Geomean]	Article 12 (2008–2012) [Ring Recoveries Geomean]	EBCC 2016 (pan-European)	EBCC 2016 (EU)	Article 12 (2008–2012) [EU Geomean]	Article 12 (2008–2012) [Ring Recoveries Geomean]
Chaffinch	→	→	→	↑	↑	→	→
Linnet	→	→	→	↓	↓	→	→
Goldfinch	→	→	↑	↑	↑	→	↑
Greenfinch	↓	↑	→	→	→	→	→
Hawfinch	↑	→	→	↑	↑	→	→
Serin	↓	→	→	↓	↓	→	→
Siskin	→	→	→	↓	↓	↑	↑

Data Sources: EBCC (2016); European Environment Agency (2014)

4.7 For each of the seven finch species considered in this analysis, the “small numbers” calculation was performed and the resulting number was reduced further to fall considerably below the 1% threshold for non-huntable species as specified in paragraph 3.5.34 of the Guidance Document on Sustainable Hunting.

4.8 The <1% figure is based on a much smaller subset of the total breeding population of the respective species within the territory of the European Union, since only those European countries (Member States) from which there are ring recoveries in Malta form part of the reference population, with the exception of the Hawfinch. In the absence of ring recoveries pertaining to the latter species, the reference population of the Hawfinch is based on ring recoveries in Italy from other Member States, subdivided by three to take into account the three main migratory flyways.

4.9 The national bag limits as established are therefore much lower than <1% of the total annual mortality of the EU reference population of each finch

species. They also take into account the average bag limits over a seven-year period (2002–2008), which in turn are all considerably below the <1% threshold (see Table 2 below).

4.10 Accordingly, the bag limits have been partitioned restrictively with those Member States that in 2008 had applied derogations for live-finch capturing or hunting of these finch species, namely Austria (Common Linnet, European Goldfinch, Eurasian Siskin, Common Chaffinch and Hawfinch), Spain (Common Linnet, European Goldfinch, Eurasian Siskin, Common Chaffinch, European Serin and European Greenfinch) and Italy (Common Chaffinch).

4.11 Table 2 also provides a direct comparison between the <1% mortality (calculated on the basis of the minimum EU breeding population size and lowest recruitment rate), the harvest record (average of *Carnet de Chasse* data over a seven-year period: 2002–2008) and the national bag limit for each of the seven species, which were thus retained as established in the Framework Regulations (S.L. 549.93)³³. The national bag limit as a percentage of the bag limit partitioned with other EU Member States is also provided in the table.

Table 2 Consideration of the <1% mortality of the reference population and harvest records

Species	*Total Annual Mortality of Reference Population (Ring Recoveries)	Maximum Bag Limit from Reference Population (<1%)	Partitioned Maximum Bag Limit (<1%)	Average Annual Harvest (2002–2008)	National Bag Limit (SL 549.93)	National Bag Limit as a percentage of the Partitioned Bag Limit (<1%)
Common Chaffinch	20,257,860	202,579	50,645	6,075	5,000	9.87%
Common Linnet	5,868,018	58,680	19,364	17,950	12,000	61.97%
European Goldfinch	4,663,440	46,634	15,389	1,025	800	5.20%
European Greenfinch	9,303,840	93,038	46,519	5,598	4,500	9.67%
Hawfinch	3,832,753	38,328	6,388	604	500	7.83%

³³ <http://www.justiceservices.gov.mt/DownloadDocument.aspx?app=lom&itemid=12211&l=1>

Table 2 Consideration of the <1% mortality of the reference population and harvest records

Species	*Total Annual Mortality of Reference Population (Ring Recoveries)	Maximum Bag Limit from Reference Population (<1%)	Partitioned Maximum Bag Limit (<1%)	Average Annual Harvest (2002–2008)	National Bag Limit (SL 549.93)	National Bag Limit as a percentage of the Partitioned Bag Limit (<1%)
European Serin	932,800	9,328	4,664	3,186	2,350	50.39%
Eurasian Siskin	2,652,936	26,529	8,843	3,185	2,350	26.57%
Total			151,812		27,500	18.11%

* Data sources: Cramp and Perrins (1994); Bauer (2005); Robinson (2005), based on the minimum EU population (breeding pairs) as reported in Article 12 reports for the period 2008–2012 (EEA, 2014).

4.12 The detailed information on the assessment of conservation status for each of the seven species concerned, as well as determination of “small numbers” is included as Annex I to this report.

5. ISSUANCE OF AUTUMN 2017 FINCH LIVE-CAPTURING LICENCES

5.1 Applications for a special finch live-capturing licence were received during a 21-day period between 10th July and 31st July 2017. Only those applicants who were at the time of application already in possession of a valid general live-capturing licence for 2017 (5-year General Licence card) were eligible to apply.

5.2 Applicants were informed that their applications are provisional, and that the issuance of a special licence would be subject to the actual decision to apply the derogation.

5.3 In order to apply, eligible persons were requested to submit a completed and signed application form, produce a valid General Licence card for 2017 (which was to include a general live-capturing licence component) and provide an ID card at application stage. Each application was accepted against a licence fee of €55 as well as a charge of €0.50 per each special single-use ring ordered by the applicant (a maximum of 10 rings could be

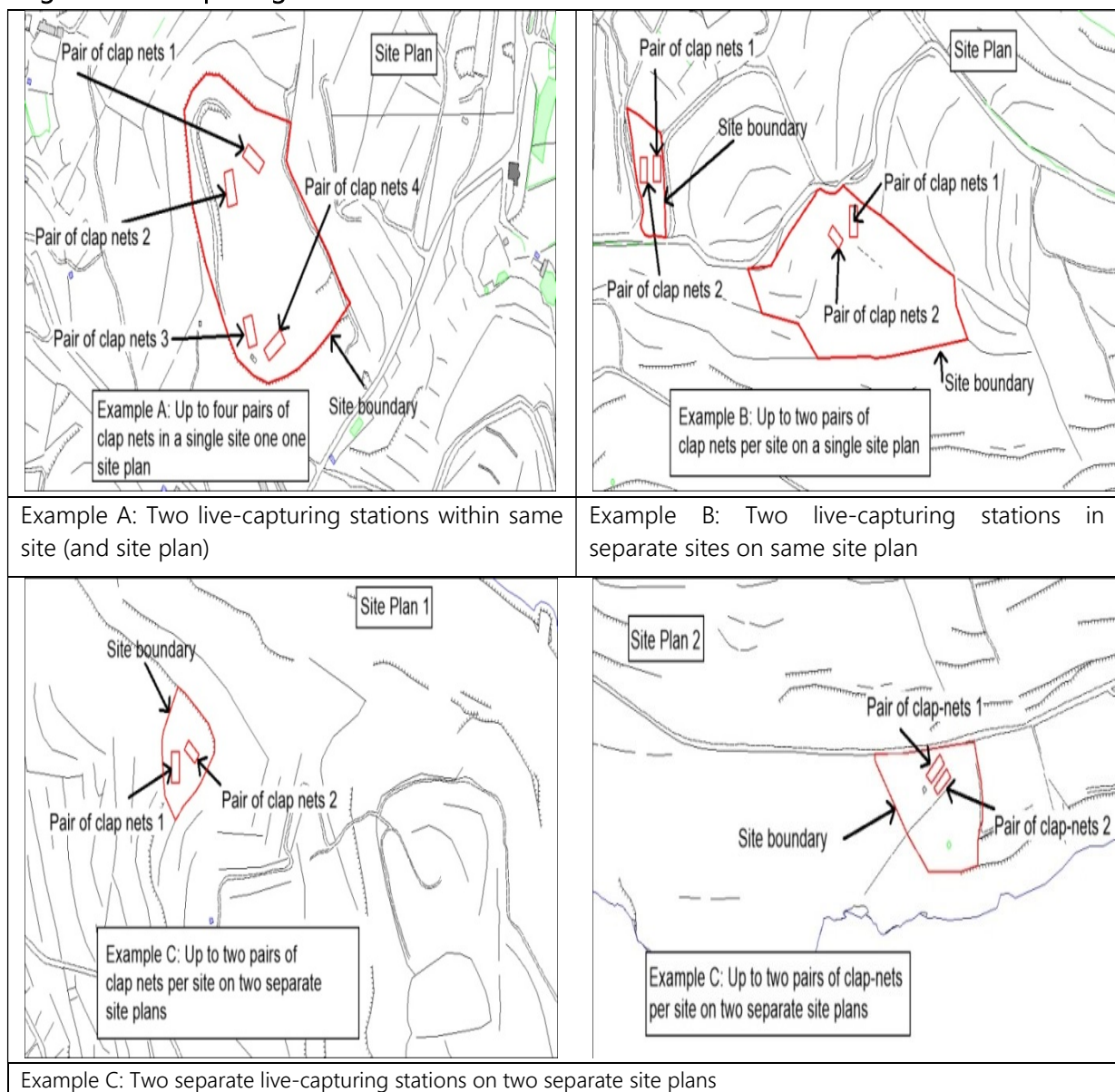
ordered by each applicant). Applicants were informed that these fees were refundable only if no derogation is applied.

- 5.4 Applications for new general live-capturing licences were not accepted after 2014 and therefore no further examinations for this category of licence were conducted during 2017.
- 5.5 A total of 3,715 individuals submitted applications for special finch live-capturing licence (2,720 in Malta and 995 in Gozo). Of these, 795 persons (655 in Malta and 140 in Gozo) also applied to obtain a special licence to capture Golden Plover and Song Thrush under the terms of a separate derogation.
- 5.6 Applications were screened against database of criminal records and all applicants were found to be eligible to submit their application. Therefore, the final number of special licences issued on 25th September stood at 3,715, of which 2,720 licences were issued to applicants residing in Malta and 995 to applicants residing in Gozo. The total number of special finch live-capturing licences in 2017 was *circa* 3% less than the number of special licences issued in 2016 (n=3,844).
- 5.7 The Autumn 2017 live-capturing licence (vide Annex II) set a number of conditions for the 2017 live-capturing season, as provided in the Framework Regulations (S.L. 549.93) and the Notice of Derogation (Legal Notice 294 of 2017). The Regulations also included *inter alia*, restrictions on the mesh size to be used (not less than 18mm × 18mm), and the requirement for the licensee to immediately place the species-specific single-use ring (white, green or metal depending on the species) on the tarsus of the finch, followed by reporting the catch by dialling the number indicated on the 2017 special licence.
- 5.8 At any one time, a licensed person could only make use of a maximum of twenty-one (21) specimens from the relevant species, including their hybrids, as live-decoys, with a ceiling of not more than seven live-decoys for any one species. All live-decoys had to be fitted with either a seamless closed ring of the appropriate size for the species (and hybrids thereof) or a single-use ring issued by the Wild Birds Regulation Unit. In addition to these conditions, licensed live-capturers were also required to abide with the provisions laid down in the Conservation of Wild Birds Regulations (S.L. 549.42).

- 5.9 Licensees were also required to abide by the time restrictions and respect the seasonal bag limit per licence of 10 birds. Licensed finch live-capturers were required to carry their 2017 special licence for live-capturing and the General multi-Licence card (with valid 2017 general live-capturing licence component) at all times, together with the relevant registered site plans as approved by the Wild Birds Regulation Unit.
- 5.10 The registration and screening procedure for site plans, which ensured compliance with the rigorous criteria established in legislation, was described in detail in Malta's report on the outcome of the 2014 finch live-capturing derogation and will not be re-stated in this report.
- 5.11 In 2017, a new web-based GIS platform was developed instead of the former offline system, which relied exclusively on existing hardware (tablet PCs). The new system was fully integrated with the core licensing and reporting database systems and allowed for rapid access to site registration and licensing information from any internet-enabled device, for the purposes of enforcement and verification. All digital geographic information and related metadata pertaining to the previous (2016) live-capturing derogations were transferred onto the web-based system. During application period, live-capturers were instructed not to submit any physical site plans with their special licence application form. Any requests to substitute registered sites submitted in 2016 with other registered sites had to be specified by the applicants during application period (Section E of the application form). Applicants opting to change from one registered site to another were requested to set a personal appointment with the Wild Birds Regulation Unit by not later than 29 September 2017 to ensure that any changes in registered site plans were reflected in the new web-based system. A total of 479 requests to swap registered sites were processed. An administrative fee of €10 was charged in respect of each request in accordance with Schedule X of the Conservation of Wild Birds Regulations.
- 5.12 Licensees were only eligible to practice live-capturing on a maximum of two live-capturing stations per person, which could be configured either as two live-capturing stations within the same site, with each live-capturing station having not more than two pairs of clap-nets from one hide (see Figure 1, Example A); or as two separate live-capturing stations on one site plan with each live-capturing station having not more than two pairs of clap-nets from one hide (see Figure 1, Example B); or as two different site plans, with each

site plan showing a single live-capturing station containing not more than two pairs of clap-nets from one hide (see Figure 1, Example C).

Figure 1: Live-capturing stations



5.13 The total number of clap-net pairs for live-capturing of finches in 2017 stood at 7,257, registered on 3,715 licensees (Table 3). This figure represents an overall decreasing trend when compared with the 2014–2016 finches live-capturing seasons: $n_{2014} = 11,370$ clap-net pairs, submitted by 4,171 applicants; $n_{2015} = 10,710$ clap-net pairs, submitted by 3,877 applicants; $n_{2016} = 10,310$ clap-net pairs, submitted by 3,844 applicants.

5.14 In 2017, a total of 5,266 registered clap-net pairs were located in Malta whereas 1,991 clap-net pairs were located in Gozo. Out of these two totals, 3,648 clap-net pairs in Malta and 1,610 clap-net pairs in Gozo were

exclusively used for live-capturing of finches. The other registered clap-net pairs (1,618 and 381 respectively) were used for both the Finches and Golden Plover and Song Thrush derogations.

Table 3 – Registered finch live-capturing stations in 2017

	<u>Clap-net pairs*</u>	<u>Licensees*</u>
Malta	5,266	2,720
Gozo	1,991	995
Total	7,257	3,715
* Data refers to licensees in possession of the Finches special licence and licensees in possession of both the Finches and Golden Plover/Song-Thrush special licences.		

Source: Wild Birds Regulation Unit, 2017

- 5.15 Following eligibility screening, all applications for the autumn 2017 Finches live-capturing special licence were considered valid. Consequently, a total of 3,715 special licences were issued, representing a decrease of 129 licensees when compared with the previous season ($n_{2016}=3,844$), a decrease of 162 licensees when compared with the 2015 season ($n_{2015}=3,877$) and a decrease of 456 individuals in comparison with the number of licences issued in 2014 ($n_{2014}=4,171$). 2,720 licences were issued to persons residing in Malta (*circa* 73%) and 995 licences were issued to persons residing in Gozo (*circa* 27%), as shown in Table 4.

Table 4 – Autumn 2017 Special Licence applications

Applications	Total	Malta	Gozo
Persons issued with a Finches special live-capturing licence only	2,920	2,065	855
Persons issued with a Finches special live-capturing licence <u>and</u> a Golden Plover / Song Thrush special live-capturing licence (under the terms of separate derogation)	795	655	140
Total	3,715	2,720	995
Source: Wild Birds Regulation Unit			

6. SINGLE-USE RINGS

- 6.1 The applicants were required to declare the quantity of single-use rings up to a maximum of ten (any combination of colours up to ten in total). For the finches special licence, the single-use rings (finch rings) were issued in three different sizes bearing the official code 'R16U', 'RU15' or 'WBRU14' on each ring. The finch rings were colour-coded according to the species (and size), as shown in Table 5 and Figure 2.

Table 5 – Special single-use rings

Ring colour	Species	Quantities supplied to licensees
White	Linnet, Chaffinch, Serin, Siskin and Goldfinch	27,631
Green	Greenfinch	5,022
Metal	Hawfinch	4,390
Total		37,043

Source: Wild Birds Regulation Unit, 2017

Figure 2: 2017 single-use rings for finches



- 6.2 The limit imposed on single-use rings corresponded with the maximum individual seasonal bag limit of ten finches. Finch live-capturers applied for a total of 37,043 rings. White rings comprised 74.6% of this total, followed by green rings (13.6%) and metal (11.8%).
- 6.3 Following closure of the 2017 finch live-capturing season, licensed live-capturers were legally required to return all unused finch rings within the period which was stipulated by the Wild Birds Regulation Unit, that is, from 15 January until 2 March 2018. The rings were only accepted on presentation of the identifying general licence card. By the deadline of 2 March, 3,467 finch live-capturers returned a total of 27,484 unused finch rings. The remaining balance of 447 unreturned rings, as shown in Table 6 below, was subject to a €5 fine per ring. Legal action was initiated against the only finch

live-capturer who failed to return a total of 10 rings or pay the corresponding fine. A further 30 rings were confiscated by enforcement officers during field enforcement operations.

Table 6 – returns of unused single-use finch rings

Number of finch rings distributed	37,043
Number of finches caught	9,072
Number of finch rings returned	27,484
Number of rings not returned and subject to €5 fine per ring	447
Number of rings confiscated during enforcement operations	30
Rings not returned by 2nd March	10

Source: Wild Birds Regulation Unit, 2018

7. REAL-TIME GAME REPORTING SYSTEM

- 7.1 According to the Conservation of Wild Birds (Framework for Allowing a Derogation Opening an Autumn Live-capturing Season for Finches) Regulations [S.L.549.93], licensed live-capturers were obliged to immediately report their catch by calling on number 77070006, as specified in the special licence.
- 7.2 The reporting system deployed a filtering / verification system which ensured that only registered mobile numbers pertaining to licensed individuals (as specified in their application form) were able to use the reporting system. A voice-over guided the caller to select the species, followed by the quantity caught. As soon as the call was registered, the system would send an automated text message to the caller as an acknowledgement of the species and quantity caught. This SMS was to be retained throughout the season for potential inspection by enforcement officers. The telephonic game reporting system also contained a number of messages that reminded callers of their legal obligations, including bag limits, permitted hours and so on. Should a live-capturer attempt to report birds caught over his allowed quota, he would be immediately prompted to release the birds caught, and the report would be lodged for enforcement purposes.
- 7.3 Throughout the duration of the derogation, the Wild Birds Regulation Unit had access to monitor individual and national quota uptake for both species in real time. The system also allowed the generation of various statistical

reports as well as reports on any individual live-capturer's data at any point in time. These reports, amongst other, stipulated the total number of birds reported caught per species during each day, cumulative totals, as well as the detailed information pertaining to precise time of each report, the registered mobile phone number pertaining to the licensee making such a report, uptake of any individual licensee's personal quota, personal data of any licensee and other information. Enforcement officers conducting patrols in the field were given access to this information.

7.4 All data were simultaneously and securely captured on two servers, with automatic back up every five minutes. A total of 12 telephone lines were available at any one time in case of simultaneous reports.

7.5 The system was programmed to automatically inform the callers that their individual seasonal bag limit of ten specimens was reached, at which point no further calls would be accepted from such numbers. These reports were closely monitored throughout the season, with a view to keeping track of various variables, including (i) the total number of birds per species caught per day, (ii) cumulative totals (seasonal bag limits), and (iii) individual seasonal bag limits per licence. The game reporting data is presented in Table 7 and Figure 3 below.

