Ministry of Environment

THE RED LIST OF BREEDING BIRDS IN JORDAN

Fares Khoury & Ehab Eid

2026



Jordan Species Specialist Group IUCN SSC

Part of IUCN SSC Species Survival Commission

الجمعية الأردنية لمراقبة الطيور
JORDAN BIRDWATCH

The Red-list

of Breeding Birds in Jordan

2026

Fares Khoury & Ehab Eid

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يتحمل المؤلف كامل المسؤولية القانونية عن محتوى مصنفه ولا يعّبر
هذا المصنف عن رأي دائرة المكتبة الوطنية أو أي جهة حكومية أخرى

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List of Abbreviations Used in This Book

Abbreviation	Full Term
AAO	Arabian Avifauna Observatory
AEMLAP	African-Eurasian Migratory Landbirds Action Plan
AEWA	Agreement on the Conservation of African-Eurasian Migratory Waterbirds
AOO	Area of Occupancy
AUM	American University of Madaba
CBD	Convention on Biological Diversity
CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora
CMS	Convention on the Conservation of Migratory Species of Wild Animals
CR	Critically Endangered
DD	Data Deficient
DSRM	Dead Sea Rift Margins
EIA	Environmental Impact Assessment
EN	Endangered
EOO	Extent of Occurrence
ERFAP	Environmental Resource Framework Action Plan
EU	European Union
EW	Extinct in the Wild
EX	Extinct
GBIF	Global Biodiversity Information Facility
GIS	Geographic Information System
IPBES	Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services
ISBN	International Standard Book Number
IUCN	International Union for Conservation of Nature
JBW	Jordan Birdwatch Association
JOD	Jordanian Dinar
LC	Least Concern
MOE	Ministry of Environment
MOU	Memorandum of Understanding
NA	Not Applicable
NE	Not Evaluated
NT	Near Threatened
OSME	Ornithological Society of the Middle East
PE	Possibly Extinct
RE	Regionally Extinct
ROWA	Regional Office for West Asia
RP	Regional Population
RSCN	Royal Society for the Conservation of Nature
SSC	Species Survival Commission
SW	Southwest / Southwestern
UN	United Nations
UNESCO	United Nations Educational, Scientific, and Cultural Organization
VU	Vulnerable



Azraq; photo: © Fares Khoury

Foreword



It is with great pride that I present The Red List of Breeding Birds in Jordan. This landmark national publication reflects Jordan's firm commitment to conserving its natural heritage and fulfilling its responsibilities toward global biodiversity.

Jordan's biodiversity is integral to the Kingdom's natural heritage and a defining element of its national identity. Situated at the meeting point of three continents, Jordan hosts an exceptional diversity of birdlife shaped by its unique landscapes, climatic gradients, and ecosystems, ranging from deserts and steppe ecosystems to wetlands, highlands, and the Rift Valley. This richness is not only a source of national pride but also a valuable ecological asset that underpins ecosystem resilience, cultural values, and sustainable development. Preserving this natural heritage is therefore not an option, but a national responsibility owed to future generations and to the global community.

This publication stands as a national statement of Jordan's commitment to safeguarding its natural assets through informed leadership and responsible governance. It reflects the Kingdom's determination to place biodiversity conservation at the heart of national priorities, to recognize the importance of birds as indicators of environmental health, and to ensure that decisions affecting nature are guided by knowledge, foresight, and long-term national interest.

The findings of this assessment directly support the implementation of Jordan's National Biodiversity Strategy and Action Plan and contribute to the Kingdom's international commitments under the Kunming–Montreal Global Biodiversity Framework. They also underscore the importance of strengthening national coordination, promoting balanced development, enhancing protection of natural sites, and fostering a shared sense of responsibility for conserving Jordan's ecosystems as a foundation for economic stability, environmental security, and societal well-being.

I commend the authors and all experts and institutions who contributed to this work for their professionalism, dedication, and collaborative spirit. Their efforts demonstrate the strength of national expertise and the value of partnerships in advancing conservation outcomes. I also acknowledge the important role of civil society, academic institutions, and local communities in supporting bird conservation and biodiversity protection across the Kingdom.

The Ministry of Environment remains committed to translating the outcomes of this work into meaningful national action. In this regard, I wish to acknowledge the dedicated efforts of the Nature Directorate at the Ministry of Environment for its pivotal role in facilitating and coordinating national efforts that underpin and strengthen the Ministry's work in biodiversity conservation and environmental protection. I trust that this publication will serve as a valuable reference for decision-makers and stakeholders, and as an invitation to all Jordanians to take pride in, and responsibility for, protecting our birds and the natural heritage they represent, today and for generations to come.

H.E. Dr. Ayman Suleiman
Minister of Environment, Jordan

Foreword



As Chair of the IUCN Species Survival Commission, it is a privilege to introduce "The Red List of Breeding Birds in Jordan", a landmark publication that represents a major scientific and conservation achievement for the country and the wider West Asian region.

This volume is the first comprehensive national assessment of Jordan's breeding avifauna and provides an authoritative baseline for understanding extinction risk among breeding bird species in Jordan.

Jordan occupies a uniquely important biogeographic position at the crossroads of three continents and along one of the world's most significant migratory flyways. At the same time, it faces acute pressures from habitat loss, water scarcity, land-use change, climate variability, and unsustainable exploitation. The results presented in this book, highlighting high levels of threat, particularly among raptors and wetland-dependent species, as well as the regional extinction of several iconic taxa, are therefore both scientifically compelling and deeply concerning. They send a clear and timely message about the urgency of conservation action.

I commend the authors, Dr. Fares Khoury and Mr. Ehab Eid, for their leadership, scientific integrity, and long-term commitment to Red List assessment and bird conservation in Jordan. Their work reflects not only technical excellence but also a strong collaborative spirit, drawing on national expertise, institutional support, and stakeholder engagement under the Ministry of Environment's auspices. This publication stands as an example of how national Red Lists can effectively bridge science and policy, supporting biodiversity planning, protected-area management, hunting regulation, and international reporting under the Kunming–Montreal Global Biodiversity Framework.

Beyond its immediate national relevance, this Red List contributes to the IUCN's global knowledge base, strengthens regional conservation efforts, and reinforces the critical role of national assessments in preventing species extinctions. I hope it will be widely used by policymakers, conservation practitioners, researchers, and civil society, and inspire concrete actions to safeguard Jordan's birds and the ecosystems on which they depend.

On behalf of the IUCN Species Survival Commission, I congratulate all those involved in preparing this important work and encourage its use as a foundation for decisive, evidence-based conservation action, now and for generations to come.

Vivek Menon FLS
Chair, IUCN SSC
New Delhi, India.

Executive Summary

This publication presents the first comprehensive national assessment of breeding birds in Jordan using the IUCN Red List Categories and Criteria and the Guidelines for Application of the IUCN Red List Criteria at Regional and National Levels. The assessment was conducted under the auspices of the Ministry of Environment and directly supports Jordan's National Biodiversity Strategy and Action Plan (2026–2030) and national reporting under the Kunming–Montreal Global Biodiversity Framework.

The breeding populations of 168 bird species were assessed in Jordan in accordance with the IUCN Red List Categories and Criteria and the Guidelines for the Regional and National Levels. The national assessment identified 13 species (7.7%) as Regionally Extinct (RE). 67 species (39.9% of all assessed species) were classified as threatened, including 21 Critically Endangered (CR) species (12.5%), 19 Endangered (EN) species (11.3%), and 27 Vulnerable (VU) species (16.1%). In addition, 16 species (9.5%) were assessed as Near Threatened (NT), 58 species (34.5%) as Least Concern (LC), and 14 species (8.3%) as Data Deficient (DD). Based on the IUCN Red List statistical approach, the best estimate of the proportion of threatened breeding bird species in Jordan is 47.5%, which demonstrates a high risk of extinction for breeding bird populations in Jordan and an urgent need for action.

Several threatened species are characterized by very small national populations, often fewer than 1000, and in some cases fewer than 250 mature individuals, restricted areas of occupancy, and continuing declines in habitat extent and quality. The presence of 14 Data Deficient species further underscores significant knowledge gaps and the need for strengthened monitoring and targeted research.

Marked differences in extinction risk occur among ecological and taxonomic groups. Raptors are among the most imperiled taxa, reflecting persistent pressures such as persecution, poisoning, disturbance, and the destruction of nesting sites, as well as habitat degradation that reduces prey availability. Wetland-dependent breeding species are also highly vulnerable, particularly those reliant on marshes, reedbeds, and other well-vegetated aquatic habitats.Threatened wetland birds span multiple families and species that depend on intact riparian and other wetland habitats. Illegal hunting continues to exert strong pressure on bustards, partridges, sandgrouse, and other game species, several of which are threatened or regionally extinct as breeders.

Spatial variation in extinction risk is evident across landscapes and habitats, with western Jordan, where habitats are spatially restricted and subject to multiple interacting threats, supporting a higher bird diversity and proportion of threatened species. In contrast, the extensive deserts of central, eastern, and parts of southern Jordan generally experience lower or more localized threat intensity.

Overall, this Red List demonstrates that Jordan's breeding avifauna is under substantial and uneven pressure, with extinction risk concentrated among top predators and species dependent on wetlands, native woodlands, and shrublands. The findings provide a robust scientific baseline for policy development, protected-area planning, habitat restoration, enforcement of hunting regulations, and species recovery planning, while establishing a reference point for tracking future population trends at the national scale.

الملخص التنفيذي

يعتبر هذا هو الكتاب الأول من نوعه الذي يوفر تقييم وطني شامل لأنواع الطيور المتكاثرة (المفرخة) في الأردن استنادًا إلى فئات ومعايير القائمة الحمراء للاتحاد الدولي لحماية الطبيعة (IUCN) وإرشادات تطبيقها على المستويين الإقليمي والوطني. وقد أُجري هذا التقييم تحت رعاية وزارة البيئة، ويدعم بصورة مباشرة تنفيذ الاستراتيجية الوطنية للتنوع الحيوي وخطة العمل (2026–2030)، إضافة إلى متطلبات الإبلاغ الوطني ضمن الإطار العالمي للتنوع الحيوي "كونمينغ–مونتريال".

تم تقييم 168 نوع من الطيور المتكاثرة في الأردن وفقًا لمعايير وفئات القائمة الحمراء للاتحاد الدولي لحماية الطبيعة وإرشادات تطبيقها على المستويين الوطني والإقليمي. وأظهرت نتائج التقييم أن 13 نوع (7.7%) مصنفة على أنها منقرضة إقليميًا (RE) أي أنها لم تعد تتكاثر في الأردن رغم استمرار وجودها في مناطق أخرى من العالم. وتم تصنيف 67 نوع (39.9% من إجمالي الأنواع المقيّمة) كمهددة بالانقراض، وتشمل 21 نوعًا مهددًا بالانقراض بشكل حرج (CR) بنسبة 12.5%، و 19 نوع مهدد بالانقراض (EN)بنسبة 11.3%، و 27 نوع معرض للانقراض (VU) بنسبة 16.1%. كما تم تصنيف 16 نوع (9.5%) ضمن فئة الانواع التي تقترب من التهديد (NT) و 58 نوع (34.5%) ضمن فئة الانواع غير المهددة بالانقراض (LC) في حين تم تصنيف 14 نوعًا (8.3%) ضمن فئة الانواع التي لا تتوفر بيانات كافية لتصنيفها (DD). وبالاستناد إلى المنهجية الإحصائية المعتمدة في القائمة الحمراء للاتحاد الدولي لحماية الطبيعة ، فإن أفضل تقدير لنسبة عدد الأنواع المهددة في الأردن يبلغ 47.5% من الأنواع المفرخة الموجودة حاليًا، حيث تدل هذه النسبة على درجة عالية من التهديد لجماعات الانواع المفرخة والحاجة الماسة للعمل التشاركي على جميع المستويات من أجل حمايتها من المخاطر المتزايدة .

تتميّز العديد من الأنواع المهددة بأعداد وطنية صغيرة جدًا، بعضها لا يتجاوز 250 فردًا بالغًا، إضافة إلى محدودية نطاق انتشارها واستمرار تدهور مساحات وجودة موائلها. كما يعكس تصنيف 14 نوعًا ضمن فئة البيانات غير الكافية وجود فجوات معرفية مهمة تستدعي تعزيز برامج الرصد والبحوث الموجهة.

وتظهر فروق واضحة في مستويات مخاطر الانقراض بين المجموعات البيئية المختلفة. إذ تُعد الجوارح من أكثر المجموعات تعرضًا للخطر، نتيجة ضغوط مستمرة تشمل القتل والصيد والتسميم وتدمير أو إزعاج مواقع التعشيش وتدهور مناطق التغذية وانخفاض وفرة الفرائس. كما تُعد الأنواع المتكاثرة المعتمدة على الأراضي الرطبة من الفئات شديدة الحساسية، ولا سيما تلك المرتبطة بالسبخات والمستنقعات والمناطق التي تنتشر فيها أحزمة نبات القصب والغطاء النباتي الرطب. ويستمر الصيد غير المشروع في فرض ضغوط كبيرة على انواع متعددة مثل الحجل والشنار والقطا وغيرها من تلك الأنواع المفضلة لدى الصيادين، وقد أصبح عدد منها مهددًا أو منقرضًا إقليميًا كنوع مُتكاثر.

كما تتباين مستويات المخاطر بين الأقاليم البيئية، حيث تسجل مناطق غرب الأردن نسبة أعلى من الأنواع المهددة نظرًا لتركز الضغوط في موائل محدودة المساحة وأنواع ذات تجمعات قليلة وفي المقابل، تمتد الصحارى الواسعة في وسط وشرق وجنوب الأردن، حيث تتراوح شدة الضغوط بين ضغوط محلية قليلة أو واسعة الانتشار.

بصورة عامة، توضح هذه القائمة الحمراء أن طيور الأردن المتكاثرة تتعرض لضغوط كبيرة وغير متوازنة مع حالتها، تتركز بشكل خاص على المفترسات العليا والأنواع المعتمدة على الأراضي الرطبة والغابات الطبيعية والأحراج المتوسطية والسهوب. وتوفر نتائج هذا التقييم أساسًا علميًا راسخًا لدعم تطوير السياسات الوطنية، وتخطيط وإدارة المحميات، واستعادة الموائل، وتعزيز إنفاذ تشريعات الصيد، وإعداد برامج تعافي الأنواع، كما تشكل مرجعًا وطنيًا لمتابعة الاتجاهات المستقبلية في أعداد الطيور على المستوى الوطني.

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The authors extend their sincere gratitude to the Ministry of Environment, under whose auspices this national work was conducted. This publication represents the first such effort to assess the extinction risk of breeding bird species in Jordan. This work contributes directly to achieving the national objectives outlined in the National Biodiversity Strategy and Action Plan (2026–2030), endorsed by the Prime Minister's Office in 2025 and led by the Ministry of Environment for implementation, in fulfillment of Jordan's commitments under the Kunming–Montreal Global Biodiversity Framework of the Convention on Biological Diversity. In this context, the authors wish to express special thanks to Mr. Bilal Qteshat, Director of the Nature Protection Directorate at the Ministry of Environment, for his valuable support in ensuring the success of this work, as well as to Mr. Ahmad Abbas, Head of the Nature Protection Division, for his support during the design and implementation phase.

We also appreciate the support of the IUCN Regional Office for West Asia (ROWA) for providing space for the species assessment consultation workshops.

We extend our sincere appreciation to all colleagues who participated in the species assessment workshops and contributed information that strengthened the evaluation process. Special thanks are due to colleagues from the Royal Society for the Conservation of Nature (RSCN), including Mr. Abdel Razzaq Al-Hmoud (Director of Sustainable Hunting and Wildlife Law Enforcement), Mr. Hazem Hreisha (Azraq Wetland Reserve Manager), Mr. Tareq Qaneer (Head of Birds' Projects Management Unit), Mr. Mohammad Al-Aqra (Bird Researcher), Mr. Tamer Oqeili (Researcher, Azraq Wetland Reserve), and Mr. Feras Rahahleh (Aqaba Bird Observatory Manager and Climate Change Specialist). The authors also thank Mr. Laith Al-Maghrebi (Technical Manager, Fieldfare Ecology), Mr. Abdullah Al-Ashoush (Bird Researcher), Mr. Ahmad Deeb, Marjorie Rapp, and Alistair Walsh (Jordan Birdwatch) for their valuable contributions during the assessment workshops. Further appreciation is extended to Mr. Mohammad Al-Zoubi (Ornithology Department Manager, King Salman Royal Reserve Authority) and Mr. Malek Al-Owaji (Senior Analyst, Eco Consult).

The authors would also like to thank Mr. Waseem Alhayek for his participation in the workshop and for providing a collection of high-quality photographs of various bird species. In this regard, sincere thanks are also extended to Mr. Raad Al-Btoush, Mr. Ramez Al-Tamimi, and Mr. Ammar Al-Omari for providing professional, high-resolution photographs of birds, which played an important role in enhancing the final visual presentation.

The authors also wish to thank Ms. Miral Al-Hudairy, Ms. Zain Humaidi, Mr. Al-Mothana Mahadeen, and Ms. Jood Aneed, students of Biology and Biotechnology at the American University of Madaba (AUM), for their assistance and support during the preparation of this publication. Their enthusiasm and contributions are sincerely appreciated.

This study utilizes occurrence data obtained from eBird, a citizen science initiative managed by the Cornell Lab of Ornithology, and iNaturalist, an independent nonprofit organization dedicated to biodiversity documentation. We acknowledge and appreciate the valuable contributions of observers whose submitted records made this analysis possible.

This work was carried out through the voluntary dedication of its authors and contributors, inspired by a deep belief that efforts safeguarding Jordan's land, resources, and natural heritage need no incentive beyond responsibility and care. Rich in species that form part of the country's identity, this heritage deserves protection, and the authors hope this work will guide meaningful conservation action to secure these species for future generations. The authors extend their sincere apologies to any individual or institution whose contribution may have been unintentionally overlooked.

1.

The IUCN Red List Framework and Assessment Procedures

1.1 The IUCN Red List: Scientific Framework and Purpose

1.2 Red List Categories and Regional Application

1.3 Conservation and Policy Relevance

1.4 Assessment Framework and Methodology



Wadi Moujeb; photo: © Ehab Eid

1.1 The IUCN Red List: Scientific Framework and Purpose

The IUCN Red List of Threatened Species is internationally recognized as the most authoritative system for evaluating species' extinction risk. Since its establishment in 1964, it has developed into a global scientific standard for assessing the conservation status of animals, plants, and fungi across terrestrial, freshwater, and marine ecosystems. Its credibility is founded on clearly defined quantitative criteria, applied through a rigorous, transparent, and repeatable process that ensures consistency and comparability across regions and taxonomic groups.

Each assessment integrates information on a species' geographic distribution, population size and trends, habitat requirements, ecological characteristics, levels of exploitation, threats, and conservation actions. By synthesizing these data within a standardized analytical framework, the Red List transforms scientific evidence into practical guidance for conservation planning and decision-making.

The overarching purpose of the Red List is to identify species at risk of extinction and to monitor changes in their status over time. Through standardized categories and criteria, it enables objective comparisons across taxa and regions, facilitating the detection of biodiversity declines, recoveries, and emerging conservation priorities.

1.2 Red List Categories and Regional Application

Species are classified to reflect their extinction risk. These range from Extinct (EX) and Extinct in the Wild (EW) to the threatened categories, including Critically Endangered (CR), Endangered (EN), and Vulnerable (VU), which indicate extremely high, very high, and high risks of extinction in the wild, respectively. Additional categories include Near Threatened (NT), Least Concern (LC), Data Deficient (DD), and Not Evaluated (NE). In regional and national contexts, Regionally Extinct (RE) and Not Applicable (NA) may also be applied (Figure 1).

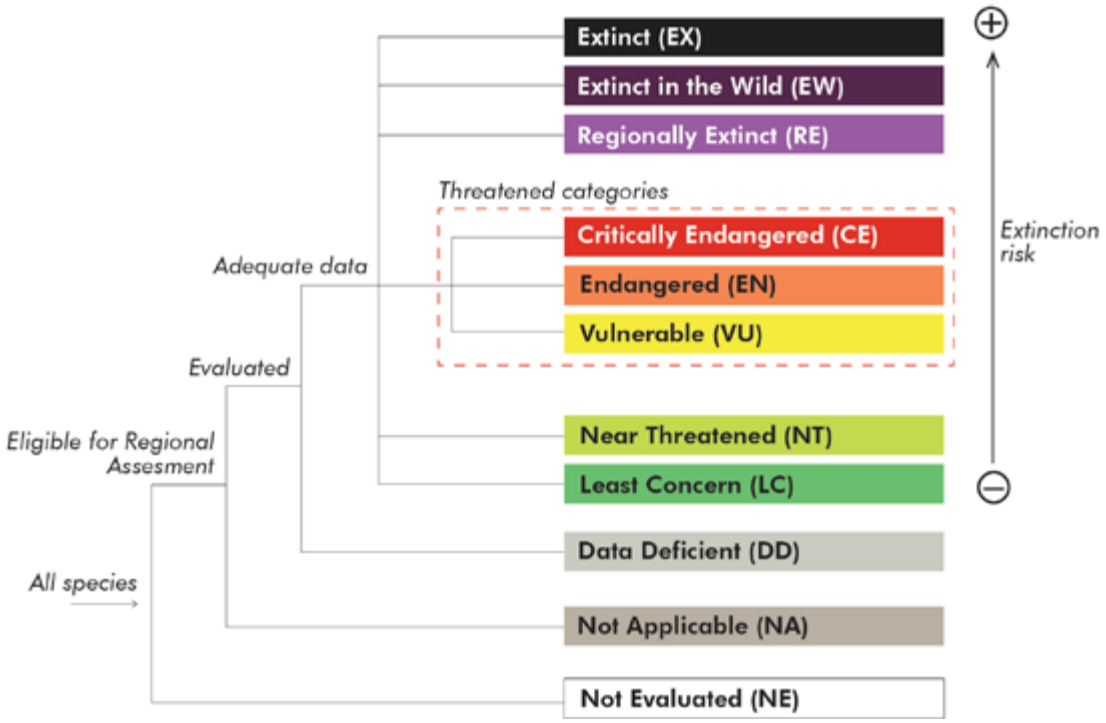


Figure (1): IUCN Red List categories and regional assessment framework.

Although originally designed for global assessments, the Red List framework is widely implemented at regional and national scales. The Guidelines for Application of the IUCN Red List Categories and Criteria at Regional and National Levels provide methodological direction for adapting global criteria to geographically defined areas while maintaining scientific rigor. These guidelines ensure explicit consideration of migratory dynamics, marginal or isolated populations, introduced taxa, and the potential influence of populations outside the assessment region, including possible "rescue effects".

By maintaining consistency with global standards, regional and national assessments contribute to a coherent international knowledge base and produce results directly relevant to domestic conservation policy and management.

1.3 Conservation and Policy Relevance

Beyond classification, the Red List is a strategic conservation instrument. By identifying threatened species and clarifying the drivers of decline, it supports prioritizing conservation action, recovery planning, and the allocation of limited resources. It also documents improvements in status where effective management has reduced extinction risk.

Red List data underpin global biodiversity indicators, such as the Red List Index, which are used to monitor progress under the Convention on Biological Diversity and the Kunming–Montreal Global Biodiversity Framework. Assessments contribute to reporting under the Sustainable Development Goals, particularly Goal 15, and inform multilateral environmental agreements, including CITES, CMS, and the Ramsar Convention, as well as science–policy platforms such as IPBES. At the national level, Red Lists provide the scientific foundation for integrating biodiversity considerations into environmental impact assessment, spatial planning, sectoral policies, and conservation finance. In Jordan, Red List assessments directly support the implementation of the National Biodiversity Strategy and Action Plan (2025–2050), strengthening policy coherence between national priorities and global commitments.

1.4 Assessment Framework and Methodology

At the outset, the IUCN Red List Categories and Criteria (Version 3.1) were formally adopted as the primary framework for evaluating extinction risk, together with the Guidelines for Application of the IUCN Red List Categories and Criteria at Regional and National Levels. Adherence to these internationally recognized standards ensured methodological rigor, transparency, and full comparability with regional and global assessments.

The assessment began with a comprehensive review of all bird species documented as breeding in Jordan, drawing on published literature, national monitoring datasets, expert consultation, and biodiversity databases. Scientific names and taxonomic status were carefully verified to ensure consistency and accuracy. Taxonomic validation was undertaken using Birds of the World (Billerman *et al.*, eds., 2025) and the OSME Region List of Bird Taxa (Blair *et al.*, 2025), thereby establishing a standardized, authoritative baseline species list.

Species were then screened to determine eligibility for assessment. The final list included resident species, regular summer breeders, and former breeding species. Migratory taxa occurring solely as non-breeding visitors were classified as Not Evaluated (NE), mainly due to insufficient information on breeding populations within Jordan. Vagrants, introduced species, and irregular breeders influenced by natural environmental fluctuations were excluded and categorized as Not Applicable (NA, see appendix 2). The assessment, therefore, focused strictly on national breeding populations.

For each eligible species, available information was compiled using standardized data sheets aligned with IUCN data fields. Data included current and historical distribution, population size and trends, habitat status, threats classified under the IUCN Threat Classification Scheme, and conservation actions in place. Occurrence records were obtained from the Jordan BirdWatch database, eBird, iNaturalist, and additional documented sources cited in the species accounts.

Where data were incomplete or uncertain, limitations were explicitly documented, and species were assigned to the Data Deficient (DD) category where appropriate. Preliminary maps of the Extent of Occurrence (EOO) were prepared and reviewed during a two-day national assessment workshop that brought together ornithologists, researchers, conservation practitioners, birdwatchers, and relevant stakeholders. The workshop validated species lists, reviewed distribution data, and refined assessments of population trends and threats.

Extinction risk categories were assigned by applying IUCN Criteria A–E at the national scale using the best available evidence. Where possible, spatial analyses were used to estimate the Extent of Occurrence (EOO) and Area of Occupancy (AOO). Each category assignment was supported by documented justification and quantitative evidence. Following preliminary categorization, regional adjustments were applied where relevant in accordance with the IUCN Regional Guidelines.

Assessors evaluated demographic connectivity and the likelihood that immigration from outside Jordan could reduce extinction risk. Any adjustments were applied conservatively and fully justified, with explicit consideration of potential rescue effects.

All assessments underwent expert review to ensure scientific accuracy, internal consistency, and compliance with IUCN standards. Differences of interpretation were resolved through documented consensus. Finalized assessments were submitted for technical validation and formal endorsement by the responsible national authority. The Red List of Breeding Birds in Jordan was prepared for publication as a national report and for dissemination through national biodiversity platforms. The methodology, criteria, and lists of assessors and reviewers are publicly documented to ensure transparency. The results are intended to inform national conservation planning, policy development, and international reporting obligations while remaining fully compatible with global and regional IUCN Red List assessments.



Glossy Ibis (Plegadis falcinellus); photo: © Fares Khoury

2.

Avifaunal Regions and Threats in Jordan

2.1 Overview of Avifaunal Regions of Jordan

2.2 The Main Threats to Breeding Birds in Jordan



Dana; photo: © Fares Khoury

2.1 Overview of Avifaunal Regions of Jordan

Jordan is located at the crossroads of Eurasia and Africa, a biogeographically strategic position that, together with pronounced altitudinal gradients and marked topographical and geological diversity, has created a wide spectrum of bioclimatic zones and habitats. These range from Mediterranean-type woodlands in the highlands and along the upper margins of the Rift Valley, to subtropical open scrub and savanna formations within the Rift Valley, and extend eastward to steppe landscapes and rolling sandy-gravel deserts, or rugged, rocky deserts characterized by hilly and mountainous terrain. This environmental heterogeneity underpins a diverse avifauna, with species assemblages adapted to distinct ecological conditions across the country.

A broad and practical habitat classification was proposed by Andrews (1995), who divided Jordan into avifaunal regions based on integrated topographical, geomorphological, climatic, and vegetation criteria (Figure 2). While these regions provide a useful ecological framework, considerable variation exists within each zone, and transitional areas occur between them. In western Jordan in particular, habitat mosaics are often complex and heterogeneous, contributing to high species diversity and overlapping bird distributions.

The Rift Valley is located along the western border; this lowland is partially below sea level, with an arid subtropical climate, subdivided into distinct areas with increasing aridity towards the south: Jordan Valley (flat, subtropical area, mostly converted into an agricultural landscape), Dead Sea, Wadi Araba, and the Gulf of Aqaba. The northern Jordan Valley still includes patches and strips of Tamarisk thickets and reeds along small streams and canals, in addition to dry salt marshes, arid plains, and agricultural habitats, some of which include irrigation and fish ponds; the Dead Sea basin and the Wadi Araba encompass low-lying arid desert, rocky slopes, alluvial fans covered with stones, plains and dunes covered by sand and gravel, dry salt marshes, arid *acacia* savannah, and small oases.

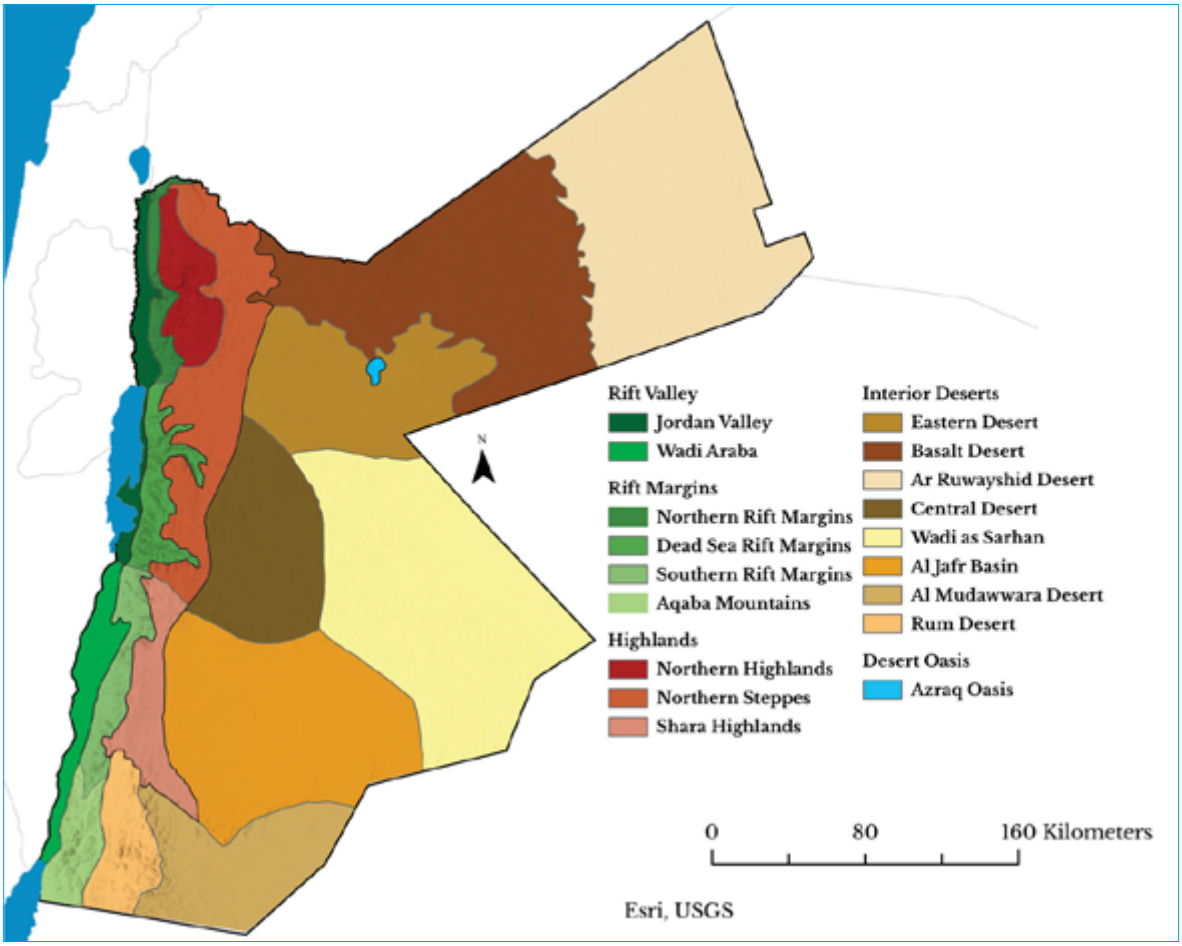


Figure (2): Avifaunal regions of Jordan (Source: Andrews, 1995).

The Rift margins are the western slopes and valleys of the highlands that face and run parallel to the Rift Valley, in a north-south direction. The Rift margins also include distinct subdivisions that increase in aridity from north to south, and from high to low elevations: the Northern Rift Margins, the Dead Sea Rift Margins, the Southern Rift Margins, and the Aqaba Mountains. These include heterogeneous landscapes with altitudinal climatic gradients, steep slopes, rocky cliffs, and deep valleys, ranging from hundreds of meters below sea level near the Dead Sea to over 1,000 meters above sea level. These altitudinal and geological gradients also create a distinct zonation in climate and vegetation, ranging from arid slopes with steppe-like or arid scrub vegetation to open woodland at higher elevations. Smaller valleys, gorges, steep slopes, and cliffs are common along the Rift margins and therefore attract several raptor and owl species.

The Highlands, range from north to south, just east of and parallel to the Rift Margins and are subdivided into the Northern Highlands (Irbid –Amman), with a typical Mediterranean climate and including areas with dense or open Mediterranean-type woodland, the northern steppes (Mafraq – Karak), and the Southern Highlands with high altitudes and steppe-like habitats (Tafila south to Ras En-Naqab near Ma'an).

The arid interior desert, comprising 75% of Jordan's area, is subdivided into distinct desert regions based on geology and drainage basins. The climate is arid to hyperarid, but more continental than the subtropical climate of the Rift Valley. Much of this region comprises a rolling, barren landscape, covered by extensive gravel and stone deposits and interrupted by shallow wadis and hilly areas with small cliffs. The interior desert is generally composed of the sandy-gravel Hamada Desert and the Basalt Desert in the North. The mountainous Rum Desert (east of Aqaba) is characterized by wide, sandy wadis and mudflats that separate the high, towering mesas.