Table 7 – Finches caught as reported through the game reporting system

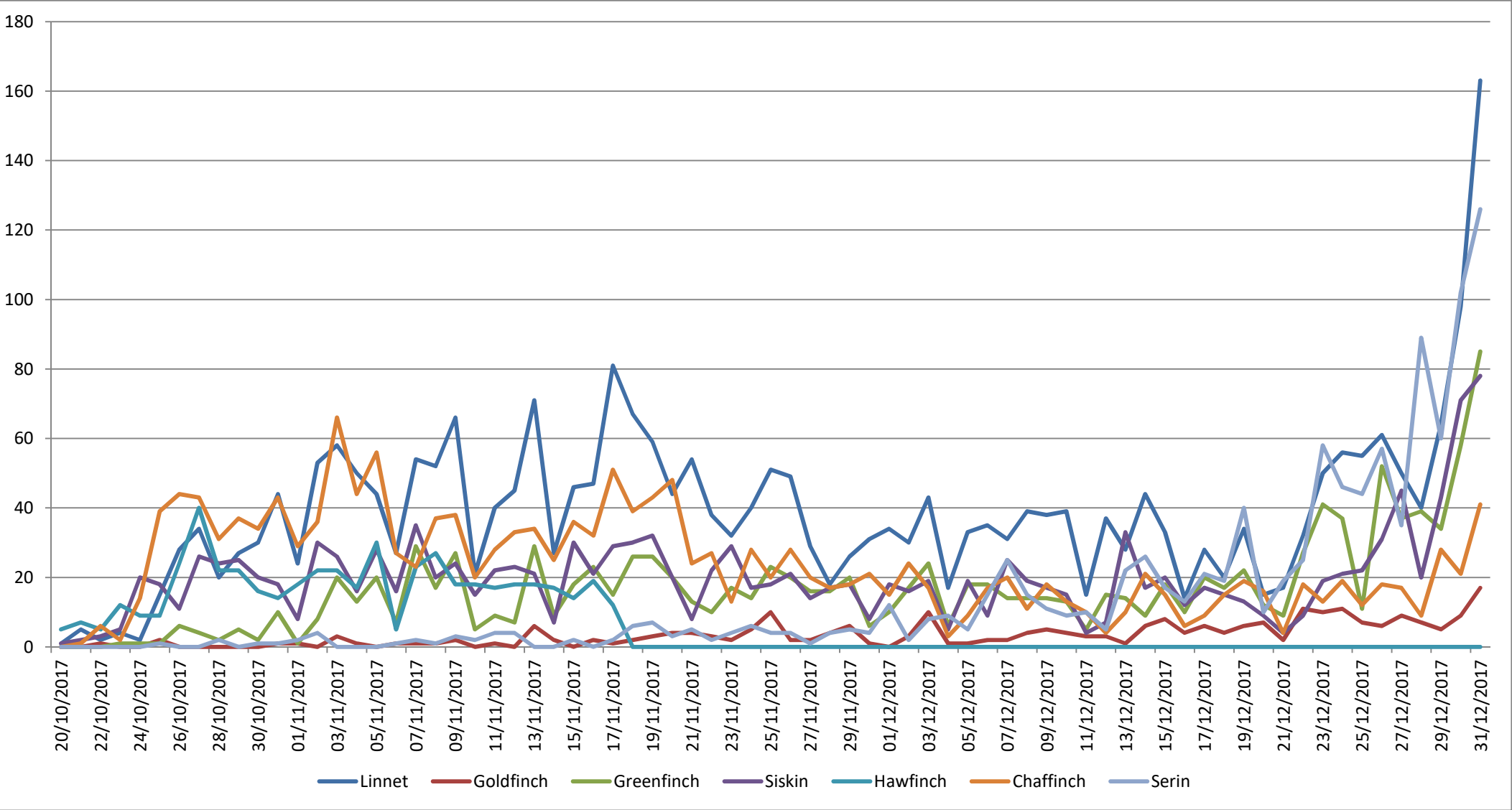
Date	Linnet	Goldfinch	Greenfinch	Siskin	Hawfinch	Chaffinch	Serin
20/10/2017	1	0	0	1	5	0	0
21/10/2017	5	0	0	2	7	1	0
22/10/2017	2	1	0	3	5	6	0
23/10/2017	4	0	1	5	12	2	0
24/10/2017	2	0	1	20	9	14	0
25/10/2017	15	2	1	18	9	39	1
26/10/2017	28	0	6	11	24	44	0
27/10/2017	34	0	4	26	40	43	0
28/10/2017	20	0	2	24	22	31	2
29/10/2017	27	0	5	25	22	37	0
30/10/2017	30	0	2	20	16	34	1
31/10/2017	44	1	10	18	14	43	1
01/11/2017	24	1	1	8	18	29	2
02/11/2017	53	0	8	30	22	36	4
03/11/2017	58	3	20	26	22	66	0
04/11/2017	50	1	13	16	17	44	0
05/11/2017	44	0	20	28	30	56	0
06/11/2017	27	1	7	16	5	27	1

Date	Linnet	Goldfinch	Greenfinch	Siskin	Hawfinch	Chaffinch	Serin
07/11/2017	54	1	29	35	23	23	2
08/11/2017	52	1	17	20	27	37	1
09/11/2017	66	2	27	24	18	38	3
10/11/2017	21	0	5	15	18	20	2
11/11/2017	40	1	9	22	17	28	4
12/11/2017	45	0	7	23	18	33	4
13/11/2017	71	6	29	21	18	34	0
14/11/2017	27	2	9	7	17	25	0
15/11/2017	46	0	18	30	14	36	2
16/11/2017	47	2	23	21	19	32	0
17/11/2017	81	1	15	29	12	51	2
18/11/2017	67	2	26	30	0	39	6
19/11/2017	59	3	26	32	0	43	7
20/11/2017	44	4	20	20	0	48	3
21/11/2017	54	4	13	8	0	24	5
22/11/2017	38	3	10	22	0	27	2
23/11/2017	32	2	17	29	0	13	4
24/11/2017	40	5	14	17	0	28	6
25/11/2017	51	10	23	18	0	20	4
26/11/2017	49	2	20	21	0	28	4
27/11/2017	29	2	16	14	0	20	1
28/11/2017	18	4	16	17	0	17	4
29/11/2017	26	6	20	18	0	18	5
30/11/2017	31	1	6	8	0	21	4
01/12/2017	34	0	10	18	0	15	12
02/12/2017	30	3	17	16	0	24	2
03/12/2017	43	10	24	19	0	17	8
04/12/2017	17	1	6	5	0	3	9
05/12/2017	33	1	18	19	0	9	5
06/12/2017	35	2	18	9	0	17	15
07/12/2017	31	2	14	25	0	20	25
08/12/2017	39	4	14	19	0	11	15
09/12/2017	38	5	14	17	0	18	11
10/12/2017	39	4	13	15	0	13	9
11/12/2017	15	3	5	4	0	10	10
12/12/2017	37	3	15	7	0	4	5
13/12/2017	28	1	14	33	0	10	22
14/12/2017	44	6	9	17	0	21	26
15/12/2017	33	8	18	20	0	15	17
16/12/2017	14	4	10	12	0	6	13
17/12/2017	28	6	20	17	0	9	21
18/12/2017	20	4	17	15	0	15	19
19/12/2017	34	6	22	13	0	19	40
20/12/2017	15	7	12	9	0	16	10
21/12/2017	17	2	9	4	0	4	19

Date	Linnet	Goldfinch	Greenfinch	Siskin	Hawfinch	Chaffinch	Serin
22/12/2017	32	11	27	9	0	18	25
23/12/2017	50	10	41	19	0	13	58
24/12/2017	56	11	37	21	0	19	46
25/12/2017	55	7	11	22	0	12	44
26/12/2017	61	6	52	31	0	18	57
27/12/2017	50	9	37	45	0	17	35
28/12/2017	40	7	39	20	0	9	89
29/12/2017	64	5	34	43	0	28	60
30/12/2017	98	9	58	71	0	21	102
31/12/2017	163	17	85	78	0	41	126
Totals	2,849	248	1,236	1,470	500	1,727	1,042

Source: Wild Birds Regulation Unit, 2018

Figure 3 – Distribution of catches during the season



Source: Wild Birds Regulation Unit, 2018

7.6 During the 2017 live-capturing derogation the seasonal bag limit of 500 birds for the Hawfinch species was reached on the 17th of November. Live-capturers were immediately notified of the closure of the season for Hawfinch via text message (SMS) and official Notice in Government Gazette was published accordingly.³⁴

7.7 Over the period of the derogation, the individual seasonal bag limit of ten finches was reached by 244 licence holders, whilst 1,767 licensees (48% of all licensees) reported a catch ranging from one bird to the maximum bag limit of ten, as shown in Table 8.

Table 8 – Comparative analysis of reported catches

Finches caught	Number of live-capturers declaring catch	Total finches reported caught
0	1,948	0
1	247	247
2	284	568
3	180	540
4	184	736
5	114	570
6	117	702
7	90	630
8	124	992
9	183	1,647
10	244	2,440
Total caught		9,072

Source: Wild Birds Regulation Unit, 2018

³⁴ Government Notice 1290 published in Gazette issue No 19903 on 20 November 2017: <https://gov.mt/en/Government/Government%20Gazette/Government%20Notices/Pages/2017/11/Gov-Notices-2011.aspx>

8. FINCHES MIGRATION STUDY

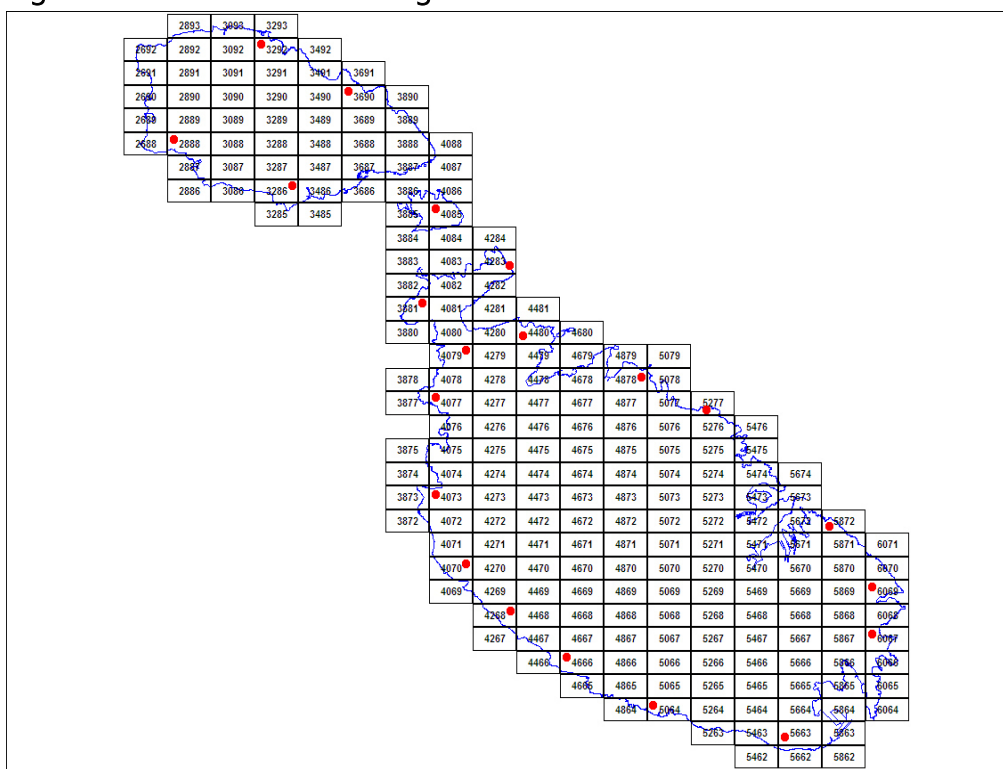
- 8.1 An independent scientific study was carried out between 20 October and 31 December 2017, inclusive of both dates, in order to obtain an estimate of migratory influxes of the seven finch species during the derogation period. The study, carried out by Ecoserv, was commissioned by the Wild Birds Regulation Unit, with its overall objective being to assess the influx or passage of the seven finch species during the autumn/winter 2017 migration period.
- 8.2 The study was expected to result in the following deliverables:
- Daily datasheets with raw counts for each of the seven finch species; and
 - A monitoring report for autumn/winter 2017 finch migration season which includes:
 - List of monitoring stations which recorded high/low counts;
 - Dates which showed high/low peaks in the migration of each of the seven finch species;
 - A daily estimate of the influx of each of the seven finch species for the whole of the Maltese Islands;
 - The estimated total influx for these species for the whole of the study period, subject to scientifically justified assumptions;
 - A comparison of the influxes recorded in 2017 with the influxes recorded as a result of the 2014–2016 studies;
 - A comparative analysis of the results obtained with the bag data extracted from the 2017 telephonic game reporting system.
- 8.3 The geographical scope of the study extended across the three inhabited islands of the Maltese archipelago (Malta, Gozo and Comino), with data gathered during an 11-week period from 20 October until 31 December 2017. Given that the study was mainly intended to quantify the influx of migrating finches, the count stations were located at strategic locations along the coast. A full copy of the survey report is attached in Annex III, with key conclusions summarised below.
- 8.4 During the survey, two individuals - a specially trained field assistant capable of identifying finch species and an observer who was responsible for data

recording in the field - were stationed at each of the total of 21 sites (count stations). During the survey, counts of individuals of the seven species were made at each of six different sites on each day during the monitoring period.

8.5 Each group of six sites was surveyed once every four days, such that a total of 21 sites were surveyed in total over each period of four days. The study site at Comino was included in the six sites surveyed on any one day, such that this site was surveyed on a daily basis; when weather conditions precluded surveys at the Comino site due to unavailability of sea transport services, these were undertaken in an alternative site (in Qala) instead. Counts obtained across this network of observation stations over the survey period are given in the following table.

8.6 Since the survey was mainly aimed at quantifying the influx of migrating individuals, field sites were sited at strategic locations behind the coast. The location of the sites is shown in Figure 4 below.

Figure 4 – Location of monitoring sites



Source: Ecoserv, 2018

8.7 For each species, the number of individuals observed flying within each study site was recorded, while the count area was estimated as the area

within the observer's field of view when observing horizontally (c. 250m on each side of the observer) and vertically upwards (as far as the birds were detected by sight). To aid the observers detect the birds, field personnel used a pair of binoculars (magnification: 8 x 21). The different species were identified on the basis of their flight pattern and call. When the field personnel had doubt as to the specific identity of a species, a '?' was placed next to the record on the field data sheet to indicate the uncertainty. Afterwards, during data analysis (see below), comparison was made of records marked with a '?' from a particular site with records from other sites for the same day as corroboration procedure. Uncertain records were allotted to the species which the field personnel determined as most probable with respect to species identity and which showed agreement with appreciable records from other sites on the same day for that species.

- 8.8 Monitoring for finches was carried out between 09:00 and 14:00 during the first eleven days of the study (i.e. up to the date when the daylight saving hour was removed) and between 08:00 and 13:00 during the rest of the study period. The count data collected for the pre-defined area and count period at each study site was used to establish the mean number of birds recorded for each day of the survey.
- 8.9 At each study site, the observers also recorded the prevalent weather conditions, namely wind direction and strength, and degree of cloud cover.
- 8.10 Using the recorded raw data for each of the seven bird species, estimates were made of the mean daily count and total count for the study period (20 October to 31 December 2017). Values of standard deviation for the respective mean daily counts were also estimated; standard deviation is a measure of variability among counts recorded from the different sites, that is, a low standard deviation implies that very similar counts were recorded at all six sites surveyed during a particular day, whereas dissimilar values would lead to a high standard deviation. Standard deviation is influenced by sample size (i.e. number of study sites); it tends to increase with a decreased sample size.
- 8.11 An estimate of total influx of the respective bird species was made using the daily counts. Extrapolations were then made to obtain the total number of individuals of each species that migrated over the Maltese Islands on a particular date. However, such an estimate must be treated with utmost

caution, given that: (a) migration of finches is not necessarily restricted to that time of the year covered by the present study; (b) the relatively small number of sites used; (c) the counts were not made daily at each site; and (d) bird counts were made while the live-capturing season for finches was open, hence individuals may have been caught before the field personnel could record them. Being small birds, finches are easy to miss or present difficulty to identify if they pass beyond a certain distance from the observer, and especially if they do not call while in flight. Furthermore, passage of birds at different localities is extremely variable, with potential large differences in birds passing at two different localities, even if these are separated only by a very small distance.

8.12 Another notable limiting factor was that the field survey was stopped in the early afternoon and did not start again before the following morning, hence potentially missing birds that arrive during that time of the day not covered by the present survey, as these would not have been recorded by the field observers. For example, most of the finch species are known to also migrate between dusk and dawn; hence individuals migrating during this time would not be detected during the survey. One should also note that finch migration extends beyond the period which was surveyed, given that autumn/winter migration starts from mid-September onwards and trails off by the end of January. Such finches would not have been included in the present survey.

8.13 Since the coastal length surveyed at each site during the present survey is approximately 0.5 km, the mean daily count represents the mean influx of the respective species per 0.5 km coastline. The estimated daily influx was obtained by extrapolating the mean daily values obtained (per 0.5 km) to the total coastline length for the Maltese Islands, which have a perimeter of 271.22 km (Mallia et al, 2002)³⁵; that is the estimated daily influx equals the mean daily count multiplied by an extrapolation factor of 271.22/0.5. The values of estimated daily influx were then summed to obtain an estimate of the total influx of the seven bird species.

8.14 Raw daily counts for **Linnet** recorded from the 21 sites during the present study varied between 0 and a maximum of 17, while the mean daily counts ranged between 0 and 8.17 (Table 9). During the present (2017) autumn migration, relatively high counts for this species were recorded on some

³⁵ Note, however, that this estimate includes the perimeter of minor islets and rocks.

days between 25th October and 22nd November 2017. The total counts, i.e. the total number of Linnet, recorded from a given grid location (= study site) during the whole study period (73 days), varied appreciably between the different sites: at the lower end, no individuals were recorded from the sites at grid locations 6067, while at the higher end, 67 Linnet individuals were recorded from the site at grid location 4077 . Count values for Linnet from the present (autumn 2017) survey are similar to those made in previous years. A pattern of higher count values made during the period late October to mid-November is noted for the four years 2014 – 2017 (Figure 5).

- 8.15 An estimate of total influx of Linnet over the Maltese Islands is given below. Based on the mean daily counts, extrapolation translates to an estimated daily influx ranging between 0 and 4,430 individuals, with a total influx over the survey period (20 October – 31 December; i.e. 73 days) of 48,996 individuals, i.e. some 671 birds per day.