2.2 The main threats to breeding birds in Jordan

The main threats to breeding birds are shown in Figure (3) below, which shows a general pattern of importance at the national level, although this may differ across regions and habitats. The aim here is to classify threats at various levels according to IUCN guidelines, along with descriptions of these threats and their relative importance across different avifaunal regions or habitats. It is not our aim to suggest priorities for tackling threats, as in most cases, a combination of threats and factors affects the extinction risk of individual species or groups exposed to the same

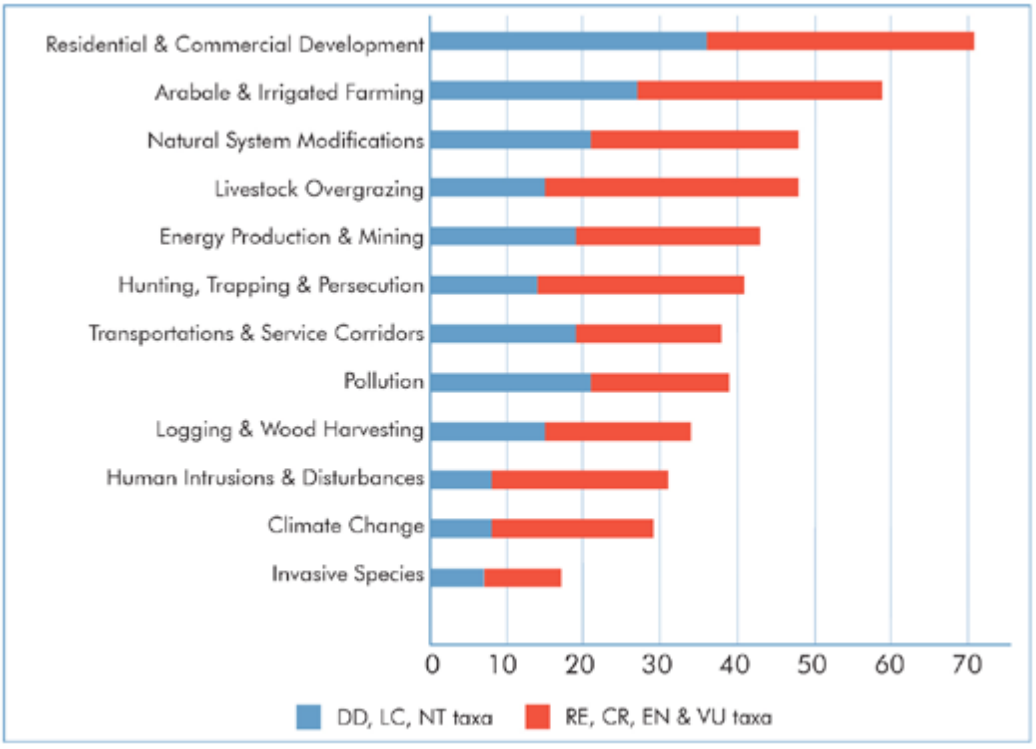


Figure (3): Major threats to breeding birds in Jordan. The X-axis represents the number of bird taxa according to conservation status: Blue: DD, LC, and NT taxa; Red: RE, CR, EN, and VU taxa.

threats. Multiple threats that are relevant to each case should therefore be considered in any effective action plan.

The breeding bird fauna of Jordan is exposed to a wide range of anthropogenic and environmental threats. These threats vary in spatial scale and intensity across avifaunal regions and habitats, but collectively contribute to habitat loss and degradation, population declines, and increased extinction risk for many taxa. The following description summarises the primary threats, in alignment with the IUCN Threat Classification Scheme, and is supported by observations, published studies, and national statistics (e.g., Department of Statistics, 2026; UN-Habitat Jordan, 2026; Andrews, 1991, 1995).

- **Residential & Commercial Developments:** Urban expansion represents one of the most extensive and spatially impactful threats to breeding birds in Jordan. Rapid growth in housing, commercial areas, roads, and associated infrastructure has led to large-scale habitat loss and fragmentation, particularly in north-western Jordan, where human population density is highest, and breeding species richness is greatest (Department of Statistics, 2026; UN-Habitat Jordan, 2026). Mediterranean-type woodlands, open shrublands (Maquis and Batha semi-steppe vegetation), and Irano-Turanian dwarf-shrub and grassland steppes of the Northern Steppes are particularly affected. Rapid urban and tourism development in Aqaba is expanding northward into Wadi Araba and along the Rift margins, further reducing natural breeding habitats. Recreational infrastructure and resorts are increasingly affecting ecologically sensitive areas, including desert wadis and escarpments.

- **Agricultural Expansion & Intensification:** The spread of irrigated annual and perennial crops has transformed shrublands, wetlands and dry salt marshes, steppe ecosystems, remnant Mediterranean woodland, sand dunes, and arid *Acacia* Savanah, particularly in the Jordan Valley, Rift Margins, Northern Highlands, and parts of Wadi Araba. Conversion of native vegetation into large olive groves and other monocultures has reduced habitat area and quality essential for many breeding species (Al-Eisawi, 1996). In Wadi Araba, removal of *Acacia* stands has negatively affected species dependent on arid scrub habitats, including the Critically Endangered Arabian Warbler, while sand dunes are being encroached by intensive farming activities (Khoury & Al-Shamlih 2006). Agricultural intensification also contributes to habitat fragmentation, increased human disturbance, excessive water abstraction, and agrochemical pollution.

- **Natural System Modifications:** Hydrological alteration is one of the most significant drivers of wetland decline in Jordan. Dam construction, surface-water diversion, and groundwater over-pumping have substantially reduced water flow in springs, streams, and floodplains, leading to the drying of key wetlands such as Azraq during the 1980s (Andrews, 1991; Andrews, 1995; Waitzbauer & Petutschnig, 2004; Abu-Sharar, 2006). Dams along desert wadis reduce downstream flooding events at mudflats that are important breeding habitats for threatened species such as the Greater Sand-Plover and other specialists of seasonal wetlands. Additional modifications include afforestation (tree-planting) projects in naturally arid ecosystems, the replacement or abandonment of traditional rain-fed cereal farming, and fires in woodland habitats. These changes alter habitat structure and ecological dynamics.

- **Nomadic & Small-Holder Grazing:** Overgrazing is a major cause of vegetation degradation across shrublands, steppe, and wetland habitats. High densities of sheep and goats reduce vegetation cover, impair shrub regeneration, and increase soil erosion (Albert *et al.*, 2004; Khoury, 1998). Grasslands in the Northern Steppe have largely been replaced by more tolerant, unpalatable dwarf shrubs (Albert *et al.*, 2004). While some grassland species, such as Calandra Lark, locally benefit from rain-fed cereal fields, such traditional farming activities are being increasingly abandoned. Camels and goats further degrade desert scrub and remnant salt marshes in the Jordan Valley. Livestock numbers have increased substantially over recent decades, intensifying habitat pressure. Grazing disturbance also facilitates the spread of invasive plants such as *Prosopis juliflora* . Combined with drought and water abstraction, grazing increases the extinction risk for species dependent on dense scrub, *Tamarix* sp. thickets, and marshland habitats (Khoury & Körner, 2018).

- **Energy Production & Mining:** Oil-shale extraction, quarrying, mining, and expansion of

renewable energy projects in desert and steppe regions pose increasing threats to breeding habitats. Habitat loss and fragmentation are of particular concern in central and southern Jordan, including the Rift margins, which support high bird species richness and several threatened raptors. Wind farms, powerlines, pipelines, and associated infrastructure increase collision and electrocution risks, especially for large birds. Many energy sites have been selected primarily on technical and economic criteria without adequate biodiversity screening. Mining expansion in areas such as Fifa reserve threatens habitats used by species, including the Nubian Nightjar. Effective project pre-screening, biodiversity-sensitive site selection, and rigorous environmental impact assessments are essential to mitigate these risks.

- **Transportation and Service Corridors:** Jordan's road network (approximately 8,700 km) causes direct habitat fragmentation, particularly in western regions. Roads in remote desert areas increase access, facilitating hunting, logging, and disturbance to sensitive species like raptors. Planned railway corridors in Wadi Araba and the Rum Desert would fragment important breeding and feeding habitats used by rare and threatened desert specialists, including Sooty Falcon, Crowned Sandgrouse, Lichtenstein's Sandgrouse, Nubian Nightjar, and Arabian Warbler. Electrocution and collision mortality from poorly designed power lines represent an emerging threat, particularly for large raptors and migratory soaring birds along flyways and in breeding areas.

- **Hunting, Trapping, and Persecution:** Hunting affects particularly members of Anatidae, Phasianidae, Pteroclidae, and the European Turtle Dove. Large raptors and owls are reportedly persecuted or hunted. Illegal trapping and trade disproportionately affect large falcons, owls, and finches, with the European Goldfinch particularly targeted. Secondary poisoning from toxic baits poses additional risks to scavengers and raptors (Eid & Handal, 2018; Khoury *et al.*, 2020, 2023).

- **Logging & Wood Collection:** Illegal logging and shrub removal for firewood reduce the extent and structural quality of Mediterranean woodland and arid savannah habitats. Native woodland areas in Jordan remain limited and continue to decline (Khoury 1998; Albert *et al.*, 2004; Taifour *et al.*, 2022), necessitating stronger legislation and ecosystem-level restoration planning.

- **Human Intrusion & Recreational Disturbance:** Off-road driving, camping, picnicking, rock climbing, and even uncontrolled birdwatching can disturb breeding birds and cause nest abandonment. Cliff-nesting raptors and owls are especially sensitive during the breeding season. Disturbance has been recorded in wooded areas, including Dana Nature Reserve, where the Critically Endangered Syrian Serin breeds.

- **Pollution:** Pesticide use in agriculture directly affects bird health, reproduction, and prey availability. Wetlands are also affected by wastewater discharge and eutrophication, which alter biotic and abiotic features critical for breeding water birds. Plastic pollution is widespread in Jordan, probably affecting wildlife, including breeding birds.

- **Climate Change:** Jordan has experienced prolonged drought, increased temperatures, and rising evapotranspiration rates (Orud, 2024). These changes reduce vegetation productivity and wetland persistence across regions. Drought interacts with overgrazing and water abstraction, compounding habitat degradation (Khoury, 2001; Khoury *et al.*, 2025). Climate change also contributes to land transformation, including the abandonment of rainfed agriculture and increased water extraction.

- **Invasive Species:** The invasive shrub *Prosopis juliflora* has spread widely across the Jordan Valley, tributaries flowing into the Dead Sea, and parts of Wadi Araba. It alters habitat structure, reduces native plant diversity, lowers soil moisture and groundwater availability, and negatively affects species dependent on native scrub and wetland vegetation (Khoury & Körner, 2018; Khoury & Körner, 2019). The Common Myna (*Acridotheres tristis*) has expanded in urban and agricultural landscapes in Jordan. Research and citizen-science analyses indicate increasing distribution and potential competitive interactions with native birds, raising ecological concerns (Khoury *et al.*, 2021; Eid & Khoury, 2025). Feral dogs in rural landscapes also contribute to predation on ground-dwelling birds and nests placed near the ground.

3.

Jordan's Red List Outcomes

3.1 Breeding Birds of Jordan

3.2 Overview of Assessments Outcomes

3.3 Results by Bird Group

3.4 Results by Bird Avifaunal Regions

3.5 Species Accounts

3.6 Red List of Breeding Birds in Jordan in Tabular Form



Little Egret (Egretta garzetta); photo: © Fares Khoury

3.1 Breeding Birds of Jordan

A total of 440 bird species have been recorded in Jordan, of which 168 species have been assessed based on their confirmed status as native breeding birds. Among these assessed species, 95 are recorded as resident, although 66 of these are also documented under at least one additional seasonal category, most commonly as passage migrants and/or winter visitors. Specifically, 31 species with resident breeding populations are also partial migrants, being recorded as passage migrants, 24 as winter visitors, and 14 as recorded under all three statuses: resident, passage migrant, and winter visitor. A small number of breeding species are additionally described as nomadic or erratic. Across the assessed breeding list, passage migrant status is recorded for 89 species, winter visitor status for 52 species, and summer visitor or summer breeder status for 54 species. Because several species hold more than one seasonal designation, these figures are not mutually exclusive and should not be summed. In addition, 9 species are recorded as former breeders or as regionally extinct resident breeders.

3.2 Overview of Assessment Outcomes

The breeding populations of 168 bird species were assessed in Jordan in accordance with the IUCN Red List Categories and Criteria and the Guidelines for Application at Regional and National Levels. The national assessment identified 13 species (7.7%) whose breeding populations are Regionally Extinct (RE). Whereas the national breeding populations of 67 extant species (39.9% of all assessed species) were classified as threatened, including 21 Critically Endangered (CR) species (12.5%), 19 Endangered (EN) species (11.3%), and 27 Vulnerable (VU) species (16.1%). In addition, 16 species (9.5%) were assessed as Near Threatened (NT), 58 species (34.5%) as Least Concern (LC), and 14 species (8.3%) as Data Deficient (DD) (Table 1). Based on the IUCN Red List statistical approach for incorporating Data Deficient species, the best estimate of threatened species in Jordan is 47.5% of extant species, assuming that DD species are equally threatened as data sufficient species. The best estimate of extinction risk is the percentage, which is the midpoint value and is calculated as follows: [(CR+EN+VU) / (Assessed-DD-RE)].

This result indicates that nearly half of Jordan's currently breeding species are threatened (Critically Endangered, Endangered, or Vulnerable), highlighting the urgency of implementing targeted conservation measures at the national level. Introduced species and irregular (Not Applicable) or non-breeding visitors (Not Evaluated) were excluded from the assessment and are therefore not included in the total number of assessed breeding species (Figure 4). Detailed accounts of each evaluated breeding population are provided in the following chapter.

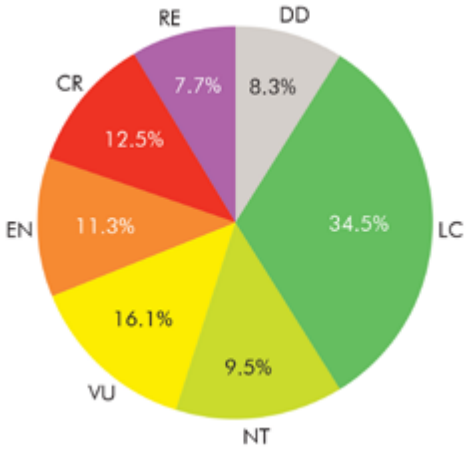


Figure (4): Distribution of Jordan's breeding bird species across IUCN Red List categories based on all assessed species (n = 168).

IUCN Red List Categories	No. species in Jordan
Regionally Extinct (RE)	13
Critically Endangered (CR)	21
Endangered (EN)	19
Vulnerable (VU)	27
Near Threatened (NT)	16
Least Concern (LC)	58
Data Deficient (DD)	14
Total number of species assessed	168

Table (1): Summary of numbers of breeding birds within each Red List category

3.3 Results by Bird Group

For analytical purposes, the 168 evaluated species were organized into ecological–taxonomic groups, and also into migratory and non-migratory groups. Raptors included all species belonging to the families Accipitridae (eagles, vultures, buzzards, harriers, and kites), Falconidae (falcons and kestrels), and the owl families Strigidae and Tytonidae. Water birds comprised non-passerine taxa associated primarily with wetlands, lakes, rivers, coastal habitats, and marshes, including members of Podicipedidae, Anatidae, Phalacrocoracidae, Ardeidae, Rallidae, Recurvirostridae, Glareolidae, Charadriidae, and Laridae. Non-passerine landbirds included the families Struthionidae, Phasianidae, Otididae, Pteroclidae, Burhinidae, Columbidae, Cuculidae, Caprimulgidae, Apodidae, Coraciidae, Alcedinidae, and Picidae. Passerines comprised all families within the order Passeriformes represented in the dataset, spanning from Alaudidae to Emberizidae.

In terms of taxonomic representation, Passeriformes formed the largest component of the national evaluation with 83 species (49.4%) of the total assessed taxa. Waterbirds represent 25 species (14.9%), Raptors account for 28 species (16.7%), while non-passerine landbirds comprise 32 species (19.0%) of the total assemblage, Figure (5).

The results of the assessments demonstrate that Raptors represent the most threatened ecological group, with 15 species (40.0%) out of 28 assessed species classified as Critically Endangered, Endangered, or Vulnerable. Five species are already extinct as breeders, and two of the Critically Endangered Raptor species are labeled as possibly extinct in Jordan. All four Vulture Species are either former breeders (RE) or currently Critically Endangered and possibly extinct. Out of four Eagles, three are threatened (two are Critically Endangered) while the breeding population of one species is extinct (RE). Five out of six assessed Falcon species are threatened, while the breeding populations of seven out of ten owl species are threatened and one is regionally extinct (see Species Account). The best estimate of extinction risk for the breeding Raptors (including owls) is 71% which is disproportionately high when compared to the overall value of 47.5%. This group is followed by water birds with 40% of the assessed taxa being threatened. The best estimate of extinction risk among water birds (62.5%) is also disproportionately high. The breeding populations of five water birds are already extinct, especially due to the drying out of Azraq Oasis, lack of water in mudflats and degradation of wetlands in the Rift Valley (Figures 6–9; 13). Unlike the analysis above (Fig. 7), the wetland species presented in Figure 13 include both passerine and non-passerine species (e.g. *Acrocephalus* sp.) that depend on wetland habitats for breeding. While 16 (43%) of all assessed wetland species are threatened, and 7 regionally extinct, the best estimate of extinction risk is disproportionately high at 64%.

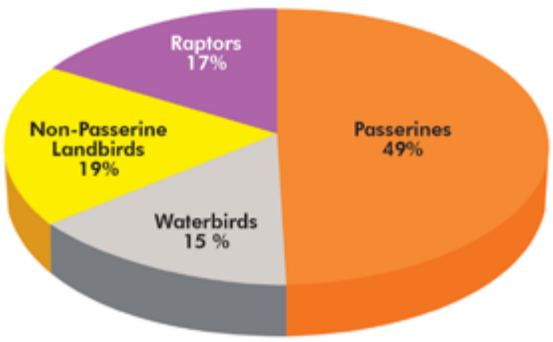


Figure (5): Composition of the 168 evaluated bird species by taxonomic and ecological groups.

The proportions of threatened taxa among all assessed Non-passerine landbirds and Passerines are 37.5% and 29%, and the best estimates of extinction risk for these two groups are 44% and 34% respectively (Figures 6–9). The most threatened non-passerines landbirds are Partridges and Sandgrouse, which are impacted by hunting and habitat loss. Most threatened passerines are associated during breeding to habitats with a small extent in Jordan, such as wetlands, shrublands, including Mediterranean-type woodlands and arid Savannahs (see next sections and species account).



Figure (6): Number of Jordan's breeding raptor species in each IUCN Red List Category.



Figure (7): Number of Jordan's breeding Waterbird species in each IUCN Red List Category.



Figure (8): Number of Jordan's breeding non-Passerine species in each IUCN Red List Category.



Figure (9): Number of Jordan's breeding Passerines in each IUCN Red List Category.

DD LC NT VU EN CR RE

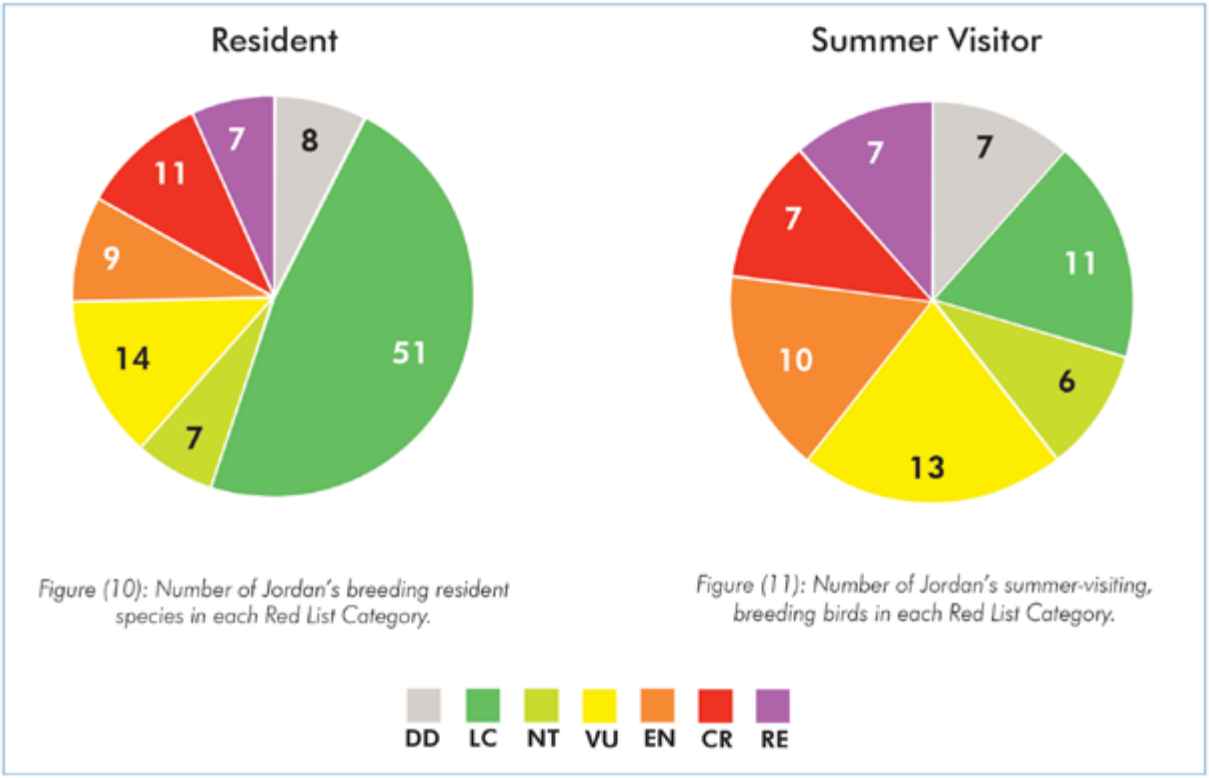


Figure (10): Number of Jordan's breeding resident species in each Red List Category.

Figure (11): Number of Jordan's summer-visiting, breeding birds in each Red List Category.

Resident breeding species, including those that undertake only short-distance movements, outnumber migratory or summer-visiting breeders, many of which are long-distance migrants. Although the absolute number of threatened taxa is broadly similar across the two groups, the proportions differ substantially. Among migratory or summer-visiting breeders, 37 of 60 species (61.6 %) are classified as either threatened or regionally extinct. In contrast, 41 of 108 resident breeding species (38%) fall within these categories.

This pattern indicates that migratory breeding species face disproportionately higher conservation risks compared with resident species. The difference most likely reflects the concentration of summer visitors in breeding habitats that are particularly restricted and threatened within Jordan, as well as broader global trends in which many migratory birds, especially insectivorous long-distance migrants, are experiencing population declines (Figures 10–11).

3.4 Results by Avifaunal Regions

The richness of breeding birds across avifaunal regions is presented in Figure 12. It shows that richness of breeding species is highest along the Rift Margins and the Jordan Valley, relatively high in the Northern Highlands, Wadi Araba, and the Azraq Basin, and relatively low in the interior deserts and Aqaba Mountains.

The distribution of breeding bird species across avifaunal regions and two ecological groups (wetland species and raptors) is also presented in Figure (13).

The highest numbers of threatened and regionally extinct species (CR, EN, VU, and RE combined) are concentrated in western Jordan, particularly in the Northern Rift Margins (NoRM), Dead Sea Rift Margins (DSRM), Southern Rift Margins (SoRM), and Jordan Valley (JoVa) (Figures 13-14). Although these regions support the greatest overall species richness, the proportion of threatened taxa is particularly high, reflecting the ecological sensitivity of these heterogeneous landscapes, which include Mediterranean-type woodlands, shrublands, steppe formations, cliffs, and escarpments.

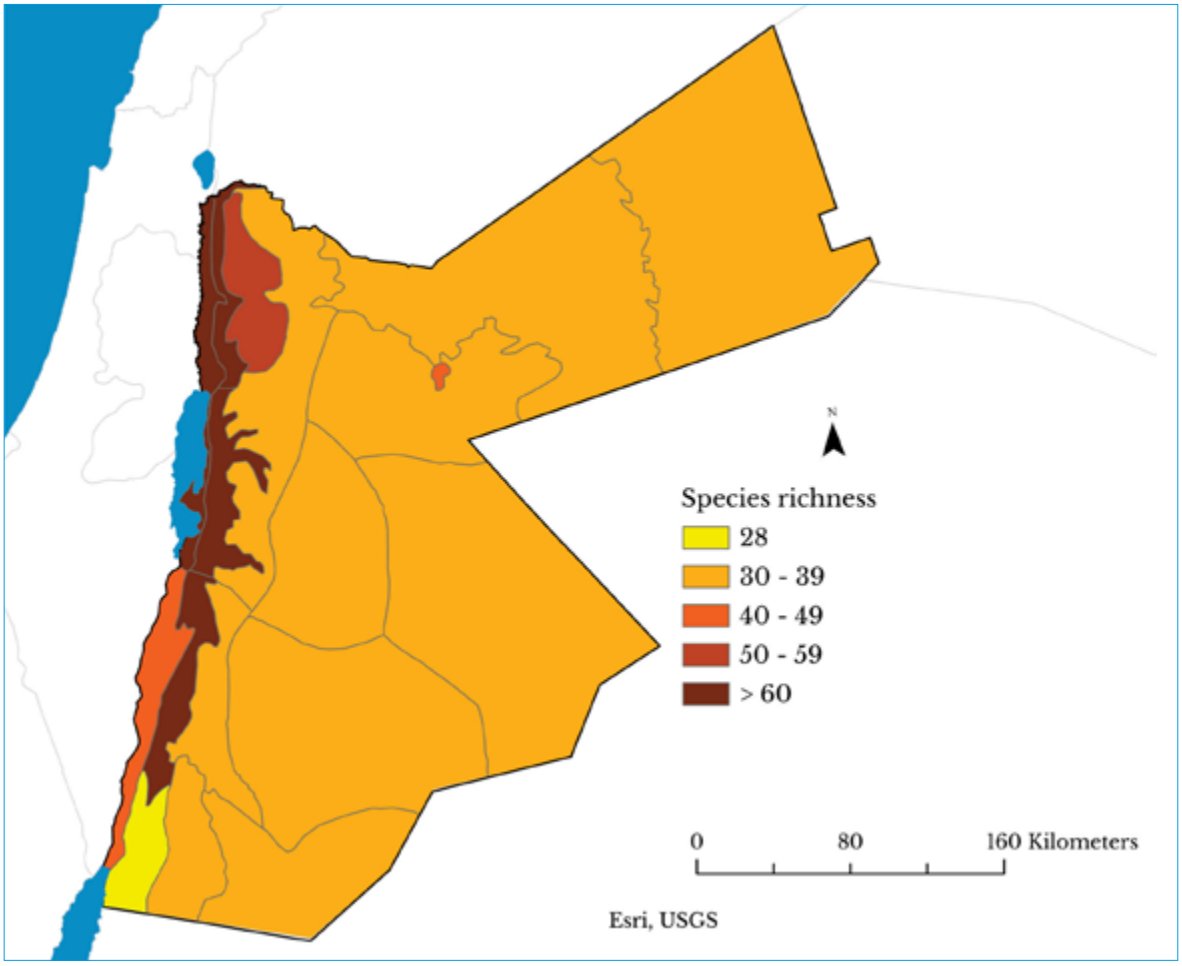


Figure (12). The number of bird taxa with breeding populations in the different avifaunal regions. Lines represent approximate borders of avifaunal regions (cf. Fig. 2).

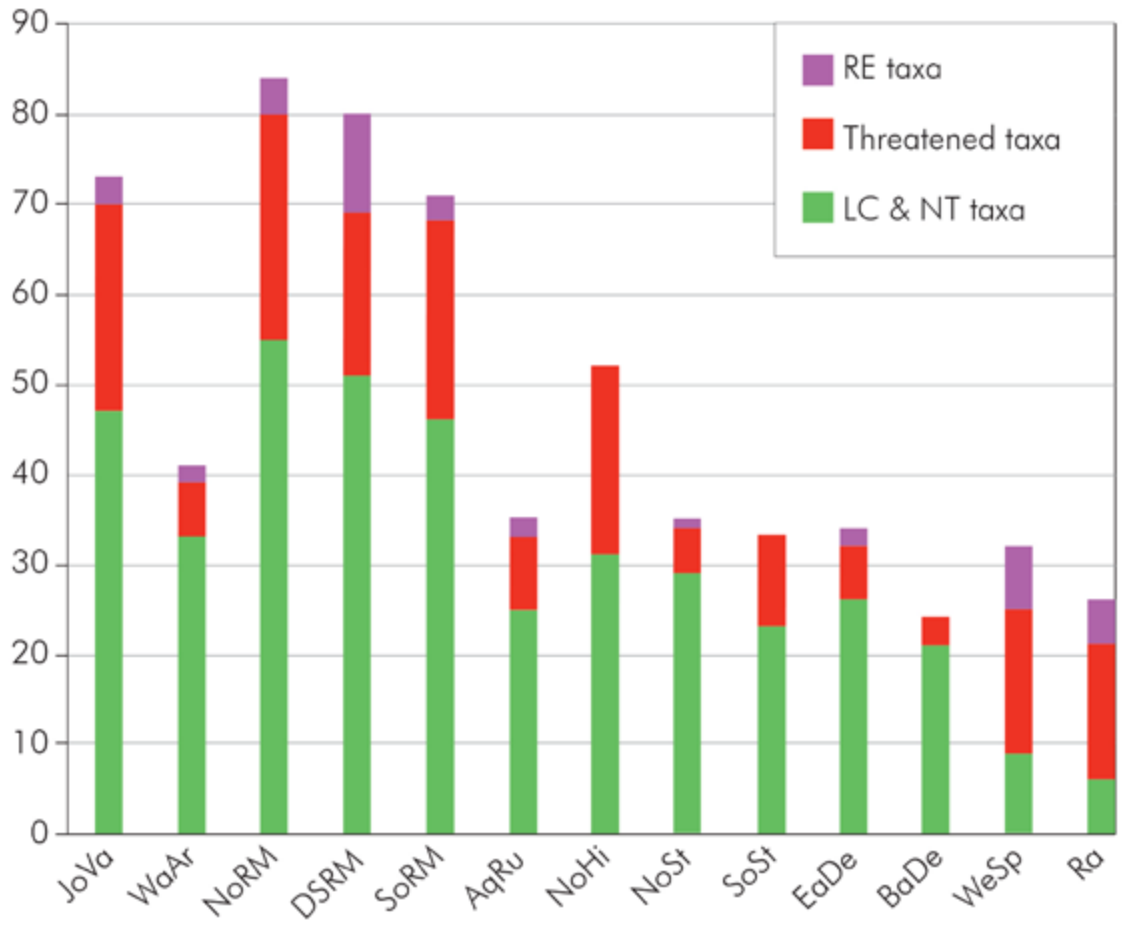


Figure (13): Number of Breeding Bird Species by Conservation Status across Avifaunal Regions and two ecological groups (Wetland species, and raptors). Avifaunal regions include: JoVa (Jordan Valley), WaAr (Wadi Araba), NoRM (Northern Rift Margins), DSRM (Dead Sea Rift Margins), SoRM (Southern Rift Margins), AqRu (Aqaba Mountains and Rum Desert), NoHi (Northern Highlands), NoSt (Northern Steppe), SoSt (Southern Steppe/Sharra Highlands), EaDe (Interior Deserts, excluding Basalt and Rum Deserts), and BaDe (Basalt Desert). The final two columns represent Wetland species (WeSp) and Raptors (Ra) (Figure 13). Data Deficient species were excluded from this analysis.

The Northern Highlands and Northern Rift Margins contain relatively restricted Mediterranean woodland and shrubland habitats, supporting a comparatively high number of threatened breeding bird taxa, some of which occur as small, or, isolated breeding populations. Ongoing habitat degradation, fragmentation, agricultural expansion, infrastructure development, and other anthropogenic pressures heighten conservation concerns in these regions.

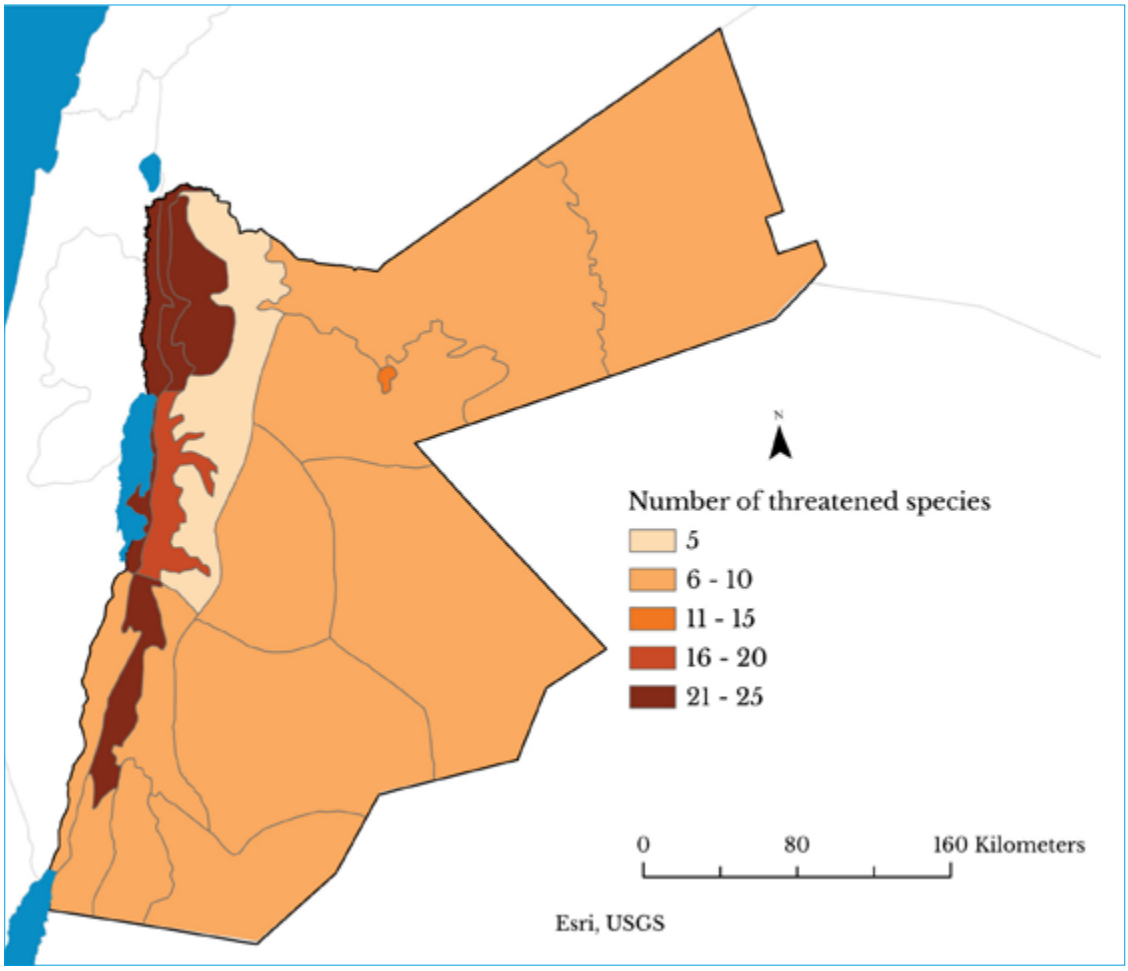


Figure (14): Spatial Distribution of Threatened and Regionally Extinct Breeding Bird Species across Avifaunal Regions of Jordan (CR, EN, VU, and RE Combined). Lines represent approximate borders of avifaunal regions (cf. Fig. 2)

Rift margin systems collectively exhibit both high richness and high conservation concern. Several species formerly breeding in these areas are now regionally extinct, and multiple raptor and passerine taxa remain under significant threat. The concentration of threatened taxa in these western regions reflects both higher biodiversity and higher exposure to cumulative threats. In contrast, the Interior Desert (EaDe) and Basalt Desert (BaDe) contain fewer threatened and regionally extinct species overall. This pattern largely reflects lower species richness than in western regions, as well as the broader spatial extent and greater relative continuity of desert habitats. However, the desert regions still host several threatened species, particularly habitat specialists that are vulnerable to targeted pressures such as overhunting, disturbance, and alterations to key ecological processes (e.g., reduced flooding frequency affecting desert wetlands and mudflats).

The Northern Steppe (NoSt) and Southern Steppe/ Sharra Highlands (SoSt) show moderate numbers of threatened species. Most of the species at risk in these regions are grassland and dwarf-shrub steppe specialists, including species that have become associated with traditional rain-fed cereal fields as an alternative to degraded grassland steppes. However, land-use systems such as extensive rain-fed wheat and barley fields are increasingly declining or intensifying, thereby reducing habitat suitability.

As mentioned in the previous section, many wetland species are threatened and regionally extinct, contributing to the relatively large number of threatened taxa in two avifaunal regions: the Jordan Valley and Azraq Basin, where breeding populations have a rather restricted distribution and are exposed to high anthropogenic pressure.

3.5 Species Accounts

Each species account in this National Red List is presented in a standardized and scientifically consistent format to ensure clarity, comparability, and transparency across taxa. The structure integrates taxonomic, conservation, ecological, and legal information, followed by an evidence-based justification of status and forward-looking conservation recommendations.

Each account begins with the English and Arabic common names, followed by taxonomic placement (Order and Family) and the accepted scientific name. Taxonomy follows the most recent authorities of Birds of the World and the OSME Regional List of Bird Taxa (Billerman *et al.*, eds., 2025; Blair *et al.*, 2025), ensuring consistency with international ornithological standards. The National Red List Status reflects the species' risk of extinction at the national (regional) level according to IUCN Red List criteria. In some species accounts, the Red List category is followed by the symbol (°). This indicates that the species initially met the criteria for a higher threat category at the pre-regional assessment stage, but was downlisted by one category following the IUCN regional guidelines due to a likely rescue effect from neighbouring populations. The Population Trend summarizes whether the national population is observed, estimated, inferred, or suspected to be increasing, stable, declining, or extinct. The field "Status in Jordan" provides a standardized description of seasonal occurrence and breeding status within the country, based on the updated JBW Jordan Bird List (Khoury, ed., 2025).

A concise Justification section explains the rationale for the assigned Red List category, drawing on quantitative survey data, detectability, historical records, trends in habitat extent and quality, and time since last confirmed observation (see Section 2 for criteria and methodology).

Occurrence data were compiled from multiple sources, including the Jordan BirdWatch (JBW) database, eBird, iNaturalist, Mountfort (1965), Nelson (1973), Andrews (1995), Andrews *et al.* (1999), and additional published literature cited in the reference list. Expert input from workshop participants contributed further data, including peer-reviewed studies, academic theses, and unpublished survey reports from the Royal Society for the Conservation of Nature (RSCN) and Jordan BirdWatch. Subsequent sections describe the species' historical and current distribution, habitat requirements, and ecological characteristics within Jordan. A dedicated Conservation Status in Jordan section provides context on legal protection, management history, and past conservation actions. The Major Threats section identifies the principal drivers of decline at the national scale. Each account concludes with a recommended conservation that outlines priority measures and key knowledge gaps relevant to national and regional conservation planning.

Syrian Ostrich

Order: Struthioniformes
Family: Struthionidae
Scientific Name: *Struthio camelus syriacus* (Rothschild, 1919)
Arabic Name:
النعامة العربية السورية
National Red List Status: RE
Population Trend: Extinct
Status in Jordan: Extinct, former resident and breeder

- **Justification:** The Syrian Ostrich is assessed as Regionally Extinct (RE) because there is no reasonable doubt that the last individual has died. The species has been absent from Jordan for more than 80 years, and despite extensive surveys across all suitable habitats and its high detectability, no individuals have been recorded.

- **Distribution:** The Syrian Ostrich historically occurred across the arid and semi-arid regions of the northern Arabian Peninsula, with its range contracting over time into two relict populations: one in the southeastern deserts and a larger one in the northern deserts, spanning the areas where the borders of several Levantine and Mesopotamian regions meet today. **In Jordan**, it was historically present in the southern and eastern deserts, where petroglyphs confirm its former presence (Andrews, 1995).

- **Habitats and Ecology:** In Jordan, the Syrian Ostrich historically occupied open arid landscapes, including the desert plains of Wadi Rum (Al-Hizmah Basin) and the eastern desert. It ranged across wide, sparsely vegetated plains and semi-desert steppe, did not depend on standing water, and met most of its moisture needs through succulent plants and efficient water-use physiology.

- **Conservation Status:** Historically, a five-year hunting ban was introduced under the 1936 Hunting Law. Still, the Syrian Ostrich had already disappeared from Jordan by the early 1940s. A dead bird found near Ma'an in 1966 did not indicate the presence of a surviving population. The Common Ostriches (*Struthio camelus*) currently kept in captivity at Shaumari Wildlife Reserve are an introduced subspecies kept for educational purposes, not a remnant of the native taxon.

- **Major Threats:** The Syrian Ostrich likely became extinct in Jordan due to sustained, deliberate hunting pressure that specifically targeted the species. This intensive overhunting, combined with ongoing habitat degradation in desert areas, directly led to the population's disappearance.

- **Recommended Conservation and Research:** Future conservation efforts should focus on ex situ management and on assessing the feasibility of reintroducing the species into suitable reserves in eastern Jordan. Ongoing reintroduction programs in nearby Saudi Arabia highlight the importance of regional collaboration.



Ostrich engraved on basalt rock in Qurma basalt-desert; photo: © Fares Khoury

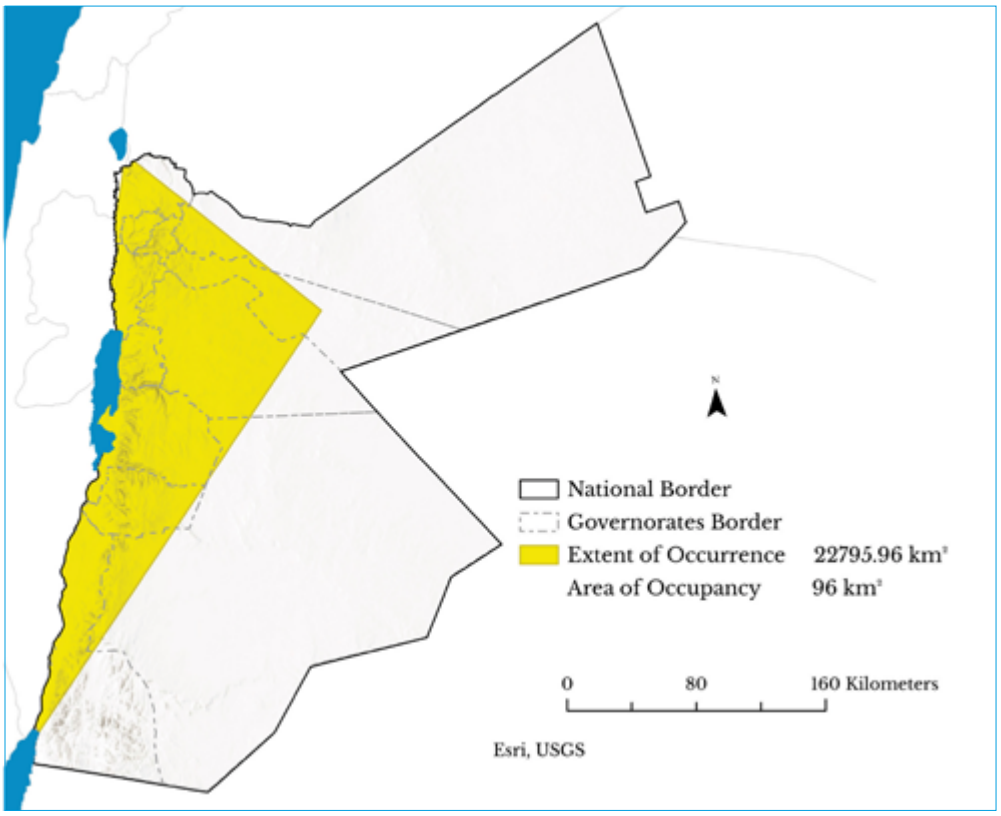
Little Grebe

Order: Podicipediformes
Family: Podicipedidae
Scientific Name: *Tachybaptus ruficollis* (Pallas, 1764)
Arabic Name:
غطاس صغير
National Red List Status: VU° B2ab(iii); D1
Population Trend: Probably Decreasing
Status in Jordan: Resident and winter visitor

• **Justification:** The Little Grebe *Tachybaptus ruficollis* qualifies as Endangered in Jordan because its national breeding population is very small, estimated at ≤ 250 mature individuals, meeting criterion D1. Its Area of Occupancy is maximum 100 km^2, well below the 500 km^2 threshold for criterion B2, and the species occurs at a few locations that are vulnerable to the same threats. A continuing decline in habitat quality is evident due to water extraction, drought, and modification of key wetlands, satisfying sub-criterion B2ab(iii). It is downlisted to Vulnerable, based on the occurrence of breeding populations in surrounding countries.

• **Distribution:** The species has a broad Palearctic and Afrotropical distribution, occurring across Eurasia from western regions eastward through China to Japan, and extending into northwestern and sub-Saharan Africa as well as the Middle East. **In Jordan**, it maintains a localized breeding population at the Azraq Wetland Reserve, as well as sporadic breeding in ponds and lakes/water reservoirs in the Jordan Valley and the Jordan River tributary system. It is otherwise a passage migrant and winter visitor at various sites with large ponds and dams, e.g., Al Tanoor Dam, and at the Aqaba Bird Observatory, where occasional breeding is possible.

• **Habitats and Ecology:** In Jordan, the Little Grebe was recorded in various artificial and natural freshwater ponds, water reservoirs, sewage treatment ponds, slow-moving rivers, and seasonally inundated areas. It occurs as a resident breeder, passage migrant, and probably as a winter visitor.



The species primarily feeds on aquatic invertebrates and occasionally small fish.

It nests in shallow wetlands, building a floating platform of aquatic vegetation anchored to emergent plants or submerged branches near sheltered shorelines.

- **Conservation Status:** In Jordan, the species occurs within the Azraq Wetland Reserve and is protected under the general provisions of the Agricultural Law of 2015 and the Environmental Law of 2017, which prohibit killing and the destruction of nests or eggs.

- **Major Threats:** Wetland loss driven by excessive water extraction and recurrent droughts is the main threat, reducing the surface water needed for breeding and feeding. Although dams have modified natural watercourses and habitats, the establishment of reservoirs provides some compensation for this species.

- **Recommended Conservation and Research:** Implementation of an action plan to protect and restore degraded wetland habitats and maintaining natural hydrological processes to secure suitable breeding and foraging sites. Further research is needed to clarify population size, distribution, and trends; assess prevailing threats, and monitor long-term changes in habitat conditions.

Little Grebe (Tachybaptus ruficollis) – Photo: © Ammar Al-Omari



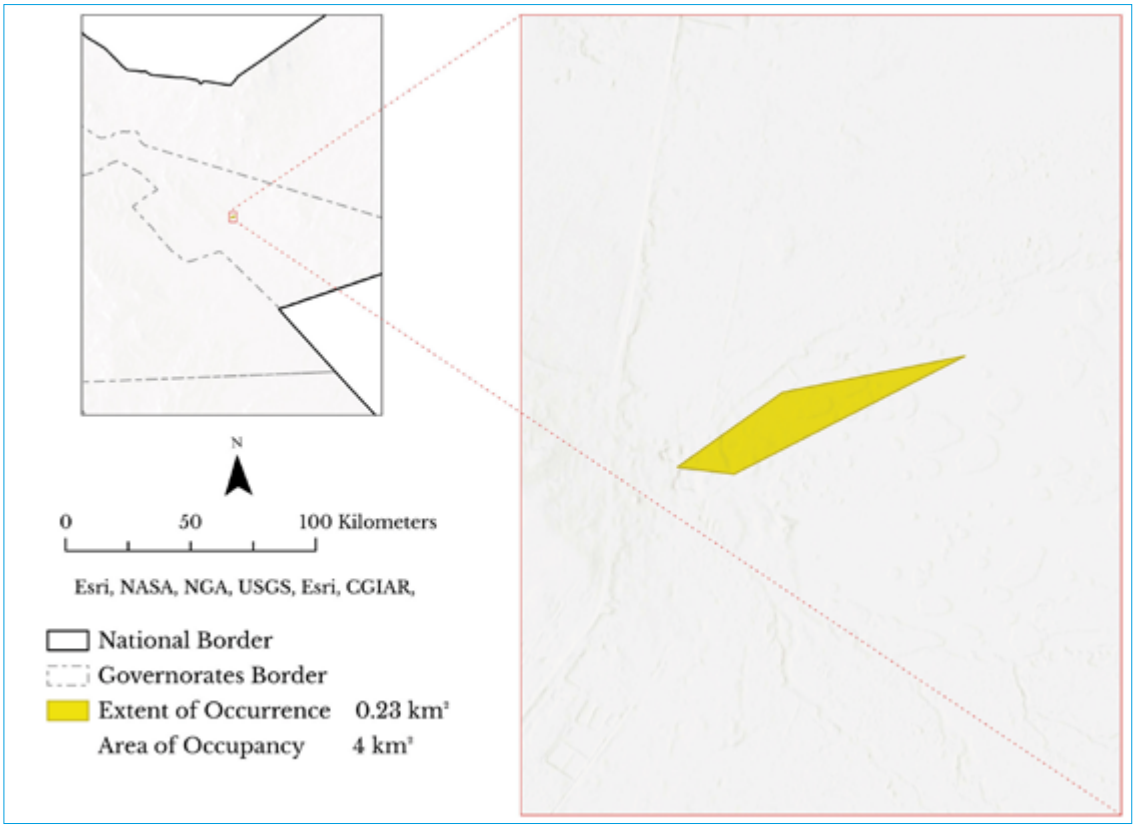
Mallard

Order: Anseriformes
Family: Anatidae
Scientific Name: *Anas platyrhynchos* (Linnaeus, 1758)
Arabic Name:
بط أبو حشيش
National Red List Status: EN° B2ab(iii); D1
Population Trend: Decreasing
Status in Jordan: Resident and winter visitor

- **Justification:** The national breeding population is extremely small (≤50 mature individuals) and confined to very few locations along the Jordan and Yarmouk Rivers and at Azraq. The Area of Occupancy is restricted (<500 km^2), and habitat quality continues to decline due to water extraction, drought, disturbance, and hunting, placing sustained pressure on the remaining population. The species occurs widely in neighboring countries and immigration into Jordan is plausible.

- **Distribution:** The species is resident and a summer breeder across much of Eurasia and North America, while wintering in South America, South Asia, East Africa, and the Middle East. **In Jordan**, it occurs primarily as a passage migrant and winter visitor, with confirmed breeding at the Azraq Wetland Reserve, and it possibly breeds along the Jordan River. The species is most consistently recorded at the Aqaba Bird Observatory and Azraq Wetland Reserve, and the River Jordan system, with fluctuating numbers.

- **Habitats and Ecology:** This species inhabits a variety of freshwater wetlands, including marshes, permanently vegetated ponds, reservoirs, slow-flowing streams, and occasionally in flooded mudflats. These habitats provide suitable foraging and breeding conditions during both migration and the wintering period. During the breeding season, it prefers larger wetland areas with dense vegetation cover.



• **Conservation Status:** A portion of the national breeding population is safeguarded within the Azraq Wetland Reserve. Outside this site, the species remains dependent on the continued availability and management of suitable freshwater wetlands. Nationally, the species is only protected under the general provisions of the Environmental Protection Law of 2017.

• **Major Threats:** The species is threatened by illegal hunting and habitat degradation, including wetland loss and alteration caused by water abstraction, dam operations, and recurrent drought. At least eight individuals were documented as illegally killed based on evidence from social media (Facebook) records (Eid & Handal, 2018).

• **Recommended Conservation and Research:** Conservation priorities include protecting wetland habitats, improving site management, restoring degraded areas, raising public awareness, strengthening legal protections, and enhancing compliance and enforcement to address illegal hunting and habitat loss. Research should focus on clarifying population size, distribution, and historical trends, assessing current threats, and monitoring long-term changes in habitat conditions.

Marbled Duck

Order: Anseriformes
Family: Anatidae
Scientific Name: *Marmaronetta angustirostris* (Ménétries, 1832)
Arabic Name:
شرشير مخطط
National Red List Status: RE
Population Trend: Extinct
Status in Jordan: Vagrant or rare passage migrant and visitor, former breeder

• **Justification:** The Marbled Duck is classified as Regionally Extinct (RE) in Jordan because it has not been recorded in the country since the 1990s, despite extensive bird monitoring at all former breeding sites.

• **Distribution:** The species has a patchy breeding range extending across northwestern Africa, southeastern Europe, and western and central Asia, with wintering populations occurring in central and northwestern Africa and India. **In Jordan**, it is currently considered a vagrant, but it may be underrecorded as a rare spring migrant and winter visitor. Breeding was documented at the Azraq Wetland Reserve during the 1980s and again in the 1990s, but no further breeding records have been reported since.

• **Habitats and Ecology:** The species occupies a range of wetland habitats, including permanent and seasonal lakes, marshes, and ponds, as well as brackish or saline pools. It shows a preference for small, shallow, often brackish lakes with marshy margins suitable for nesting. In Jordan, it has bred in the flooded mudflat of Azraq (Andrews, 1995). A dabbling duck that seldom dives, it typically feeds in shallow water and often forms gregarious groups. Populations vary in their movement patterns, with some being resident and others fully migratory.

• **Conservation Status:** The species' former breeding site at Azraq is now protected, offering some conservation support despite the absence of recent breeding. The species also benefits from extensive legal protection: listed on CMS Appendices I and II, covered under AEWA, included in the Bern Convention (Appendix II) and the EU Birds Directive (Annex I), and nationally protected under the Agricultural Law of 2005 and the Environmental Protection Law of 2017.

• **Major Threats:** The species generally faces habitat loss driven by water extraction, dam impacts, and drought (Andrews, 1991), as well as additional pressure from illegal hunting in Jordan (Andrews, 1991).

• **Recommended Conservation and Research:** Priority actions include protecting key wetland habitats, improving site management, restoring degraded areas, raising public awareness, and strengthening enforcement to reduce illegal hunting. Further research is needed to survey the avifauna of the Yarmouk River, where the species may still occur.

Common Shelduck

Order: Anseriformes
Family: Anatidae
Scientific Name: *Tadorna tadorna* (Linnaeus, 1758)
Arabic Name:
شهرمانة
National Red List Status: RE
Population Trend: Extinct
Status in Jordan: Passage migrant, winter visitor; former summer visitor, and breeder

- **Justification:** The Common Shelduck has not been recorded breeding in Jordan since the 1980s, despite extensive long-term monitoring of wetlands and riverine habitats. Former breeding sites are no longer occupied during the breeding season.

- **Distribution:** The species breeds widely across Eurasia as a summer visitor, ranging from Iceland through northern and Eastern Europe and eastward to China, while remaining resident in parts of Western Europe. It winters around the Mediterranean basin and in regions of southern Asia. **In Jordan**, the species occurs primarily as a winter visitor, with marked annual fluctuations in numbers. Records show a distribution strongly concentrated at the Azraq Wetland Reserve, which represents the principal wintering and former breeding site. Additional winter records are almost regularly obtained at Qa Khanna and other sites flooded by winter rains.

- **Habitats and Ecology:** The species inhabits freshwater wetlands, permanent lakes, seasonal brackish lakes, and artificial water bodies, such as reservoirs. It is a migratory species frequently recorded on flooded mudflats during passage and wintering periods. Although historically known to breed at Azraq, no breeding has been reported there in the past two decades (Andrews, 1995).

- **Conservation Status:** In Jordan, the species' only documented breeding site, within the Azraq Wetland Reserve, is formally protected. However, its status in the country remains dependent on the availability and management of suitable wetland habitats during winter and migration. The species is only protected under the general provisions of the 2017 Environmental Protection Law.

- **Major Threats:** The species is affected by wetland loss and degradation resulting from water extraction, dam construction, and recurrent drought, all of which reduce the suitability of foraging and resting habitats. Illegal hunting further pressures wintering and migrating individuals (Andrews, 1991, 1995).

- **Recommended Conservation and Research:** Research should focus on monitoring water bird counts across key wetlands, assessing habitat quality, and tracking threats, including hunting and habitat degradation. Conservation priorities include protecting and managing natural wetland habitats, restoring water flow regimes in desert areas, raising public awareness, bolstering legal protection, and strengthening compliance and enforcement to reduce illegal hunting and habitat loss.

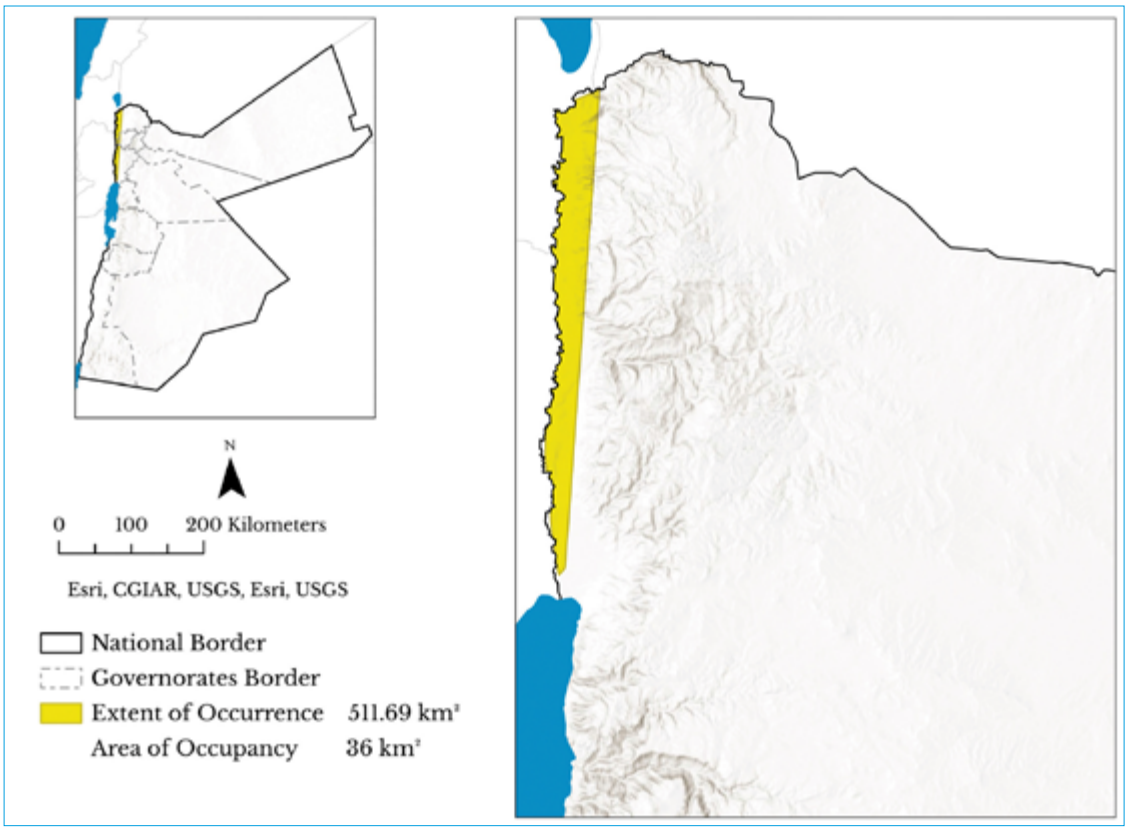
Black Francolin

Order: Galliformes
Family: Phasianidae
Scientific Name: *Francolinus francolinus* (Linnaeus, 1766)
Arabic Name:
دراج أسود (السبت)
National Red List Status: VU° B2ab(ii,iii,v); D1
Population Trend: Decreasing
Status in Jordan: Resident

- **Justification:** The national population is estimated at ≤250 mature individuals, meeting EN D1. The Area of Occupancy is ~40 km^2 (<500 km^2), with a highly restricted and fragmented distribution and continuing declines in area of occupancy, habitat quality, and number of mature individuals due to hunting, agricultural expansion, overgrazing, and invasive species, meeting B2ab(ii,iii,v). The species therefore qualifies as Endangered B2ab(ii,iii,v); D1. However, breeding populations in neighboring countries make immigration and a rescue effect plausible, supporting downlisting to Vulnerable.

- **Distribution:**
The species is native to the Middle East and extends eastward into central Asia, with introduced populations established in parts of North America, southern Europe, and western India. **In Jordan**, it is confined to the banks of the Jordan River and a few adjacent tributaries, including Wadi Gharba and Wadi Al-Kharrar. Although previously recorded at Fifa, its current status there remains uncertain.

- **Habitats and Ecology:** The species occupies well-vegetated grasslands and dry scrub adjacent to permanent rivers and streams, particularly along the Jordan River and its tributaries. It also frequents nearby farmland where suitable cover and foraging opportunities are available. Its diet consists primarily of plant material, supplemented with insects and other small invertebrates.



• **Conservation Status:** In Jordan, the species is afforded legal protection under Appendix III of Agricultural Law No. 13 of 2015 (pursuant to Regulation No. 43 of 2008) and under the general provisions of the Environmental Protection Law No. 7 of 2017. It has been recorded within the Fifa Protected Area, and the baptism site offers some habitat-based conservation support. Internationally, the species is listed on CITES Appendix III, providing additional safeguards against unlawful trade.

• **Major Threats:** The species is primarily threatened by habitat loss and degradation driven by intensive farming, livestock overgrazing, and groundwater abstraction for agriculture (Khoury *et al.*, 2006; Khoury & Körner, 2018) as well as by the recent construction of fencing along the Jordan River, all of which reduce vegetation cover and degrade riparian habitats. Illegal hunting continues to pressure local populations and is closely linked to the wildlife trade. The species has been recorded in trade at the Friday public animal market in Amman (Eid *et al.*, 2010). These pressures are exacerbated by the increasing frequency of drought associated with climate change, which further reduces water availability and accelerates the degradation of remaining suitable habitats.

• **Recommended Conservation and Research:** Conservation actions should focus on restoring and protecting riparian habitats and scrub vegetation in the Jordan Valley, strengthening the legal framework and enforcement against illegal hunting. Continued monitoring of local populations is also essential.

Chukar

Order: Galliformes
Family: Phasianidae
Scientific Name: *Alectoris chukar* (J.E.Gray, 1830)
Arabic Name:
شنار (حجل)
National Red List Status: VU° A2cd
Population Trend: Decreasing
Status in Jordan: Resident

• **Justification:** The Chukar population in Jordan is inferred to have declined by ≥50% over the past three generations, due to intense, ongoing, unregulated hunting and widespread habitat loss and degradation associated with urban expansion and land-use change. These drivers have not ceased and continue to operate, meeting the criteria for Endangered A2cd at the pre-regional stage (population reduction due to exploitation and habitat deterioration). The species is widespread and breeds in neighboring countries, making regular immigration into Jordan likely; therefore, a rescue effect is expected, and the taxon is downlisted.

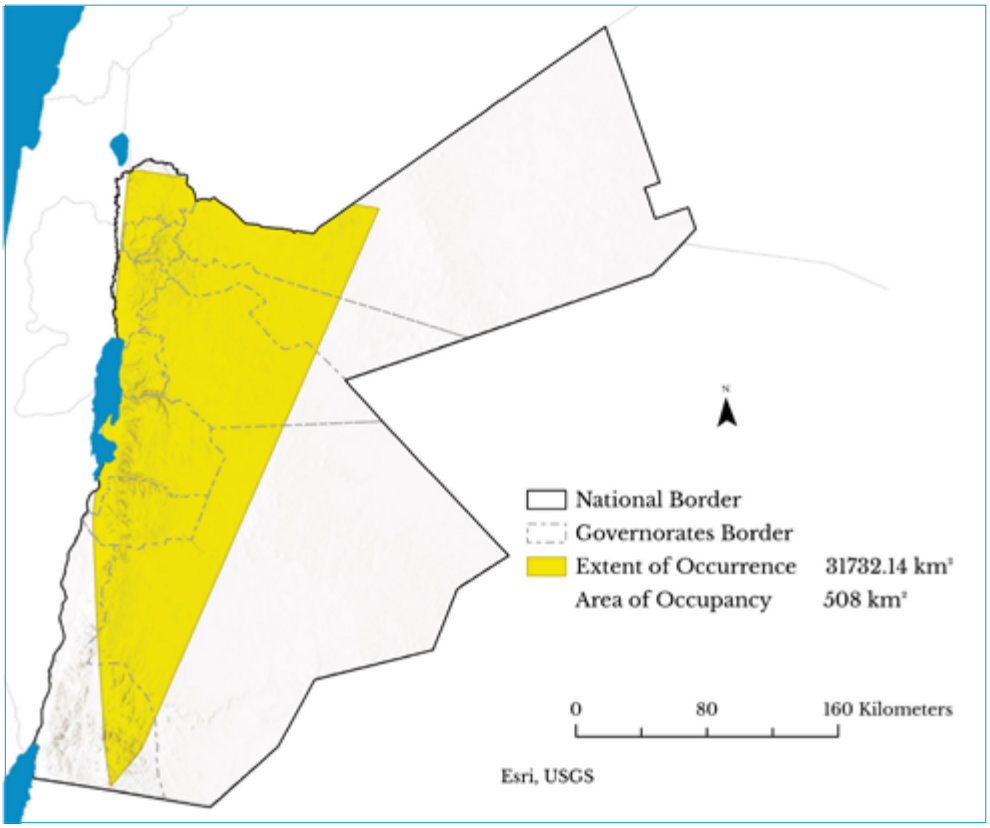
• **Distribution:** The species has a wide range extending across the Middle East, central Asia, and parts of southern and Eastern Europe. **In Jordan**, it is resident throughout much of the western region, from Al-Yarmouk in the north to Wadi Rum in the south.

• **Habitats and Ecology:** The Chukar Partridge inhabits rocky hillsides and mountain slopes, with temperate shrublands and low scrub, from sea level to about 1,800 m in Jordan, avoiding the most arid areas. It is primarily associated with the Mediterranean and Irano-Turanian bioclimatic zones. It forms coveys of 10–50 birds outside the breeding season, whereas breeding pairs establish territories in spring–early summer, with males displaying strong vocal and aggressive behavior. In winter, it often moves into cultivated valleys to forage and roosts on rocky slopes, under shrubs, or in caves. Its diet includes seeds, green vegetation, and insects, and it meets water needs through succulent plants and occasional visits to open water.

• **Conservation Status:** The species is protected under the Agricultural Law No. 13 of 2015 and the Environmental Protection Law No. 7 of 2017. It is listed annually as a regulated game species by the Ministry of Agriculture and is also used in captive breeding and game-farming programs. Beyond its consumptive use, it holds notable cultural and eco-tourism value. Despite these frameworks, overhunting remains a significant issue. Eid and Handal (2018) reported severe quota violations, with some hunters exceeding legal limits by up to 3,000% and 1,503 individuals documented as killed.

• **Major Threats:** The species faces significant pressure from overhunting alongside the loss and degradation of its natural habitats. Expanding urbanization, agricultural development, intensive grazing, and increasing drought collectively reduce the availability of suitable foraging and breeding areas. Overhunting is further exacerbated by illegal trade, as documented at the Friday public animal market in Amman (Eid *et al.*, 2010; Eid & Handal, 2018). Additional pressures arise from tourism development and road construction, which fragment remaining habitats and increase human disturbance.

• **Recommended Conservation and Research:** Research needs include assessing and monitoring population size, distribution, and past trends. An action plan for protecting game species is urgently required including an assessment of the effectiveness of current conservation measures and to identify priority areas for improved management and community-based conservation.