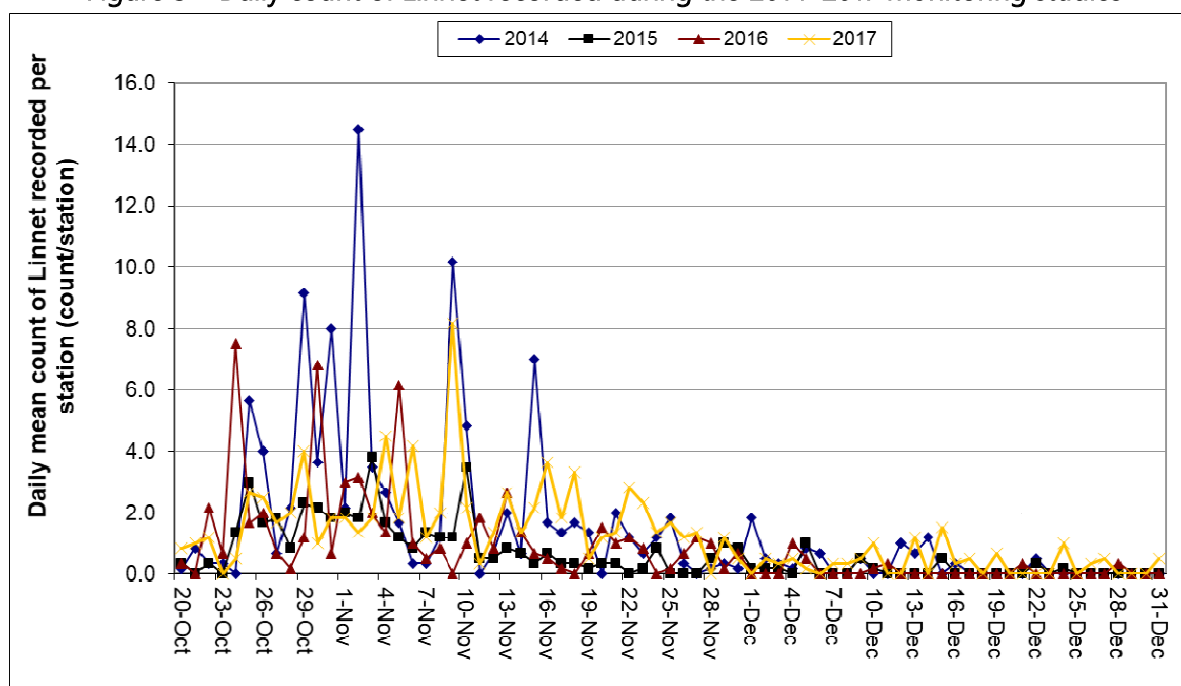
Table 9 - Values of mean ($\pm$ SD) daily count and daily total count recorded from the six study sites, together with total influx of migratory Linnet

Date	Mean daily count	Standard deviation	Total daily count	Estimated daily influx
20-Oct-17	0.83	± 1.33	5	452
21-Oct-17	1.00	± 1.55	6	542
22-Oct-17	1.17	± 2.04	7	633
23-Oct-17	0.00	± 0.00	0	0
24-Oct-17	0.50	± 0.84	3	271
25-Oct-17	2.67	± 4.18	16	1447
26-Oct-17	2.50	± 3.99	15	1356
27-Oct-17	1.67	± 3.20	10	904
28-Oct-17	2.00	± 3.16	12	1085
29-Oct-17	4.00	± 5.62	24	2170
30-Oct-17	1.00	± 1.26	6	542
31-Oct-17	1.83	± 1.47	11	994
1-Nov-17	1.83	± 2.99	11	994
2-Nov-17	1.33	± 2.42	8	723
3-Nov-17	1.83	± 3.25	11	994
4-Nov-17	4.50	± 3.67	27	2441
5-Nov-17	1.83	± 3.60	11	994
6-Nov-17	4.17	± 6.62	25	2260
7-Nov-17	1.17	± 1.60	7	633
8-Nov-17	2.00	± 4.00	12	1085
9-Nov-17	8.17	± 6.24	49	4430
10-Nov-17	2.17	± 3.92	13	1175
11-Nov-17	0.33	± 0.82	2	181
12-Nov-17	1.33	± 2.80	8	723
13-Nov-17	2.67	± 5.61	16	1447
14-Nov-17	1.33	± 1.97	8	723
15-Nov-17	2.17	± 3.49	13	1175
16-Nov-17	3.67	± 3.61	22	1989

Date	Mean daily count	Standard deviation	Total daily count	Estimated daily influx
17-Nov-17	1.83	± 2.40	11	994
18-Nov-17	3.33	± 6.41	20	1808
19-Nov-17	0.50	± 0.84	3	271
20-Nov-17	1.17	± 1.94	7	633
21-Nov-17	1.33	± 1.51	8	723
22-Nov-17	2.83	± 2.14	17	1537
23-Nov-17	2.33	± 4.32	14	1266
24-Nov-17	1.33	± 3.27	8	723
25-Nov-17	1.67	± 1.86	10	904
26-Nov-17	1.17	± 2.04	7	633
27-Nov-17	1.33	± 2.80	8	723
28-Nov-17	0.00	± 0.00	0	0
29-Nov-17	1.17	± 2.86	7	633
30-Nov-17	0.50	± 1.22	3	271
1-Dec-17	0.00	± 0.00	0	0
2-Dec-17	0.50	± 1.22	3	271
3-Dec-17	0.33	± 0.82	2	181
4-Dec-17	0.50	± 1.22	3	271
5-Dec-17	0.17	± 0.41	1	90
6-Dec-17	0.00	± 0.00	0	0
7-Dec-17	0.33	± 0.82	2	181
8-Dec-17	0.33	± 0.82	2	181
9-Dec-17	0.50	± 1.22	3	271
10-Dec-17	1.00	± 1.55	6	542
11-Dec-17	0.00	± 0.00	0	0
12-Dec-17	0.00	± 0.00	0	0
13-Dec-17	1.17	± 2.86	7	633
14-Dec-17	0.00	± 0.00	0	0
15-Dec-17	1.50	± 1.97	9	814
16-Dec-17	0.33	± 0.82	2	181
17-Dec-17	0.50	± 1.22	3	271
18-Dec-17	0.00	± 0.00	0	0
19-Dec-17	0.67	± 1.21	4	362
20-Dec-17	0.00	± 0.00	0	0
21-Dec-17	0.00	± 0.00	0	0
22-Dec-17	0.00	± 0.00	0	0
23-Dec-17	0.00	± 0.00	0	0
24-Dec-17	1.00	± 2.45	6	542
25-Dec-17	0.00	± 0.00	0	0
26-Dec-17	0.33	± 0.82	2	181
27-Dec-17	0.50	± 1.22	3	271
28-Dec-17	0.00	± 0.00	0	0
29-Dec-17	0.00	± 0.00	0	0
30-Dec-17	0.00	± 0.00	0	0
31-Dec-17	0.50	± 1.22	3	271
Total Count / Estimated Influx			542	48,996

Source: Ecoserv, 2018

Figure 5 – Daily count of Linnet recorded during the 2014–2017 monitoring studies



Source: Ecoserv, 2018

8.16 Raw daily counts for **Common Chaffinch** recorded from the 21 sites during the present study varied between 0 and a maximum of 17, while the mean daily counts ranged between 0 and 6.0 (Table 10). Relatively high counts for this species were recorded on some days between 25th October and 18th November (Figure 6). The total counts, i.e. the total number of Chaffinch, recorded from a given grid location (= study site) during the whole study period (73 days), varied appreciably between the different sites: at the lower end, no individuals were recorded throughout the survey period from each of the sites at grid locations 5064 and 3881, while at the higher end, 72 Chaffinch individuals were recorded from the site at grid location 5064 and 3881, while at the higher end 72 Chaffinch individuals were recorded from the site at grid location 4268.

8.17 An estimate of total **influx** of Chaffinch over the Maltese Islands is given in Table 10 below. Based on the mean daily counts, extrapolation translates to an estimated daily influx ranging between 0 and 3,255 individuals, with a total influx over the survey period (20 October – 31 December; i.e. 73 days) of 49,451 individuals, that is some 677 birds per day.

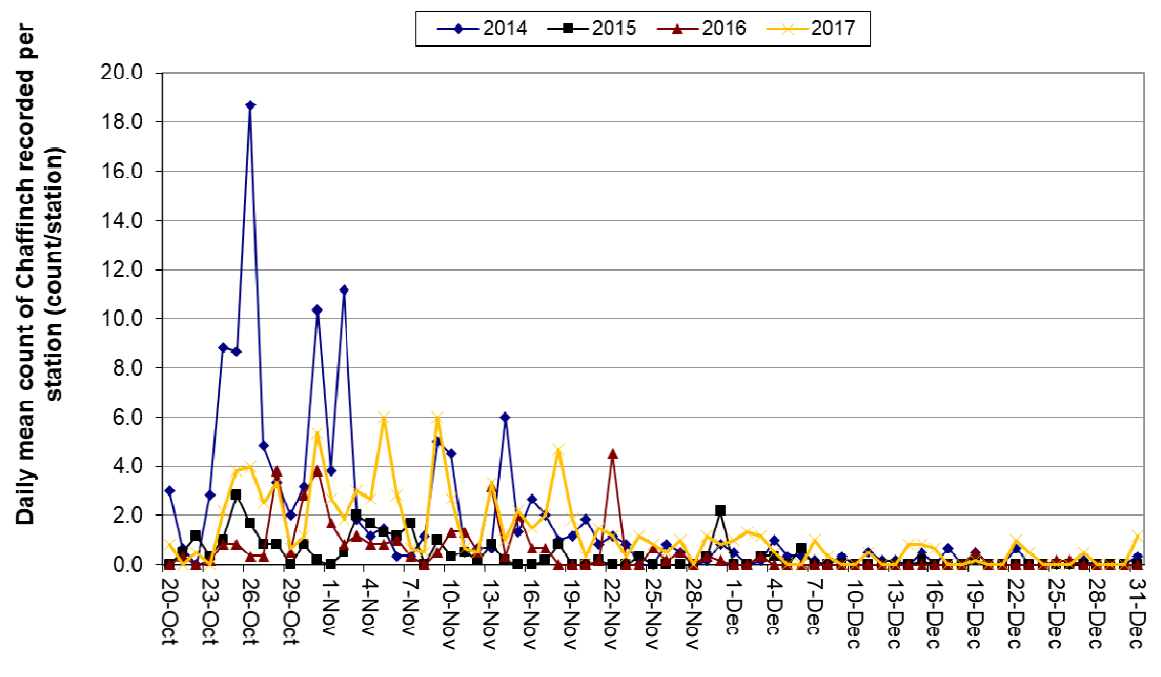
Table 10 - Values of mean ($\pm$ SD) daily count and daily total count recorded from the six study sites, together with total influx of migratory Common Chaffinch

Date	Mean daily count	Standard deviation	Total daily count	Estimated daily influx
20-Oct-17	0.83	± 1.33	5	452
21-Oct-17	0.00	± 0.00	0	0
22-Oct-17	0.50	± 1.22	3	271
23-Oct-17	0.00	± 0.00	0	0
24-Oct-17	2.17	± 2.14	13	1175
25-Oct-17	3.83	± 2.14	23	2079
26-Oct-17	4.00	± 2.76	24	2170
27-Oct-17	2.50	± 2.43	15	1356
28-Oct-17	3.33	± 2.94	20	1808
29-Oct-17	0.67	± 1.63	4	362
30-Oct-17	1.17	± 1.94	7	633
31-Oct-17	5.33	± 6.50	32	2893
1-Nov-17	2.67	± 3.08	16	1447
2-Nov-17	1.83	± 2.40	11	994
3-Nov-17	3.00	± 3.10	18	1627
4-Nov-17	2.67	± 3.20	16	1447
5-Nov-17	6.00	± 2.37	36	3255
6-Nov-17	2.83	± 6.46	17	1537
7-Nov-17	0.67	± 1.63	4	362
8-Nov-17	0.50	± 1.22	3	271
9-Nov-17	6.00	± 6.69	36	3255
10-Nov-17	2.67	± 2.66	16	1447
11-Nov-17	0.67	± 1.03	4	362
12-Nov-17	0.50	± 1.22	3	271
13-Nov-17	3.33	± 4.72	20	1808
14-Nov-17	1.00	± 2.45	6	542
15-Nov-17	2.17	± 3.06	13	1175
16-Nov-17	1.50	± 1.97	9	814
17-Nov-17	2.00	± 2.28	12	1085
18-Nov-17	4.67	± 6.31	28	2531
19-Nov-17	1.83	± 2.56	11	994
20-Nov-17	0.33	± 0.52	2	181
21-Nov-17	1.50	± 1.87	9	814
22-Nov-17	1.17	± 2.86	7	633
23-Nov-17	0.33	± 0.82	2	181
24-Nov-17	1.17	± 1.83	7	633
25-Nov-17	0.83	± 2.04	5	452
26-Nov-17	0.50	± 1.22	3	271
27-Nov-17	1.00	± 2.00	6	542
28-Nov-17	0.00	± 0.00	0	0
29-Nov-17	1.17	± 1.94	7	633
30-Nov-17	0.83	± 2.04	5	452
1-Dec-17	1.00	± 1.67	6	542
2-Dec-17	1.33	± 2.16	8	723
3-Dec-17	1.17	± 2.04	7	633
4-Dec-17	0.50	± 1.22	3	271
5-Dec-17	0.00	± 0.00	0	0
6-Dec-17	0.00	± 0.00	0	0
7-Dec-17	1.00	± 1.55	6	542
8-Dec-17	0.33	± 0.82	2	181

Date	Mean daily count	Standard deviation	Total daily count	Estimated daily influx
9-Dec-17	0.00	± 0.00	0	0
10-Dec-17	0.00	± 0.00	0	0
11-Dec-17	0.50	± 0.84	3	271
12-Dec-17	0.00	± 0.00	0	0
13-Dec-17	0.00	± 0.00	0	0
14-Dec-17	0.83	± 2.04	5	452
15-Dec-17	0.83	± 2.04	5	452
16-Dec-17	0.67	± 1.63	4	362
17-Dec-17	0.00	± 0.00	0	0
18-Dec-17	0.00	± 0.00	0	0
19-Dec-17	0.17	± 0.41	1	90
20-Dec-17	0.00	± 0.00	0	0
21-Dec-17	0.00	± 0.00	0	0
22-Dec-17	1.00	± 1.67	6	542
23-Dec-17	0.50	± 1.22	3	271
24-Dec-17	0.00	± 0.00	0	0
25-Dec-17	0.00	± 0.00	0	0
26-Dec-17	0.00	± 0.00	0	0
27-Dec-17	0.50	± 1.22	3	271
28-Dec-17	0.00	± 0.00	0	0
29-Dec-17	0.00	± 0.00	0	0
30-Dec-17	0.00	± 0.00	0	0
31-Dec-17	1.17	± 2.04	7	633
Total Count / Estimated Influx			547	49,451

Source: Ecoserv, 2018

Figure 6 – Daily count of Chaffinch recorded during the 2014–2017 monitoring studies



Source: Ecoserv, 2018

- 8.18 Raw daily counts for **Greenfinch** recorded from the 21 sites during the present study varied between 0 and a maximum of 19, while the mean daily counts ranged between 0 and 3.5. Low counts for this species were recorded throughout most of the survey period, with comparatively higher counts recorded on 9th, 16th and 23rd November. The total counts, i.e. the total number of Greenfinch, recorded from a given grid location (= study site) during the whole study period (73 days), varied appreciably between the different sites: at the lower end, no individuals were recorded throughout the survey period from site at grid location 5064, while at the higher end 39 Greenfinch individuals were recorded from the site at grid location 4073.
- 8.19 Values of mean daily counts and total counts of Greenfinch recorded during the period 20 October to 31 December 2017 from the present survey as well as values of standard deviation associated with the mean daily counts are provided in tables below. Count values for Greenfinch from the present (autumn 2017) survey are similar to those recorded from the autumn 2014 survey and higher than those recorded in the autumn 2015 and 2016 surveys. Individuals of this species were recorded throughout the survey period in all four years, albeit sporadically and in low counts during 2015 and 2016 (Figure 7).
- 8.20 The estimated total influx of Greenfinch over the Maltese Islands is given in Table 11. Based on the mean daily counts, extrapolation translates to an estimated daily influx ranging between 0 and 1,899 individuals, with a total influx over the survey period (20 October – 31 December; that is 73 days) of 18,079 individuals, that is, some 248 birds per day.

Table 11 - Values of mean ($\pm$ SD) daily count and daily total count recorded from the six study sites, together with total influx of migratory Greenfinch

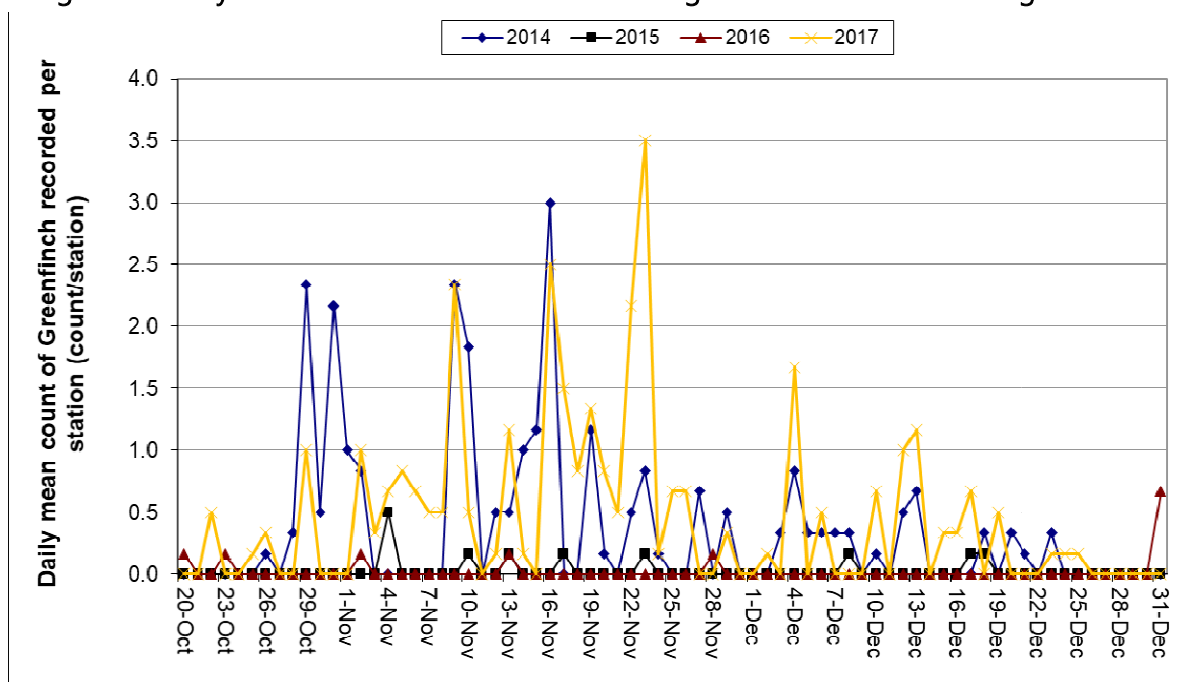
Date	Mean daily count	Standard deviation	Total daily count	Estimated daily influx
20-Oct-17	0.00	$\pm$ 0.00	0	0
21-Oct-17	0.00	$\pm$ 0.00	0	0
22-Oct-17	0.50	$\pm$ 1.22	3	271
23-Oct-17	0.00	$\pm$ 0.00	0	0
24-Oct-17	0.00	$\pm$ 0.00	0	0
25-Oct-17	0.17	$\pm$ 0.41	1	90
26-Oct-17	0.33	$\pm$ 0.82	2	181
27-Oct-17	0.00	$\pm$ 0.00	0	0
28-Oct-17	0.00	$\pm$ 0.00	0	0
29-Oct-17	1.00	$\pm$ 2.45	6	542
30-Oct-17	0.00	$\pm$ 0.00	0	0
31-Oct-17	0.00	$\pm$ 0.00	0	0

Date	Mean daily count	Standard deviation	Total daily count	Estimated daily influx
1-Nov-17	0.00	± 0.00	0	0
2-Nov-17	1.00	± 2.00	6	542
3-Nov-17	0.33	± 0.82	2	181
4-Nov-17	0.67	± 1.03	4	362
5-Nov-17	0.83	± 0.98	5	452
6-Nov-17	0.67	± 1.21	4	362
7-Nov-17	0.50	± 0.84	3	271
8-Nov-17	0.50	± 1.22	3	271
9-Nov-17	2.33	± 3.14	14	1266
10-Nov-17	0.50	± 1.22	3	271
11-Nov-17	0.00	± 0.00	0	0
12-Nov-17	0.17	± 0.41	1	90
13-Nov-17	1.17	± 1.83	7	633
14-Nov-17	0.17	± 0.41	1	90
15-Nov-17	0.00	± 0.00	0	0
16-Nov-17	2.50	± 4.18	15	1356
17-Nov-17	1.50	± 2.51	9	814
18-Nov-17	0.83	± 1.33	5	452
19-Nov-17	1.33	± 1.51	8	723
20-Nov-17	0.83	± 1.33	5	452
21-Nov-17	0.50	± 0.84	3	271
22-Nov-17	2.17	± 1.94	13	1175
23-Nov-17	3.50	± 7.64	21	1899
24-Nov-17	0.17	± 0.41	1	90
25-Nov-17	0.67	± 1.03	4	362
26-Nov-17	0.67	± 1.21	4	362
27-Nov-17	0.00	± 0.00	0	0
28-Nov-17	0.00	± 0.00	0	0
29-Nov-17	0.33	± 0.82	2	181
30-Nov-17	0.00	± 0.00	0	0
1-Dec-17	0.00	± 0.00	0	0
2-Dec-17	0.17	± 0.41	1	90
3-Dec-17	0.00	± 0.00	0	0
4-Dec-17	1.67	± 2.25	10	904
5-Dec-17	0.00	± 0.00	0	0
6-Dec-17	0.50	± 1.22	3	271
7-Dec-17	0.00	± 0.00	0	0
8-Dec-17	0.00	± 0.00	0	0
9-Dec-17	0.00	± 0.00	0	0
10-Dec-17	0.67	± 1.63	4	362
11-Dec-17	0.00	± 0.00	0	0
12-Dec-17	1.00	± 2.00	6	542
13-Dec-17	1.17	± 2.86	7	633
14-Dec-17	0.00	± 0.00	0	0
15-Dec-17	0.33	± 0.82	2	181
16-Dec-17	0.33	± 0.82	2	181
17-Dec-17	0.67	± 1.21	4	362
18-Dec-17	0.00	± 0.00	0	0
19-Dec-17	0.50	± 0.84	3	271
20-Dec-17	0.00	± 0.00	0	0
21-Dec-17	0.00	± 0.00	0	0
22-Dec-17	0.00	± 0.00	0	0
23-Dec-17	0.17	± 0.41	1	90

Date	Mean daily count	Standard deviation	Total daily count	Estimated daily influx
24-Dec-17	0.17	± 0.41	1	90
25-Dec-17	0.17	± 0.41	1	90
26-Dec-17	0.00	± 0.00	0	0
27-Dec-17	0.00	± 0.00	0	0
28-Dec-17	0.00	± 0.00	0	0
29-Dec-17	0.00	± 0.00	0	0
30-Dec-17	0.00	± 0.00	0	0
31-Dec-17	0.00	± 0.00	0	0
Total Count / Estimated Influx			200	18,079

Source: Ecoserv, 2018

Figure 7 – Daily count of Greenfinch recorded during the 2014–2017 monitoring studies



Source: Ecoserv, 2018

8.21 Raw daily counts for **Siskin** recorded from the 21 sites during the present study varied between 0 and a maximum of 17, while the mean daily counts ranged between 0 and 3.83 (Table 12). Low counts for this species were recorded throughout most of the survey period, with comparatively higher counts recorded on 24th and 31st October and 5th December. The total counts, i.e. the total number of Siskin, recorded from a given grid location (= study site) during the whole study period (73 days), varied appreciably between the different sites: at the lower end, no individuals were recorded throughout the survey period from sites at grid locations 6069 and 5872, while at the higher end 61 Siskin individuals were recorded from the site at grid location 4085.