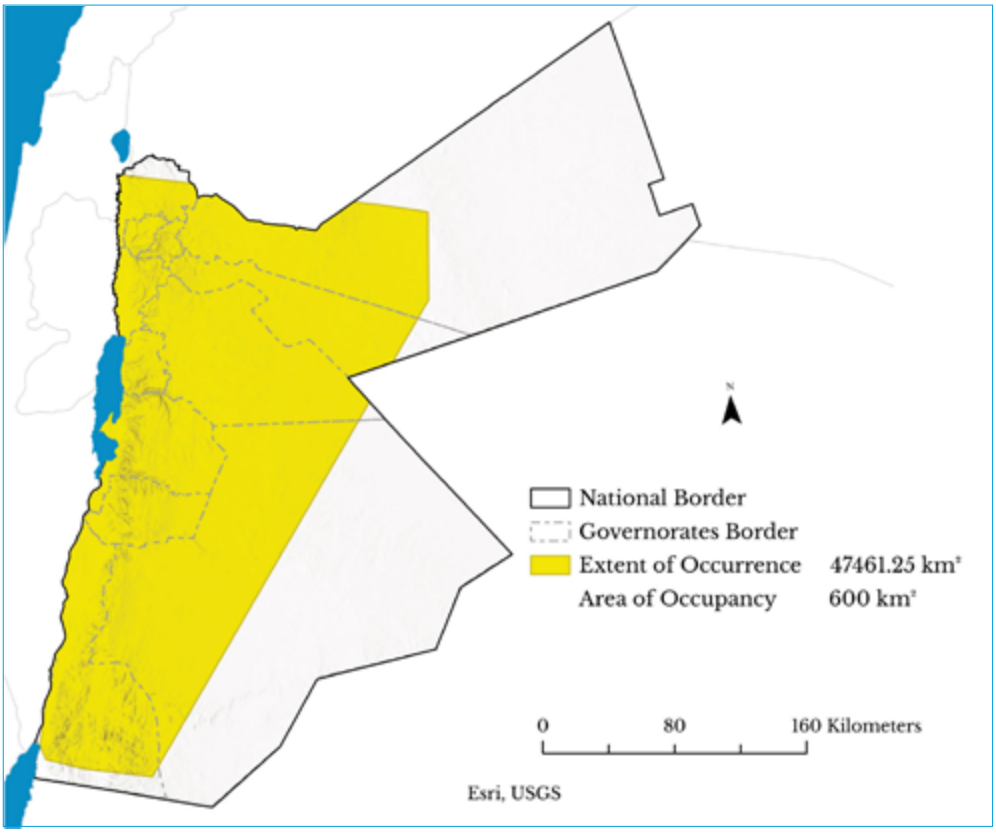
Sand Partridge

Order: Galliformes
Family: Phasianidae
Scientific Name: *Ammoperdix heyi* (Temminck, 1825)
Arabic Name:
حجل رملي
National Red List Status: NT
Population Trend: Stable, locally decreasing
Status in Jordan: Resident

- **Justification:** The Sand Partridge has an uncertain national population size and trend, with local declines inferred from unregulated hunting, habitat degradation, and the drying of springs due to drought and groundwater extraction. Its Area of Occupancy is extensive, estimated at>2,000 km^2, exceeding thresholds for threatened categories under criterion B, and suspected declines cannot be quantified to apply criterion A. Although ongoing threats make future declines plausible, available data do not demonstrate that thresholds for any threatened category are met.

- **Distribution:** The species is restricted to northeastern Africa, the southern Levant, and the Arabian Peninsula. **In Jordan**, it is resident along the Rift margins, throughout the Jordan Valley, in the Rum Desert, and in the Basalt Desert.

- **Habitats and Ecology:** The Sand Partridge's distribution lies primarily within the arid Saharo-Arabian and Sudanian bioclimatic zones. It occupies rocky and stony slopes, steep wadis with scattered dwarf shrubs, subtropical dry shrublands, inland rocky areas, and hot desert landscapes. It is also characteristic of sandy areas with rocky outcrops and mountain terrain, particularly in the Rum Desert. The species forages mainly on seeds, berries, buds, and leaves, supplementing its diet with insects when available.



- **Conservation Status:** The species is globally assessed as Least Concern by the IUCN and is protected nationally under Jordan's Environmental Law No. 6 of 2017, which regulates hunting and provides a legal framework for its conservation.

- **Major Threats:**

The species is negatively affected by habitat modification and disturbance linked to expanding infrastructure, small-scale agriculture, and intensive grazing, which degrade vegetation and reduce the availability of suitable foraging and nesting areas. Illegal hunting and poaching represent a significant additional threat, with significant numbers of hunted birds being documented on Facebook posts (Eid & Handal, 2018). Ongoing human disturbance, including tourism pressure at sites such as Petra, together with climate-driven water scarcity and prolonged drought, further exacerbates habitat degradation and population stress.

- **Recommended Conservation and Research:** The preparation of a multi-species action plan for game species is recommended. Regular surveys at selected sites are also needed to infer population trends.



Sand partridge (Ammoperdix heyi); Photo: © Waseem Al-Hayek

Common Quail

Order: Galliformes
Family: Phasianidae
Scientific Name: *Coturnix coturnix* (Linnaeus, 1758)
Arabic Name:
الفري
National Red List Status: DD
Population Trend: Unknown
Status in Jordan: Passage migrant, rare summer visitor, and breeder

- **Justification:** Information on this species is insufficient to allow a robust evaluation of its breeding status. Available observations indicate marked interannual fluctuations in occurrence and apparent abundance, likely reflecting variable environmental conditions. The absence of systematic, long-term data prevents reliable estimates of breeding population size, trends, distribution, and threats, precluding a confident assessment.

- **Distribution:** The species is widespread across Eurasia and Africa, occurring as a summer visitor or resident, and winters mainly in Africa and India. **In Jordan**, it is recorded as a passage migrant across most regions. Singing and apparently territorial birds have been recorded during March–April in the Northern Steppes and Rift Margins, indicating local breeding.

- **Habitats and Ecology:** The species primarily inhabits open grasslands, steppe environments, cereal fields, fallow land, and other open agricultural landscapes with low, dense ground cover, occurring across temperate and subtropical dry lowland grassland systems. It breeds in open grassland and cultivated fields and forages mainly on seeds and other plant material, supplemented by ground-dwelling invertebrates.

- **Conservation Status:** The species is listed under the Convention on the Conservation of Migratory Species of Wild Animals (Appendix II) and the

Agreement on the Conservation of African-Eurasian Migratory Waterbirds. It is protected nationally under Jordan's Environmental Protection Law No. 6 of 2017. There are no known captive-breeding programs for this species.

- **Major Threats:** The species is primarily threatened by habitat loss and degradation driven by agricultural intensification, land-use change, and grazing pressure, which reduce the quality of breeding and foraging habitats. Common Quail are widely hunted and trapped during both passage and breeding seasons, with documented evidence of high off-take (Eid & Handal, 2018). Pesticide use in agricultural areas poses additional risks through direct exposure and reduced food availability. Climate variability, including increasing drought frequency and phenological shifts, further exacerbates habitat degradation and population fluctuations. Trade is not considered a documented driver of decline for this species.

- **Recommended Conservation and Research:** Conservation efforts should prioritize regulating hunting and trapping, reducing habitat degradation in agricultural and steppe landscapes, and mitigating the impacts of pesticides. Targeted monitoring is needed to quantify population size and trends through seasonal counts, assess breeding success, and track harvest levels. Research priorities include clarifying breeding status and distribution.

Pygmy Cormorant

Order: Suliformes
Family: Phalacrocoracidae
Scientific Name: *Microcarbo pygmaeus* (Pallas 1773)
Arabic Name:
غاق صغير
National Red List Status: DD
Population Trend: Unknown
Status in Jordan: Transient

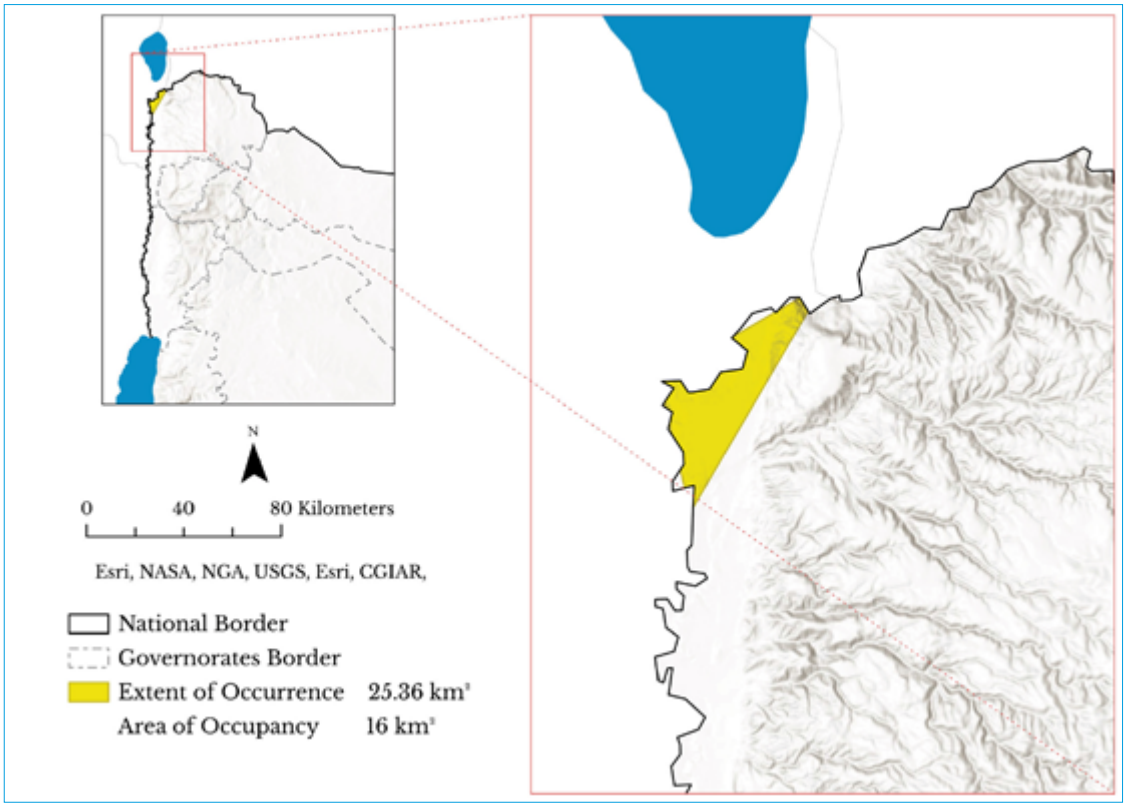
- **Justification:** The Pygmy Cormorant is suspected to breed locally along the Jordan and Yarmouk Rivers, but no surveys or systematic studies have been conducted to confirm its breeding status. Available information is based on records of visiting birds, and current data are insufficient to apply any IUCN criterion. Therefore, the breeding population of this species is assessed as Data Deficient (DD) at the national level until further information can be collected on its breeding status in inaccessible parts of the Rift Valley.

- **Distribution:** The species has a discontinuous range extending from southeastern Europe and Turkey eastward into central Asia, and southward into Palestine and Iraq. Most populations are resident, though some exhibit partial migration, with wintering occurring mainly within or just south of the breeding range. **In Jordan**, it is transient, i.e., a non-breeding species present year-round in the Jordan Valley and along the Jordan River tributaries, with small numbers recorded at Aqaba. However, breeding is suspected locally at the Yarmouk and Jordan Rivers.

- **Habitats and Ecology:** The species inhabits permanent streams, marshes, reed beds, vegetated ponds, deltas, and reservoirs. Nesting typically occurs in *Salix* sp. and *Tamarix* sp. stands or in reed beds, where it builds deep, cup-shaped nests near or over water. It breeds from April to July in large mixed colonies, leaving nesting sites by late August and returning in spring. Mostly sedentary, it makes short movements within its range and feeds alone or in small groups, mainly on fish up to 15 cm long.

- **Conservation Status:** Internationally, it is listed under AEWA, included in Annex II of the Bern Convention, and listed in Annex I of the EU Birds Directive. Nationally, it is protected under the Agricultural Law of 2015 and the Environmental Law of 2017.

- **Major Threats:** The potential breeding habitats of this wetland species are threatened primarily by habitat loss and degradation, driven mainly by agricultural expansion, agricultural surface-water abstraction (Khoury & Körner, 2018), and possibly military activities.



• **Recommended Conservation and Research:** Conservation efforts should prioritize the restoration of degraded wetland habitats and the maintenance of natural hydrological processes to safeguard suitable breeding and foraging areas. Research is needed to assess breeding and population status, habitat conditions, and local occurrence patterns.

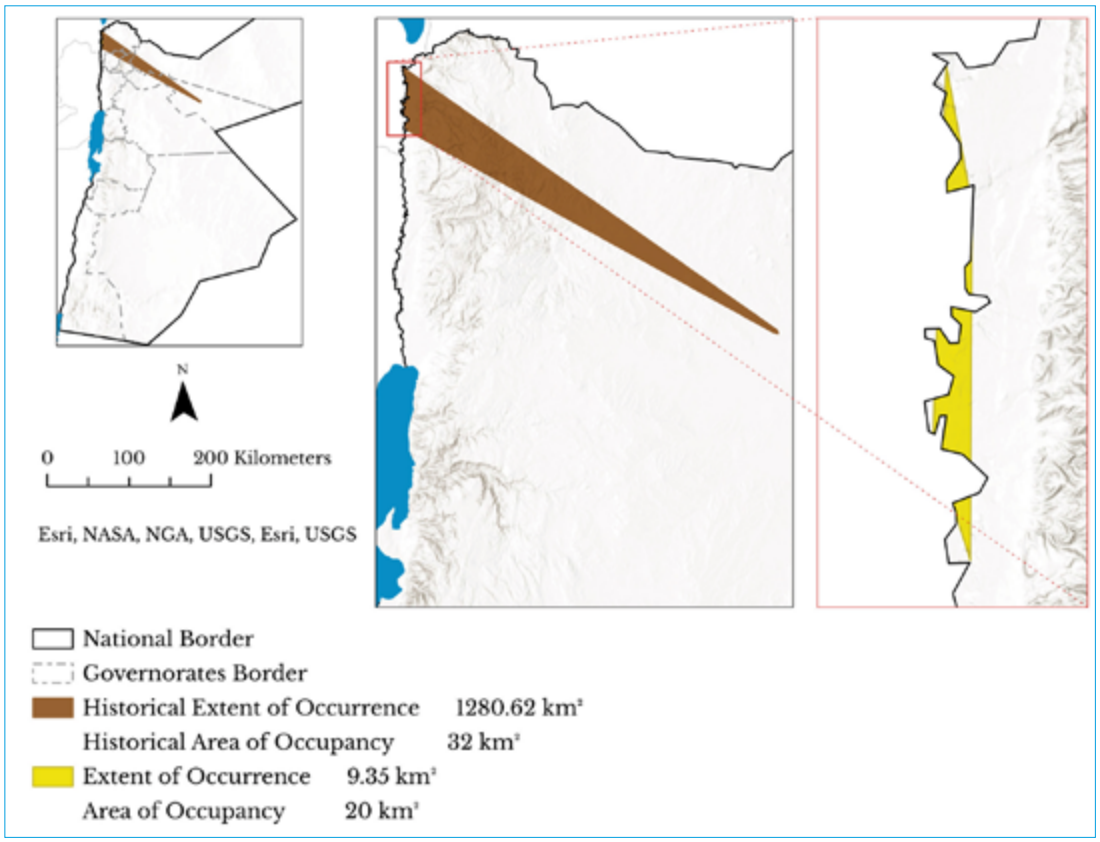
Purple Heron

Order: Pelecaniformes
Family: Ardeidae
Scientific Name: *Ardea purpurea* (Linnaeus 1766)
Arabic Name:
بلشون أرجواني
National Red List Status: CR B2ab(ii,iii); D1
Population Trend: Decreasing
Status in Jordan: Passage migrant, rare summer visitor, and breeder

• **Justification:** The breeding population of Purple Heron has declined severely in Jordan following the collapse of the Azraq wetlands in the 1980s. Fewer than 15 pairs, and almost certainly <50 mature individuals, are thought to persist along the Jordan River and Yarmouk Valley. The species has an extremely restricted Area of Occupancy and continues to decline due to hydrological degradation, drought, and loss of marsh habitat, meeting CR B2ab(ii,iii) and CR D1. Although the species breeds in neighboring countries, suitable habitat in Jordan is highly limited and fragmented, making a rescue effect unlikely.

• **Distribution:** The species breeds widely across Eurasia as a summer visitor and winters in sub-Saharan Africa and southern Asia. **In Jordan**, it is a fairly common passage migrant, occasionally recorded in flocks at Azraq. It formerly bred at Azraq, and a few pairs still breed locally on the banks of the Jordan and Yarmouk Rivers.

• **Habitats and Ecology:** The species uses permanent streams, marshes, ponds, deltas, reservoirs, and irrigated fields, feeding mainly on fish. It requires large and undisturbed reed beds for breeding. All Eurasian populations are migratory.



• **Conservation Status:** In Jordan, one potential breeding site, the Azraq Wetland Reserve, is protected, while other possible breeding areas remain unprotected. Internationally, the species benefits from strong legal frameworks: it is listed on CMS Appendix II, covered under AEWA, included in Annex II of the Bern Convention, and listed as an Annex I species under the EU Birds Directive. The species is protected nationally under the Agricultural Law No. 13 of 2015 and the Environmental Protection Law No. 6 of 2017.

• **Major Threats:** The species is threatened by wetland loss associated with agricultural expansion and streambank encroachment, as well as recreational disturbance and water abstraction for irrigation, which reduce habitat availability and quality. Even after rehabilitation efforts, the reed beds at the Azraq wetland reserve are too small and disturbed to allow resumed breeding. Two individuals were documented as killed based on evidence from Facebook posts (Eid & Handal, 2018).

• **Recommended Conservation and Research:** Conservation priorities include restoring degraded wetland habitats and strengthening policies and regulations as part of a comprehensive plan ensuring adequate protection and recovery of wetlands in Jordan. Research needs to focus on clarifying population size, distribution, and historical trends, identifying key threats, and monitoring long-term habitat changes.



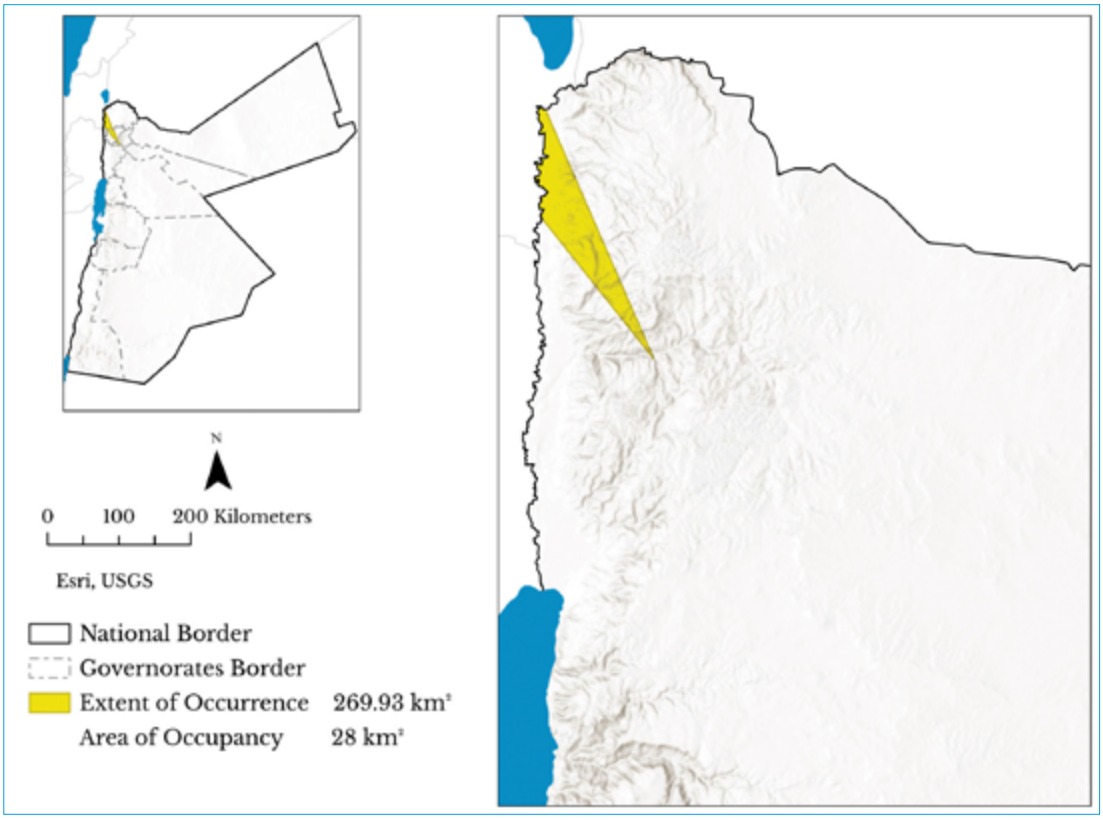
Purple Heron (Ardea purpurea); photo: © Ammar Al-Omari

Black-crowned Night Heron

Order: Pelecaniformes
Family: Ardeidae
Scientific Name: *Nycticorax nycticorax* (Linnaeus 1758)
Arabic Name:
بلشون الليل أسود التاج
National Red List Status: EN° B2ab(iii); D1
Population Trend: Decreasing
Status in Jordan: Resident, passage migrant, and winter visitor

- **Justification:** The national breeding population is extremely small (≤50 mature individuals), and the species breeds at very few locations (King Talal Dam and parts of the Jordan River), with an Area of Occupancy <500 km^2 and a continuing decline in habitat quality due to water extraction, disturbance, and degradation of riparian wetlands, meeting CR B2ab(iii); D1 at the pre-regional stage. However, the species breeds extensively in neighboring Levant countries, including immediately across the Jordan River, making regular immigration into Jordan plausible; the national breeding population of this taxon is therefore downlisted to Endangered.

- **Distribution:** This is the world's most widespread heron, occurring on all continents except Australia and Antarctica. Northern populations are migratory, wintering in tropical Africa and South Asia, while some move only short distances to milder climates just south of their breeding range. In contrast, southern populations in South Asia, Africa, and South America are largely resident. **In Jordan**, the species occurs as a regular passage migrant and winter visitor in various permanent and temporary wetlands, with localized breeding at two locations. Records indicate that winter occurrences are concentrated primarily at major reservoirs, the Jordan River system, and the Azraq Wetland Reserve, with sporadic records elsewhere. Breeding has been observed in Wadi Zarqa and along the Jordan River.



- **Habitats and Ecology:** The species occupies a wide range of wetlands, including streams, marshes, ponds, deltas, reservoirs, and artificial ponds. It feeds mainly on fish and nests colonially in trees. In Jordan, it is primarily a passage migrant and winter visitor, with limited breeding occurrences.

- **Conservation Status:** In Jordan, a breeding was confirmed in the Royal Botanic Garden. Internationally, the species potentially benefits from several conservation frameworks: it is listed on CMS Appendix II, covered under AEWA, and included in Annex II of the Bern Convention. Nationally, it is legally protected under the Agricultural Law of 2005, the Agricultural Law No. 13 of 2015, and the Environmental Protection Law No. 6 of 2017.

- **Major Threats:** The species is affected by wetland loss and degradation resulting from water abstraction, agricultural expansion, and livestock overgrazing, which removes native vegetation and encroaches on streambanks. Recreational activities such as fishing and picnicking further disturb the environment.

- **Recommended Conservation and Research:** Priority actions include restoring wetland habitats and strengthening national policies and regulations to ensure effective protection of wetlands in Jordan. Research needs to focus on clarifying population size, distribution, and historical trends, identifying prevailing threats, and monitoring long-term changes in habitat conditions.

Squacco Heron

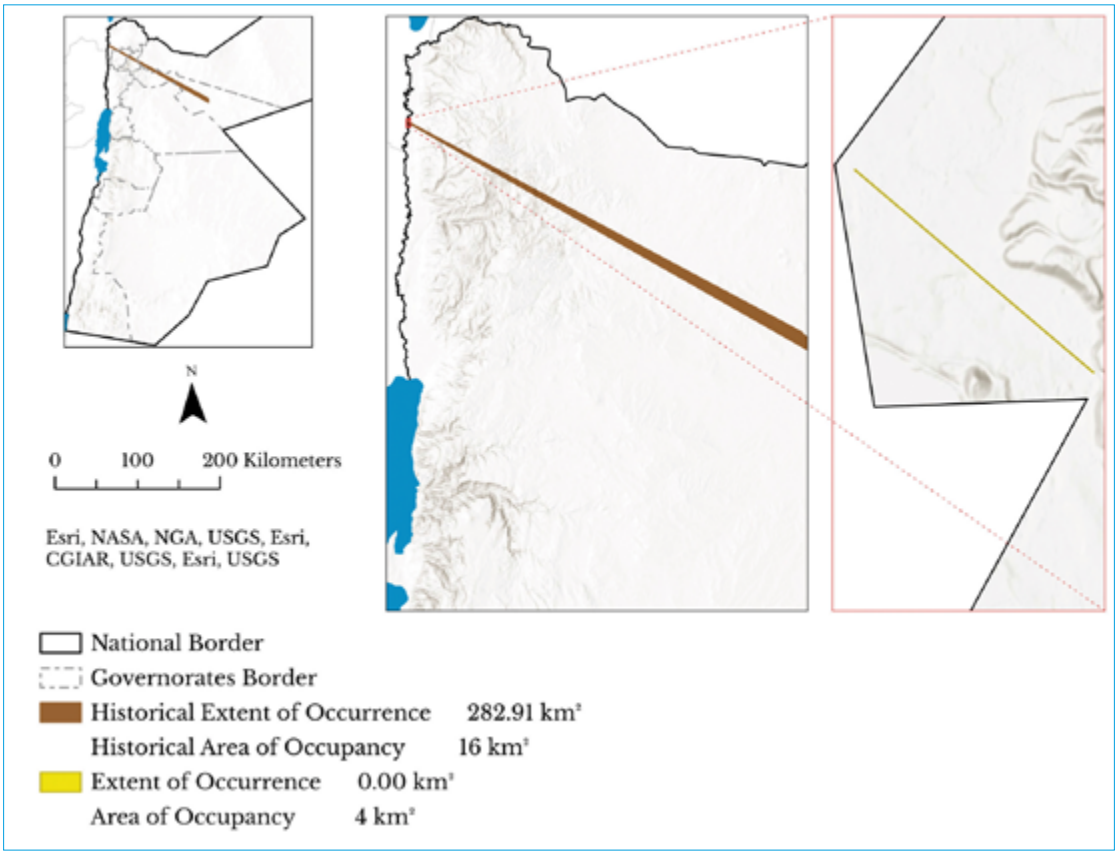
Order: Pelecaniformes
Family: Ardeidae
Scientific Name: *Ardeola ralloides* (Scopoli 1769)
Arabic Name:
بلشون مذهب
National Red List Status: DD
Population Trend: Unknown
Status in Jordan: Passage migrant, winter visitor, rare resident, and breeder

- **Justification:** The Squacco Heron formerly bred at Azraq, but breeding ceased decades ago following the collapse of the wetlands. Although a small number of pairs are suspected to breed along the eastern banks of the Jordan and Yarmouk Rivers based on observations from the western bank, there are no confirmed breeding records, population estimates, or verified AOO or EOO for Jordan. Limited survey access along the border further constrains data collection, and the persistence, size, and trend of any national breeding population remain unknown, preventing assessment under any criterion.

- **Distribution:** The Squacco Heron is resident in the Euphrates basin and across sub-Saharan Africa. Elsewhere, it occurs as a summer visitor around the Mediterranean, Black Sea, and Caspian Sea regions, extending eastward into Central Asia, with these populations wintering mainly in Africa, including the Nile Valley, and less frequently in parts of the Middle East. **In Jordan**, the species occurs as a common passage migrant and an uncommon year-round visitor, with records concentrated at Azraq Wetland Reserve, the Aqaba Bird Observatory, and Al Karameh Dam, and occasional observations from several other sites. Local breeding has been documented at Azraq in the 1960s, and a few pairs were known to breed along the Jordan River.

- **Habitats and Ecology:** The species uses a wide range of wetlands, streams, marshes, ponds, deltas, reservoirs, and irrigated fields, mainly within the Mediterranean zone. It feeds largely on fish and is primarily a passage migrant and rare breeder. It nests in tamarisks or other trees near water and often forages in irrigated fields during migration.

- **Conservation Status:** In Jordan, known breeding sites are unprotected. The species is not listed under CMS or CITES. Still, it is legally protected at the national level under the Agricultural Law No. 13 of 2015 and the Environmental Protection Law No. 6 of 2017.



• **Major Threats:** Wetland loss from agricultural expansion, including vegetation removal and bank encroachment, is the primary threat. Recreational disturbance and agricultural water abstraction further degrade and reduce available habitats (Andrews, 1995; Waitzbauer & Petutschnig, 2004).

• **Recommended Conservation and Research:** Conservation priorities include restoring wetland habitats and strengthening national policies and regulations to safeguard these habitats in Jordan. Research is needed to confirm breeding sites along the Jordan and possibly the Yarmouk Rivers, and to conduct population surveys and habitat assessments, especially in restricted areas.

Squacco Heron (Ardeola ralloides); photo: © Fares Khoury



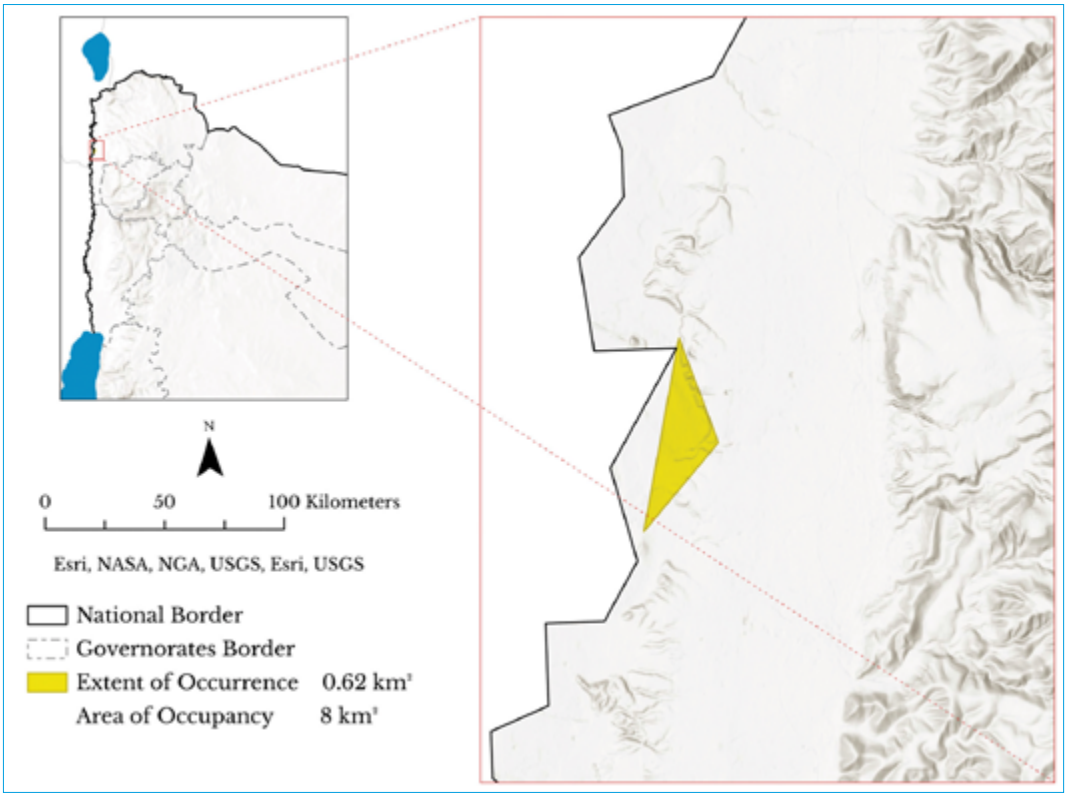
Western Cattle-Egret

Order: Pelecaniformes
Family: Ardeidae
Scientific Name: *Ardea ibis* (Linnaeus 1758)
Arabic Name:
أبو قردان
National Red List Status: DD
Population Trend: Unknown
Status in Jordan: Resident, passage migrant, and winter visitor

- **Justification:** Although the Western Cattle-Egret occurs widely in Jordan as a non-breeding visitor, its breeding status remains unconfirmed. Breeding is suspected to be limited to one or a few sites along the Jordan River, but no field surveys or nest counts have been conducted, largely due to restricted access to border areas. Consequently, the number of breeding pairs, the area of Occupancy, the number of locations, and any population trend cannot be reliably estimated, and the persistence and size of any national breeding population remain uncertain.

- **Distribution:** The Western Cattle-Egret is a widespread resident or summer visitor across West Asia, southern and Western Europe, Africa, and Central and South America. Its global range has expanded markedly over the past century, likely facilitated by agricultural development and the growth of livestock farming. **In Jordan**, it occurs as a common passage migrant and winter visitor, with records widely distributed across wetlands and agricultural areas. Observations are concentrated in the Jordan Valley, with additional records from various wetlands and agricultural areas. Limited breeding has been recorded along sections of the Jordan River, but its current breeding status on the eastern banks of the River needs to be established.

- **Habitats and Ecology:** The species forages mainly in agricultural fields and is commonly seen near livestock, feeding on insects flushed by grazing animals. It roosts and nests in trees and shrubs near water, often within mixed-species heron colonies. Jordan uses seasonally wet grasslands, permanent rivers and streams, and large freshwater lakes as part of its broader habitat range.



- **Conservation Status:** The species is protected nationally under the Agricultural Law No. 13 of 2015 and the Environmental Protection Law No. 6 of 2017. Internationally, it is included under CMS Appendix II and is covered by AEWA as a migratory water bird.

- **Major Threats:** The species is primarily threatened by wetland loss due to agricultural surface-water abstraction, which reduces the availability and quality of feeding and roosting habitats.

- **Recommended Conservation and Research:** Priority actions include restoring wetlands, protecting key wetland and agricultural foraging areas, and preventing habitat degradation from pollution and land conversion. Research should address population size and trends, life history, threats, effectiveness of conservation actions, and long-term habitat changes.



Cattle Egret (Bubulcus ibis); photo: © Ammar Al-Omari

Little Bittern

Order: Pelecaniformes
Family: Ardeidae
Scientific Name: *Botaurus minutus* (Linnaeus, 1766)
Arabic Name:
واق صغير
National Red List Status: VU° B2ab(iii); D1
Population Trend: Unknown
Status in Jordan: Resident, passage migrant, possible summer visitor

- **Justification:** The national breeding population of the Little Bittern is estimated at ≤250 mature individuals, and its Area of Occupancy is approximately 80 km^2, with breeding confined to a few fragmented wetland sites in the Jordan Valley, and at Azraq. Habitat quality is continuing to decline due to water extraction, agricultural expansion, grazing pressure, and wetland fragmentation, meeting B2ab(iii), while the small population size meets D1. These conditions indicate a higher level of risk prior to regional adjustment. However, the species is widespread and breeds regularly in neighboring countries, and immigration into Jordan is plausible, reducing the likelihood of national extinction. The breeding population of the Little Bittern is therefore downlisted to Vulnerable.

- **Distribution:** The subspecies *B. m. minutus* breeds across Eurasia, from Western Europe to central Asia, and in North Africa. Most populations are summer visitors, with partial migrants wintering in sub-Saharan Africa and along the Nile Valley. Other subspecies occur south of the Sahara as residents. In the Middle East, the species is represented by resident and partially migratory breeding populations, as well as regular passage migrants. **In Jordan**, the species is a passage migrant recorded in various parts of the country and a scarce resident breeding species in suitable habitat at the Azraq Wetland Reserve in the Jordan Valley, as well as locally along some Rift-margin valleys.

- **Habitats and Ecology:** The species inhabits marshes, reed beds, permanent streams, ponds, deltas, and artificial wetlands such as canals and

ditches. It includes both resident and partial migrant populations. Its diet consists mainly of small fish.

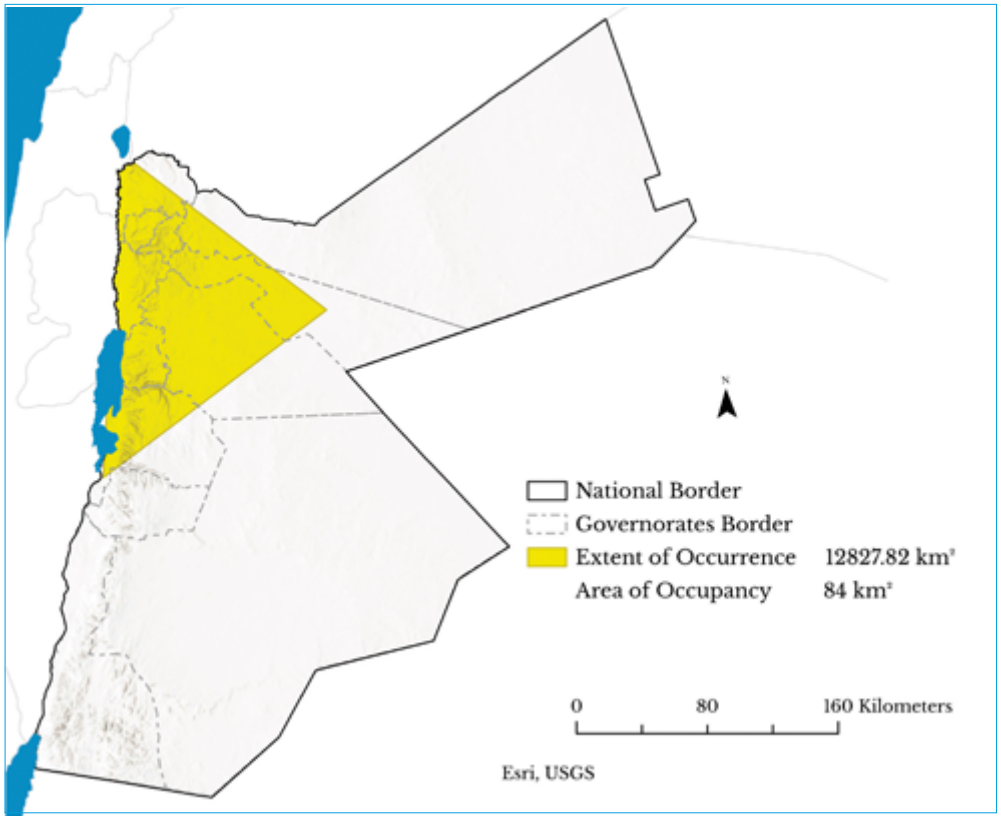
- **Conservation Status:** In Jordan, the species occurs within two protected areas, the Azraq Wetland Reserve and the Fifa Reserve, and is an occasional visitor to specially managed sites such as the Aqaba Bird Observatory. It is not listed under CMS or CITES but is legally protected at the national level under the Agricultural Law of 2005 and Environmental Law No. 6 of 2017.

- **Major Threats:** Wetland loss from agricultural expansion, particularly vegetation removal and bank encroachment, poses the main threat. Water use and agricultural surface-water abstraction further reduce habitat quality and availability. Overgrazing and the spread of alien mesquite shrubs are additional threats (Khoury & Körner, 2018).

- **Recommended Conservation and Research:** There is an urgent need for developing and implementing a comprehensive plan to protect and restore wetlands in Jordan. Research should clarify population size and distribution, identify key threats, and track long-term habitat changes.



Little Bittern (Ixobrychus minutus); photo : © Waseem Al-Hayek



Egyptian Vulture

Order: Accipitriformes
Family: Accipitridae
Scientific Name: *Neophron percnopterus* (Linnaeus 1758)
Arabic Name:
رخمة
National Red List Status: CR (PE) D
Population Trend: Decreasing
Status in Jordan: Passage migrant, former breeder

- **Justification:** The Egyptian Vulture formerly bred in Jordan along the Rift margins until at least the 1960s, but no confirmed breeding has been recorded for several decades despite continued observations. Recent summer records suggest that only 0–5 individuals may persist, with no recent evidence of nesting or territorial behavior, indicating that the breeding population is functionally extinct or extremely close to extinction. The extremely small size of the currently assumed breeding population meets the threshold for Critically Endangered under criterion D. The lack of recent breeding evidence and ongoing pressures from persecution, poisoning, and reduced food availability support the Possibly Extinct (PE) tag. Immigration from neighboring countries or other regions is unlikely to re-establish a breeding population under current conditions.



Egyptian Vulture (Neophron percnopterus); photo: © Ramez Tamimi

- **Distribution:** The species is resident across Africa, Arabia, and South Asia, and occurs as a summer visitor in parts of central Asia, southern Europe, the Middle East, and North Africa. **In Jordan**, it is an uncommon passage migrant recorded throughout the country, and it was formerly a breeding summer visitor along the Rift Margins. Immature birds are occasionally observed in summer, including records from areas such as Faynan and Mujib.

- **Habitats and Ecology:** The species uses Mediterranean shrublands, mountains, and hot desert habitats, and often occurs near human habitation, including rubbish dumps and cultivated areas. It typically nests on cliffs, on ledges, or in caves, building stick nests that may include artificial materials and usually raising one or two chicks. Primarily a scavenger, it feeds on carcasses but also takes insects, small vertebrates, eggs, and organic waste. Generally solitary, it gathers at feeding and roosting sites. Northern breeding populations are long-distance migrants that winter mainly in sub-Saharan Africa, whereas resident and migratory birds occur in the region.

- **Conservation Status:** Potential breeding sites in Jordan lie within protected areas, yet habitat modification and limited landscape connectivity continue to pose major threats. Internationally, the species is well covered by legal frameworks: it is listed on CITES Appendix II, included on both Appendices I and II of CMS, and recognized as a species of concern under the CMS Raptors MOU. Nationally, it is protected under Jordan's Agriculture Law (2015) and Environmental Protection Law (2017).

- **Major Threats:** The species faces habitat loss due to tourism development and mining activities, as well as disturbance and persecution, as well as wind farms, roads, and power lines that increase collision risks. Poisoning and recreational activities, including rock climbing, further threaten breeding and roosting sites (Khoury, 2000).

• **Recommended Conservation and Research:** Research should confirm the current species' breeding status in Jordan and investigate its breeding ecology, and major threats, including poisoning, electrocution, and food availability. A national action plan should urgently be prepared and implemented for threatened, and nationally extinct cliff-nesting raptors.

Lammergeier (Bearded Vulture)

Order: Accipitriformes
Family: Accipitridae
Scientific Name: *Gypaetus barbatus* (Linnaeus 1758)
Arabic Name:
ستل
National Red List Status: RE
Population Trend: Extinct
Status in Jordan: Former resident and breeder

• **Justification:** The Lammergeier formerly bred in Jordan along the southern Rift escarpments and Wadi Rum, with the last confirmed nesting recorded in the 1960s. The species has not been reliably observed for at least 25 years despite targeted visits to all major valleys and remote, rugged habitats where it previously occurred, with no individuals detected. Ongoing threats such as poisoning, persecution, and depletion of carrion persist, but there is no evidence that any potentially reproducing individuals remain. The species is therefore considered extinct at the national level.

• **Distribution:** The species occurs across parts of southern Europe, western and central Asia, and northern and eastern Africa. **In Jordan**, it was formerly a resident breeder in the southwest, with a nest recorded in Wadi Rum during the 1960s.

• **Habitats and Ecology:** The Lammergeier inhabits mountainous regions with cliffs and rocky slopes, occurring from subtropical to sub-alpine zones. It specializes in feeding on bone fragments and marrow, often dropping large bones from heights to break them open.

Conservation Status: Portions of the species' historical breeding range in Jordan, such as Wadi Rum and Dana, are now within protected areas. Nationally, it is safeguarded under the Agricultural Law No. 13 of 2015 (including Appendix I via Regulation No. 43 of 2008) and the Environmental Protection Law No. 6 of 2017, which collectively provide legal protection for the species and its habitats.

• **Major Threats:** The species is threatened by habitat degradation, disturbance, and reduced food availability. Tourism and recreational activities disrupt nesting areas, while livestock grazing, mining, and quarrying degrade mountain habitats. Indirect effects of hunting further reduce carrion availability, limiting essential food resources (Khoury, 2000).

• **Recommended Conservation and Research:** Conservation actions should focus on protecting cliffs and rocky mountain habitats from disturbance and on regulating hunting of large herbivores, such as the Nubian Ibex, to ensure adequate carrion availability for the species. A multiple species action plan for cliff-nesting raptors is recommended.

Lappet-faced Vulture

Order: Accipitriformes
Family: Accipitridae
Scientific Name: *Torgos tracheliotos* (J.R.Forster, 1796)
Arabic Name:
نسر أذون
National Red List Status: RE
Population Trend: Extinct
Status in Jordan: Former resident breeder, vagrant

- **Justification:** The Lappet-faced Vulture formerly bred in Jordan, with two historical nesting records from Wadi Araba prior to the 1960s. No breeding evidence or reliable sightings of resident birds have been available for more than six decades despite ongoing bird monitoring across suitable habitats. The species is therefore considered extinct at the national level.

- **Distribution:** The species is distributed across Africa and the Arabian Peninsula. **In Jordan**, it is known only from two old nesting records on acacia trees in Wadi Araba, and occasional sightings of wandering birds in the south. It is now considered a vagrant and former breeder.

- **Habitats and Ecology:** The species inhabits arid savannahs and semi-deserts. It is sedentary and feeds primarily on carrion.

- **Conservation Status:** The species is listed under CITES Appendix II and included on both Appendices I and II of CMS. It is also recognized as a species of greatest concern under the CMS Raptors MOU, which provides strong international protection. It is protected under Jordan's Agriculture Law (2015) and Environmental Protection Law (2017).

- **Major Threats:** The species is threatened primarily by habitat degradation in arid and semi-desert landscapes, reduced food availability due to declines in wild herbivore populations, and widespread use of poisons intended for predator control. Additional pressures include disturbance near nesting sites, collision with power infrastructure, and incidental ingestion of veterinary drugs present in livestock carcasses (Khoury, 2000).

- **Recommended Conservation and Research:** Conservation actions should prioritize protecting the natural habitats of Wadi Araba, and its ungulate populations, and avoid human disturbances especially at *Acacia* stands to allow this species to recolonize that area.

Eurasian Griffon

Order: Accipitriformes
Family: Accipitridae
Scientific Name: *Gyps fulvus* (Hablizl, 1783)
Arabic Name:
نسر أسمر
National Red List Status: CR(PE) C2a(ii) D1
Population Trend: Decreasing
Status in Jordan: Resident, passage migrant

- **Justification:** The Eurasian Griffon has suffered a severe long-term collapse in Jordan, with a 90–100% decline in the breeding population between 2000 and 2015. Fewer than 30 mature individuals are thought to persist, with no confirmed nesting for more than five years, and any remaining birds forming a single very small subpopulation, meeting criteria C2a(ii) and D1. Although breeding has likely ceased

locally, occasional individuals are still recorded near former nesting areas in the southern Rift margins, and cross-border records of tagged birds indicate connection to a wider regional metapopulation. As total extinction cannot yet be confirmed and sporadic presence suggests possible recolonization attempts, the taxon is treated as possibly extinct rather than regionally extinct.

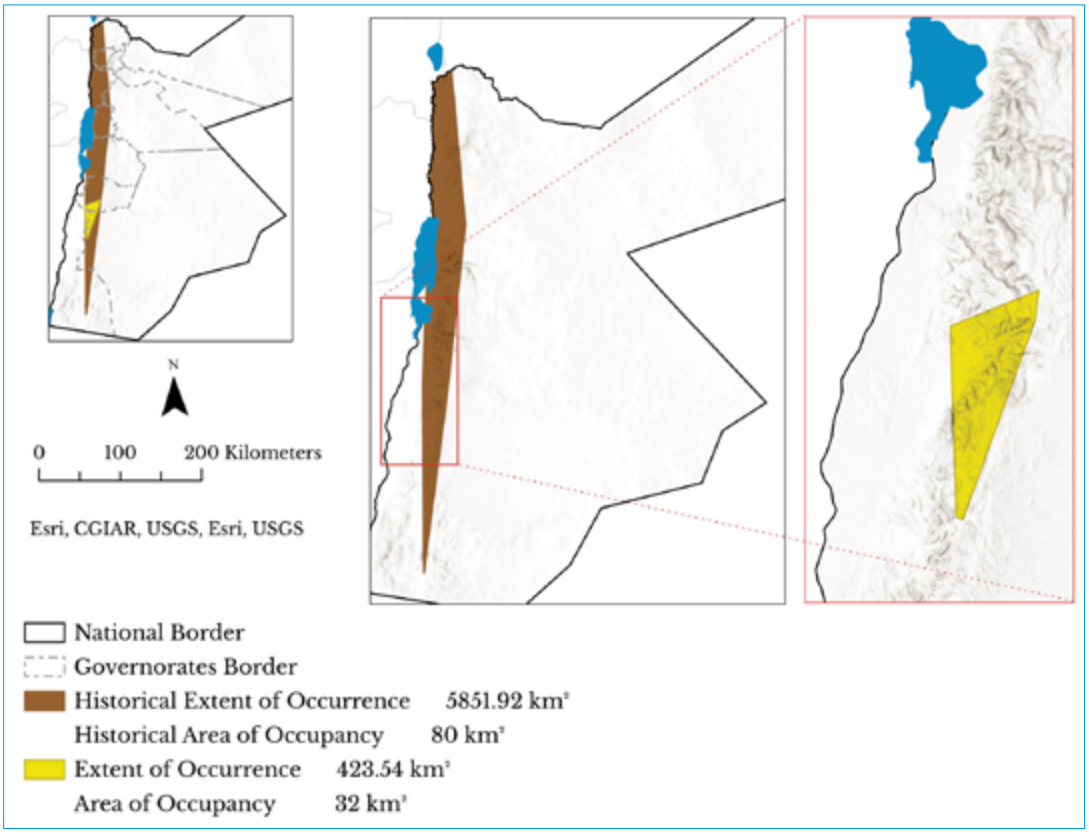


Eurasion Griffon (Gyps fulvus); photo: © Ehab Eid

• **Distribution:** The species is resident or partially migratory across North Africa, southern Europe, and eastward into central Asia. **In Jordan**, it was formerly a widespread resident breeder along the Rift margins, at the Yarmouk Valley, and from Wadi Zarqa south to Wadi Dana, and possibly to Wadi Rum. At Dana Biosphere Reserve, around six pairs bred annually until recent years. Although Eurasian Griffons are still observed in the area, no active nests have been recorded for the past decade. The species is also seen moving through Jordan as single birds or in small groups, including passage records from Aqaba and a notable group of eleven individuals at Wadi Zarqa in 1998.

• **Habitats and Ecology:** The Eurasian Griffon occupies mountainous, semi-desert landscapes and Mediterranean shrublands, from sea level to about 3,000 m. For breeding and roosting, the Griffon usually requires high cliffs with ledges. It relies on soaring flight and may migrate to Africa, though many birds are resident or nomadic. It feeds almost entirely on carrion from large mammals, searching alone but gathering at carcasses, roosts, and strong thermals. Nests are built on rocky outcrops, usually on ledges or in small caves.

• **Conservation Status:** Potential breeding sites in Jordan are now within protected areas, yet habitat modification and poor landscape connectivity continue to threaten the species. Internationally, it is listed



under CITES Appendix II and CMS Appendix II, and is recognized as a species of concern under the CMS Raptors MOU. It is protected under Jordan's Agriculture Law (2015) and Environmental Protection Law (2017).

- **Major Threats:** The species is threatened by habitat loss, food scarcity, and direct persecution. Disturbance from tourism, mining, and nearby wind-farm development affects former and potential breeding sites, while roads and power lines increase collision and electrocution risks. Poisoning associated with predator control remains a major cause of mortality, and recreational activities such as rock climbing further disturb nesting cliffs (Khoury 2000, 2004).

- **Recommended Conservation and Research:** Research should establish the species' current breeding status and distribution in Jordan and guide the development of an urgently needed national species action plan to minimize threats mentioned above. Conservation actions that secure food supplies and protect nesting areas have successfully supported population recovery elsewhere in its range.

Golden Eagle

Order: Accipitriformes
Family: Accipitridae
Scientific Name: *Aquila chrysaetos homeyeri* (Severtzov, 1888)
Arabic Name:
عقاب ذهبية
National Red List Status: CR B2ab(i,ii,iii,v); D1
Population Trend: Probably Decreasing
Status in Jordan: Resident

- **Justification:** The Golden Eagle's breeding population in Jordan is extremely small, likely fewer than 10 mature individuals, with no confirmed nesting for more than five years. The Area of Occupancy is restricted, and the species persists, if at all, at fewer than five locations, with scattered suitable cliff-nesting habitat. Continuing declines in range, habitat quality, and the number of mature individuals are inferred from recent developments, such as new gas pipelines and the loss of undisturbed nesting sites, meeting B2ab(i,ii,iii,v).

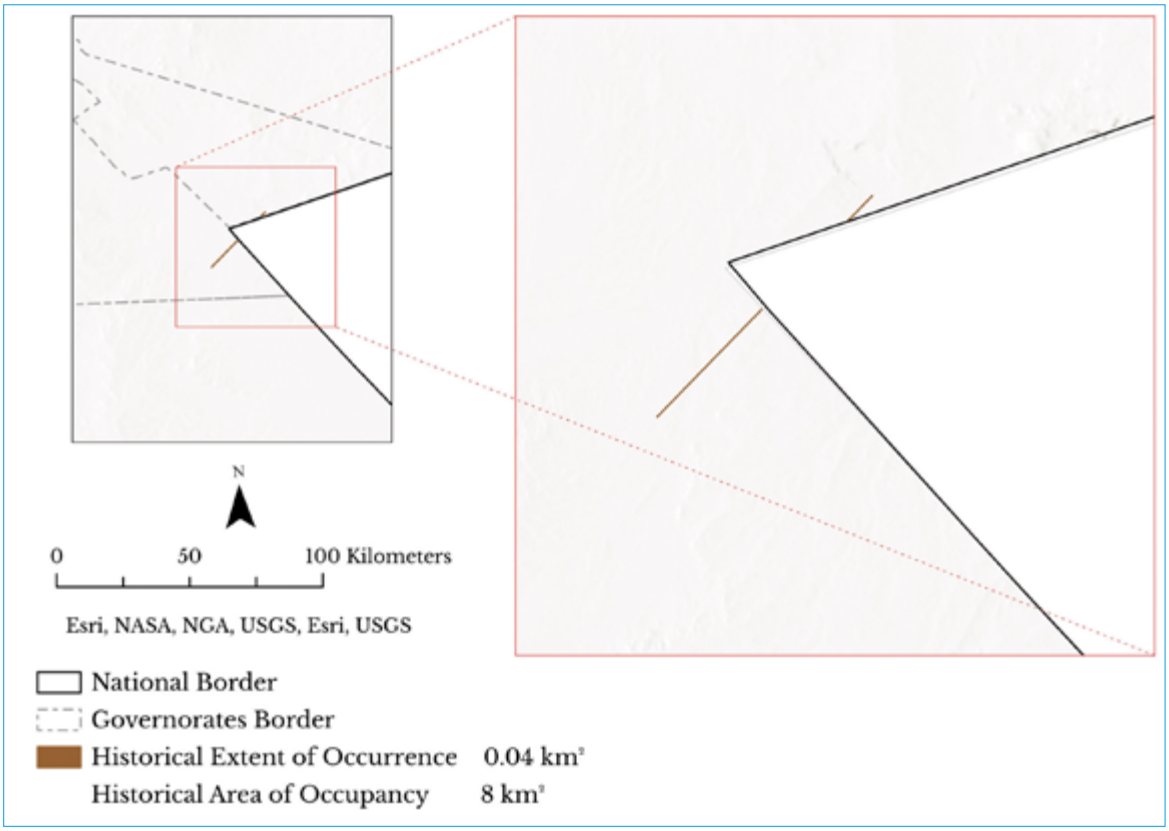
The very small population size also meets the threshold for Critically Endangered under criterion D. Although occasional individuals may cross the border from Saudi Arabia, the regional population is small and declining, and suitable breeding habitat in Jordan is scarce, making a meaningful rescue effect unlikely.

- **Distribution:** The species is widespread across Eurasia and North America, with most populations being resident, while those breeding in Alaska and Canada are migratory. **In Jordan**, it occurs only rarely, with most records coming from parts of the Eastern Desert, and a few from the Rift margins (Andrews, 1995).

- **Habitats and Ecology:** The species occupies dry savannah, Mediterranean-type shrublands, rocky inland areas, and desert habitats outside the breeding season. Mostly resident with large home ranges, it hunts mammals and reptiles and also scavenges. Breeding typically occurs on mountains and plateaus with suitable cliffs for nesting.

- **Conservation Status:** No specific conservation measures are known for this species in Jordan. It is listed under CITES Appendix II and is protected at the national level under Jordan's Agriculture Law (2015) and Environmental Protection Law (2017).

- **Major Threats:** The species is subject to disturbance and reduced food availability due to drought, habitat degradation, and hunting. Mining, quarrying, and renewable energy projects degrade or disturb suitable habitats. Roads and power infrastructure increase collision and electrocution risks, while excessive hunting of prey species reduces food supply. Recreational activities and prolonged drought further exacerbate these pressures.



• **Recommended Conservation and Research:** A single species action plan is urgently required to save the last pairs remaining of this species. Research needs include determining current population size, distribution, and threats.

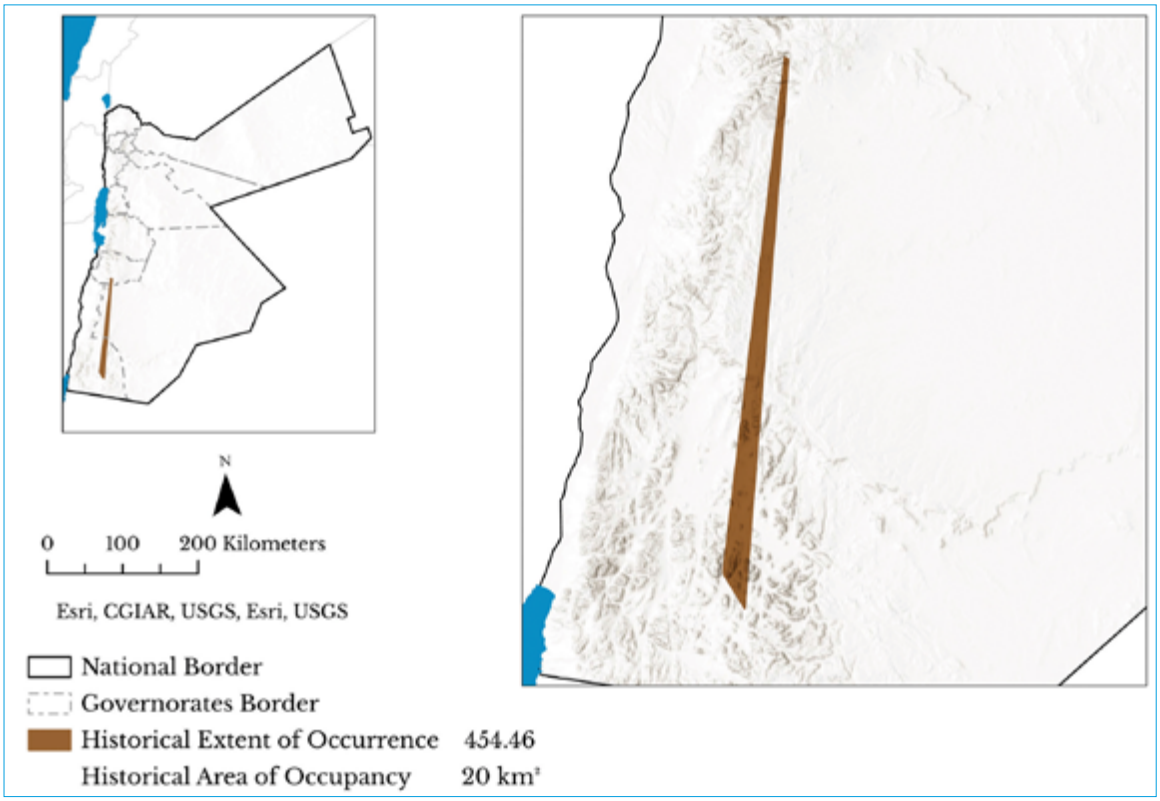
Verreaux's Eagle

Order: Accipitriformes
Family: Accipitridae
Scientific Name: *Aquila verreauxii* (Lesson, RP, 1831)
Arabic Name:
عقاب خدارية
National Red List Status: RE
Population Trend: Extinct
Status in Jordan: Former resident breeder, vagrant

• **Justification:** Verreaux's Eagle has formerly bred in Jordan, with the last confirmed breeding record in 1999. Since then, no nests, territorial pairs, or evidence of reproduction have been documented despite repeated visits to historical breeding areas at Wadi Dana and Wadi Rum. Occasional single-individual observations do not indicate the presence of a viable or potentially reproductive population. Given the prolonged absence of breeding, lack of confirmed pairs, and failure to detect any remaining population despite suitable survey effort, the species is considered extinct at the national level.

• **Distribution:** The species occurs in southern and eastern Africa and across the Arabian Peninsula, extending into southern Jordan. **In Jordan**, it is currently a vagrant, but has bred at Wadi Rum and occasionally at Wadi Dana until the late 1990s.

• **Habitats and Ecology:** The species inhabits rocky inland areas, particularly mountainous landscapes with scattered shrubs and cliffs suitable for nesting. It is resident, with a large home range, and feeds primarily on rock hyraxes.



- **Conservation Status:** No specific conservation measures are known for this species in Jordan. It is listed under CITES Appendix II and is protected at the national level under Jordan's Agriculture Law (2015) and Environmental Protection Law (2017).

- **Major Threats:** The species is threatened by habitat modification, disturbance, and reduced prey availability. Tourism development, livestock grazing, mining, quarrying, and renewable energy projects all degrade Rocky Mountain habitats. Roads and power infrastructure increase disturbance and collision risks, while excessive hunting of prey species, particularly rock hyrax, further reduces the food supply.

- **Recommended Conservation and Research:** The species faces limited effective protection in Jordan, with ongoing recreational pressures in areas such as the Rum Reserve. A multi-species action plan for cliff-nesting raptors is urgently required.

Short-toed Snake Eagle

Order: Accipitriformes
Family: Accipitridae
Scientific Name: *Circaetus gallicus* (Gmelin, 1788)
Arabic Name:
عقاب الحيات (صرارة)
National Red List Status: VU° D1
Population Trend: Decreasing
Status in Jordan: Summer visitor, passage migrant

- **Justification:** The Short-toed Snake-Eagle has an estimated breeding population of fewer than 250 mature individuals in Jordan. The species remains relatively widespread along the Rift margins and in the northern highlands during the breeding season, although local declines and habitat fragmentation have occurred, particularly in southern Jordan. Substantial and stable breeding populations persist in neighboring countries, and regular immigration into Jordan is plausible, reducing the risk of national extinction. The national breeding population is therefore assessed as Vulnerable.

- **Distribution:** The species breeds in southern Europe and western–central Asia, with resident populations in the Indian Peninsula and wintering grounds in sub-Saharan Africa. **In Jordan**, it occurs mainly as a passage migrant and as a localized summer visitor in the Northern Highlands and along the Rift margins from the Yarmouk south to Petra; it is often recorded feeding on the southern highland plateau. Passage migrants have been observed across the country.

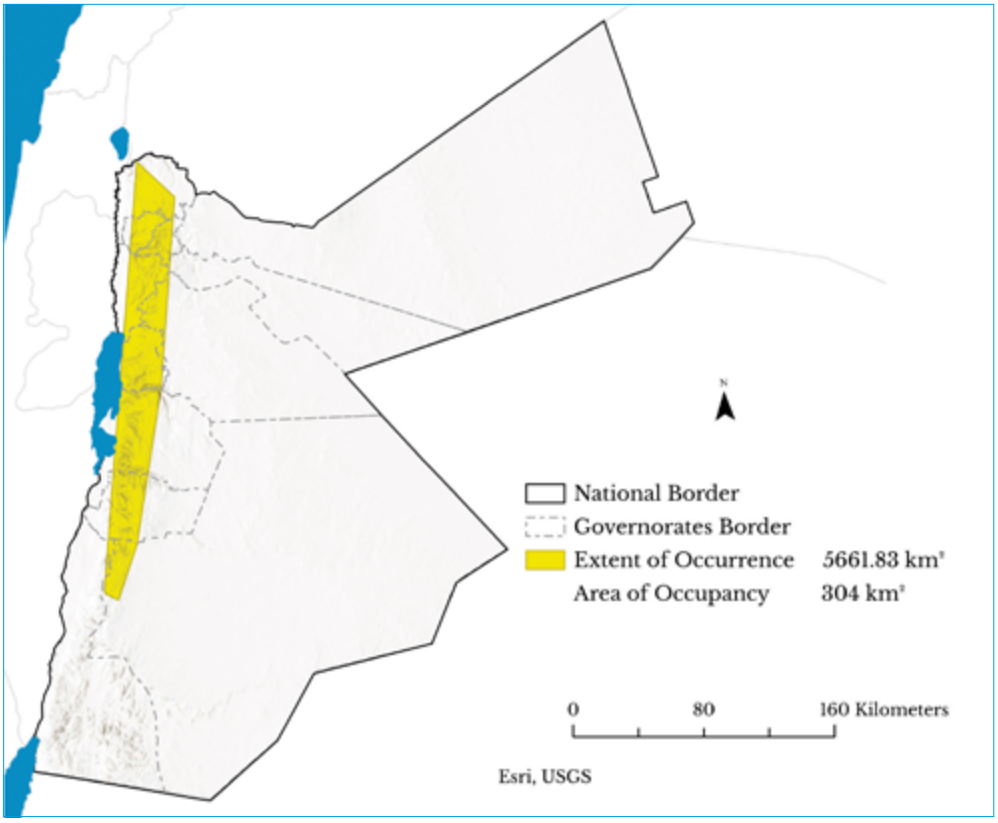
- **Habitats and Ecology:** The species occurs mainly within the Mediterranean biogeographical zone, using forests, shrublands, temperate woodlands, and inland rocky areas, including sandstone cliffs. It is migratory, but usually migrates singly or occasionally with other soaring species. Feeds chiefly on reptiles and typically nests in a tree or bush situated on a cliff or steep slope.

- **Conservation Status:** The species breeds within several protected areas in Jordan, including Yarmouk, Ajloun (possibly), Dibeen, Mujib, and Dana. However, much of its broader breeding range lies outside protected zones, leaving many nesting and foraging habitats vulnerable to disturbance and degradation. It is protected at the national level under Jordan's Agriculture Law (2015) and Environmental Protection Law (2017).

- **Major Threats:** The species is impacted by extensive habitat loss and modification across its range. Urban expansion, logging, tourism development, agricultural encroachment, mining and quarrying, and renewable energy projects all degrade or fragment suitable breeding and foraging areas. Additional pressures come from road construction and power infrastructure (i.e., wind farms), which increase disturbance and collision risk and reduce habitat quality (Khoury, 2017).

International trade records for birds indicate reported trade, including specimens listed as wild-sourced, which require further verification.

- **Recommended Conservation and Research:** Priority actions include protecting native woodlands, expanding and improving area management, and strengthening education, awareness, and regulatory enforcement, especially EIAs for major developments such as quarrying, mining, renewable energy, roads, and power lines. Partnerships with NGOs and private-sector standards can further support conservation. Research should focus on determining breeding density and population size, conducting surveys, and assessing habitat conditions across the species' range.