8.22 The estimated total influx of Siskin over the Maltese Islands is given in Table 12. Based on the mean daily counts (Figure 8), extrapolation translates to an estimated daily influx ranging between 0 and 2,079 individuals, with a total influx over the survey period (20 October – 31 December; i.e. 73 days) of 31,637 individuals, that is some 433 birds per day.

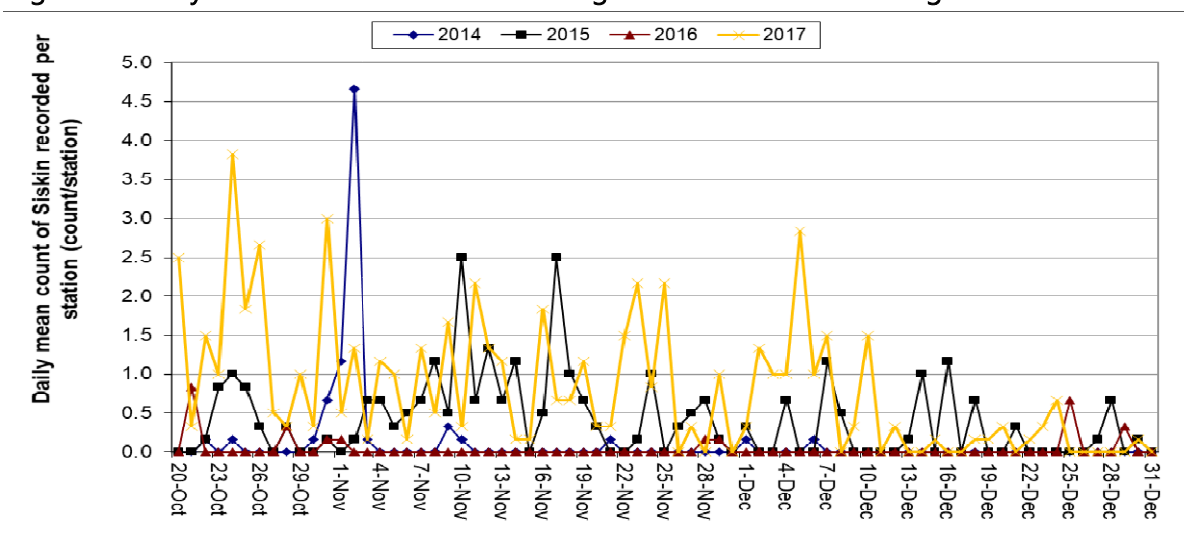
Table 12 - Values of mean ($\pm$ SD) daily count and daily total count recorded from the six study sites, together with total influx of migratory Siskin

Date	Mean daily count	Standard deviation	Total daily count	Estimated daily influx
20-Oct-17	2.50	± 6.12	15	1356
21-Oct-17	0.33	± 0.82	2	181
22-Oct-17	1.50	± 1.76	9	814
23-Oct-17	1.00	± 1.26	6	542
24-Oct-17	3.83	± 6.74	23	2079
25-Oct-17	1.83	± 4.49	11	994
26-Oct-17	2.67	± 3.01	16	1447
27-Oct-17	0.50	± 0.84	3	271
28-Oct-17	0.33	± 0.82	2	181
29-Oct-17	1.00	± 1.26	6	542
30-Oct-17	0.33	± 0.82	2	181
31-Oct-17	3.00	± 5.06	18	1627
1-Nov-17	0.50	± 1.22	3	271
2-Nov-17	1.33	± 1.51	8	723
3-Nov-17	0.17	± 0.41	1	90
4-Nov-17	1.17	± 1.83	7	633
5-Nov-17	1.00	± 1.10	6	542
6-Nov-17	0.17	± 0.41	1	90
7-Nov-17	1.33	± 1.63	8	723
8-Nov-17	0.50	± 1.22	3	271
9-Nov-17	1.67	± 2.25	10	904
10-Nov-17	0.33	± 0.82	2	181
11-Nov-17	2.17	± 3.54	13	1175
12-Nov-17	1.33	± 2.16	8	723
13-Nov-17	1.17	± 2.04	7	633
14-Nov-17	0.17	± 0.41	1	90
15-Nov-17	0.17	± 0.41	1	90
16-Nov-17	1.83	± 1.94	11	994
17-Nov-17	0.67	± 1.21	4	362
18-Nov-17	0.67	± 1.21	4	362
19-Nov-17	1.17	± 1.83	7	633
20-Nov-17	0.33	± 0.82	2	181
21-Nov-17	0.33	± 0.52	2	181
22-Nov-17	1.50	± 2.35	9	814
23-Nov-17	2.17	± 4.40	13	1175
24-Nov-17	0.83	± 0.98	5	452
25-Nov-17	2.17	± 4.83	13	1175
26-Nov-17	0.00	± 0.00	0	0
27-Nov-17	0.33	± 0.82	2	181
28-Nov-17	0.00	± 0.00	0	0
29-Nov-17	1.00	± 1.26	6	542
30-Nov-17	0.00	± 0.00	0	0

Date	Mean daily count	Standard deviation	Total daily count	Estimated daily influx
1-Dec-17	0.33	± 0.82	2	181
2-Dec-17	1.33	± 1.63	8	723
3-Dec-17	1.00	± 2.45	6	542
4-Dec-17	1.00	± 1.67	6	542
5-Dec-17	2.83	± 4.67	17	1537
6-Dec-17	1.00	± 1.67	6	542
7-Dec-17	1.50	± 1.97	9	814
8-Dec-17	0.00	± 0.00	0	0
9-Dec-17	0.33	± 0.82	2	181
10-Dec-17	1.50	± 2.35	9	814
11-Dec-17	0.00	± 0.00	0	0
12-Dec-17	0.33	± 0.82	2	181
13-Dec-17	0.00	± 0.00	0	0
14-Dec-17	0.00	± 0.00	0	0
15-Dec-17	0.17	± 0.41	1	90
16-Dec-17	0.00	± 0.00	0	0
17-Dec-17	0.00	± 0.00	0	0
18-Dec-17	0.17	± 0.41	1	90
19-Dec-17	0.17	± 0.41	1	90
20-Dec-17	0.33	± 0.82	2	181
21-Dec-17	0.00	± 0.00	0	0
22-Dec-17	0.17	± 0.41	1	90
23-Dec-17	0.33	± 0.82	2	181
24-Dec-17	0.67	± 1.63	4	362
25-Dec-17	0.00	± 0.00	0	0
26-Dec-17	0.00	± 0.00	0	0
27-Dec-17	0.00	± 0.00	0	0
28-Dec-17	0.00	± 0.00	0	0
29-Dec-17	0.00	± 0.00	0	0
30-Dec-17	0.17	± 0.41	1	90
31-Dec-17	0.00	± 0.00	0	0
Total Count / Estimated Influx			350	31,637

Source: Ecoserv, 2018

Figure 8 – Daily count of Siskin recorded during the 2014–2017 monitoring studies



Source: Ecoserv, 2018

8.23 Raw daily counts for **Goldfinch** recorded from the 21 sites during the present study varied between 0 and a maximum of 7, while the mean daily counts ranged between 0 and 1.17 (Table 13). Counts for this species were therefore very low overall: between two and seven Goldfinch individuals were recorded in total from each of the sites at grid locations 4085, 4073, 4070 and 5277, while no individuals were recorded throughout the survey period from any of the other sites.

8.24 Based on the mean daily counts (Table 13), extrapolation translates to an estimated daily influx ranging between 0 and 633 individuals, with a total influx over the survey period (20 October – 31 December; i.e. 73 days) of 1,356 individuals, i.e. some 19 birds per day. Counts were only recorded from the sites at Comino (Grid 4085, or alternative site), Fomm ir-Riĥ (Grid 4073) and Mtaħleb (Grid 4070) in western Malta and Baħar iċ-Ċagħaq (Grid 5277) in eastern Malta. Figure 9 illustrates the daily counts of Goldfinch recorded during the 2014–2017 monitoring studies.

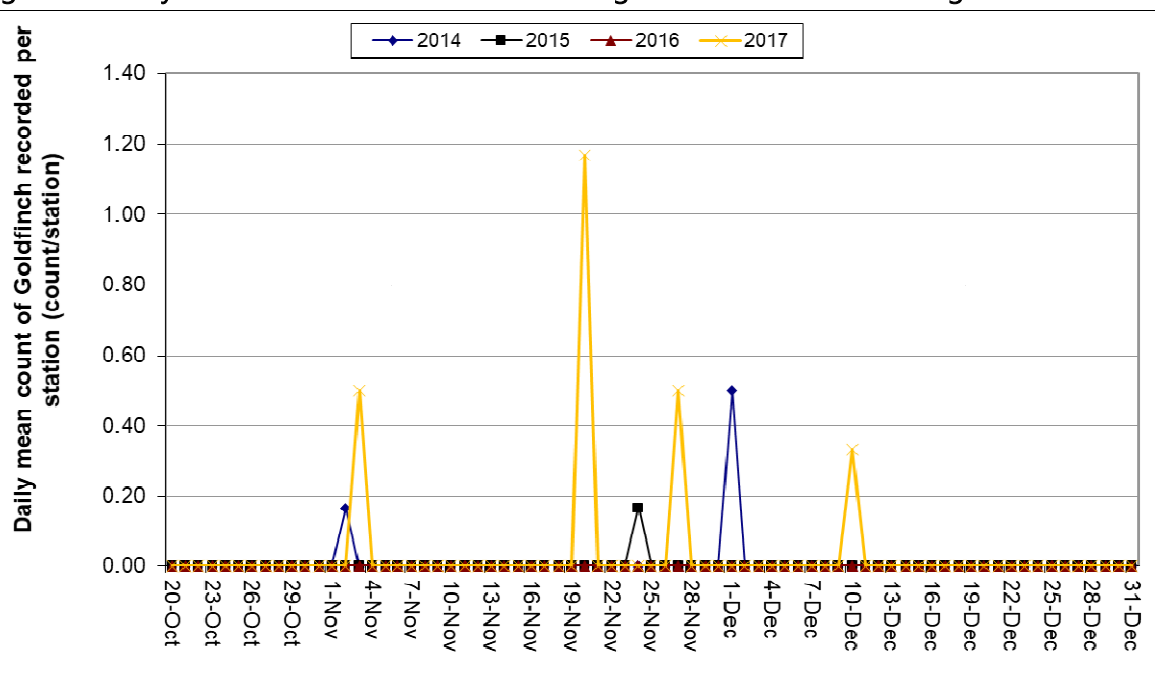
Table 13 - Values of mean ($\pm$ SD) daily count and daily total count recorded from the six study sites, together with total influx of migratory European Goldfinch

Date	Mean daily count	Standard deviation	Total daily count	Estimated daily influx
20-Oct-17	0.00	± 0.00	0	0
21-Oct-17	0.00	± 0.00	0	0
22-Oct-17	0.00	± 0.00	0	0
23-Oct-17	0.00	± 0.00	0	0
24-Oct-17	0.00	± 0.00	0	0
25-Oct-17	0.00	± 0.00	0	0
26-Oct-17	0.00	± 0.00	0	0
27-Oct-17	0.00	± 0.00	0	0
28-Oct-17	0.00	± 0.00	0	0
29-Oct-17	0.00	± 0.00	0	0
30-Oct-17	0.00	± 0.00	0	0
31-Oct-17	0.00	± 0.00	0	0
1-Nov-17	0.00	± 0.00	0	0
2-Nov-17	0.00	± 0.00	0	0
3-Nov-17	0.50	1.22	3	271
4-Nov-17	0.00	± 0.00	0	0
5-Nov-17	0.00	± 0.00	0	0
6-Nov-17	0.00	± 0.00	0	0
7-Nov-17	0.00	± 0.00	0	0
8-Nov-17	0.00	± 0.00	0	0
9-Nov-17	0.00	± 0.00	0	0
10-Nov-17	0.00	± 0.00	0	0
11-Nov-17	0.00	± 0.00	0	0
12-Nov-17	0.00	± 0.00	0	0
13-Nov-17	0.00	± 0.00	0	0
14-Nov-17	0.00	± 0.00	0	0
15-Nov-17	0.00	± 0.00	0	0

Date	Mean daily count	Standard deviation	Total daily count	Estimated daily influx
16-Nov-17	0.00	± 0.00	0	0
17-Nov-17	0.00	± 0.00	0	0
18-Nov-17	0.00	± 0.00	0	0
19-Nov-17	0.00	± 0.00	0	0
20-Nov-17	1.17	2.86	7	633
21-Nov-17	0.00	± 0.00	0	0
22-Nov-17	0.00	± 0.00	0	0
23-Nov-17	0.00	± 0.00	0	0
24-Nov-17	0.00	± 0.00	0	0
25-Nov-17	0.00	± 0.00	0	0
26-Nov-17	0.00	± 0.00	0	0
27-Nov-17	0.50	1.22	3	271
28-Nov-17	0.00	± 0.00	0	0
29-Nov-17	0.00	± 0.00	0	0
30-Nov-17	0.00	± 0.00	0	0
1-Dec-17	0.00	± 0.00	0	0
2-Dec-17	0.00	± 0.00	0	0
3-Dec-17	0.00	± 0.00	0	0
4-Dec-17	0.00	± 0.00	0	0
5-Dec-17	0.00	± 0.00	0	0
6-Dec-17	0.00	± 0.00	0	0
7-Dec-17	0.00	± 0.00	0	0
8-Dec-17	0.00	± 0.00	0	0
9-Dec-17	0.00	± 0.00	0	0
10-Dec-17	0.33	0.82	2	181
11-Dec-17	0.00	± 0.00	0	0
12-Dec-17	0.00	± 0.00	0	0
13-Dec-17	0.00	± 0.00	0	0
14-Dec-17	0.00	± 0.00	0	0
15-Dec-17	0.00	± 0.00	0	0
16-Dec-17	0.00	± 0.00	0	0
17-Dec-17	0.00	± 0.00	0	0
18-Dec-17	0.00	± 0.00	0	0
19-Dec-17	0.00	± 0.00	0	0
20-Dec-17	0.00	± 0.00	0	0
21-Dec-17	0.00	± 0.00	0	0
22-Dec-17	0.00	± 0.00	0	0
23-Dec-17	0.00	± 0.00	0	0
24-Dec-17	0.00	± 0.00	0	0
25-Dec-17	0.00	± 0.00	0	0
26-Dec-17	0.00	± 0.00	0	0
27-Dec-17	0.00	± 0.00	0	0
28-Dec-17	0.00	± 0.00	0	0
29-Dec-17	0.00	± 0.00	0	0
30-Dec-17	0.00	± 0.00	0	0
31-Dec-17	0.00	± 0.00	0	0
Total Count / Estimated Influx			15	1,356

Source: Ecoserv, 2018

Figure 9 – Daily count of Goldfinch recorded during the 2014–2017 monitoring studies



Source: Ecoserv, 2018

8.25 Raw daily counts for **Serin** recorded from the 21 sites during the present study varied between 0 and a maximum of 10, while the mean daily counts ranged between 0 and 2.33 (Table 14). Comparatively higher counts for this species were recorded on some days in early December 2017. The total counts, i.e. the total number of Serin, recorded from a given grid location (= study site) during the whole study period (73 days), varied appreciably between the different sites: at the lower end, no individuals were recorded throughout the survey period from the sites at grid locations 6069 and 3690, while at the higher end, 37 Serin individuals were recorded from the site at grid location 3292.

8.26 Count values for Serin from the present (autumn 2017) survey are similar to those recorded from the autumn 2014 survey and marginally higher than those recorded from the autumn 2015 and 2016 surveys. A similar pattern of highest count values made during the period early November to late December is noted for all four years (Figure 10). The estimated total influx of Serin over the Maltese Islands is given below. Based on the mean daily counts, extrapolation translates to an estimated daily influx ranging between 0 and 1,266 individuals, with a total influx over the survey period (20 October – 31 December; i.e. 73 days) of 18,623 individuals, i.e. some 255 birds per day.

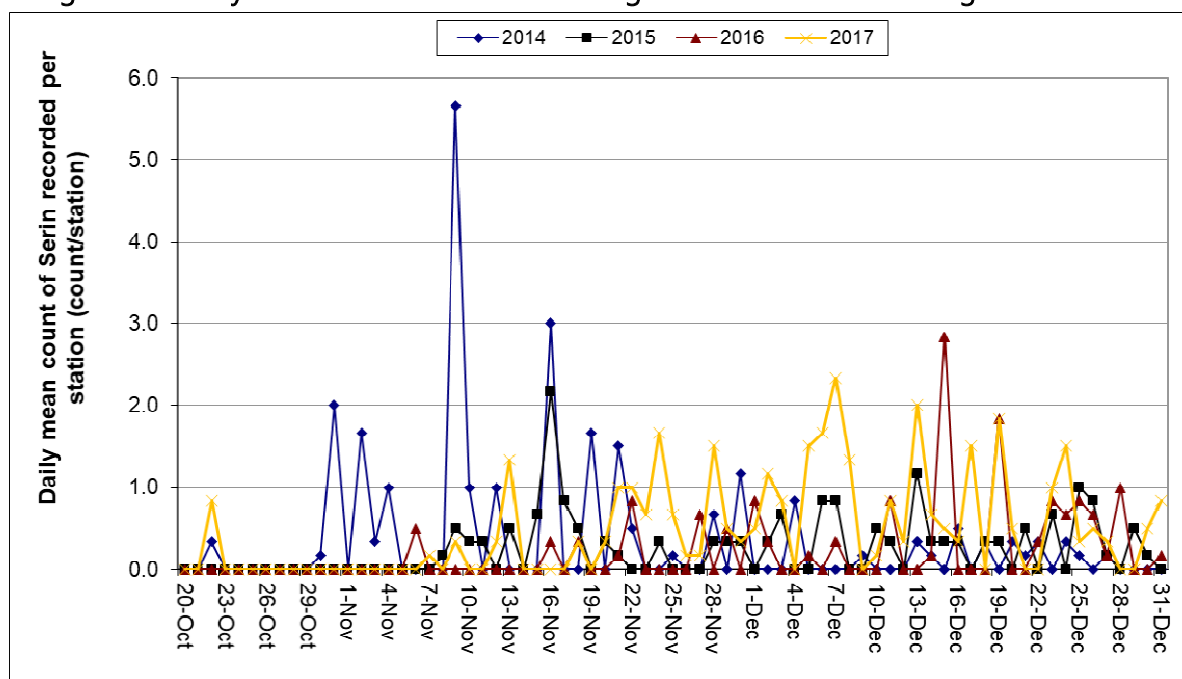
Table 14 - Values of mean ($\pm$ SD) daily count and daily total count recorded from the six study sites, together with total influx of migratory Serin