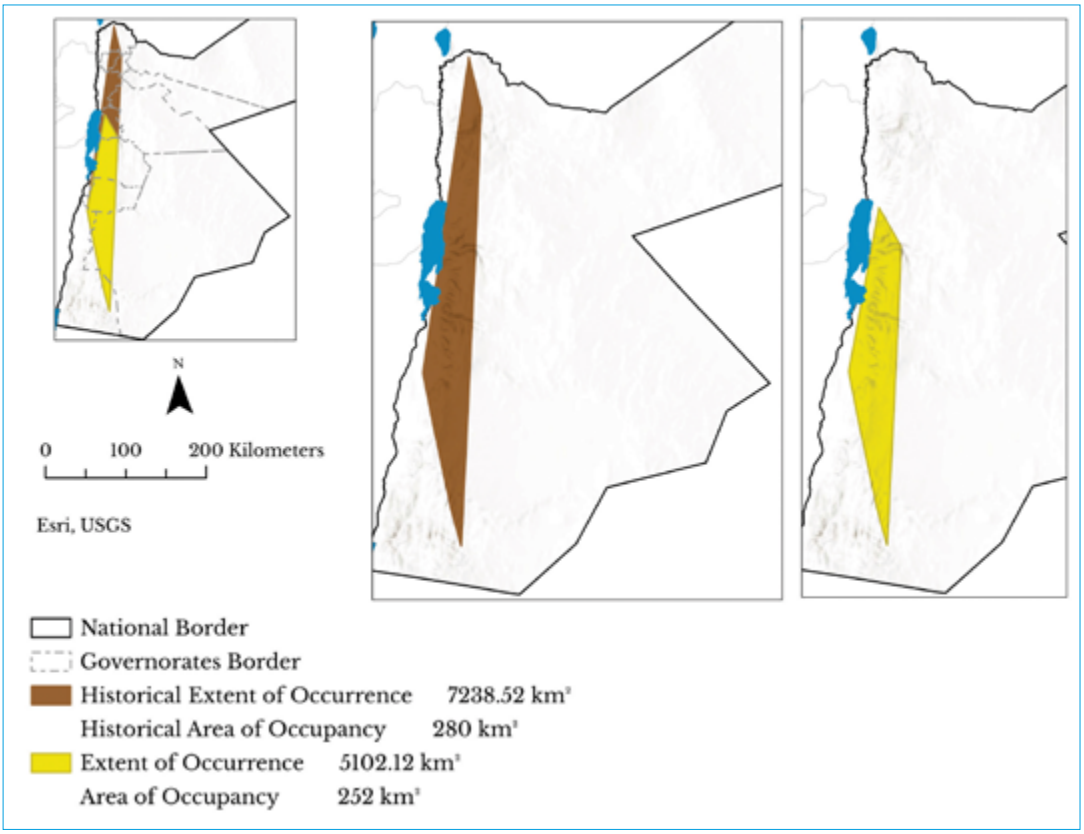
Bonelli's Eagle

Order: Accipitriformes
Family: Accipitridae
Scientific Name: *Aquila fasciata* (Vieillot, 1822)
Arabic Name:
عقاب بونلي
National Red List Status: CR D1
Population Trend: Decreasing
Status in Jordan: Resident

- **Justification:** Bonelli's Eagle has an extremely small national population, estimated at fewer than 30 mature individuals, reflecting a severe decline and near disappearance from former breeding territories in northern Jordan. Ongoing pressures from habitat degradation and human disturbance continue to affect the remaining population. The species is regionally endangered, and neighboring populations are small and declining, resulting in a minimal rescue effect and no realistic prospect of population reinforcement.

- **Distribution:** The species ranges from northwestern Africa and the Iberian Peninsula eastward through the Mediterranean, the Middle East, and Arabia to Afghanistan, Pakistan, and India, extending into northern Indochina and southeastern China. It winters in northwestern Africa, south of Senegal. **In Jordan**, it is a rare resident along the Dead Sea and southern Rift margins, with one pair recorded east of Wadi Rum. Additional scattered records of single birds occur in the north, e.g., Wadi Kafrein, Wadi Zarqa, and the Yarmouk Valley, where it may still breed. Migrating or dispersing individuals are also recorded at Aqaba.

- **Habitats and Ecology:** The species inhabits inland rocky areas and cliffs, occurring mainly within the Mediterranean and Irano-Turanian biogeographical zones. It is typically solitary or found in pairs and is resident in Jordan. Its diet includes small mammals, lizards, and medium-sized birds such as partridges and doves. It nests on cliffs but may also hunt its prey in more open, flat areas such as plateaus.



- **Conservation Status:** The species is protected under the Agricultural Law No. 13 of 2015 and the Environmental Law No. 6 of 2017. A small portion of the national population, likely 10–20%, breeds within protected areas such as Dana and Mujib, whereas most breeding sites are outside nature reserves and therefore more vulnerable to disturbance and habitat degradation.

- **Major Threats:** The species is threatened by disturbance at nesting cliffs, reduced prey availability, and habitat degradation. Urban expansion, tourism development, mining, quarrying, and wind farm construction all affect breeding and foraging sites (Khoury, 2017). Main roads increase disturbance and mortality risk, while excessive hunting of prey species further reduces food availability. Recreational activities and recurrent droughts add additional pressure on already vulnerable habitats.

- **Recommended Conservation and Research:** Conservation priorities include expanding protected areas and an urgently needed action plan for cliff-nesting raptors to be prepared and implemented, to reduce the effects of various threats mentioned above. Research needs include conducting national surveys to assess the distribution and population size of this rare species.

Western Marsh Harrier

Order: Accipitriformes
Family: Accipitridae
Scientific Name: *Circus aeruginosus* (Linnaeus 1758)
Arabic Name:
مرزة المستنقعات
National Red List Status: RE
Population Trend: Extinct
Status in Jordan: Passage migrant, winter visitor, and former breeder

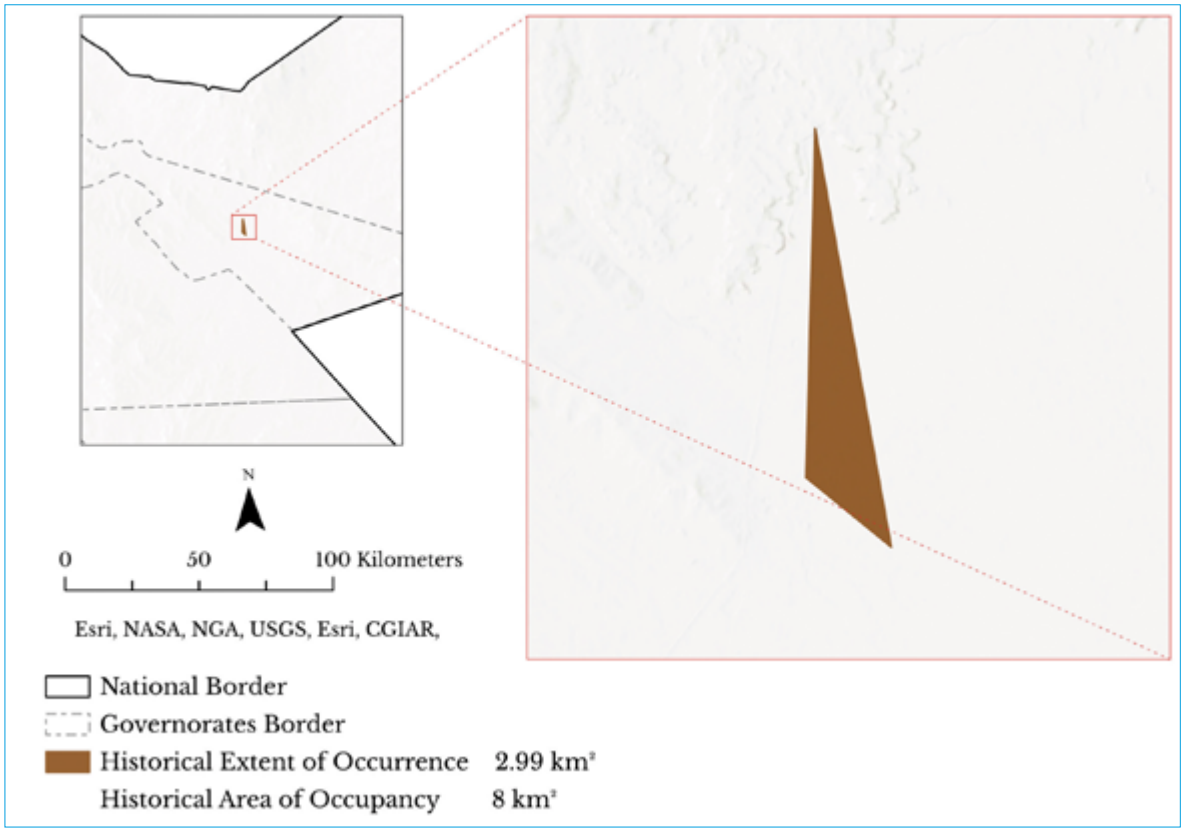
- **Justification:** The Western Marsh Harrier formerly bred in Jordan at the Azraq marshes, but breeding ceased following the collapse of the wetland in the 1970s–1980s. For more than four decades, no nests, territorial pairs, display behavior, or other evidence of local breeding have been recorded anywhere in Jordan despite continued bird monitoring, particularly at Azraq. Although the species migrates through Jordan and a small number overwinter, the prolonged absence of breeding records, the complete loss of the primary breeding habitat, and the lack of suitable undisturbed wetlands indicate that no resident breeding population remains and that natural recolonization is unlikely.

- **Distribution:** The species is widespread across Eurasia and winters in Africa and India. **In Jordan**, it occurs mainly as a common passage migrant, with records from across the country. A few apparently stay for the winter in the Jordan Valley, and it formerly bred at the Azraq Wetland Reserve.

- **Habitats and Ecology:** The species inhabits extensive marshlands with large reed beds. It is fully migratory and feeds mainly on small wetland animals, including birds. Nests are large and built on the ground, concealed within dense reed stands.

- **Conservation Status:** In Jordan, the species' former breeding site lies within the Azraq Wetland Reserve, although effective habitat management remains necessary to support any potential recovery. Internationally, it is listed under CITES Appendix II and CMS Appendix II (since 1979), and is included as a covered species under AEWA. The species is protected under the Agricultural Law No. 13 of 2015 and the Environmental Law No. 6 of 2017.

- **Major Threats:** The species is threatened by the ongoing loss and degradation of extensive reed beds in wetlands due to unregulated water extraction and agricultural expansion (Andrews 1991, 1995). International trade records for birds indicate



reported trade, including specimens listed as wild-sourced, which require further verification.

- **Recommended Conservation and Research:** Conservation efforts should include developing and implementing area-based management plans to protect and restore wetland habitats, which are essential to various threatened species that depend on marshlands and reed beds. Research is needed to survey the banks of the Jordan and Yarmouk Rivers to clarify current occurrences and identify potential habitats suitable for future conservation action.

Long-legged Buzzard

Order: Accipitriformes
Family: Accipitridae
Scientific Name: *Buteo rufinus* (Cretzschmar, 1829)
Arabic Name:
حميمق طويل الساقين
National Red List Status: NT
Population Trend: Decreasing
Status in Jordan: Resident

- **Justification:** The Long-legged Buzzard has an estimated national population probably exceeding 100 mature individuals and remains relatively widespread along the Rift Margins, where it breeds. Although evidence indicates local declines and the loss of suitable breeding habitat due to urbanization, disturbance, and reduced availability of nesting cliffs, the rates and magnitudes of these declines remain unquantified. They are unlikely to meet the thresholds for any threatened category at this time. Given ongoing pressures and indications of a contracting range, the species is considered close to qualifying for a threatened category.

- **Distribution:** The species is resident across North Africa and the Middle East, including Turkey, and extends eastward into parts of Central Asia. It also occurs as a summer visitor in southeastern Europe and central Asia, wintering in eastern Africa and southern Asia. **In Jordan**, it is resident along the

Rift margins and in Wadi Rum. During winter, some birds wander into the Northern Steppes and Interior Deserts, where a few pairs may also breed locally.

- **Habitats and Ecology:** The species occupies rocky areas, shrublands, steppes, dry savannahs, and deserts, particularly during the non-breeding season. In Jordan, it is mainly resident, though individuals often disperse widely outside the breeding period. It feeds primarily on rodents and small reptiles and typically nests on cliffs or steep rocky slopes.

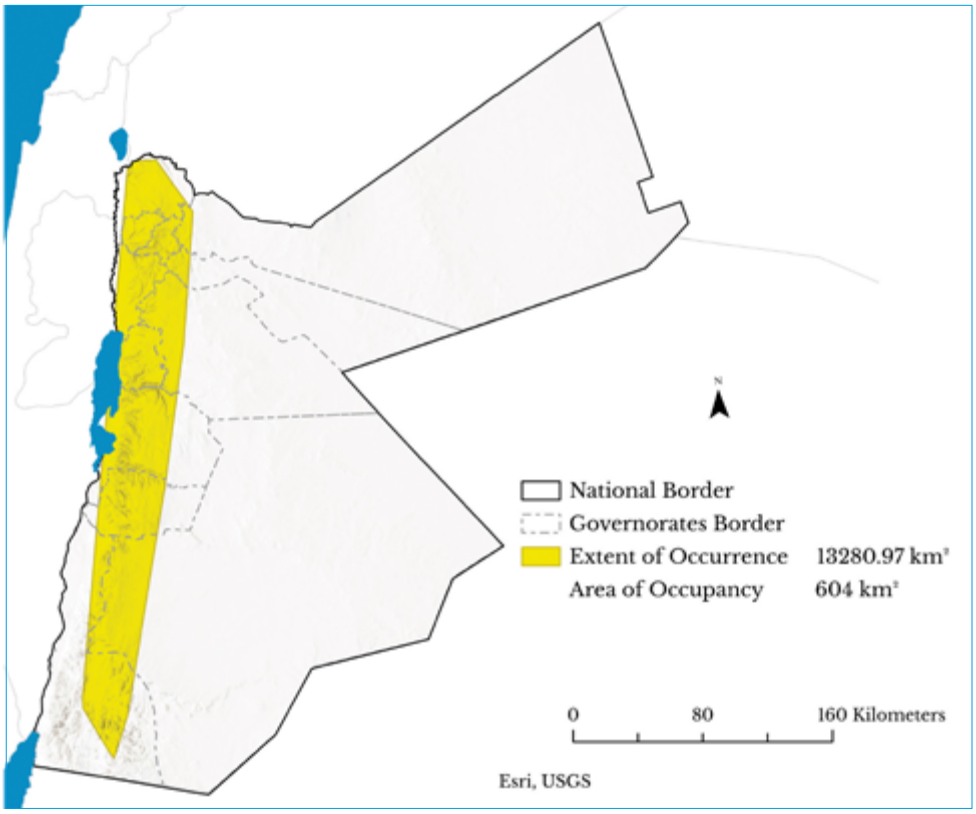
- **Conservation Status:** A small proportion of the national population breeds within protected areas such as Mujib and Dana, while most breeding sites fall outside reserve boundaries and remain vulnerable. The species is listed under CITES Appendix II and CMS Appendix II, and is covered under the CMS Raptors MoU (Annex I). Nationally, it is protected under the Agricultural Law of 2015 and the Environmental Law of 2017. It is also included in Annex I of the EU Birds Directive.

- **Major Threats:** The species is primarily threatened by habitat loss and disturbance driven by urban expansion, tourism development, mining, and quarrying, all of which degrade or fragment nesting and foraging areas. Associated infrastructure,



Long-legged Buzzard (Buteo rufinus); photo: © Fares Khoury

particularly roads, wind farms, and power lines, increases disturbance and collision risk, while recreational activities further disrupt breeding sites. Direct persecution also occurs, with two individuals documented as killed based on evidence from Facebook posts, in addition to the collection of birds and illegal trade in the Friday public animal markets (Eid *et al*, 2010; Eid & Handal, 2018; Khoury, 2017).



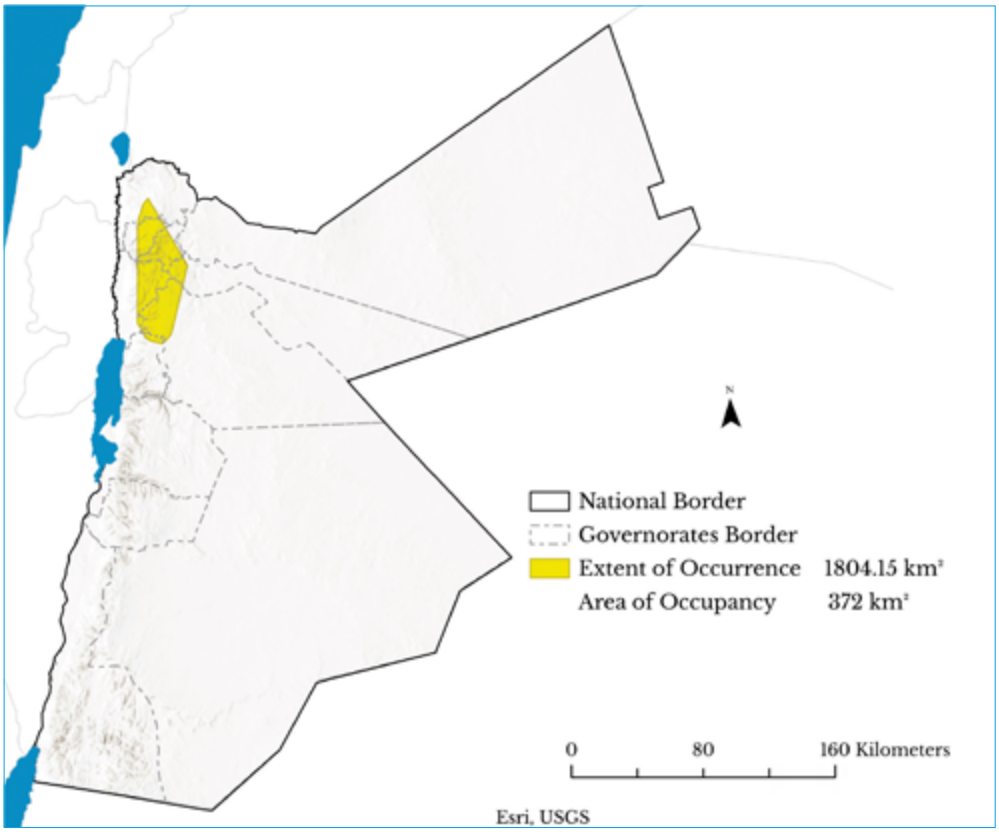
• **Recommended Conservation and Research:** The preparation and implementation of a comprehensive action plan for cliff-nesting raptors is urgently required. Research priorities include determining population size, distribution, and trends.

Eurasian Sparrowhawk

Order: Accipitriformes
Family: Accipitridae
Scientific Name: *Accipiter nisus* (Linnaeus, 1758)
Arabic Name:
باشق أوراسي
National Red List Status: DD
Population Trend: Unknown
Status in Jordan: Resident, passage migrant, winter visitor

• **Justification:** Breeding has been suspected in Jordan and was recently documented in the Northern Rift Margins; however, essential information on the size, distribution, and status of the resident population remains lacking. Despite widespread occurrences of birds that appear to be resident, the number of mature individuals cannot be estimated, and the extent of the breeding range is unclear. In the absence of reliable data on population size, trend, and Area of Occupancy, the species cannot be evaluated against quantitative criteria.

• **Distribution:** The Eurasian Sparrowhawk occurs widely across Eurasia. **In Jordan**, it is known as a passage migrant recorded throughout the country, and as a winter visitor mainly to the western regions. Increasing observations during the breeding season indicate the presence of a resident population in the northwestern highlands, extending from the Yarmouk Valley southwards through the Ajloun and Salt areas to Madaba, and possibly further south. A nest was recently discovered near the Yarmouk Valley, marking the first evidence of breeding in the country.



• **Habitats and Ecology:** This species inhabits habitats primarily within the Mediterranean biogeographical zone, including natural forests, shrublands, Mediterranean-type scrub, and pine plantations. The species primarily feeds on small birds, which it captures in flight, and uses wooded landscapes and forest edges for hunting and nesting.

• **Conservation Status:** The exact breeding distribution of the Eurasian Sparrowhawk in Jordan remains unknown. Most breeding activity is presumed to lie outside protected areas. The species is listed under CITES Appendix II, and included in CMS Appendix II and AEWA as a migratory species. The species is protected under the Agricultural Law No. 13 of 2015 and the Environmental Law No. 6 of 2017.

• **Major Threats:** Key pressures include urban expansion, woodland clearance, road development, and utility and service corridors, which reduce or alter suitable breeding and foraging habitats. One individual was documented as killed based on a Facebook post (Eid & Handal, 2018). International trade records for birds indicate reported trade, including specimens listed as wild-sourced, which require further verification.

• **Recommended Conservation and Research:** Conservation of the Eurasian Sparrowhawk should prioritize the protection and proper management of Mediterranean-type woodlands, including areas outside reserves. Strengthening EIA enforcement for developments such as quarrying, mining, renewable energy, roads, and power lines is essential to limit habitat loss. Research is required to estimate breeding population size and distribution.



Eurasion Sparrowhawk (Accipiter nisus); photo: © Raed Al-Btosh

Black-winged Kite

Order: Accipitriformes
Family: Accipitridae
Scientific Name: *Elanus caeruleus* (Desfontaines, 1789)
Arabic Name:
زرّق شائع
National Red List Status: LC
Population Trend: Increasing
Status in Jordan: Resident

• **Justification:** The Black-winged Kite is a rapidly expanding breeder in Jordan and is now recorded regularly at numerous sites. Breeding has been confirmed for more than a decade, indicating that the species is well established and no longer in an early colonization phase. Both Area of Occupancy and Extent of Occurrence have already exceeded thresholds for threatened categories, and the population trend appears to be still increasing. No significant threats have been identified that could drive a near-term decline, and continued immigration from surrounding regions further reduces the risk of extinction.

• **Distribution:** The Black-winged Kite is widely distributed in Africa and South Asia, with a recent

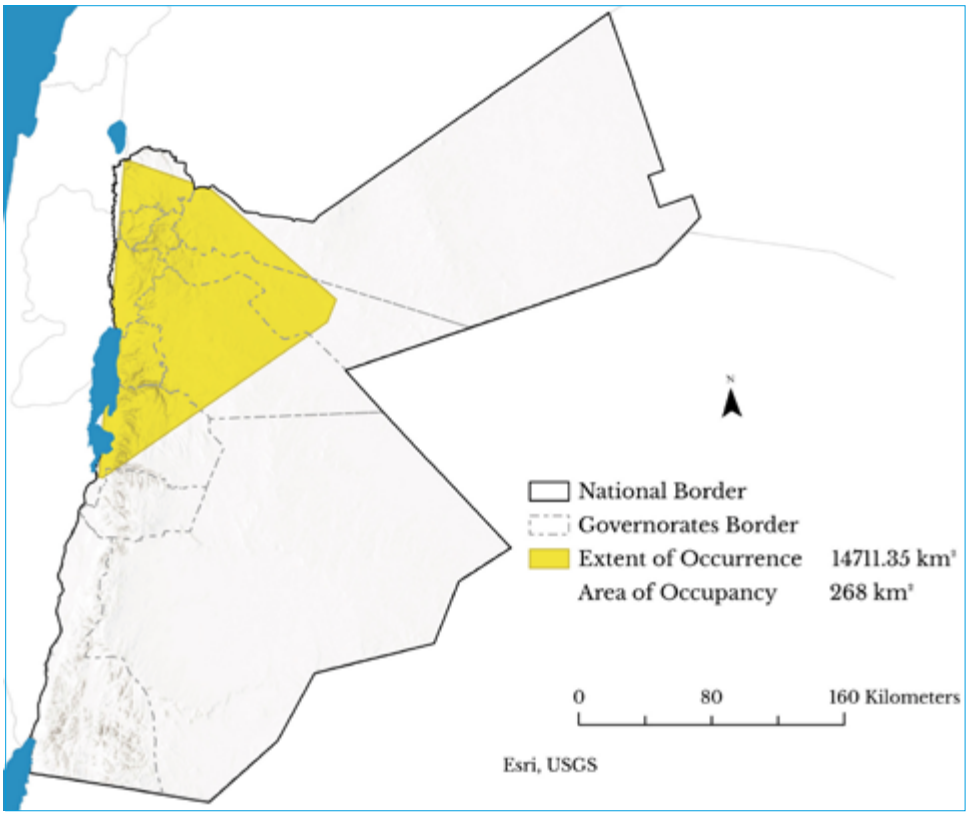
range expansion into the Middle East and the Iberian Peninsula. **In Jordan**, it was first recorded in 2013, followed by the first documented breeding in 2015 (Khoury et al, 2017); since then, the Asian subspecies has spread rapidly, particularly through the Jordan Valley, the Northern Steppes, Azraq, and other agricultural landscapes.

- **Habitats and Ecology:** This species inhabits dry savannas and open agricultural landscapes, including arable fields with scattered trees. In Jordan, it mainly hunts by hovering over fields to capture small rodents and birds, and it nests in trees in cultivated or semi-natural areas. Since its arrival, the species has expanded into multiple biogeographical regions and climatic zones across the country, demonstrating high ecological flexibility.

- **Conservation Status:** The Black-winged Kite has no species-specific conservation measures in Jordan, but it benefits indirectly from agricultural habitats and scattered tree cover across the landscape. Internationally, it is listed under CITES Appendix II and included in CMS Appendix II and AEWA, which recognize its migratory movements and promote cooperative conservation across its expanding range. Nationally, the species is only protected under the general provisions of the Environmental Protection Law of 2017. Its population in Jordan is continuing to grow and spread, and no major national threats have yet been identified.

- **Major Threats:** Potential pressures include urbanization and occasional collection or persecution. One individual was documented as killed based on evidence from a Facebook post, and it is occasionally collected and offered for sale on social media platforms (Eid & Handal, 2018).

- **Recommended Conservation and Research:** Recommended actions include continued monitoring of population expansion and breeding sites, protection of scattered trees and suitable agricultural habitats, and the incorporation of raptor-friendly measures into land-use and infrastructure planning.



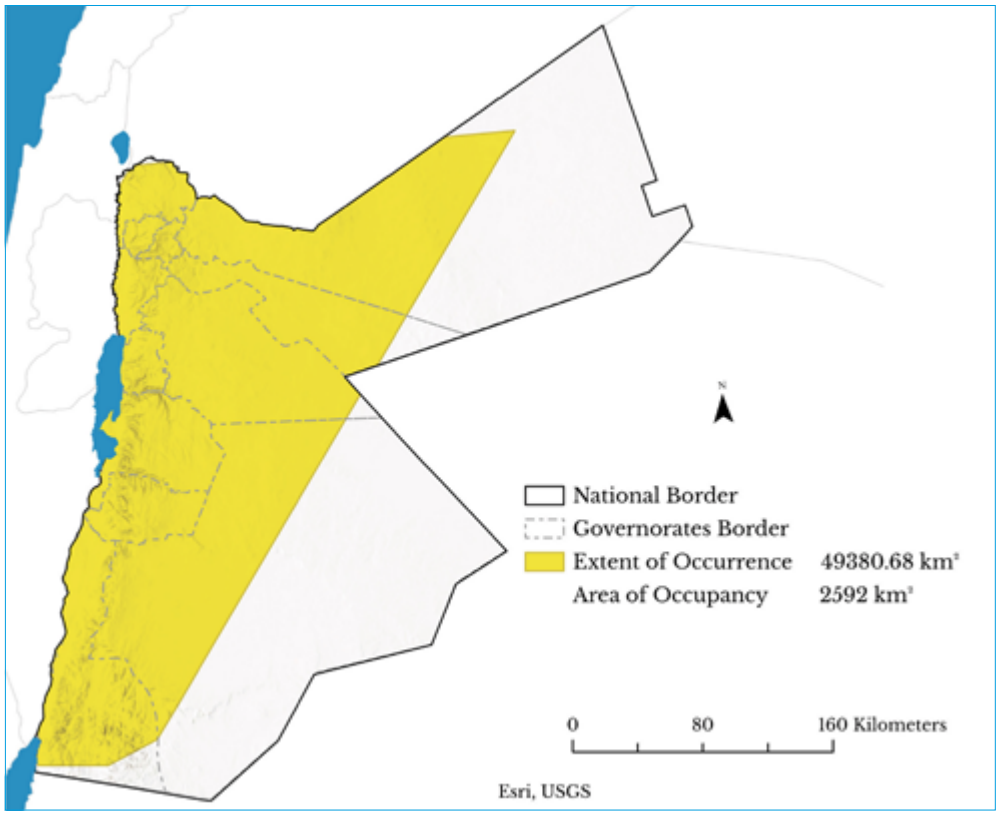
Common Kestrel

Order: Accipitriformes
Family: Falconidae
Scientific Name: *Falco tinnunculus* (Linnaeus, 1758)
Arabic Name:
عوسق شائع
National Red List Status: LC
Population Trend: Stable
Status in Jordan: Resident, passage migrant

- **Justification:** The Common Kestrel is a widespread and fairly common resident across Jordan, occurring in a wide range of urban, rural, and natural habitats. The national population is estimated to exceed 2,000 mature individuals, well above thresholds for threatened categories, and there is no evidence of a population decline. Its broad distribution, ecological flexibility, and continued presence across most regions, except parts of the eastern Hamada desert, where nesting sites are limited, indicate a stable population with no significant threats that would elevate extinction risk.

- **Distribution:** The Common Kestrel is widespread across Eurasia and northern and central Africa. Migratory populations from northeastern Europe and northern Asia winter in Africa, the Middle East, and South Asia. **In Jordan**, the species is a widespread resident found across all bioclimatic zones. It is less common as a resident in the arid deserts of central and eastern Jordan, where it also occurs as a passage migrant.

- **Habitats and Ecology:** The Common Kestrel occupies a wide range of terrestrial habitats in Jordan, including dry savanna, temperate shrublands, Mediterranean-type vegetation, rocky inland areas, hot deserts, arable land, and urban environments. It is mostly resident in Jordan, with some migrants and possibly wintering individuals also present. The species occurs singly or in pairs and is strongly territorial during the breeding season. A generalist predator, it feeds on small birds, reptiles, rodents, and large arthropods. Nests are placed on cliffs, rocky outcrops, and increasingly on buildings within urban areas.



- **Conservation Status:** The Common Kestrel is listed under CITES Appendix II, CMS Appendix II, and AEWA as a migratory species. The species is protected under the Agricultural Law No. 13 of 2015 and the Environmental Law No. 6 of 2017.

- **Major Threats:** Key threats include habitat loss driven by urban development, mining and quarrying, renewable energy installations, major road infrastructure, and pesticide use, all of which degrade or fragment suitable habitats. Breeding success is further compromised by the collection of nestlings for trade, indicating targeted exploitation of local populations. Direct persecution has also been documented (Eid *et al.* 20010; Eid & Handal, 2018).

- **Recommended Conservation and Research:** Priority actions include protecting nesting and hunting habitats, monitoring breeding and migratory populations, mitigating impacts from pesticides and habitat conversion, and promoting the installation of nest boxes in suitable areas. Further research is needed on breeding ecology, migration patterns, and the effects of habitat change and pesticide use.

Lesser Kestrel

Order: Accipitriformes
Family: Falconidae
Scientific Name: *Falco naumanni* (J.G.Fleischer, 1818)
Arabic Name:
عويسق
National Red List Status: EN B2ab(ii,iii,v)
Population Trend: Decreasing
Status in Jordan: Summer visitor, passage migrant

- **Justification:** The species has a small and declining breeding population in Jordan, with breeding restricted to locally clustered or sporadic colonies along the Rift Margins, resulting in a highly restricted Area of Occupancy. Ongoing declines in habitat quality caused by overgrazing, drought, and land-use change are leading to continued reductions in area of occupancy, feeding habitat, and breeding-site suitability, as well as a decline in the number of mature individuals seen at colonies. These conditions meet the Endangered threshold under criterion B2. Although the species is widespread globally, local declines are driven by persistent regional pressures, and immigration is unlikely to offset ongoing losses.

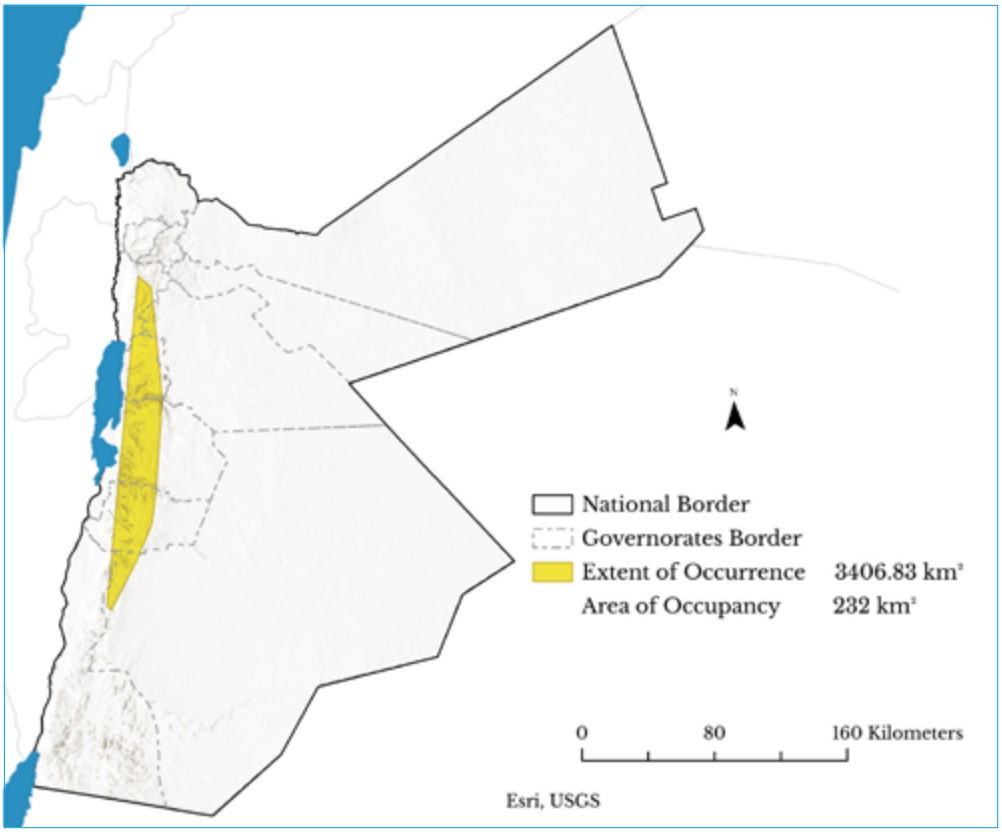
- **Distribution:** The Lesser Kestrel is a summer visitor from northwestern Africa through southeastern Europe and western Asia to China, with resident populations in parts of southern Europe and northern Africa and wintering grounds in Africa and South Asia. **In Jordan**, it breeds colonially along the Rift Margins from the Balqa' region to Shobak, foraging on nearby open slopes and fields. It also occurs as a passage migrant mainly in the west, and has been occasionally recorded in winter.



Lesser Kestrel (Falco naumanni); photo: © Fares Khoury

• **Habitats and Ecology:** The Lesser Kestrel uses temperate shrublands, steppe grasslands, rocky areas, arable fields, and pasturelands. In Jordan, it breeds colonially on sandstone and limestone cliffs and forages on nearby open slopes, steppe, and cereal fields, feeding mainly on large insects. During migration, groups often forage over agricultural areas.

• **Major Threats:** The Lesser Kestrel is threatened by habitat loss associated with urbanization, tourism development, mining and quarrying, renewable energy infrastructure, and major road construction, as well as by pesticide use that reduces prey availability and by increasing drought that degrades feeding habitats. The species was recorded in trade at the Friday Animal Market of Amman (Eid *et al.*, 2010).