Date	Mean daily count	Standard deviation	Total daily count	Estimated daily influx
20-Oct-17	0.00	± 0.00	0	0
21-Oct-17	0.00	± 0.00	0	0
22-Oct-17	0.83	± 2.04	5	452
23-Oct-17	0.00	± 0.00	0	0
24-Oct-17	0.00	± 0.00	0	0
25-Oct-17	0.00	± 0.00	0	0
26-Oct-17	0.00	± 0.00	0	0
27-Oct-17	0.00	± 0.00	0	0
28-Oct-17	0.00	± 0.00	0	0
29-Oct-17	0.00	± 0.00	0	0
30-Oct-17	0.00	± 0.00	0	0
31-Oct-17	0.00	± 0.00	0	0
1-Nov-17	0.00	± 0.00	0	0
2-Nov-17	0.00	± 0.00	0	0
3-Nov-17	0.00	± 0.00	0	0
4-Nov-17	0.00	± 0.00	0	0
5-Nov-17	0.00	± 0.00	0	0
6-Nov-17	0.00	± 0.00	0	0
7-Nov-17	0.17	± 0.41	1	90
8-Nov-17	0.00	± 0.00	0	0
9-Nov-17	0.33	± 0.82	2	181
10-Nov-17	0.00	± 0.00	0	0
11-Nov-17	0.00	± 0.00	0	0
12-Nov-17	0.33	± 0.82	2	181
13-Nov-17	1.33	± 3.27	8	723
14-Nov-17	0.00	± 0.00	0	0
15-Nov-17	0.00	± 0.00	0	0
16-Nov-17	0.00	± 0.00	0	0
17-Nov-17	0.00	± 0.00	0	0
18-Nov-17	0.33	± 0.52	2	181
19-Nov-17	0.00	± 0.00	0	0
20-Nov-17	0.33	± 0.82	2	181
21-Nov-17	1.00	± 2.45	6	542
22-Nov-17	1.00	± 2.45	6	542
23-Nov-17	0.67	± 1.63	4	362
24-Nov-17	1.67	± 2.25	10	904
25-Nov-17	0.67	± 1.63	4	362
26-Nov-17	0.17	± 0.41	1	90
27-Nov-17	0.17	± 0.41	1	90
28-Nov-17	1.50	± 1.76	9	814
29-Nov-17	0.50	± 0.84	3	271
30-Nov-17	0.33	± 0.82	2	181
1-Dec-17	0.50	± 1.22	3	271
2-Dec-17	1.17	± 0.98	7	633
3-Dec-17	0.83	± 1.33	5	452
4-Dec-17	0.00	± 0.00	0	0
5-Dec-17	1.50	± 2.51	9	814
6-Dec-17	1.67	± 4.08	10	904
7-Dec-17	2.33	± 2.34	14	1266
8-Dec-17	1.33	± 1.03	8	723
9-Dec-17	0.00	± 0.00	0	0

Date	Mean daily count	Standard deviation	Total daily count	Estimated daily influx
10-Dec-17	0.17	± 0.41	1	90
11-Dec-17	0.83	± 1.33	5	452
12-Dec-17	0.33	± 0.82	2	181
13-Dec-17	2.00	± 1.67	12	1085
14-Dec-17	0.67	± 1.21	4	362
15-Dec-17	0.50	± 0.84	3	271
16-Dec-17	0.33	± 0.82	2	181
17-Dec-17	1.50	± 1.97	9	814
18-Dec-17	0.00	± 0.00	0	0
19-Dec-17	1.83	± 2.23	11	994
20-Dec-17	0.50	± 1.22	3	271
21-Dec-17	0.00	± 0.00	0	0
22-Dec-17	0.00	± 0.00	0	0
23-Dec-17	1.00	± 1.67	6	542
24-Dec-17	1.50	± 2.35	9	814
25-Dec-17	0.33	± 0.82	2	181
26-Dec-17	0.50	± 0.84	3	271
27-Dec-17	0.33	± 0.82	2	181
28-Dec-17	0.00	± 0.00	0	0
29-Dec-17	0.00	± 0.00	0	0
30-Dec-17	0.50	± 0.84	3	271
31-Dec-17	0.83	± 1.33	5	452
Total Count / Estimated Influx			206	18,623

Source: Ecoserv, 2018

Figure 10 – Daily count of Serin recorded during the 2014–2017 monitoring studies



Source: Ecoserv, 2018

8.27 Raw daily counts for **Hawfinch** recorded from the 21 sites during the present study varied between 0 and a maximum of 5, while the mean daily counts

ranged between 0 and 0.15 (Table 15). Counts for this species were therefore very low overall: The total counts, i.e. the total number of Hawfinch, recorded from a given grid location (= study site) during the whole study period (73 days), did not vary appreciably between the different sites: a total of 17 individuals were recorded from the site at grid location 5277, while the total counts made at all other grid locations ranged between 0 and 9 Hawfinch individuals. It should be noted, however, that the Hawfinch is a shy, elusive bird that seeks the cover of vegetation, particularly thick shrubs and trees, and is particularly difficult to detect while in flight, which could therefore lead to under-sampling.

8.28 The estimated total influx of Hawfinch over the Maltese Islands is given in Table 15. Mean count values for Hawfinch recorded during the present (autumn 2017) are marginally higher than those made during the autumn 2014 survey, but appreciably higher than those made in autumn 2015 and 2016, when only single counts of this species were recorded. In 2014, the elevated counts were recorded between 20 October and 4 November, whereas during the 2017 survey such elevated counts extended from 20 October to 24 November, with some additional sporadic sightings made in December (Figure 11). Based on the mean daily counts (Table 15), extrapolation translates to an estimated daily influx ranging between 0 and 814 individuals, with a total influx over the survey period (20 October – 31 December; i.e. 73 days) of 7,955 individuals, i.e. some 109 birds per day.

Table 15 - Values of mean ($\pm$ SD) daily count and daily total count recorded from the six study sites, together with total influx of migratory Hawfinch

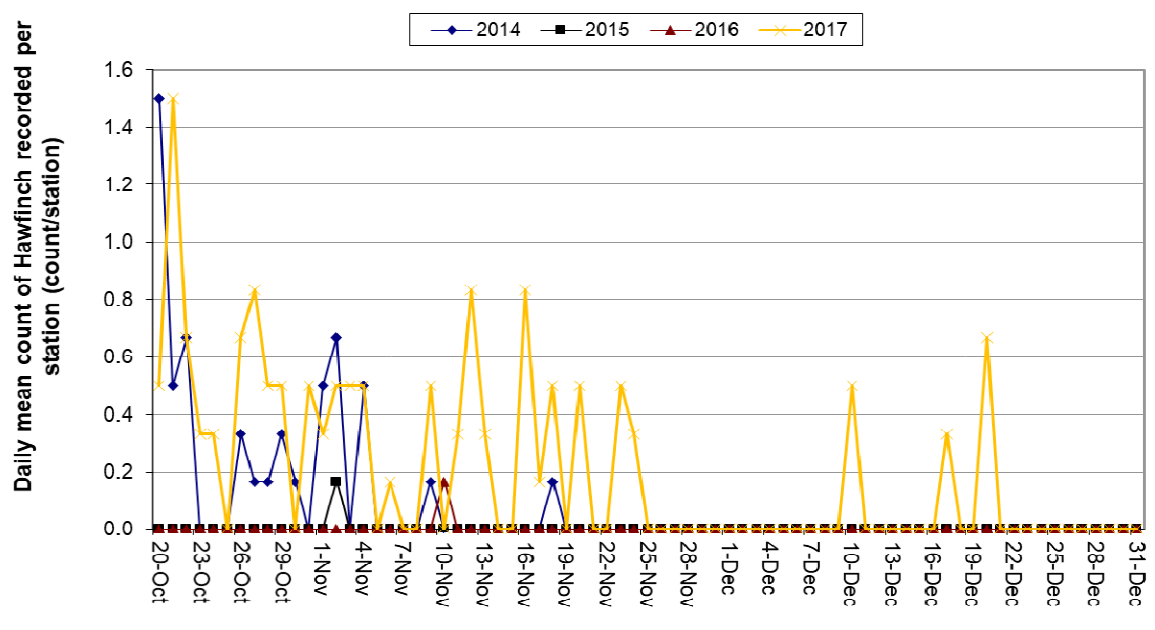
Date	Mean daily count	Standard deviation	Total daily count	Estimated daily influx
20-Oct-17	0.50	± 0.55	3	271
21-Oct-17	1.50	± 1.97	9	814
22-Oct-17	0.67	± 0.82	4	362
23-Oct-17	0.33	± 0.52	2	181
24-Oct-17	0.33	± 0.52	2	181
25-Oct-17	0.00	± 0.00	0	0
26-Oct-17	0.67	± 0.82	4	362
27-Oct-17	0.83	± 1.60	5	452
28-Oct-17	0.50	± 0.84	3	271
29-Oct-17	0.50	± 0.84	3	271
30-Oct-17	0.00	± 0.00	0	0
31-Oct-17	0.50	± 0.55	3	271
1-Nov-17	0.33	± 0.82	2	181
2-Nov-17	0.50	± 0.55	3	271
3-Nov-17	0.50	± 0.84	3	271
4-Nov-17	0.50	± 0.84	3	271

Date	Mean daily count	Standard deviation	Total daily count	Estimated daily influx
5-Nov-17	0.00	± 0.00	0	0
6-Nov-17	0.17	± 0.41	1	90
7-Nov-17	0.00	± 0.00	0	0
8-Nov-17	0.00	± 0.00	0	0
9-Nov-17	0.50	± 1.22	3	271
10-Nov-17	0.00	± 0.00	0	0
11-Nov-17	0.33	± 0.82	2	181
12-Nov-17	0.83	± 2.04	5	452
13-Nov-17	0.33	± 0.52	2	181
14-Nov-17	0.00	± 0.00	0	0
15-Nov-17	0.00	± 0.00	0	0
16-Nov-17	0.83	± 2.04	5	452
17-Nov-17	0.17	± 0.41	1	90
18-Nov-17	0.50	± 1.22	3	271
19-Nov-17	0.00	± 0.00	0	0
20-Nov-17	0.50	± 1.22	3	271
21-Nov-17	0.00	± 0.00	0	0
22-Nov-17	0.00	± 0.00	0	0
23-Nov-17	0.50	± 1.22	3	271
24-Nov-17	0.33	± 0.82	2	181
25-Nov-17	0.00	± 0.00	0	0
26-Nov-17	0.00	± 0.00	0	0
27-Nov-17	0.00	± 0.00	0	0
28-Nov-17	0.00	± 0.00	0	0
29-Nov-17	0.00	± 0.00	0	0
30-Nov-17	0.00	± 0.00	0	0
1-Dec-17	0.00	± 0.00	0	0
2-Dec-17	0.00	± 0.00	0	0
3-Dec-17	0.00	± 0.00	0	0
4-Dec-17	0.00	± 0.00	0	0
5-Dec-17	0.00	± 0.00	0	0
6-Dec-17	0.00	± 0.00	0	0
7-Dec-17	0.00	± 0.00	0	0
8-Dec-17	0.00	± 0.00	0	0
9-Dec-17	0.00	± 0.00	0	0
10-Dec-17	0.50	± 1.22	3	271
11-Dec-17	0.00	± 0.00	0	0
12-Dec-17	0.00	± 0.00	0	0
13-Dec-17	0.00	± 0.00	0	0
14-Dec-17	0.00	± 0.00	0	0
15-Dec-17	0.00	± 0.00	0	0
16-Dec-17	0.00	± 0.00	0	0
17-Dec-17	0.33	± 0.82	2	181
18-Dec-17	0.00	± 0.00	0	0
19-Dec-17	0.00	± 0.00	0	0
20-Dec-17	0.67	± 1.63	4	362
21-Dec-17	0.00	± 0.00	0	0
22-Dec-17	0.00	± 0.00	0	0
23-Dec-17	0.00	± 0.00	0	0
24-Dec-17	0.00	± 0.00	0	0
25-Dec-17	0.00	± 0.00	0	0
26-Dec-17	0.00	± 0.00	0	0
27-Dec-17	0.00	± 0.00	0	0

Date	Mean daily count	Standard deviation	Total daily count	Estimated daily influx
28-Dec-17	0.00	± 0.00	0	0
29-Dec-17	0.00	± 0.00	0	0
30-Dec-17	0.00	± 0.00	0	0
31-Dec-17	0.00	± 0.00	0	0
Total Count / Estimated Influx			88	7,955

Source: Ecoserv, 2018

Figure 11 – Daily count of Hawfinch recorded during the 2014–2017 monitoring studies



Source: Ecoserv, 2018

9. COMPARISON OF ESTIMATED MIGRATION WITH REPORTED CATCHES

9.1 A comparative analysis of the results obtained during the 2017 finches migration study with the game reporting data for the 2017 derogation period was carried out by Ecoserv (2018). It should be stated from the outset that the two sets of data were collected for different purposes, using very different methodologies, and therefore the magnitudes of the values are not directly comparable. However, the temporal trends can be expected to follow similar patterns, that is, periods when higher mean daily counts were recorded during the present survey should broadly follow the days when higher numbers of birds were captured and reported in the bag data. Ecoserv (2018) maintains that whether the influx of the bird species follows the same temporal trend from year to year can only be confirmed through a longitudinal study of influx of the different bird species over a period of several years.

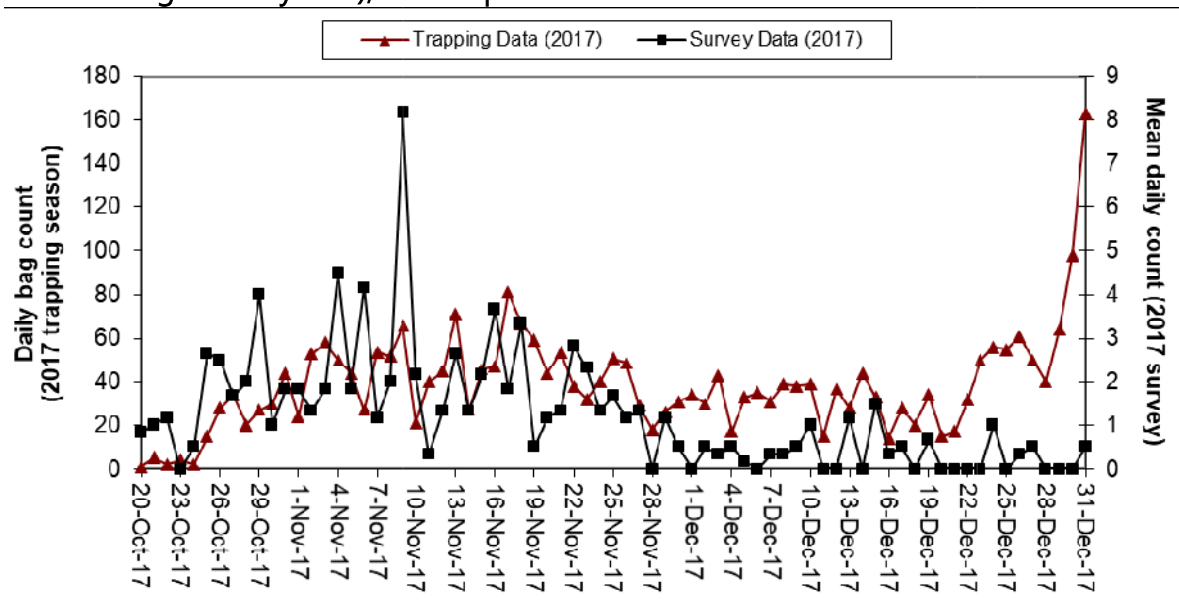
- 9.2 Graphical representations of the mean daily counts made during the present (2017) survey and the daily bag counts for the same time period (20 October – 31 December) in 2017 for each of the seven bird species were prepared to compare temporal trends among the two different data sets. In a graphical plot showing daily counts, a high variation in counts from day to day may overshadow temporal trends over the two-month period.
- 9.3 To aid visual interpretation, a second set of analyses was undertaken by computing a moving average using a rolling 5-day period for the time series count data. This has the effect of smoothening out the day to day fluctuations and hence making longer-term trends in mean daily counts or daily bag counts more apparent, thus facilitating visual interpretation of temporal trends. Note that the analyses based on a moving average do not replace those based on the raw daily counts. Rather, the graphical representations showing a 5-day moving average should be seen in conjunction with those based on daily counts, which are also presented.

Linnet

- 9.4 The daily bag counts indicating the number of Linnet caught during the 2017 live-capturing season and the mean daily counts of Linnet made during the 2017 survey are shown in Figure 12, while Figure 13 presents the 5-day moving average computed from these data. As already noted, the magnitude of the bag counts and those of the mean counts made in the 2017 survey are not directly comparable. In fact, the two sets of values are on different scales. Therefore, in Figures 12–13, two separate y-axes are used: the bag count data are plotted on the left-side y-axis, whereas the counts from the 2017 survey are plotted on the right-side y-axis.
- 9.5 Overall, the highest daily counts made during the 2017 survey occurred in late October and late November, with counts declining thereafter such that very few counts were made after 6 December. The 2017 bag data included periods of higher bag counts during November and extending until the end of December. The 2017 bag data included a period of higher bag counts during November, followed by slightly lower counts until 22 December, with counts increasing again thereafter and peaking on 31 December 2017. Thus, the general trend observed in the bag counts for 2017 is of higher counts during November and at the end of December, whereas the general trend

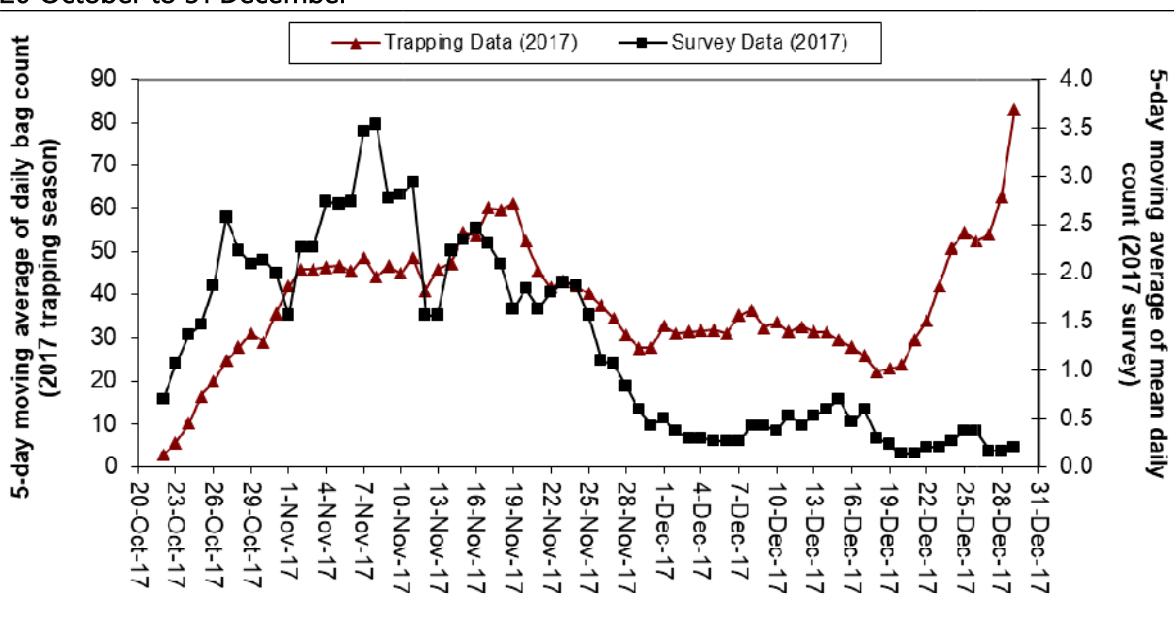
observed in the daily counts recorded during the 2017 survey is of higher counts during November and lower counts in December.

Figure 12 - Daily bag count of Linnet during 2017 (red line; values on left-side y-axis), together with the mean daily counts recorded during the 2017 survey (black line; values on right-side y-axis), for the period 20 October to 31 December



Source: Ecoserv, 2018

Figure 13 - Moving average based on a 5-day rolling time period for the daily bag counts of Linnet during 2017 (red line; values on left-side y-axis), and for the mean daily counts recorded during the 2017 survey (black line; values on right-side y-axis), for the period 20 October to 31 December

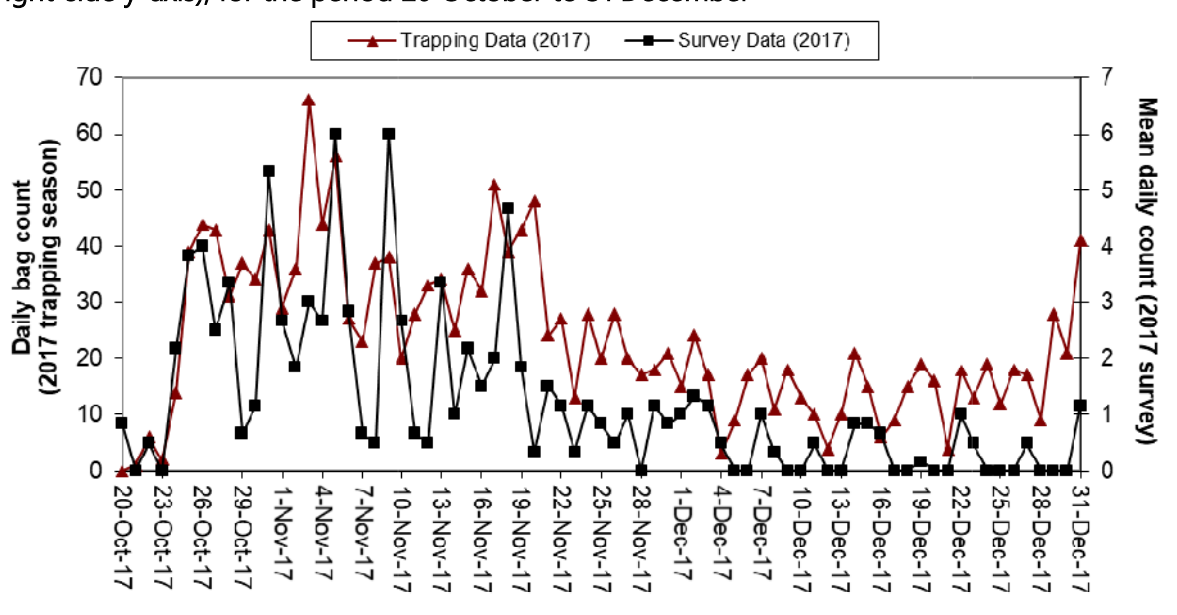


Source: Ecoserv, 2018

Chaffinch

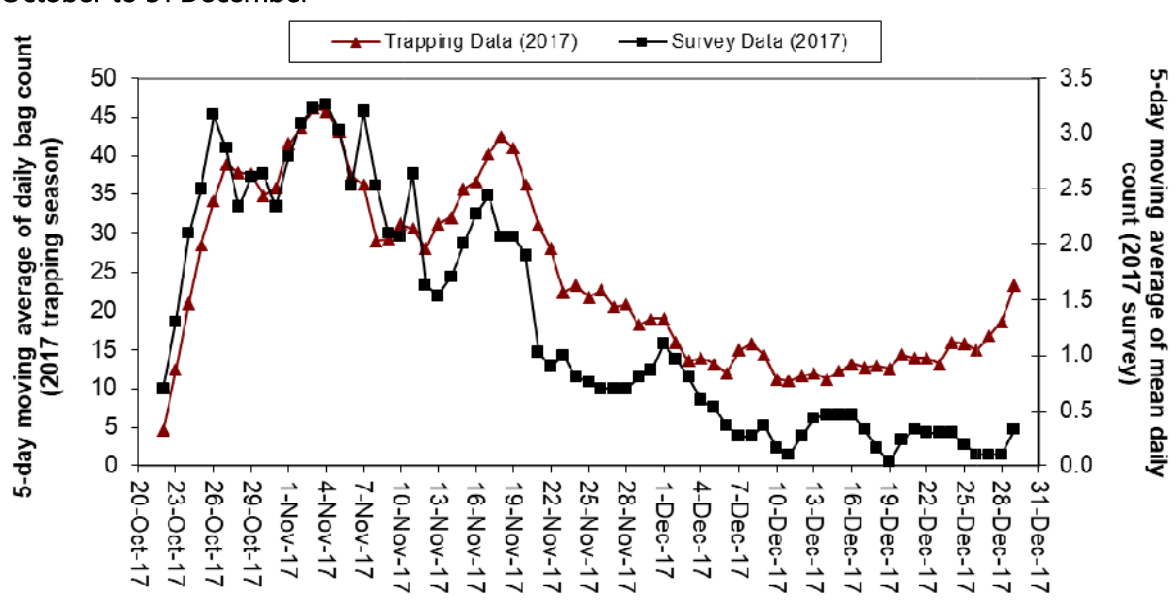
- 9.6 The daily bag counts indicating the number of Chaffinch caught during the 2017 live-capturing season and the mean daily counts made during the 2017 survey are shown in Figure 14, while Figure 15 presents the 5-day moving average computed from these data. As already noted, the magnitude of the bag counts and those of the mean counts made in the 2017 survey are not directly comparable. In fact, the two sets of values are on different scales. Therefore, in Figures 14–15, two separate y-axes are used: the bag count data are plotted on the left-side y-axis, whereas the counts from the 2017 survey are plotted on the right-side y-axis.
- 9.7 Overall, the highest daily counts recorded during the 2017 survey were made between late October and late November, with several days in December being characterised by zero counts. The highest bag counts for the 2017 season were also reported between late October and late November, while lower bag counts were recorded in December. Thus, the general trend observed in the bag counts for 2017 and daily counts recorded during the 2017 survey is of higher counts in the early part of the live-capturing season, up to around 22 November. Both the number of Chaffinch observed per day during the 2017 survey and the number of the same species captured declined thereafter.

Figure 14 - Daily bag count of Chaffinch during 2017 (red line; values on left-side y-axis), together with the mean daily counts recorded during the 2017 survey (black line; values on right-side y-axis), for the period 20 October to 31 December



Source: Ecoserv, 2018

Figure 15 - Moving average based on a 5-day rolling time period for the daily bag counts of Chaffinch during 2017 (red line; values on left-side y-axis), and for the mean daily counts recorded during the 2017 survey (black line; values on right-side y-axis), for the period 20 October to 31 December



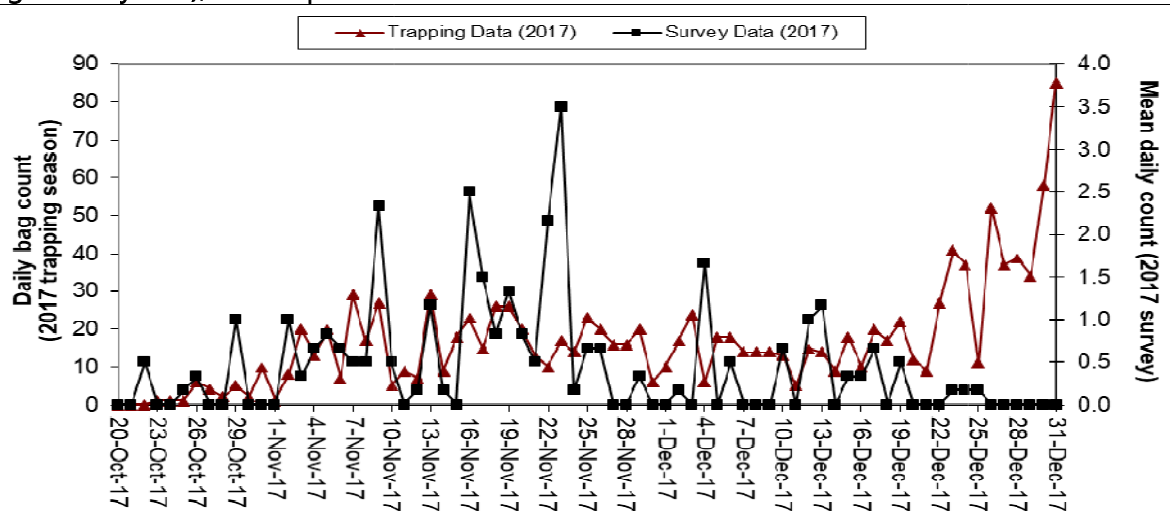
Source: Ecoserv, 2018

Greenfinch

- 9.8 The daily bag counts indicating the number of Greenfinch caught during the 2017 live-capturing season and the mean daily counts of Greenfinch made during the 2017 survey are shown in Figure 16, while Figure 17 presents the 5-day moving average computed from these data. As already noted, the magnitude of the bag counts and those of the mean/total counts made in the 2017 survey are not directly comparable. In fact, the two sets of values are on different scales. Therefore, in Figures 16–17, two separate y-axes are used: the bag count data are plotted on the left-side y-axis, whereas the counts from the 2017 survey are plotted on the right-side y-axis.
- 9.9 The highest daily counts recorded during the 2017 survey were made during November, especially in the second half of the month. Lower counts were recorded during December and several days were characterised by zero counts, especially at the end of the study period. More or less constant bag counts were reported from early November to mid-December, while the bag counts increased from 22 December onwards, with the highest count reported on 31 December. Thus, the general trend observed in the bag counts for 2017 is of similar counts from early November to mid-December, followed by an increase in counts. In contrast, the general trend recorded

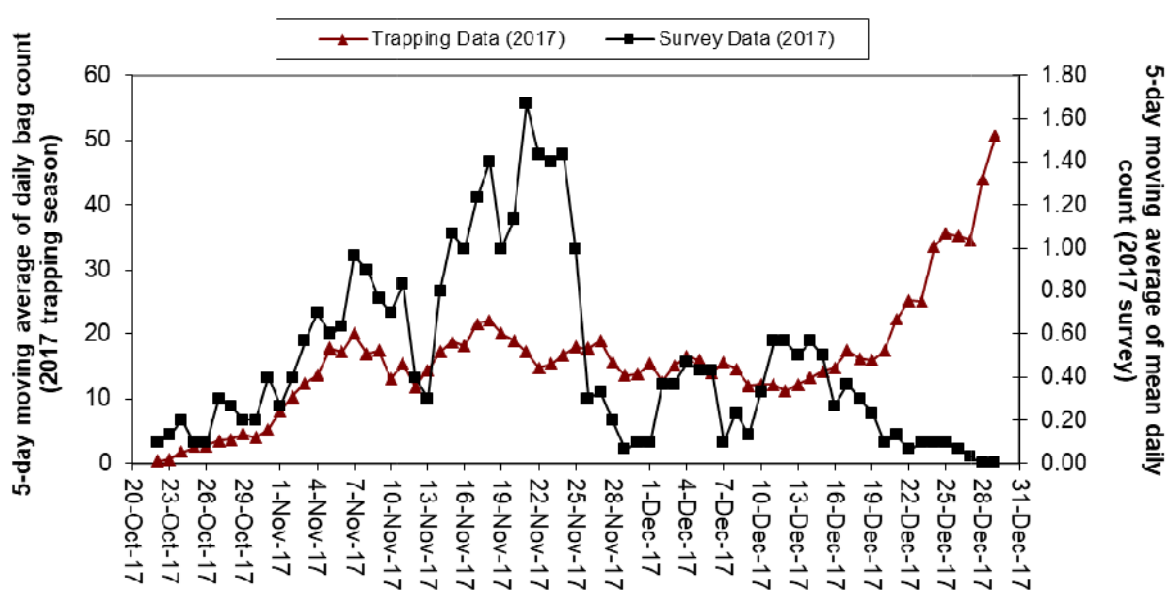
during the 2017 survey was of higher counts in November followed by lower counts in December, especially at the end of the month.

Figure 16 - Daily bag count of Greenfinch during 2017 (red line; values on left-side y-axis), together with the mean daily counts recorded during the 2017 survey (black line; values on right-side y-axis), for the period 20 October to 31 December



Source: Ecoserv, 2018

Figure 17 - Moving average based on a 5-day rolling time period for the daily bag counts of Greenfinch during 2017 (red line; values on left-side y-axis), and for the mean daily counts recorded during the 2017 survey (black line; values on right-side y-axis), for the period 20 October to 31 December



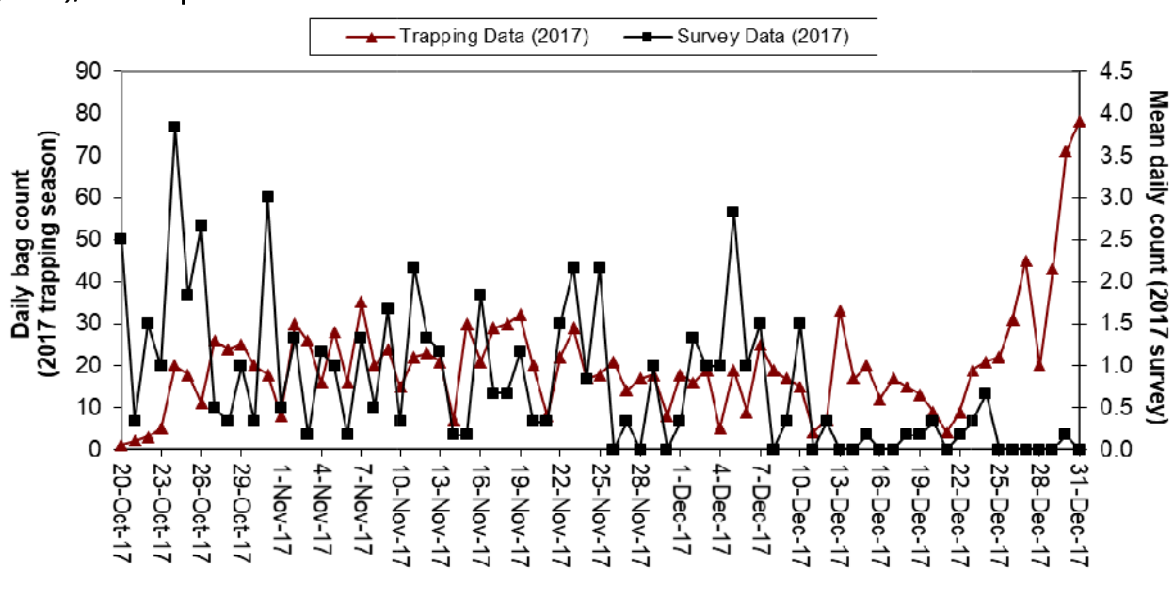
Source: Ecoserv, 2018

Siskin

9.10 The daily bag counts indicating the number of Siskin caught during the 2017 live-capturing season and the mean daily counts of Siskin made during the 2017 survey are shown in Figure 18, while Figure 19 presents the 5-day moving average computed from these data. As already noted, the magnitude of the bag counts and those of the mean counts made in the 2017 survey are not directly comparable. In fact, the two sets of values are on different scales. Therefore, in Figures 18-19, two separate y-axes are used: the bag count data are plotted on the left-side y-axis, whereas the counts from the 2016 survey are plotted on the right-side y-axis.

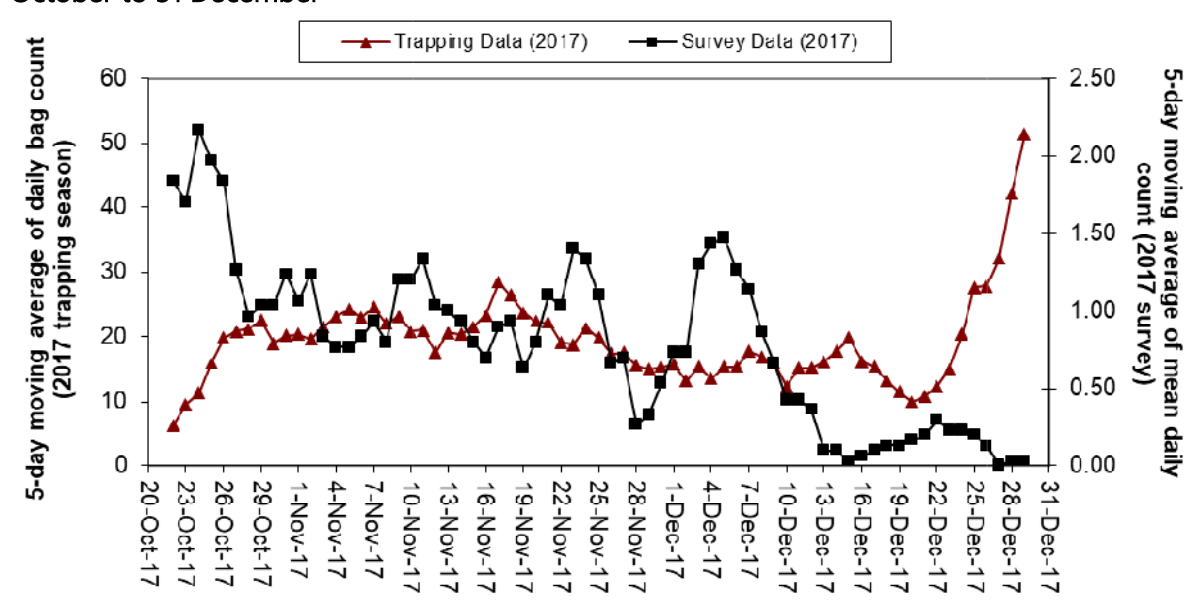
9.11 Overall, higher daily counts were recorded during the 2017 survey between early October and mid-December. Lower counts were recorded during the second half of December and several days were characterised by zero counts, especially at the end of the month. The bag counts data showed overall similar values reported from early November to mid-December, followed by an increase during the final week of December, with the highest count reported on 31 December. Thus, the general trend observed in the bag counts for 2017 is of similar counts from early November to mid-December, followed by an increase in counts till the end of December, whereas the general trend recorded during the 2017 survey was of higher counts until mid-December that decreased thereafter.

Figure 18 - Daily bag count of Siskin during 2017 (red line; values on left-side y-axis), together with the mean daily counts recorded during the 2017 survey (black line; values on right-side y-axis), for the period 20 October to 31 December



Source: Ecoserv, 2018

Figure 19 - Moving average based on a 5-day rolling time period for the daily bag counts of Siskin during 2017 (red line; values on left-side y-axis), and for the mean daily counts recorded during the 2017 survey (black line; values on right-side y-axis), for the period 20 October to 31 December



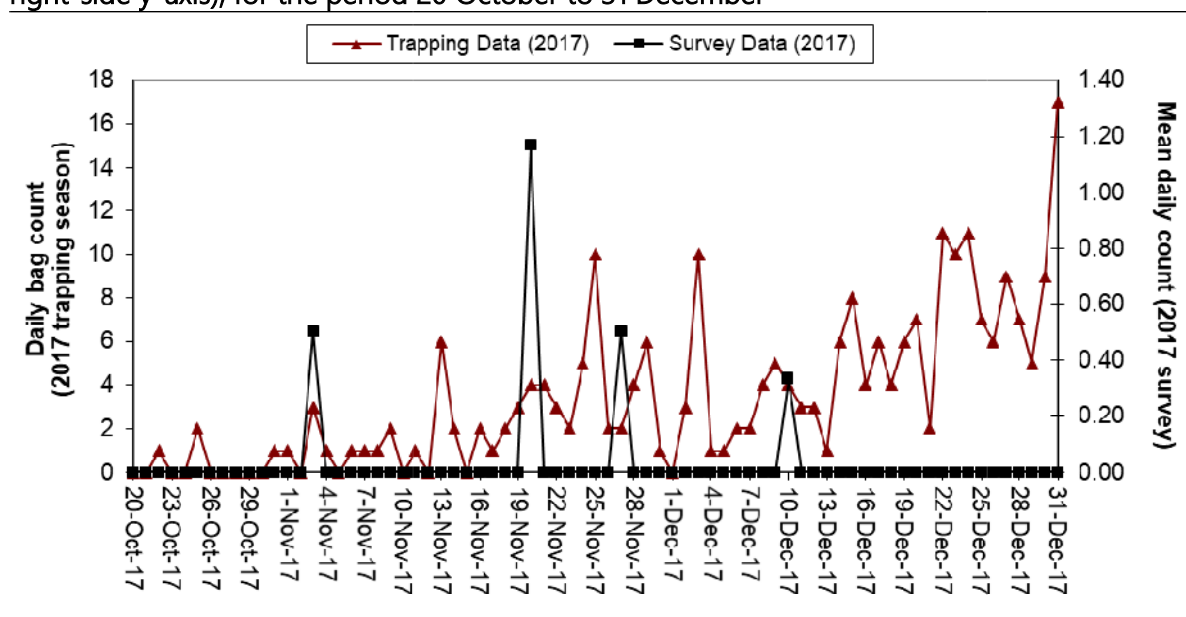
Source: Ecoserv, 2018

Goldfinch

9.12 The daily bag counts indicating the number of Goldfinch caught during the 2017 live-capturing season and the mean daily counts of Goldfinch made during the 2017 survey are shown in Figure 20, while Figure 21 presents the 5-day moving average computed from these data. As already noted, the magnitude of the bag counts and those of the mean counts made in the 2017 survey are not directly comparable. In fact, the two sets of values are on different scales. Therefore, in Figures 20-21, two separate y-axes are used: the bag count data are plotted on the left-side y-axis, whereas the counts from the 2016 survey are plotted on the right-side y-axis.