• **Conservation Status:** A few breeding colonies occur within protected areas, offering some habitat security. Internationally, the Lesser Kestrel is listed under CMS Appendices I and II and is included in AEWA as a migratory species of conservation concern, thereby attracting additional conservation attention across its range. The species is protected under the Agricultural Law No. 13 of 2015 and the Environmental Law No. 6 of 2017.

• **Recommended Conservation and Research:** An action plan is urgently required for this species and all other cliff-nesting raptors in Jordan which should focus on protecting breeding cliffs and foraging habitats, monitoring breeding success, and reducing pesticide use to support prey availability. Research is needed on the species' life history, and threats.

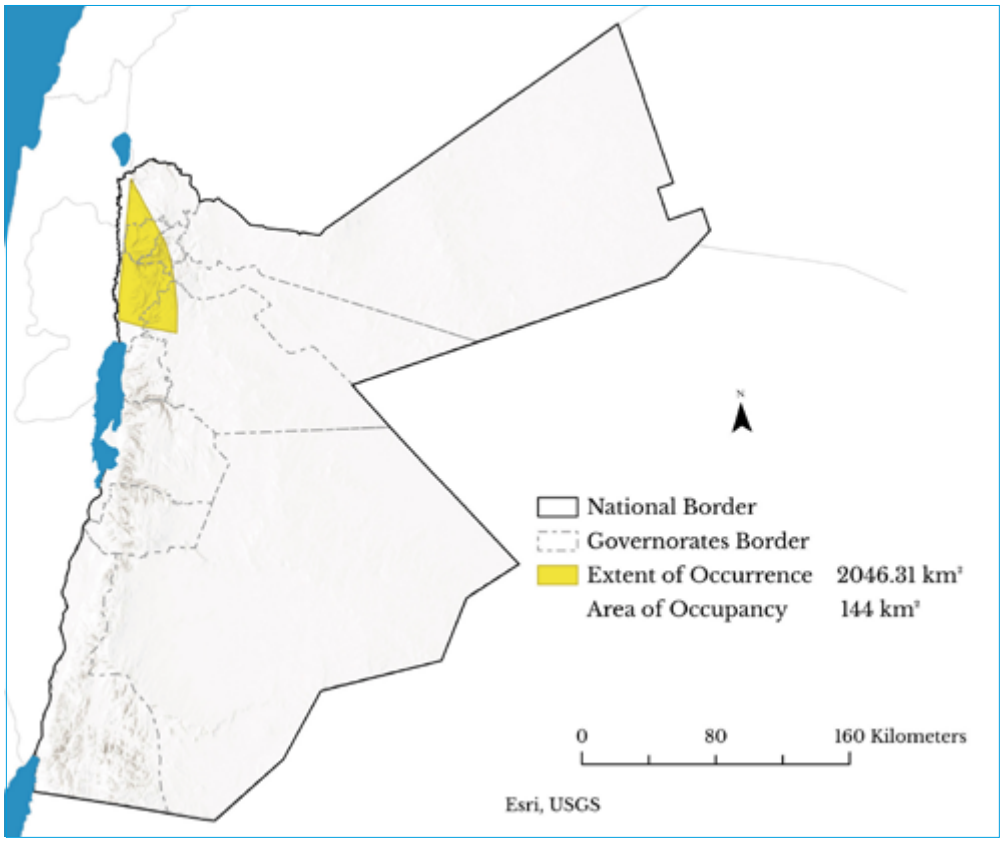
Eurasian Hobby

Order: Accipitriformes
Family: Falconidae
Scientific Name: *Falco subbuteo* (Linnaeus, 1758)
Arabic Name:
شويهين أوراسي
National Red List Status: VU° B2ab(iii); D1
Population Trend: Decreasing
Status in Jordan: Summer visitor, passage migrant

- **Justification:** The national breeding population is very small (≤250 mature individuals) and confined to fragmented woodland in the northwest. The Area of Occupancy is restricted, and habitat quality is continuing to decline due to woodland clearance and urban expansion, resulting in small, isolated subpopulations and ongoing loss of suitable breeding and feeding habitat. The threshold for Endangered is thus met under criteria B and D. The species occurs in neighboring countries, and a rescue effect is possible, given its flexibility in breeding across various woodland habitats. The national breeding population of Hobby has therefore been downlisted to Vulnerable.

- **Distribution:** This species is widespread across Eurasia and northwestern Africa, where it is a summer visitor, and it winters in sub-Saharan Africa and parts of Southeast Asia. **In Jordan**, it is a thinly distributed summer visitor in the northwest, breeding mainly in Mediterranean woodlands and occasionally in rural or urban areas with scattered trees, including transitional zones toward the Sudanian (subtropical) region. Elsewhere in the country, it occurs as an uncommon passage migrant during spring and autumn.

- **Habitats and Ecology:** The species occupies Mediterranean-type shrublands, temperate woodlands, arable lands, and urban zones with parks and scattered trees. It is highly migratory,



breeding non-colonially in tree nests and hunting mainly on the wing. Its diet consists largely of flying insects, small birds, and bats, which are captured in active aerial pursuit.

- **Conservation Status:** The species is listed in CITES Appendix II, CMS Appendix II, and is covered under AEWA as a migratory bird. Nationally, it is protected under the Agricultural Law No. 13 of 2015 and the Environmental Law No. 6 of 2017. In Jordan, it benefits from partial habitat protection within Dibeen Forest Reserve, where suitable breeding habitat persists.

- **Major Threats:** The species is affected by habitat loss and degradation, particularly through urbanization and logging, agricultural expansion and pesticide use, and road development.

- **Recommended Conservation and Research:** To support the species, the development and implementation of an action plan for woodland species is urgently required. Research is needed on national population size, exact distribution and key threats.



Eurasian Hobby (Falco subbuteo); photo: © Fares Khoury

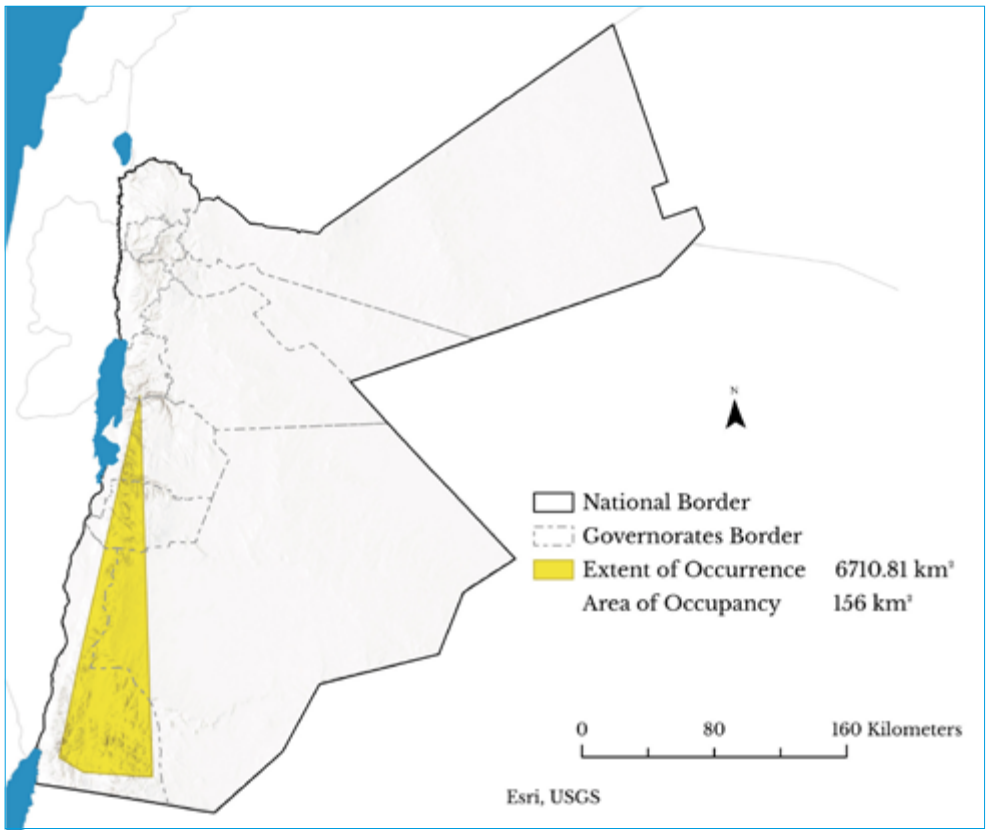
Sooty Falcon

Order: Accipitriformes
Family: Falconidae
Scientific Name: *Falco concolor* (Reuter, 1905)
Arabic Name:
صقر أسحم
National Red List Status: VU° D1
Population Trend: Unknown
Status in Jordan: Summer visitor, passage migrant

- **Justification:** The national breeding population is small (<250 mature individuals) and confined to a narrow range from the Hizmah Basin to the Dead Sea margins, with pairs scattered across isolated sites. The small population size indicates a high risk of extinction. At the same time, local threats from tourism disturbance, mining activities, and habitat degradation suggest vulnerability to future decline. However, current data are insufficient to quantify reductions under criteria A, B, or C. Breeding populations persist in Saudi Arabia, including recent inland records near Jordan, suggesting a potential rescue effect that justifies downlisting. The national breeding population of Sooty Falcon is therefore assessed as Vulnerable.

- **Distribution:** The Sooty Falcon breeds in the Middle East and northeastern Africa and winters in southeastern Africa and Madagascar. **In Jordan**, it is a late-summer visitor that breeds along the Dead Sea and southern Rift margins, south to the Hizmah Basin, and an uncommon passage migrant elsewhere in spring and early summer.

- **Habitats and Ecology:** In Jordan, the Sooty Falcon breeds on rocky cliffs and hilly or mountainous areas, mainly where sandstone and granite outcrops occur. It is a scarce summer visitor and a rare passage migrant, staying mainly through late summer to October. Breeding is timed to coincide with the autumn migration of small birds, which form a major



part of its diet along with insects. Nesting sites on the mainland are scattered, while elsewhere in its range the species may form loose colonies.

- **Conservation Status:** The species is protected under Jordan's Agriculture Law (2015) and Environmental Protection Law (2017), occurs within some protected areas, and is listed in CITES Appendix II, CMS Appendices I and II, and under AEWA. A global action plan has been prepared for this species.

- **Major Threats:** Key threats include habitat degradation and disturbance from tourism development, grazing, mining and quarrying, renewable energy projects, roads, and utility lines. Additional pressures include recreational activities at or near nesting areas (Khoury *et al.*, 2026).

- **Recommended Conservation and Research:** Research is needed to determine the exact breeding distribution, population size, population trends, and habitat changes across its range. A national action plan is needed and should focus on protecting nesting cliffs and feeding habitats.

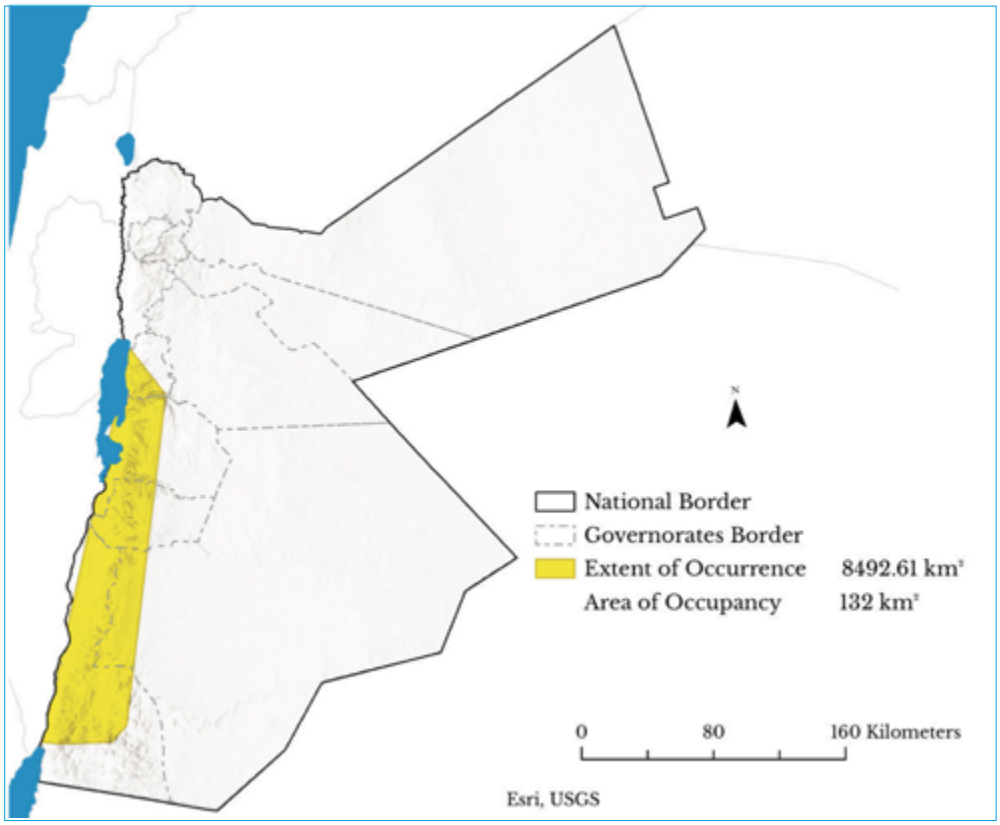
Barbary Falcon

Order: Accipitriformes
Family: Falconidae
Scientific Name: *Falco peregrinus pelegrinoides* (Temminck, 1829)
Arabic Name:
شاهين جبلي (كوبج)
National Red List Status: EN A2cd, D1
Population Trend: Decreasing
Status in Jordan: Resident

- **Justification:** The national population of the Barbary Falcon is very small (<50 pairs) and confined to a restricted breeding range. A population reduction of at least 50% is suspected based on the loss and disturbance of nesting cliffs, increasing development pressure (roads, tourism, mining), and illegal trapping and nestling collection, as well as the disappearance from several historical sites in the Dead Sea margins and Wadi Rum. A continuing decline in habitat quality, breeding-site availability, and the number of mature individuals is inferred. The small population size further indicates high extinction risk and meets thresholds for Endangered under criteria A2 and D1. Declines are occurring across the wider region, and immigration is unlikely to offset ongoing habitat loss and exploitation within Jordan.

- **Distribution:** The Peregrine Falcon occurs worldwide, except in Antarctica, and occupies a wide range of terrestrial habitats outside deserts and dense rainforests, with several regional subspecies, including the North African and Middle Eastern Barbary Falcon. **In Jordan**, *F. p. pelegrinoides* is a resident breeder along the Dead Sea, the southern Rift margins, and the Rum Desert. Other northern Peregrine subspecies occur in the country as passage migrants and rare winter visitors.

- **Habitats and Ecology:** In Jordan, the Barbary Falcon inhabits rocky inland landscapes, hot desert environments, and temperate shrublands, primarily within the Saharo-Arabian and Sudanian bioclimatic zones. The species is resident in Jordan, unlike some other Peregrine Falcon subspecies and populations



that occur only as visitors. It preys mainly on small to medium-sized birds, particularly doves, and breeds on cliff faces, where nests are established on ledges.

• **Conservation Status:** A few breeding pairs occur within protected areas such as Rum, Mujib, and Dana, although most of the subspecies' breeding range lies outside protected zones. It is protected under Jordan's Agriculture Law (2015) and Environmental Protection Law (2017), and is listed in CITES Appendix I and CMS Appendices I and II.

• **Major Threats:** The subspecies is threatened by illegal trapping and nestling collection, as well as disturbance at nesting sites. Habitat loss and degradation result from mining and quarrying, tourism development and recreational activities, renewable energy projects, and the expansion of main roads, all of which contribute to reduced breeding success and the abandonment of former nesting areas (Khoury *et al.*, 2020). International trade records for birds indicate reported trade, including specimens listed as wild-sourced, which require further verification.

• **Recommended Conservation and Research:** Priority actions include protecting all nesting cliffs and key habitats from disturbance and development, strengthening enforcement of laws against illegal trapping and trade, and raising awareness to reduce persecution. Research is needed to conduct a national survey of nesting sites and to produce an updated population estimate.

Lanner Falcon

Order: Accipitriformes
Family: Falconidae
Scientific Name: *Falco biarmicus* (Temminck 1825)
Arabic Name:
طائر حر
National Red List Status: CR C2a(ii) D1
Population Trend: Decreasing
Status in Jordan: Resident

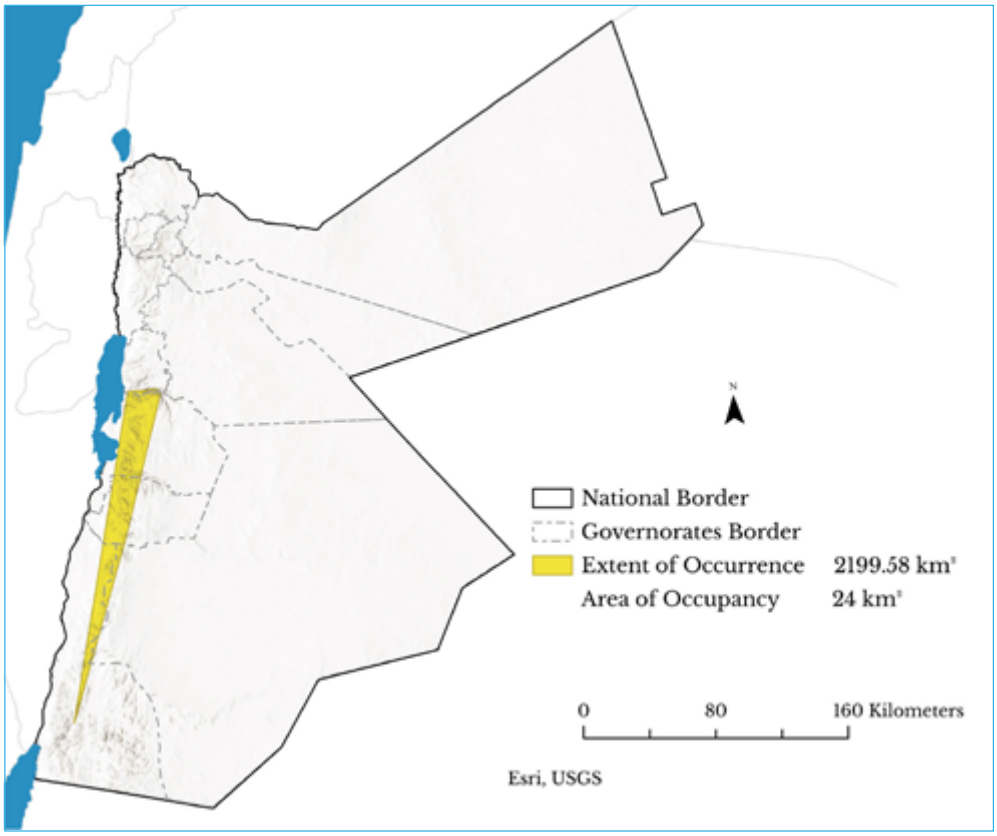
• **Justification:** The national population is extremely small, estimated at ≤20 mature individuals and fewer than 10 breeding pairs, based on few recent confirmed records. This is below the threshold for Critically Endangered under criteria C2 and D1. A continuing decline is inferred from escalating disturbance and habitat modification across the breeding range, including industrial and tourism development, roads, mining, and illegal trapping. The Area of Occupancy is extremely restricted as the Lanner falcon persists at only a few scattered sites, with all mature individuals almost certainly concentrated in one or two very small subpopulations. Given the very small population size and ongoing decline, immigration from outside Jordan is unlikely to offset severe local pressures.

• **Distribution:** The Lanner Falcon ranges across Africa, southern Europe, Turkey, and the Middle East. **In Jordan**, it was recorded primarily along the Dead Sea and Southern Rift margins and in the Rum Desert. Occasional records from Wadi Kafrein and the central and eastern areas suggest some dispersal.

• **Habitats and Ecology:** The species occupies savannahs, temperate shrublands, inland rocky areas, and hot deserts. In Jordan, it is non-migratory, nesting on cliffs in wide valleys and wadis. It feeds mainly on birds such as quail, doves, and sand partridges.

• **Conservation Status:** The species is listed in CITES Appendix II and CMS Appendix II, and is included as a species of concern under the CMS Raptors MoU. The species is protected under the Agricultural Law No. 13 of 2015 and the Environmental Law No. 6 of 2017.

• **Major Threats:** The Lanner Falcon is threatened by trapping, disturbance, and widespread habitat degradation. Key pressures include urbanization, tourism development, mining and quarrying, wind energy projects, roads and utility lines, nestling collection, recreational activities, all of which reduce habitat quality and breeding success (Khoury *et*



al., 2020). International trade records for birds indicate reported trade, including specimens listed as wild-sourced, which require further verification.

• **Recommended Conservation and Research:** Priority actions include protecting nesting cliffs and key hunting habitats from disturbance and development, monitoring, controlling illegal trapping and trade, as part of a plan to protect large breeding falcons, and other cliff-nesting raptors. Research is needed to establish current breeding status, distribution and population size.

Baillon's Crake

Order: Gruiformes
Family: Rallidae
Scientific Name: *Porzana pusilla* (Pallas 1776)
Arabic Name:
مرعة بايلون
National Red List Status: RE
Population Trend: Extinct
Status in Jordan: Passage migrant, former breeder

• **Justification:** Baillon's Crake formerly bred in Jordan, with 5–10 pairs recorded at Azraq in the 1960s, but breeding ceased completely following the collapse of the Azraq marshes in the 1970s–1980s. For over four decades, no nests, territorial birds, courtship displays, or other breeding evidence have been recorded anywhere in the country, despite extensive monitoring. The species now occurs only as a passage migrant, and the loss of suitable wetland habitat makes natural recolonization unlikely.

• **Distribution:** The species has a wide global range across Europe, Asia, Africa, and Australasia. **In Jordan**, it is a scarce passage migrant, recorded mainly at Aqaba and Azraq. It formerly bred at the Azraq Wetland during the 1960s and subsequent years, but no breeding evidence has been recorded since the wetland's collapse in the 1980s.

• **Habitats and Ecology:** The species inhabits freshwater and brackish wetlands, including

permanent and seasonal marshes, pools, and mudflats with dense vegetation. Nesting in shallow sites near water. Its diet consists mainly of aquatic insects, mollusks, and crustaceans.

- **Conservation Status:** Former and potential breeding sites lie within the Azraq Wetland Reserve, which is protected under national legislation. The species is covered by the AEWA and the Ramsar Convention through the Azraq site, which requires habitat maintenance and protection of the population. It is also protected under Jordan's Environmental Protection Law (2017) and Agricultural Law (2015).

- **Major Threats:** The species has lost its breeding habitat in Jordan due to wetland drying and vegetation collapse resulting from groundwater extraction and reduced natural recharge. Wetland quality is further degraded by agricultural water use, nutrient runoff, grazing pressure, and livestock trampling. Additional pressures include climate-related reductions in water availability, all of which prevent the re-establishment of suitable breeding conditions (Andrews 1991, 1995).

- **Recommended Conservation and Research:** This species is currently extinct as breeder, but may recolonize protected and restored wetlands. It would benefit from the implementation of a comprehensive multi-species national plan focussing on protecting and restoring wetland habitats.

Common Moorhen

Order: Gruiformes
Family: Rallidae
Scientific Name: *Gallinula chloropus* (Linnaeus, 1758)
Arabic Name:
دجاجة الماء خضراء الأقدام
National Red List Status: LC
Population Trend: Increasing
Status in Jordan: Resident, passage migrant, winter visitor

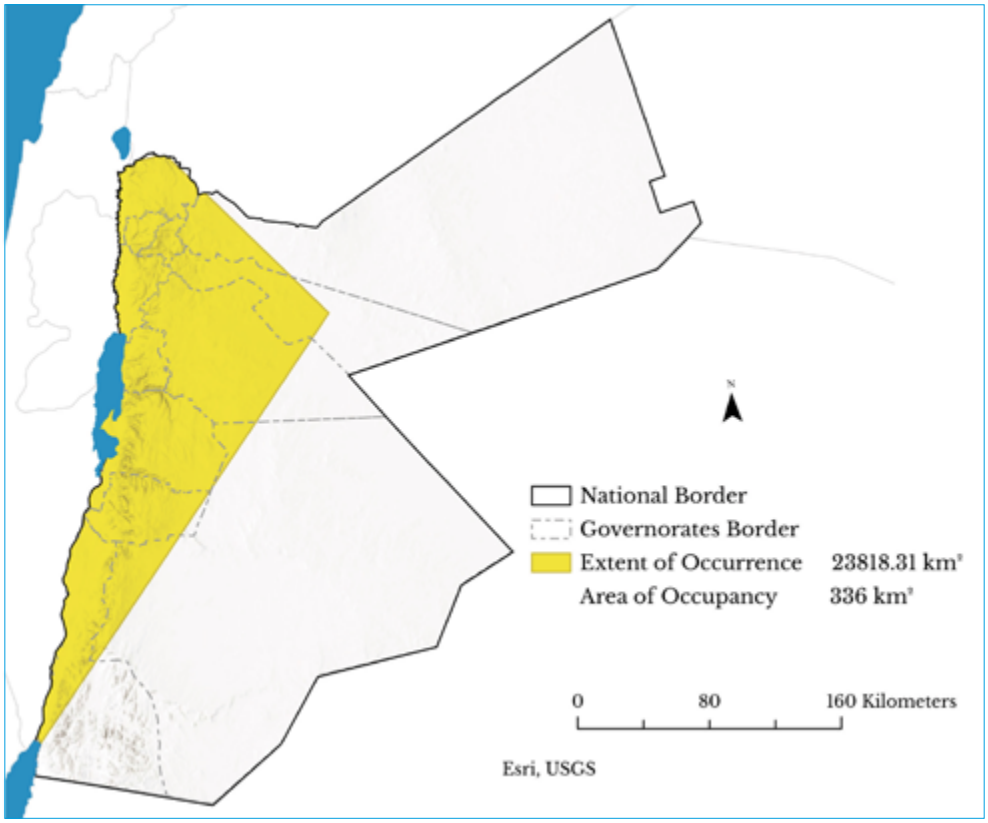
- **Justification:** The Common Moorhen is widely distributed across Jordan in both natural and artificial wetlands, with continuous occurrence along the Jordan River system, streams flowing into the Dead Sea, and various wetland sites such as Azraq. The species has expanded into newly created habitats, including ponds at water treatment plants and tourism developments (e.g., Ayla in Aqaba). With an Area of Occupancy of approximately 336 km^2, broad ecological adaptability, and occupation of numerous sites, there is no evidence of significant population decline, severe fragmentation, or major threats. The species continues to exist at suitable wetlands and does not approach thresholds for any threatened category.

- **Distribution:** The Common Moorhen is widespread across Eurasia and Africa. **In Jordan**, it is a common resident and passage migrant, with consistent records from Azraq Wetland Reserve, the Aqaba Bird Observatory, and various wetlands in the Rift Valley and its margins.

- **Habitats and Ecology:** The species occupies well-vegetated freshwater wetlands, including permanent streams, marshes, ponds, canals, and wastewater treatment areas. It favors permanent water bodies with dense margins, feeding on plant material and invertebrates while swimming or grazing on land. Nests are placed near water edges or on floating vegetation. The Common Moorhen occurs across all climatic regions of Jordan, wherever suitable wetlands exist.

- **Conservation Status:** The species is protected under Jordan's Agricultural Law (2015) and Environmental Protection Law (2017), and is listed under AEWA and Appendix III of the national wildlife protection regulations. It also benefits from habitat protection within the Azraq Wetland Reserve and Fifa Nature Reserve.

- **Major Threats:** The species is affected by wetland loss and degradation caused by drainage, land conversion, and pollution. These impacts are



compounded by agricultural intensification, sewage and pesticide runoff, urban encroachment, water abstraction, and livestock grazing (Khoury & Körner, 2018), all of which reduce the extent and quality of freshwater habitats. Pressure from illegal capture and trade is also evident, as the species was recorded at the Friday Animal Market (Eid *et al.*, 2010).

- **Recommended Conservation and Research:** Priority actions include protecting and restoring wetlands, improving pollution control, managing grazing at wetlands, reducing disturbance, engaging communities, and enhancing monitoring. Research needs include population surveys, water quality, and habitat condition, as well as disease surveillance to support long-term conservation.

Eurasian Coot

Order: Gruiformes
Family: Rallidae
Scientific Name: *Fulica atra* (Linnaeus 1758)
Arabic Name:
غرة أوراسية
National Red List Status: EN B2ab(iii); D1
Population Trend: Unknown
Status in Jordan: Passage migrant and winter visitor, and a rare breeding resident

- **Justification:** The national breeding population is extremely small (≤100 mature individuals), indicating a very high risk of extinction. Breeding is confined to Azraq and, probably, to very few locations along the Jordan and Yarmouk Rivers, resulting in a restricted Area of Occupancy (<500 km^2). Habitat quality continues to decline due to water extraction, drought, disturbance, and hunting, placing ongoing pressure on the remaining population. Although the species is widely distributed and breeds in neighboring countries, and immigration into Jordan is plausible, this provides only partial demographic support and does not eliminate the underlying national threats.

- **Distribution:** The Eurasian Coot is widespread across Eurasia, Africa, and Australia, with northern

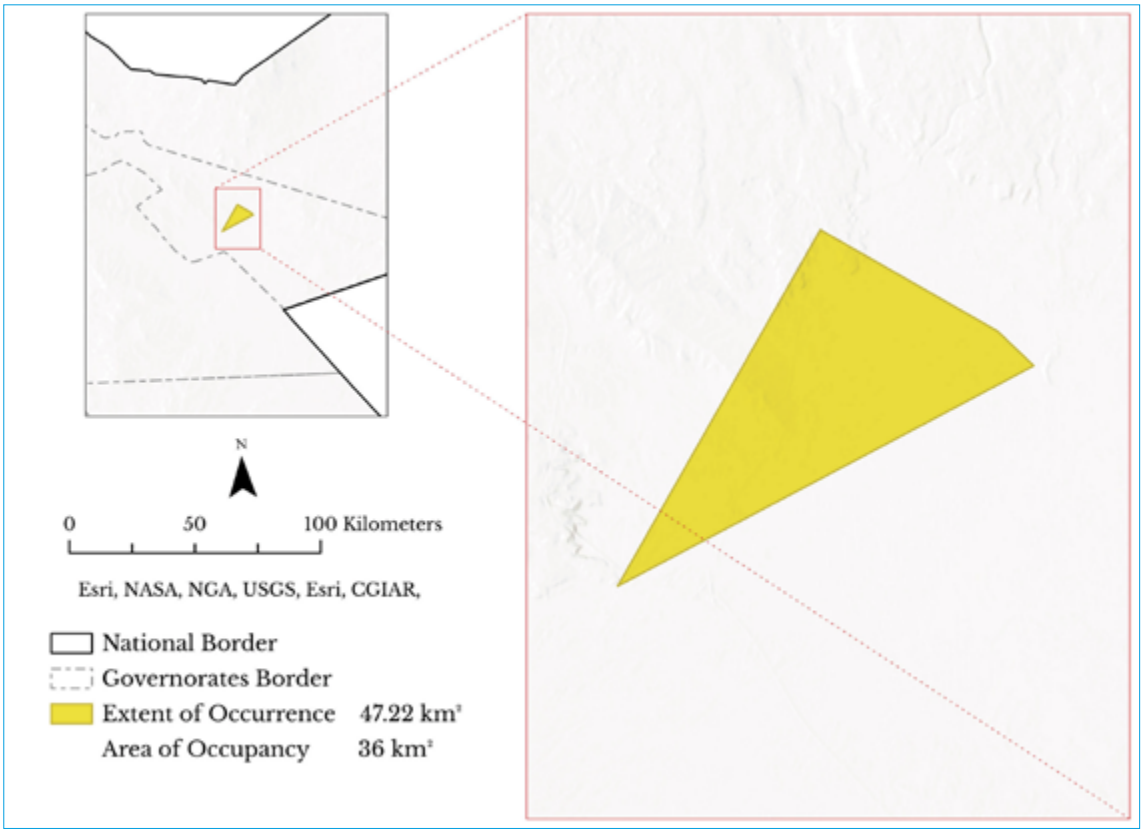


Eurasian Coot (Fulica atra); photo: © Ammar Al-Omari

populations wintering in South Asia, North Africa, southern Europe, and the Middle East. **In Jordan**, it occurs as a fairly common winter visitor and a localized resident breeder. Long-term observations indicate regular winter events at the Azraq Wetland Reserve and in other permanent and temporary water bodies.

- **Habitats and Ecology:** The species inhabits permanent freshwater wetlands, including ponds, lakes, water storage areas, and wastewater treatment sites with vegetated margins. It is omnivorous, feeding mainly on aquatic plants and grazing near water. Nests are built on vegetation just above the water surface.

- **Conservation Status:** The species benefits from in-situ protection at Azraq, the Aqaba Bird Observatory, and Fifa Nature Reserve. It is covered under AEWA, CMS Appendix II, and Jordan's Environment Law No. 6/2017, and is supported by ongoing wetland restoration and protection programs in Azraq.



• **Major Threats:** The species is mainly affected by wetland loss and degradation resulting from drainage, land conversion, and altered hydrology (Andrews 1991, 1995). Additional pressures include pollution from sewage and agricultural chemicals, water abstraction, infrastructure development affecting aquatic habitats, and hunting and trapping. One individual was documented as killed based on evidence from a Facebook post (Eid & Handal, 2018).