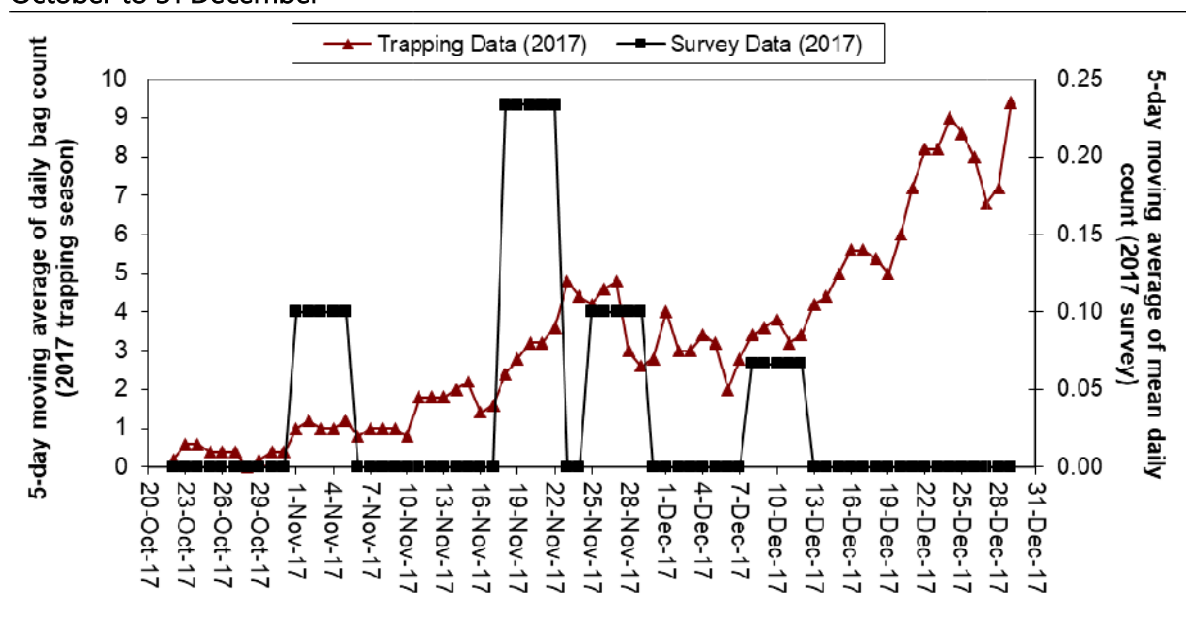
9.13 Goldfinch individuals were only recorded on four days during the 2017 survey. Thus inferences on temporal trends in migration rates cannot be drawn based on such limited data. In the 2017 season, bag counts were low between October and mid-November, and increased slightly thereafter, especially towards the end of December.

Figure 20 - Daily bag count of Goldfinch during 2017 (red line; values on left-side y-axis), together with the mean daily counts recorded during the 2017 survey (black line; values on right-side y-axis), for the period 20 October to 31 December



Source: Ecoserv, 2018

Figure 21 - Moving average based on a 5-day rolling time period for the daily bag counts of Goldfinch during 2017 (red line; values on left-side y-axis), and for the mean daily counts recorded during the 2017 survey (black line; values on right-side y-axis), for the period 20 October to 31 December



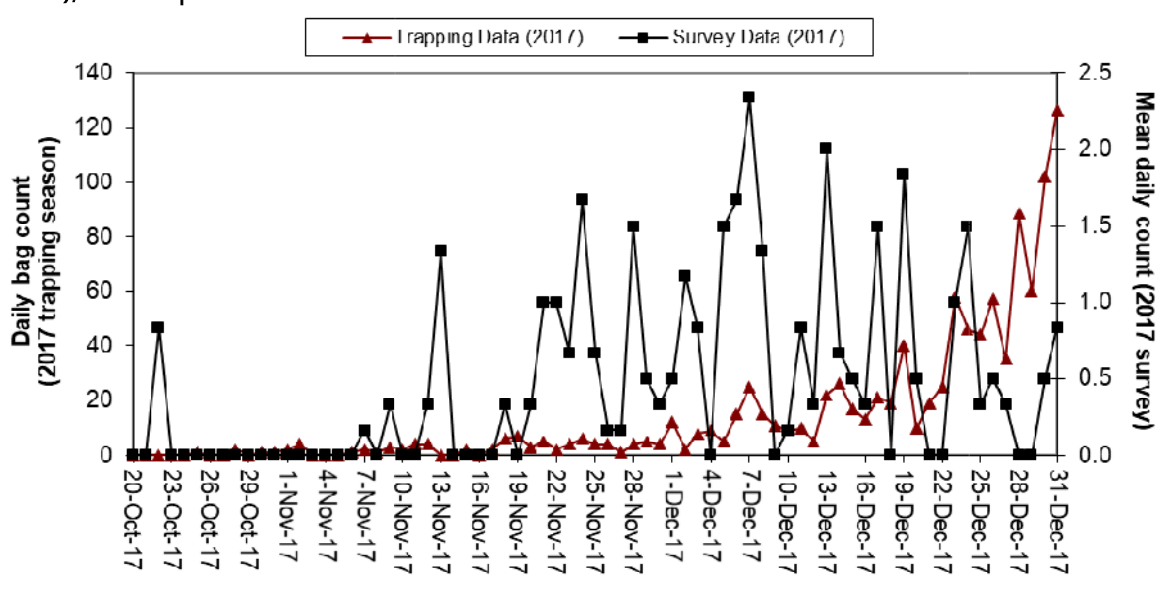
Source: Ecoserv, 2018

Serin

9.14 The daily bag counts indicating the number of Serin caught during the 2017 live-capturing season and the mean daily counts of Serin made during the 2017 survey are shown in Figure 22, while Figure 23 presents the 5-day moving average computed from these data. As already noted, the magnitude of the bag counts and those of the mean/total counts made in the 2017 survey are not directly comparable. In fact, the two sets of values are on different scales. Therefore, in Figures 22-23, two separate y-axes are used: the bag count data are plotted on the left-side y-axis, whereas the counts from the 2017 survey are plotted on the right-side y-axis.

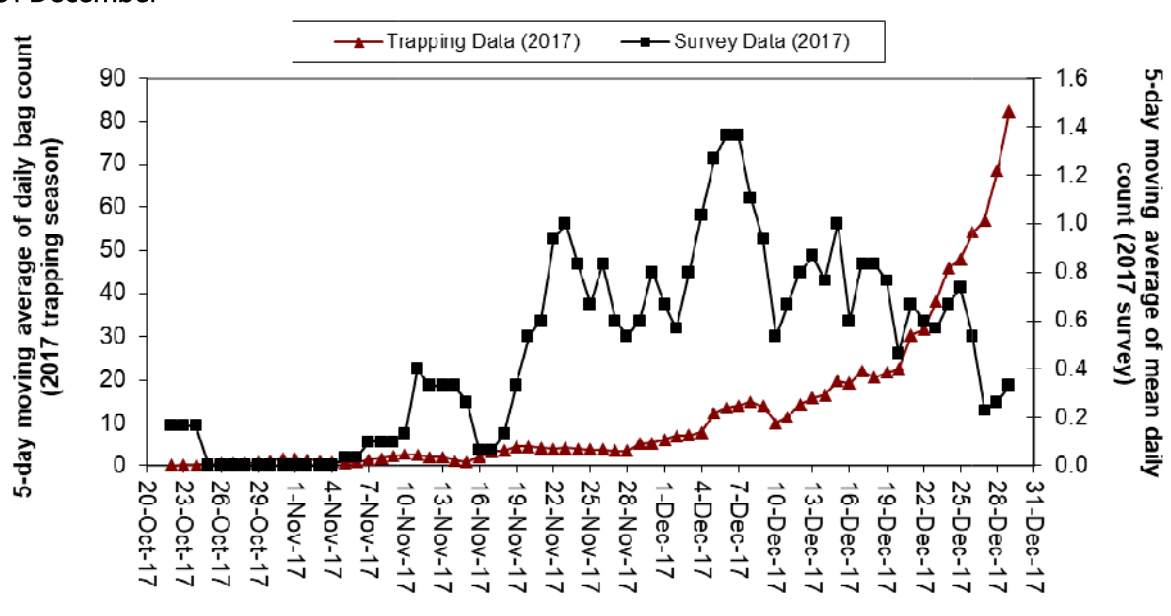
9.15 Overall, the daily counts recorded during the 2017 survey were very low during late October and early November, but subsequently increased in mid-November resulting in a period of higher counts that extended until the end of December. The 2017 bag count data also showed very low counts initially, which remained low throughout November but then showed a steady increase in December, reaching the highest count at the end of the month. Thus, the general trend observed in the daily counts recorded during the 2017 survey is of higher counts in the second half of the live-capturing season from mid-November to end December; the general trend in the bag counts for 2017 is of lower counts until end November followed by a series of increasing counts during December.

Figure 22 - Daily bag count of Serin during 2017 (red line; values on left-side y-axis), together with the mean daily counts recorded during the 2017 survey (black line; values on right-side y-axis), for the period 20 October to 31 December



Source: Ecoserv, 2018

Figure 23 - Moving average based on a 5-day rolling time period for the daily bag counts of Serin during 2017 (red line; values on left-side y-axis), and for the mean daily counts recorded during the 2017 survey (black line; values on right-side y-axis), for the period 20 October to 31 December



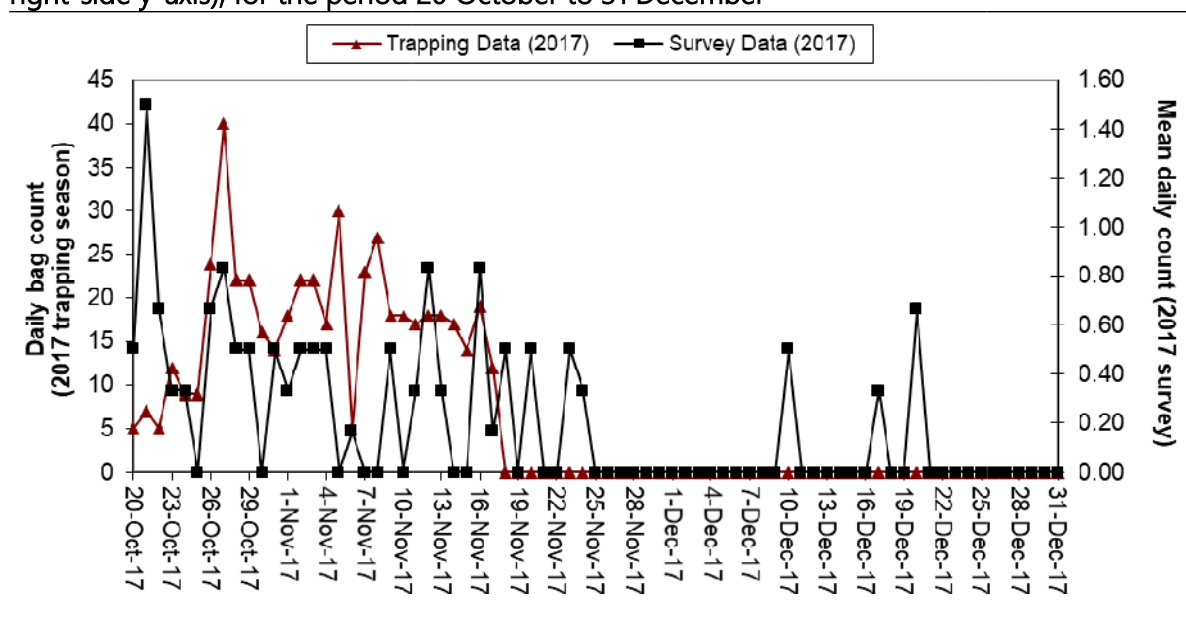
Source: Ecoserv, 2018

Hawfinch

9.16 The daily bag counts indicating the number of Hawfinch caught during the 2017 live-capturing season and the mean daily counts of Hawfinch made during the 2017 survey are shown in Figure 24, while Figure 25 presents the 5-day moving average computed from these data. As already noted, the magnitude of the bag counts and those of the mean counts made in the 2017 survey are not directly comparable. In fact, the two sets of values are on different scales. Therefore, in Figures 24-25, two separate y-axes are used: the bag count data are plotted on the left-side y-axis, whereas the counts from the 2017 survey are plotted on the right-side y-axis.

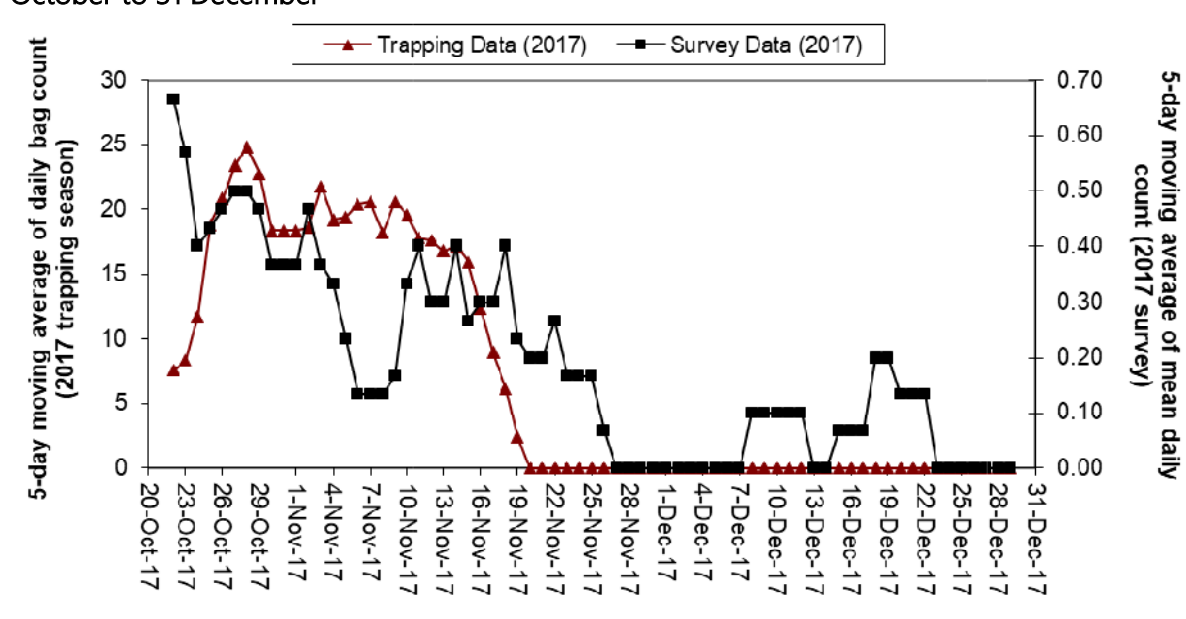
9.17 Overall, the highest daily counts recorded during the 2017 survey were made between early October and end November, with most of December characterised by zero counts. The bag count data showed a similar pattern of higher counts during early to mid-November, with zero counts reported after 20 November. Thus, the general trend in the bag count data and in the daily counts made during the 2017 survey is of higher counts until mid- to end-November, with only sporadic sightings made in December.

Figure 24 - Daily bag count of Hawfinch during 2017 (red line; values on left-side y-axis), together with the mean daily counts recorded during the 2017 survey (black line; values on right-side y-axis), for the period 20 October to 31 December



Source: Ecoserv, 2018

Figure 25 - Moving average based on a 5-day rolling time period for the daily bag counts of Hawfinch during 2017 (red line; values on left-side y-axis), and for the mean daily counts recorded during the 2017 survey (black line; values on right-side y-axis), for the period 20 October to 31 December



Source: Ecoserv, 2018

10. ENFORCEMENT AND STRICT SUPERVISION

- 10.1 Prior to the start of the season, enforcement officials detailed to carry out controls in the field received specialised training on enforcement priorities and techniques organised by the Wild Birds Regulation Unit. Twenty officers attended the first training session in Gozo on 6 September 2017 (Figure 26) whereas 40 officers attended the second training session in Malta, which was held on 13 October 2017 (Figure 27). The attendees were trained in basic field ornithology and avian ecology, as well as on the relevant regulations and licence conditions, inspection techniques, principles of surveillance as well as counter-poaching operations and wildlife crime detection and prosecution techniques.



Figure 26: Training seminar held in Gozo on 6 September 2017



Figure 27: Training seminar held in Malta on 13 October 2017

Overall deployment and field surveillance

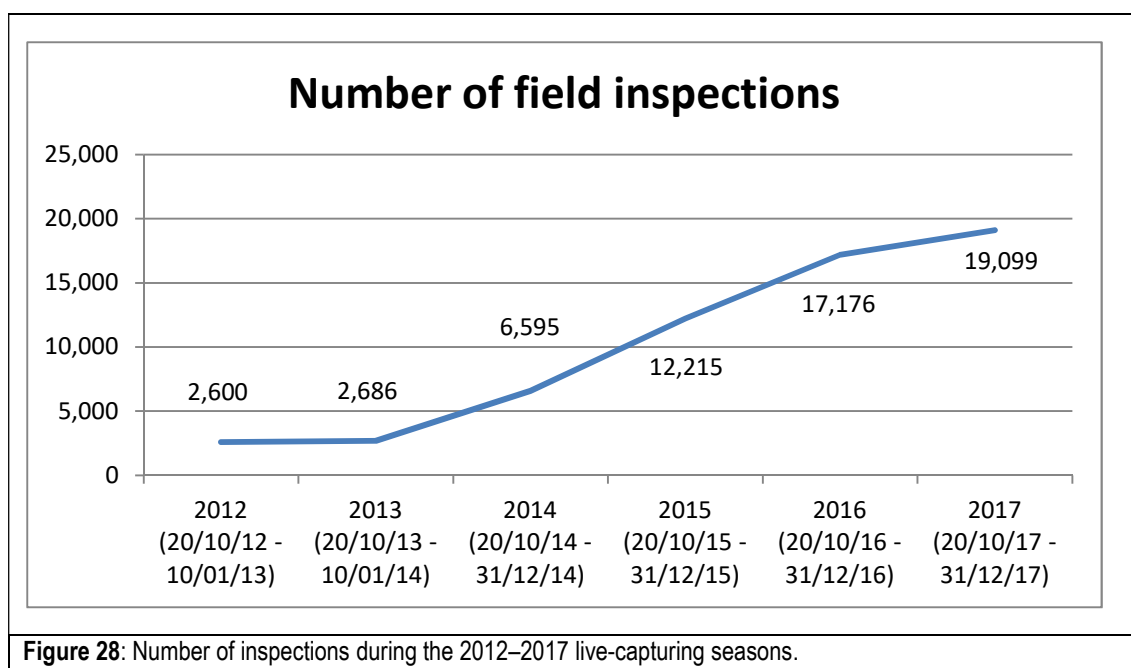
- 10.2 The Conservation of Wild Birds (Framework for Allowing a Derogation Opening an Autumn Live-Capturing Season for Finches) Regulations (S.L.549.93) stipulates that for every one thousand (1,000) licences issued in accordance with these regulations, there shall be a minimum of seven (7) officers and/or marshals on duty during all hours for which an Autumn live-capturing season is open.
- 10.3 The Framework Regulations also specify that, outside these hours, if applicable, at least two (2) police officers and/or marshals shall be on duty during the hours of daylight. The Regulations also specify that the Police shall continue to carry out on-the-spot checks until at least two weeks following the end of an Autumn live-capturing season, in order to prevent illegal capture. Moreover, following the closure of the season, for every one thousand (1,000) Autumn live-capturing licences issued that year, a minimum of three (3) police officers shall be on duty during the hours of daylight.
- 10.4 Given that there were 3,715 licences issued to capture finches under the terms of the present derogation, this translates to a minimum requirement of 26 officers during permitted hours of the derogation. However, also taking into account that in parallel with the finch live-capturing derogation there was also a separate derogation concerning live-capturing of Golden Plover and Song Thrush, under which a further 1,059 special licences were issued to finch live-capturers (i.e. the total number of licensed persons participating in either one or in both derogations was 3,979³⁶), the total deployment requirement translated to a minimum of 28 officers. The Maltese authorities opted to exceed this requirement to ensure for the strictest supervision possible.
- 10.5 During the Autumn 2017 live-capturing season (20 October 2017 to 31 December 2017), the enforcement authorities deployed a total overall complement of 74 officers to oversee and supervise the parameters of the derogation (Table 16).

³⁶ 3,715 finch live-capturing licences + 1,059 Golden Plover and Song Thrush licences less 795 persons in possession of both categories of licence = 3,979 licensed live-capturers

Table 16: Deployment of enforcement officers during the Autumn 2017 live-capturing season		
Entity	Number of officers	Duties
Administrative Law Enforcement Unit (ALE) of the Police	17	Field patrols, surveillance, inspections, investigations, prosecution
District police officers seconded to the (ALE)	26	Field patrols, surveillance, inspections, investigations, prosecution
Armed Forces of Malta	28	Field patrols and surveillance
Wild Birds Regulation Unit	3	Verification of compliance with registration conditions; field inspection of sites; assistance to police in prosecution processes, other expert services
Total	74	

10.6 Police and Armed Forces of Malta maintained a daily field deployment that ranged between a maximum of 43 officers and a minimum of 28 officers in the field at any point in time from 05:00hrs to 21:30hrs, effectively covering live-capturing activity times. This excludes all other non-field staff assigned on-duties related to supervision of the live-capturing season, or field staff on shift rotation.

10.7 During the period of the derogation enforcement officers carried out 19,099 field inspections in various localities around the Maltese Islands (14,688 in Malta and 4,411 in Gozo)—the highest enforcement effort since 2012, as shown in Figure 28 below. It should be noted that the number of on-site inspections in Gozo represents a fivefold increase when compared with the previous year ($n_{2016}=795$).



Source: Wild Birds Regulation Unit and Malta Police Force, 2018

10.8 In addition to site inspections, a total of 1,629 spot-checks (1,193³⁷ in Malta and 436 in Gozo) were conducted on individual licensees whilst they were carrying out their activity. Table 17 lists the number of enforcement officers deployed, number of field inspections conducted, spot-checks on individual live-capturers, offences detected and persons charged.

³⁷ Out of which 428 were road blocks/road checks.

Table 17 – Daily enforcement statistics during autumn live-capturing season

Date	Number of officers deployed 0500-1500 (ALE / District / AFM)		Number of officers deployed 1500-2100 (ALE / District / AFM)		Number of field inspections conducted (visits to specific areas)		Number of spot-checks on individual live-capturers		Offences detected (number of cases and nature of offence)		Number of persons charged and nature of action taken	
	Malta	Gozo	Malta	Gozo	Malta	Gozo	Malta	Gozo	Malta	Gozo	Malta	Gozo
20/10/2017	15	6	14	3	204	86	6	20	0	0	0	0
21/10/2017	14	2	14	3	204	63	26	13	0	0	0	0
22/10/2017	15	4	15	2	204	49	42	9	0	0	0	0
23/10/2017	13	5	14	2	204	80	17	12	0	0	0	0
24/10/2017	15	2	14	3	204	61	18	17	0	0	0	0
25/10/2017	15	2	14	3	204	73	18	13	0	1: trapping on unregistered site ³⁸	0	0
26/10/2017	15	3	14	3	204	46	85	12	0	0	0	0
27/10/2017	15	5	16	2	204	115	31	20	0	0	0	0
28/10/2017	16	5	14	2	204	75	45	6	0	0	0	0
29/10/2017	15	2	14	2	204	78	47	12	0	0	0	0
30/10/2017	16	5	15	2	204	25	46	6	1: illegal use of bird caller	0	1 person subjected to administrative fine of €250	0
31/10/2017	15	3	14	4	204	96	77	20	0	0	0	0

³⁸ Case refers to an unattended unregistered trapping site—all trapping paraphernalia including one Chaffinch (*Fringilla coelebs*) were seized. The Chaffinch was handed over to the Government Experimental Farm in Xewkija for life-time care since it was captive-bred (fitted with a genuine closed ring).

Date	Number of officers deployed 0500-1500 (ALE / District / AFM)		Number of officers deployed 1500-2100 (ALE / District / AFM)		Number of field inspections conducted (visits to specific areas)		Number of spot-checks on individual live-capturers		Offences detected (number of cases and nature of offence)		Number of persons charged and nature of action taken	
01/11/2017	12	2	16	3	204	24	25	2	0	0	0	0
02/11/2017	14	2	14	2	204	25	51	10	0	0	0	0
03/11/2017	14	2	13	3	204	59	17	7	0	0	0	0
04/11/2017	14	2	14	3	204	81	23	16	0	0	0	0
05/11/2017	13	2	14	4	204	71	26	9	0	0	0	0
06/11/2017	15	3	14	2	204	82	66	12	0	0	0	0
07/11/2017	13	4	14	4	204	78	46	13	0	0	0	0
08/11/2017	14	3	13	5	204	99	30	3	0	0	0	0
09/11/2017	14	2	14	3	204	54	2	14	1: illegal use of bird caller	0	1 person subjected to administrative fine of €250	0
10/11/2017	14	2	12	3	204	86	33	7	0	0	0	0
11/11/2017	13	5	14	3	204	76	34	10	0	0	0	0
12/11/2017	15	3	13	4	204	127	6	14	0	0	0	0
13/11/2017	15	3	14	3	204	47	9	7	0	0	0	0
14/11/2017	13	3	12	3	204	94	3	3	0	0	0	0
15/11/2017	13	3	14	3	204	15	8	4	0	0	0	0
16/11/2017	15	2	13	3	204	91	15	4	0	0	0	0
17/11/2017	16	4	14	2	204	55	34	23	0	0	0	0
18/11/2017	14	2	14	3	204	109	58	8	0	0	0	0
19/11/2017	15	5	14	3	204	61	15	2	0	0	0	0
20/11/2017	14	4	13	3	204	120	5	4	0	0	0	0

Date	Number of officers deployed 0500-1500 (ALE / District / AFM)		Number of officers deployed 1500-2100 (ALE / District / AFM)		Number of field inspections conducted (visits to specific areas)		Number of spot-checks on individual live-capturers		Offences detected (number of cases and nature of offence)		Number of persons charged and nature of action taken	
21/11/2017	14	2	14	3	204	70	21	13	0	0	0	0
22/11/2017	15	2	14	3	204	86	25	5	1: illegal use of bird caller	0	1 person subjected to administrative fine of €250	0
23/11/2017	14	3	14	5	204	66	15	9	0	0	0	0
24/11/2017	15	3	14	2	204	42	2	4	0	0	0	0
25/11/2017	15	2	15	3	204	19	1	9	0	0	0	0
26/11/2017	16	2	15	2	204	99	11	5	0	0	0	0
27/11/2017	15	5	14	5	204	98	4	4	0	0	0	0
28/11/2017	14	3	14	3	204	131	9	5	0	0	0	0
29/11/2017	14	2	14	3	204	13	0	4	0	0	0	0
30/11/2017	15	2	12	3	204	89	3	5	1: illegal use of bird caller	0	1 person subjected to administrative fine of €250	0
01/12/2017	14	6	14	3	204	82	5	2	0	0	0	0
02/12/2017	12	2	14	2	204	86	6	2	1: illegal use of bird caller	0	1 person subjected to administrative fine of €250	0
03/12/2017	15	4	14	4	204	50	4	2	0	0	0	0

Date	Number of officers deployed 0500-1500 (ALE / District / AFM)		Number of officers deployed 1500-2100 (ALE / District / AFM)		Number of field inspections conducted (visits to specific areas)		Number of spot-checks on individual live-capturers		Offences detected (number of cases and nature of offence)		Number of persons charged and nature of action taken	
04/12/2017	13	4	14	4	204	50	14	2	1: illegal use of bird caller	0	1 person subjected to administrative fine of €250	0
05/12/2017	14	2	13	2	204	6	0	3	0	0	0	0
06/12/2017	13	5	13	3	204	38	3	1	0	0	0	0
07/12/2017	14	2	12	2	204	20	1	0	0	0	0	0
08/12/2017	12	2	13	2	204	43	17	2	0	0	0	0
09/12/2017	12	2	14	2	204	91	0	3	0	0	0	0
10/12/2017	12	4	14	2	204	26	3	5	0	0	0	0
11/12/2017	13	2	12	2	204	57	1	0	0	0	0	0
12/12/2017	13	2	12	3	204	11	0	3	0	0	0	0
13/12/2017	12	3	14	2	204	70	3	0	0	0	0	0
14/12/2017	12	3	12	2	204	100	15	2	0	0	0	0
15/12/2017	13	2	12	2	204	8	0	0	0	0	0	0
16/12/2017	12	2	12	3	204	23	21	3	0	0	0	0
17/12/2017	13	6	14	3	204	78	0	0	0	0	0	0
18/12/2017	12	5	13	3	204	56	0	1	0	0	0	0
19/12/2017	12	2	12	3	204	53	2	0	0	0	0	0
20/12/2017	12	2	13	3	204	107	12	1	2: illegal use of bird caller	0	2 persons subjected to administrative fine of	0

Date	Number of officers deployed 0500-1500 (ALE / District / AFM)		Number of officers deployed 1500-2100 (ALE / District / AFM)		Number of field inspections conducted (visits to specific areas)		Number of spot-checks on individual live-capturers		Offences detected (number of cases and nature of offence)		Number of persons charged and nature of action taken	
											€250 each	
21/12/2017	13	3	14	3	204	53	0	0	0	0	0	0
22/12/2017	14	2	13	2	204	11	9	2	0	0	0	0
23/12/2017	12	3	13	3	204	13	4	0	0	0	0	0
24/12/2017	12	2	14	2	204	84	3	1	0	0	0	0
25/12/2017	13	2	14	2	204	10	0	1	0	0	0	0
26/12/2017	14	3	12	3	204	13	0	0	0	0	0	0
27/12/2017	12	2	13	2	204	7	10	2	0	0	0	0
28/12/2017	12	3	12	3	204	15	4	1	0	0	0	0
30/12/2017	12	3	12	3	204	84	1	1	0	0	0	0
31/12/2017	13	2	14	2	204	52	0	1	0	0	0	0
					Total	Total	Total	Total	Total	Total	Total	Total
					14,688	4,411	1,193	436	8	1	8	0

Source: Wild Birds Regulation Unit and Malta Police Force, 2018

10.9 During inspections, the Malta Police Force was responsible for ensuring the lawful operation of live-capturing practices. They were, *inter alia*, instructed to:

- Verify that live-capturers were in possession of all requisite documents;
- Verify that any captured birds had been immediately reported via mobile phone and fitted with a single use ring;
- Ensure compliance with time restrictions;
- Ensure that no species, other than those that could be captured under the specific licences were being targeted;
- Verify that the live-capturing site in use was the one that had been approved by the Wild Birds Regulation Unit;
- Verify that the conditions of the licence, such as the maximum limit of decoys present on site and the maximum number of allowed clap-nets and their respective sizes, were being complied with; and
- Ensure compliance with the provisions of the Conservation of Wild Birds Regulations (S.L.549.42) and other applicable legislation.

10.10 In order to facilitate the conduct of their duties, enforcement officers had 11 vehicles and four horses at their disposal. All vehicles were equipped with radio communication facilities, in order to enable contact with police officers from other sections/districts, and in order to allow for continuous liaison and coordination with the police headquarters. Police officers were also equipped with binoculars to facilitate their investigations on the ground. Police were also provided with a list of licensed live-capturers and access to real-time licensing and reporting database which facilitated the immediate identification of any live-capturers not in possession of the requisite Autumn live-capturing licence as well as the immediate verification of telephonic reports of birds caught.

10.11 Patrolling officers were also provided with portable tablet computers with mobile internet for access to enforcement web-based GIS, a pre-installed GIS as back-up in case mobile internet access was not possible in any specific location, as well as GPS link capability and geo-tagging photography capability. During inspections, police officers made extensive use of these devices, which have proven to be a very effective way of instantly verifying regulatory information pertaining to each licensee's permitted location. In the past, verification of live-capturers' registration and

licensing information necessitated time-consuming retrieval of physical documentation and site plans from office archives. With the introduction of a digital GPS-enabled system this process takes only a few seconds. Due to the introduction of this technology, enforcement officers were able to dedicate considerably greater share of their time to actual field surveillance duties, as opposed to documentation retrieval.

- 10.12 Further general information concerning enforcement deployment and relevant checks routinely conducted during field patrols and inspections is found in the video³⁹ available under the following link:

<https://www.youtube.com/watch?v=JNeUffX6Uqc>.

- 10.13 The Specialist Enforcement Branch of the Wild Birds Regulation Unit assisted the police in the coordination of overall enforcement effort, as well as conducted inspections and spot-checks both jointly and complementarily to police operations. Officers utilized various techniques, including vehicular patrols, covert observation, stationary observation posts, foot patrols, physical inspections and spot-checks on individual live-capturers.
- 10.14 In addition to surveillance and inspection effort provided by the police, prior to the opening of the season, WBRU enforcement officers carried out five targeted patrols in various localities in Malta and Gozo to detect any infringements related to live-capturing outside season. During the derogation period, WBRU enforcement officers conducted 19 spot-checks and performed 30 patrols and 20 covert observations covering multiple live-capturing sites. Following closure of the autumn live-capturing season, inspections by the ALE, Gozo Police and WBRU Specialist Enforcement Branch continued until the end of January 2018, extending the statutory minimum spot-check requirement of two weeks to a full month. An overview of the infringements detected is provided in the following section.

Infringements detected

- 10.15 Two trapping-related infringements were detected before the season opened—an active trapping site was detected and dismantled by WBRU enforcement officers in Gozo (Figure 29), whilst in a separate operation, the

³⁹ The video shows patrols and spot-checks conducted on licensed finch live-capturers during the finch live-capturing derogation. However, since the enforcement and strict supervision component is common for both derogations, the visual illustration of enforcement operations is relevant for the purposes of this report.

ALE seized two Hawfinches and a cage-trap in Malta. The two Hawfinches were fitted with closed rings having an internal diameter larger than the required standard for this species. Both specimens were released on the same day by WBRU officers in the presence of ALE after all relevant details were documented (Figure 30).



Figure 29: Active illegal trapping site at Ta' Ċenċ, Gozo. Photo taken on 16 October 2017.



Figure 30: Release of a pair of Hawfinches (*Coccothraustes coccothraustes*) seized on 16 October 2018.

- 10.16 Court action against two offenders has been initiated in relation to these cases. No infringements specifically related to the Golden Plover and Song Thrush derogation were detected during this period.
- 10.17 During the inspections carried out by enforcement staff throughout the derogation period, a total of nine live-capturing infringements were detected. Eight persons were issued with an automatic administrative fine of €250 each for illegal use of pre-recorded bird callers whilst trapping. All illicit devices were seized and destroyed. No legal action could be taken in relation to the other illegality since the person/s making use of an unregistered trapping site could not be traced (Figure 31). The nature of all disclosed infringements during the derogation period is outlined in Table 18 below, which also presents a comparison with the same statistics for the Finches derogations since 2013.



Figure 31: Pair of clap-nets within an unregistered site dismantled by WBRU enforcement officers in the presence of ALE. Photo taken on 30 November 2017 at Ħas-Saptan, l/o Ħal-Għaxaq.

- 10.18 Following closure of the live-capturing season, WBRU's Specialist Enforcement Branch detected three active finch live-capturing sites which were subsequently dismantled in the presence of police officials (Figure 32). Five Common Linnets and a Eurasian Siskin were seized from one of the live-capturing sites and released following removal of forged closed rings

(Figure 33). No offences specifically related to the Golden Plover and Song Thrush derogation were detected following closure of the live-capturing season.



Figure 32: Pair of clap-nets and finches seized by WBRU officers on 25 January 2018 in the presence of Gozo Police. Site at Xlendi, Gozo.



Figure 33: Release of a Common Linnet (*Linaria cannabina*) seized on 25 January 2018.

10.19 As at February 2018, legal action was in the process of being taken against one offender found to be illegally trapping finches before the season opened, while investigations on five infringements detected outside season were still ongoing at the time this report was drafted, including one case of illegal trapping within a bird sanctuary (Figure 34), two cases of illegal trapping of finches (Figures 32, 34 and 35), one case of illegal use of bird caller seized from a dismantled trapping site and another case of illegal use of cage traps for finches. Given that these cases were detected outside of the period of live-capturing derogations, the aforementioned data has been excluded from Tables 17 and 18.



Figure 34: Active illegal trapping site in Buskett Bird Sanctuary dismantled by WBRU enforcement officers in the presence of ALE. Photo taken on 16 January 2018.



Figure 35: Pair of clap-nets dismantled by WBRU enforcement officers on 25 January 2018 in the presence of Gozo Police. Site at Xlendi, Gozo.



Figure 36: Active trapping site during closed season dismantled by WBRU enforcement officers on 25 January 2018 in the presence of Gozo Police. Site at Xlendi, Gozo. This is the same site shown in Figure 32.

Table 18: Offences disclosed during autumn live-capturing seasons⁴⁰

	2013 (20.10.13–10.01.14)			2014 (20.10.14–31.12.14)			2015 (20.10.15–31.12.15)			2016 (20.10.16–31.12.16)			2017 (20.10.17–31.12.17)			
	Cases in Malta	Cases in Gozo	Total number of cases	Cases in Malta	Cases in Gozo	Total number of cases	Cases in Malta	Cases in Gozo	Total number of cases	Cases in Malta	Cases in Gozo	Total number of cases	Cases in Malta	Cases in Gozo	Total number of cases	
Trapping for protected birds	13	5	18	0	0	0	2	0	2	0	0	0	0	0	0	Decrease
Use of illegal means (e.g. cage traps; artificial light; vertical nets; decoys of protected birds; pre-recorded bird calls)	10	4	14	17	3	20	27	6	33	17	6	23	8	0	8	Decrease
Trapping using nets of prohibited mesh size	6	4	10	0	0	0	0	0	0	0	0	0	0	0	0	No Change
Using in excess of 21 live-decoys (Finches) whilst trapping	N/A	N/A	N/A	5	4	9	6	3	9	0	3	3	0	0	0	Decrease
Trapping during unpermitted	0	0	0	0	0	0	0	1	1	2	0	2	0	0	0	Decrease

⁴⁰ Since enforcement was carried out concurrently for both Finches and Golden Plover / Song Thrush derogations, this table includes statistics related to offences under both live-capturing regimes.

hours																
Trapping within bird sanctuaries	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	No Change
Trapping on unregistered sites	0	0	0	2	0	2	4	1	5	1	2	3	0	1	1	Decrease
Trapping using unmarked decoys	2	0	2	9	6	15	1	0	1	0	0	0	0	0	0	No change
Exceeding the seasonal quota of captured birds	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	No change
Failure to report captured bird	0	0	0	4	0	4	2	0	2	0	0	0	0	0	0	No change
Trapping without licence	7	5	13	3	0	3	8	1	9	0	0	0	0	0	0	No change
Total	38	18	57	41	13	54	50	12	62	20	11	31	8	1	9	Decrease
Number of persons apprehended	16	5	21	29	9	38	46	12	58	21	9	30	8	0	8	Decrease

Source: Wild Birds Regulation Unit and Malta Police Force, 2018

10.20 When compared with the 2013–2016 live-capturing seasons, the rate of disclosure for most types of violations in 2017 decreased. The above decrease in disclosed illegalities is, apart from improvements in field deployment, attributable also to the heightened awareness of regulations and threat of considerable legal deterrents against abuse.

11. CONCLUSIONS

11.1 The application of a finch live-capturing derogation in autumn 2017 was preceded by a series of profound analyses that considered all relevant legal, scientific and technical aspects pertaining to this derogation, as well as by an open and transparent discussion with all stakeholders.

11.2 As a result of these processes, the decision to apply derogation was made with full confidence that the following critical prerequisites will be met, without reservation:

- the derogation satisfies all the relevant parameters of the Birds Directive, and specifically the parameters stipulated in Article 9(1)(c); and
- the actual implementation of the derogation on the ground ensures that the relevant legal parameters enacted in pursuance of point (a) above are respected in the field through an elaborate and robust enforcement regime.

11.3 The Maltese authorities have subsequently ensured that the above two prerequisites were met in practice. After ascertaining that there is no other satisfactory solution other than the application of this limited and strictly controlled derogation, the authorities put into place a robust legal and regulatory regime that ensured that the scientific considerations pertaining to small numbers and conservation status of the species in question were being implemented in practice and that the relevant parameters of the derogation were fully respected.

11.4 Supervision on the ground was ensured through deployment of appropriately trained and suitably equipped field officers that have exponentially increased the intensity of field inspections in comparison with similar derogations in the previous three years. The use of latest state-of-the-art technology (GIS, GPS, portable tablet PCs, electronic game reporting

system, etc.) has resulted in a greater efficiency of the overall supervision process. This was aided further by very high levels of legal deterrents against wildlife crime in force since 2014, regulatory rigour (e.g. pre-screening, registration and digitalization of all site plans), and ongoing efforts at promoting education and regulatory awareness. The above efforts paid off in terms of a sustained reduction in the incidence of serious trapping-related violations that were prevalent in the past years.