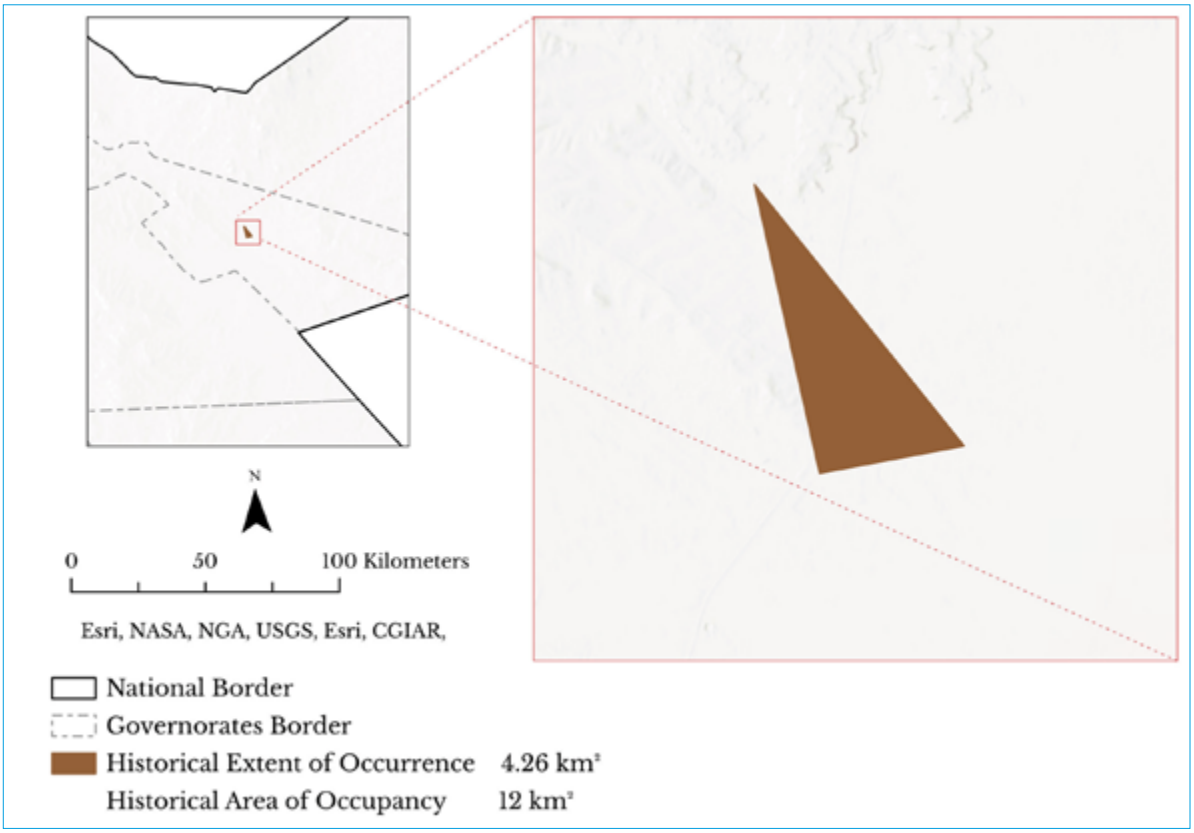
• **Recommended Conservation and Research:** This species would benefit nationally from multi-species action plans focussing on wetland habitat restoration. Research needs include updated wetland and population surveys.

Water Rail

Order: Gruiformes
Family: Rallidae
Scientific Name: *Rallus aquaticus* (Linnaeus, 1758)
Arabic Name:
مرعة ماء
National Red List Status: RE
Population Trend: Extinct
Status in Jordan: Passage migrant and winter visitor, former breeder

• **Justification:** The species was formerly bred at Azraq Wetland, with confirmed breeding records in the 1960s, but there has been no evidence of breeding for several decades. The collapse of the Azraq Wetland due to excessive groundwater over-pumping led to the loss of suitable breeding habitat, resulting in the extinction of the local breeding population. Although the species is still recorded regularly in winter, these records represent non-breeding visitors only and do not indicate reproduction within Jordan.

• **Distribution:** The species has a broad distribution across northwest Africa, Europe, and western to central Asia, with wintering populations extending to India, the Middle East, and the Nile Valley. **In Jor-**



dan, it is a regular winter visitor, recorded at Azraq and other wetlands along the Rift Valley and its margins. A few summer records from Azraq suggest possible local breeding; however, no confirmed breeding evidence has been reported since the Azraq wetlands collapsed decades ago.

- **Habitats and Ecology:** In Jordan, the species is associated primarily with freshwater wetlands within the Mediterranean biogeographical zone, including dense freshwater marshes, permanent marshes, and freshwater oases. It requires dense vegetation near water, such as reedbeds, marshes, and riparian habitats. The species primarily feeds on invertebrates and small vertebrates, foraging in mud or on dry ground near water and wading in shallow water. It is a resident or short-distance migrant elsewhere, but in Jordan, it occurs mainly as a winter visitor.

- **Conservation Status:** Globally, the species is assessed as Least Concern. In Jordan, it is protected under Agricultural Law No. 13 of 2015 (Regulation No. 43 of 2008), is covered by AEWA, and occurs within Ramsar-listed protected areas, notably Azraq.

- **Major Threats:** The main threats include habitat degradation, driven by water abstraction, agricultural developments, pollution, reed cutting, and fires (Andrews 1991, 1995).

- **Recommended Conservation and Research:** This species does not currently breed, but may recolonize suitable, restored wetlands if managed adequately. The species would benefit from avoiding disturbances such as reed cutting during the breeding season at Azraq Wetland Reserve, and from action plans focussing on protecting and restoring wetland habitats.

Asian Houbara

Order: Otidiformes
Family: Otididae
Scientific Name: *Chlamydotis macqueenii* (J.E.Gray, 1832)
Arabic Name:
حبارى آسيوي
National Red List Status: RE
Population Trend: Extinct as a Breeder
Status in Jordan: Former breeder, rare winter visitor

- **Justification:** The Asian Houbara formerly bred across central, eastern, and southwestern Jordan, but no breeding evidence has been recorded for more than four decades, despite extensive monitoring. Since the 1960s, no nests displaying males, territorial pairs, or juveniles have been observed. Reintroduction attempts of captive-bred birds have not resulted in an established breeding population and therefore do not influence this assessment. The species is now only a rare visitor, and the likelihood of natural recolonization is very low due to persistent unregulated hunting and widespread degradation of former breeding habitats.

- **Distribution:** The Asian Houbara breeds in Central Asia and occurs as a resident or partial migrant in Southwest Asia and the southern Arabian Peninsula. Its range has declined markedly due to overexploitation. **In Jordan**, it is considered extinct as a resident breeder, with the last evidence of breeding in the mid-1990s in Wadi Araba. Formerly widespread in the eastern desert and central steppes, it is now recorded only as a very rare winter visitor. Recent reintroduction attempts have shown low success.

- **Habitats and Ecology:** The species inhabits arid semi-deserts, steppe plains, and hot deserts with flat ground of sand, clay, or gravel and scattered low shrubs. It feeds on plants, insects, and small vertebrates, and nests on the ground in sparsely vegetated terrain.

- **Conservation Status:** The species is globally Vulnerable and is protected under AEWA, the Convention on Migratory Species Appendix II, CITES Appendix I, as well as Jordan's Environment Law No. 6/2017 and Agricultural Law No. 13/2015. According to CITES records, international trade involving Jordan between 2013 and 2020 consisted solely of imports from the United Arab Emirates, totaling 13,626 live individuals and 9 bodies, based on exporter-reported quantities only (CITES Trade Database, 2020). These imports were associated with releases implemented through the Sheikh Khalifa Bin Zayed Houbara Project in cooperation with the Royal Society for the Conservation of Nature, with birds released in Burqu', Wadi Rum, southern Wadi Araba, and Aqaba. The project has since been closed, and there is no current evidence of surviving individuals.

- **Major Threats:** The national breeding population is extinct due to illegal and unsustainable hunting, including falconry-related capture and poaching at water sources. Additional pressures include habitat degradation from overgrazing and other developments, such as farming and quarrying, increased road construction and disturbances (Clarke, 1983; Andrews, 1995). These threats, in addition to the lack of effective measures to regulate hunting in Jordan, are preventing re-colonization or successful reintroductions.

- **Recommended Conservation and Research:** Key actions for making recolonization or re-introductions possible and successful include strict hunting control, maintaining large areas of suitable habitats, and proper planning of reintroduction schemes.

Pied Avocet

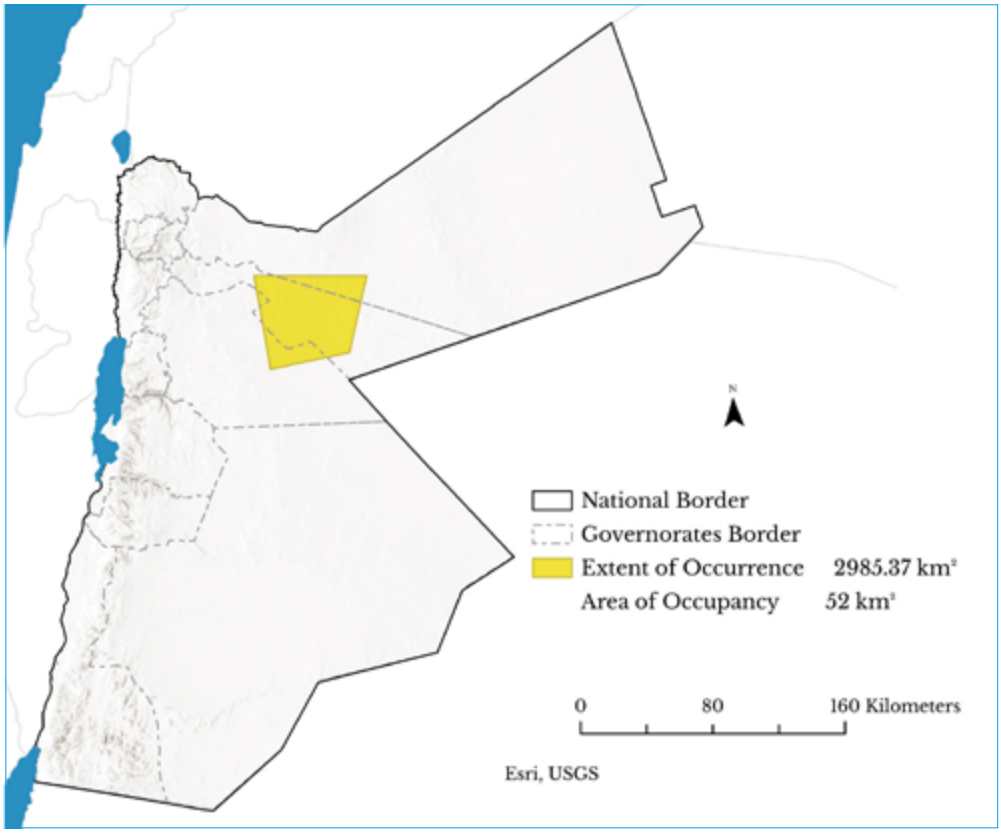
Order: Charadriiformes
Family: Recurvirostridae
Scientific Name: *Recurvirostra avosetta* (Linnaeus, 1758)
Arabic Name:
نكات العالم القديم
National Red List Status: DD
Population Trend: Unknown
Status in Jordan: Passage migrant, (irregular) summer visitor, and breeder

- **Justification:** The Pied Avocet has an apparently irregular and poorly documented breeding presence in Jordan. Breeding has been recorded in some years at the Azraq mudflat when conditions are suitable, but the frequency and consistency of breeding at the national level are unclear. Reliable information on the size, trend, and annual fluctuations of the national breeding population is lacking, preventing the application of quantitative assessment criteria.

- **Distribution:** The Pied Avocet is a widespread Palearctic species that visits parts of Europe, the Middle East, and Asia in summer and winters in South Asia and Africa. **In Jordan**, it occurs mainly in spring and summer at temporary wetlands in the central and eastern deserts, and occasionally at other wetlands. It apparently breeds irregularly on flooded mudflats in central and eastern Jordan. At Qa' Al-Azraq, several tens of pairs may breed in some years.

- **Habitats and Ecology:** The species uses freshwater and brackish wetlands, including seasonal and permanent shallow lakes. It breeds on open, flat shorelines, often saline or brackish, and migrates from temperate breeding areas, including Jordan, to Africa and South Asia. It feeds on aquatic invertebrates and nests in simple ground scrapes, often on islands and sometimes alongside Black-winged Stilts.

- **Conservation Status:** This species is protected under AEWA and CMS Appendix II, ensuring international conservation support. Nationally, the



species is only protected under the general provisions of the Environmental Protection Law of 2017.

- **Major Threats:** Key threats include agricultural expansion, water abstraction, and dam construction along wadis, as well as hunting-related disturbances to wetlands.

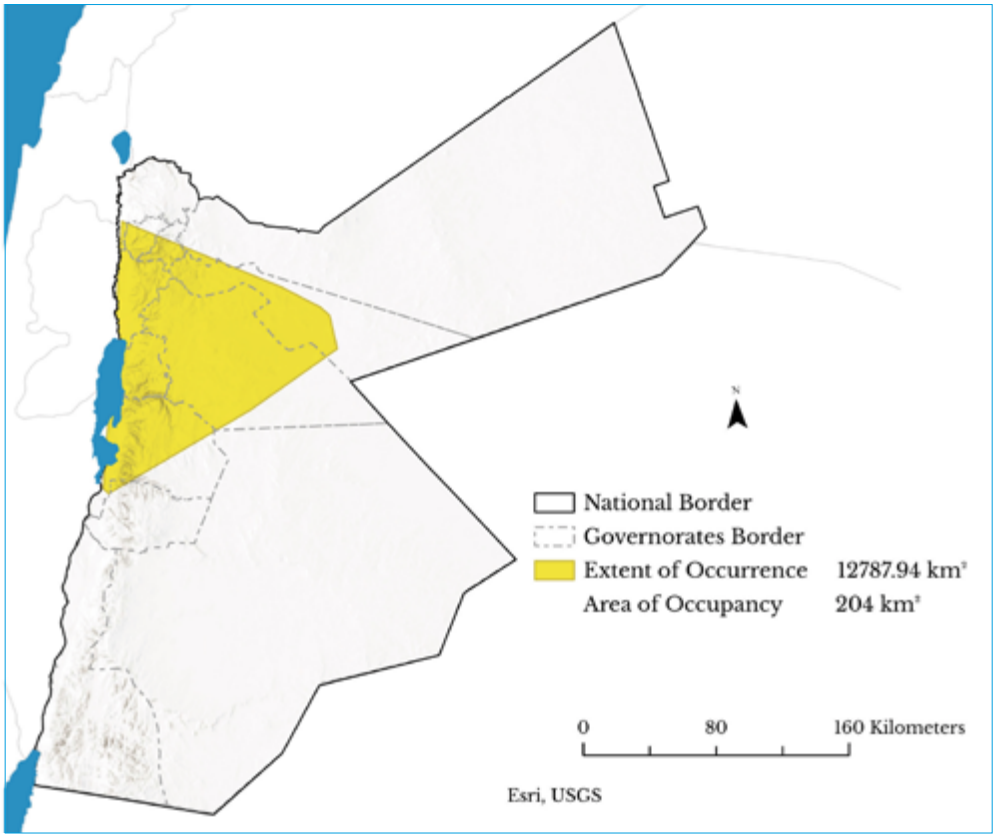
- **Recommended Conservation and Research:** This species would benefit from a multi-species action plan focussing on the protection of birds breeding in temporary wetlands and mudflats. Further research is needed to conduct population surveys, assess key threats and disturbance impacts, and evaluate the effects of water quality and pollution on the species' habitats in Jordan.

Black-winged Stilt

Order: Charadriiformes
Family: Recurvirostridae
Scientific Name: *Himantopus himantopus* (Linnaeus, 1758)
Arabic Name:
أبو المغازل
National Red List Status: NT
Population Trend: Unknown
Status in Jordan: Summer visitor, passage migrant, winter visitor

- **Justification:** The Black-winged Stilt is assessed as Near Threatened due to its highly variable breeding population and the number of suitable, temporary wetland sites. Although numbers can increase in flood years, suitable breeding conditions are irregular and vulnerable to hydrological change. There is no evidence of a continuing decline sufficient for Vulnerable. However, the species remains close to qualifying for a threatened category, given its reliance on a few at-risk habitats.

- **Distribution:** The Black-winged Stilt is a widespread summer visitor from southern Europe to Central Asia, with resident populations in the Middle East, South Asia, and parts of Africa. Its winter range extends south into Africa and Southeast Asia.



In Jordan, it is a common passage migrant and winter visitor in various wetlands, with regular breeding at a few sites in the Jordan Valley, e.g., Al-Karamah area and Fifa. Hundreds of pairs breed in some years when mudflats in the eastern deserts are flooded, for example, at the mudflat of the Azraq Wetland Reserve. Records show regular occurrence and breeding near Al Karameh Dam, the Aqaba Bird Observatory, dykes at Fifa, and the Al-Kherbeh Es-Samra wastewater plant.

- **Habitats and Ecology:** The species uses freshwater, saline, and brackish wetlands, including seasonal pools, shallow lakes, and wastewater treatment areas. It breeds on open shores and islands of shallow saline or brackish lakes, nesting in simple



Black-winged Stilt (Himantopus himantopus); photo: © Ammar Al-Omari

ground scrapes. Black-winged stilts usually migrate to Africa or South Asia and feed mainly on aquatic invertebrates.

- **Conservation Status:** The Black-winged Stilt has been recorded breeding at key protected sites, including the Azraq Wetland Reserve and the Fifa Nature Reserve. It is listed under the AEWA, protected nationally under the Environment Law No. 6/2017 and the Agricultural Law No. 13/2015, and covered by the Ramsar Convention. Globally, it is included under the Bonn Convention Appendix II and the Bern Convention Appendix II for migratory wetland birds.

- **Major Threats:** Major threats include agricultural expansion, water abstraction and wadi damming, recreational disturbance at wetland sites, and pollution from wastewater and other discharges that degrade breeding and feeding habitats (Khoury, 1996). One individual was documented as killed based on evidence from a Facebook post (Eid & Handal, 2018).

- **Recommended Conservation and Research:** This species would benefit from a multi-species action plan focussing on protection and recovery of temporary wetlands and mudflats. Research should focus on population surveys, key threats and disturbance impacts, effects on water quality, and habitat use, to inform effective management.

Eurasian Stone-curlew

Order: Charadriiformes
Family: Burhinidae
Scientific Name: *Burhinus oedicnemus* (Linnaeus, 1758)
Arabic Name:
كروان أوراسي
National Red List Status: LC
Population Trend: Stable
Status in Jordan: Resident

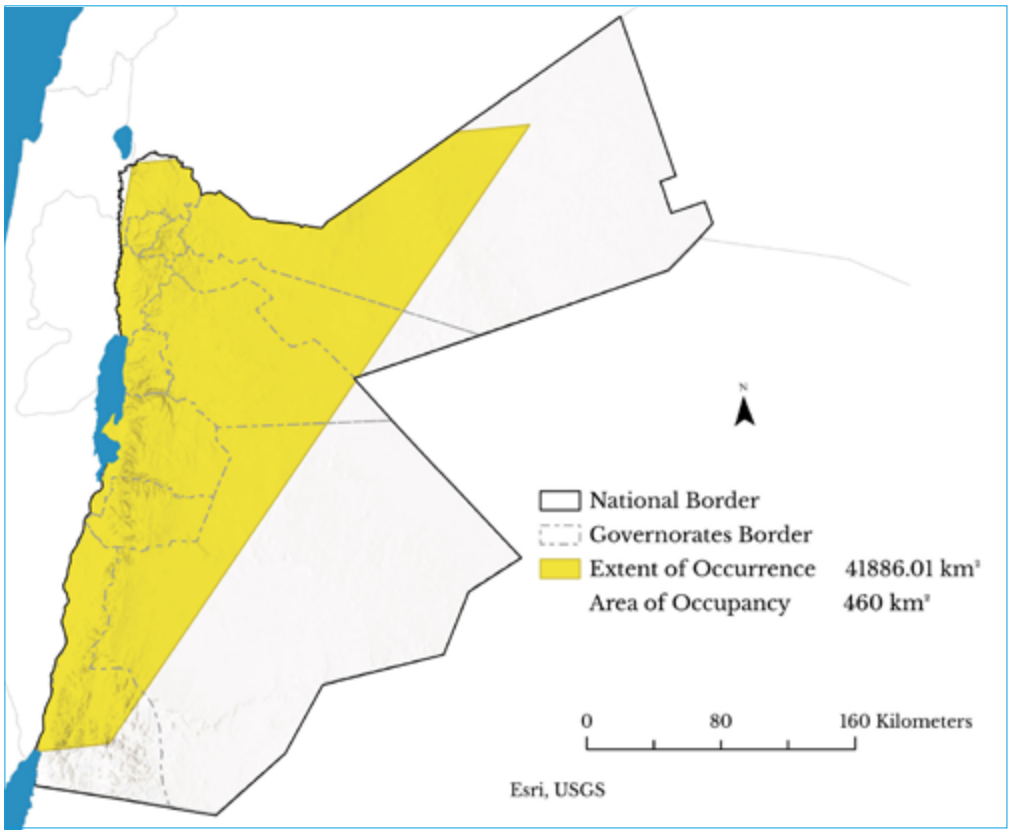
- **Justification:** The Eurasian Stone-curlew has a wide breeding distribution across western and central Jordan, with a stable population estimated to exceed 1,000 mature individuals. Although localized threats such as overgrazing, drought, and occasional hunting occur, there is no evidence of a national-level population decline. Both Extent of Occurrence and Area of Occupancy are above thresholds for threatened categories. While steppe habitats are undergoing some degradation, the species remains widespread and stable across most of its range.

- **Distribution:** The Eurasian Stone-curlew is a resident or a summer visitor across Eurasia and North Africa, wintering in northeastern Africa and the Arabian Peninsula. **In Jordan**, it is thinly distributed, with records from the Jordan Valley, Wadi Araba, the Rift Margins, the Northern Steppes, and Azraq. Winter aggregations of tens of birds have been recorded south of Amman. Local dispersion and winter aggregations have been observed.

- **Habitats and Ecology:** In Jordan, the Eurasian Stone-curlew inhabits dry savannas, temperate shrublands, grasslands, arable land, and pastureland across various bioclimatic zones. It is most frequent in open, flat steppe habitats with dwarf shrubs and grasses. It feeds on large invertebrates and small vertebrates, and is primarily active at dusk and night. The species nests on the ground, is monogamous, and the Jordanian population appears to be resident or partly migratory.

- **Conservation Status:** The Eurasian Stone-curlew is globally listed as Least Concern and is protected under Jordan's Environment Law (2017) and Agricultural Law No. 13/2015. It is also covered under AEWA and included in CMS Appendix II, providing additional international protection for migratory populations.

- **Major Threats:** The species is threatened by habitat loss and fragmentation resulting from agricultural intensification, urban expansion, and



road development in the typical steppe habitats. Overgrazing, off-road driving, and prolonged droughts further degrade steppe and open habitats. Hunting is a localized secondary threat, with six individuals documented as killed based on evidence from Facebook posts (Eid & Handal, 2018).

- **Recommended Conservation and Research:** Conservation efforts should promote low-intensity agriculture and steppe vegetation that support the species. Priority research needs include updated Jordan-specific population data on size, distribution, and breeding sites; assessment of disturbance and habitat-change thresholds; and establishing annual monitoring programs for breeding populations, nest success, and habitat conditions.

Cream-coloured Courser

Order: Charadriiformes
Family: Glareolidae
Scientific Name: *Cursorius cursor* (Latham, 1787)
Arabic Name:
كروان عسلي
National Red List Status: NT
Population Trend: Stable (Locally Declining)
Status in Jordan: Resident, summer visitor, and passage migrant

- **Justification:** This species is widespread in Jordan, but it occurs at generally low densities across most breeding areas, with higher densities limited to parts of Wadi Araba. The national breeding population is possibly fewer than 2,500 mature individuals, placing it close to thresholds for a threatened category. Illegal hunting by local and Gulf-region hunters poses significant, largely undocumented pressure that may be contributing to local declines.

- **Distribution:** The Cream-coloured Courser is a summer visitor or resident across North Africa and West Asia, with a winter range extending south into

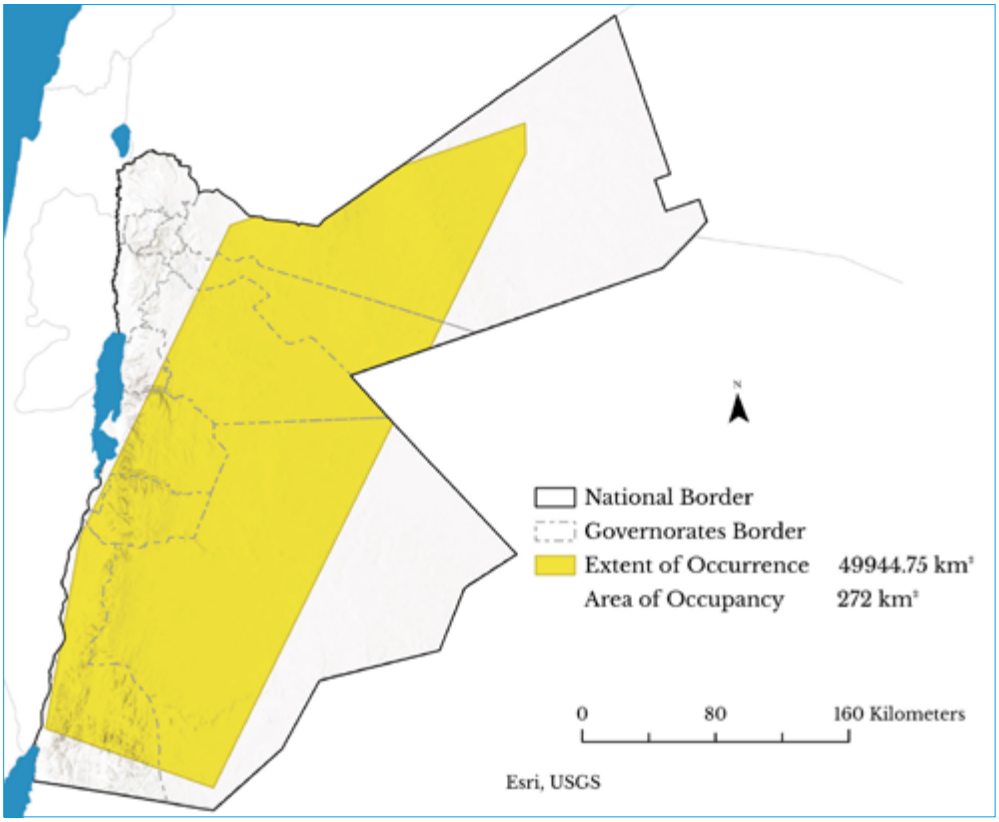
the Sahel zone. **In Jordan**, it occurs as a summer visitor in the interior deserts. It is also resident and possibly a localized winter visitor in Wadi Araba and the Mudawara desert.

- **Habitats and Ecology:** The Cream-coloured Courser inhabits arid open plains, including temperate grasslands, hot desert, sandy and gravelly steppe, dry wadi beds, and mudflats with sparse low vegetation. It feeds on arthropods and small lizards, nests on the ground, and is noncolonial, although small groups may form in winter and during migration. The species is a partial migrant, with some individuals remaining resident in Jordan while others undertake seasonal movements.

- **Conservation Status:** The Cream-coloured Courser occurs within several protected desert reserves, including Azraq, Shaumari, and Burqu. It is covered under the AEWA and broader CBD and AEWA frameworks for migratory birds. It is nationally protected under Appendix III of Agricultural Law No. 13/2015 (Regulation No. 43/2008) and the Environment Law (2017)

- **Major Threats:** The species is threatened by illegal hunting, habitat degradation resulting from agricultural expansion, quarrying, and road construction. Additional pressures include unsuitable grazing regimes and off-road vehicle disturbance. Three individuals were documented as killed based on evidence from Facebook posts (Eid & Handal, 2018).

- **Recommended Conservation and Research:** Conservation should focus on preventing habitat conversion, managing grazing to maintain suitable groundcover, enforcing hunting regulations, and limiting tourist and vehicle disturbance in key areas. Research needs include population surveys, studies of breeding ecology, assessments of hunting and grazing impacts on habitat, and evaluations of infrastructure disturbance on nesting areas.



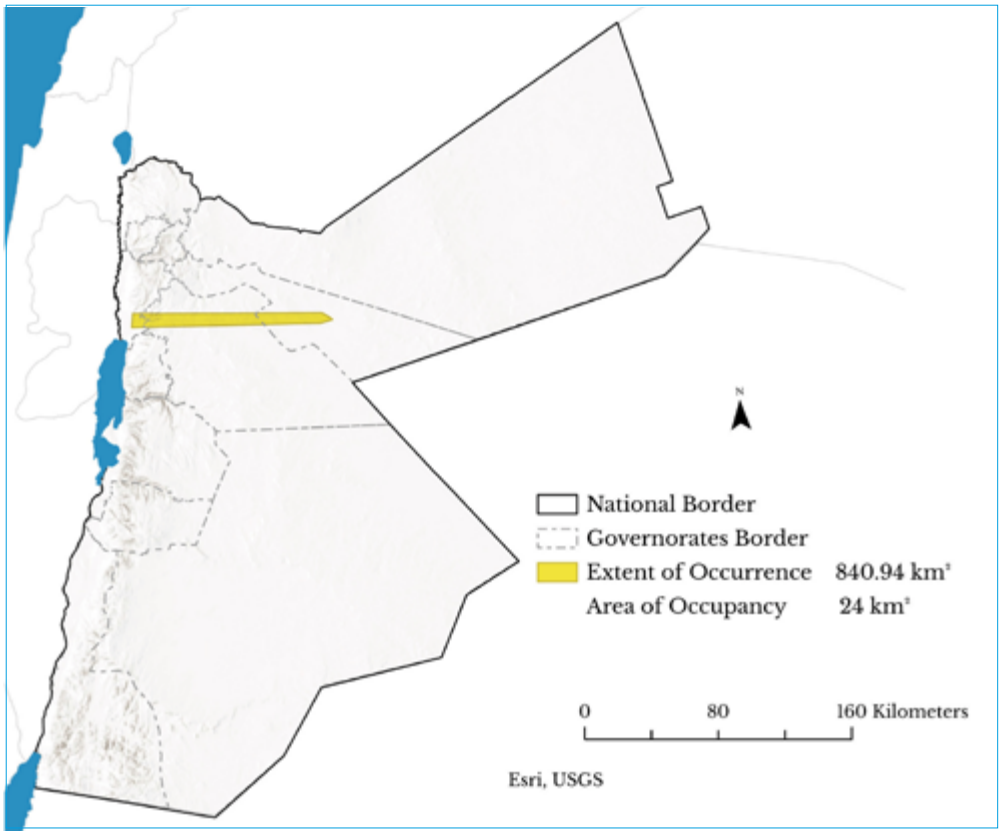
Collared Pratincole

Order: Charadriiformes
Family: Glareolidae
Scientific Name: *Glareola pratincola* (Linnaeus, 1766)
Arabic Name:
يسر مطوق
National Red List Status: CR D1
Population Trend: Unknown
Status in Jordan: Passage migrant, (irregular) summer visitor, and breeder

• **Justification:** The Collared Pratincole has an extremely small national breeding population, usually fewer than 50 mature individuals, with breeding occurring irregularly and largely restricted to Azraq. The Area of Occupancy is very limited (approximately 24 km^2), and breeding sites are poorly known, unstable, and dependent on unpredictable wetland conditions. There is no evidence that immigration from neighboring populations provides meaningful reinforcement. The very small and vulnerable breeding population indicates an extremely high risk of national extinction.

• **Distribution:** The Collared Pratincole breeds in parts of North Africa, southern and southeastern Europe, and eastward into Central Asia, and winters primarily in Sub-Saharan Africa, with some resident populations in Central Africa. **In Jordan**, it occurs primarily as a scarce passage migrant. Occasional breeding has been documented at Azraq during suitable hydrological conditions, and there are localized summer records from the Jordan Valley indicating sporadic, limited, and possibly irregular breeding.

• **Habitats and Ecology:** The species inhabits open grasslands, seasonally flooded wetlands, brackish mudflats, and, occasionally, fallow fields near water. It feeds on flying insects and nests on the ground. In Jordan, it is migratory, with small numbers breeding irregularly when seasonal flooding creates suitable temporary habitats.



• **Conservation Status:** The Collared Pratincole is protected under Jordan's Agricultural Law No. 13 of 2015 and Environmental Law No. 6 of 2017. Internationally, it is listed under the AEWA and CMS Appendices II and III, and included in the Bern Convention Appendix II as a species of special conservation concern in the Euro-Mediterranean region.

• **Major Threats:** The Collared Pratincole is threatened by habitat loss, degradation, and disturbance at nesting sites, including land conversion for farming, grazing pressure, and opportunistic shooting. Nest predation by feral dogs is a rising threat, even at Azraq. Groundwater abstraction and dams reduce seasonal wetland flooding, which is essential for breeding (Andrews, 1995; Khoury, 1996), while wastewater pollution further degrades habitat quality. Increasing drought and reduced rainfall linked to climate change also limit the availability of suitable breeding conditions.

• **Recommended Conservation and Research:** This species should be considered in a multi-species action plan that focuses on protecting birds breeding in temporary wetlands and mudflats. Regular surveys at Azraq and in the Jordan Valley should be carried out to study breeding habits and annual fluctuations in Jordan.

Little Ringed Plover

Order: Charadriiformes
Family: Charadriidae
Scientific Name: *Charadrius dubius* (Scopoli, 1786)
Arabic Name:
قطقاط مطوق صغير
National Red List Status: CR D1
Population Trend: Unknown
Status in Jordan: Summer visitor, passage migrant

• **Justification:** The Little Ringed Plover has an extremely small national breeding population, estimated at fewer than 50 mature individuals, confined to a few scattered sites, including Azraq, Wadi Zarqa, and possibly the mouth of the Jordan River and Wadi Kafrein. Each site supports only a few pairs, and the species has recently disappeared from one site due to disturbance and habitat degradation. The Area of Occupancy is very limited (<100 km^2), and the breeding range continues to contract. There is no evidence that immigration from neighboring countries, where populations are also under pressure, can reinforce the national population, and the remaining breeding sites are highly fragmented and vulnerable.

• **Distribution:** The Little Ringed Plover is a widespread summer visitor across Eurasia, wintering in Sub-Saharan Africa, Southeast Asia, and parts of Northeast Africa and the Middle East, with additional resident populations in South Asia. **In Jordan**, it occurs mainly as a passage migrant and rare summer visitor, with localized breeding recorded at the Azraq Wetland Reserve and along permanent streams in tributaries of the Jordan River.

• **Habitats and Ecology:** The Little Ringed Plover uses a variety of freshwater and brackish habitats, including permanent streams, seasonal brackish flats, and water storage areas. It prefers open ground with sand, gravel, stones, and sparse vegetation, feeding mainly on invertebrates and tadpoles. It is migratory and typically observed as single birds or in pairs.

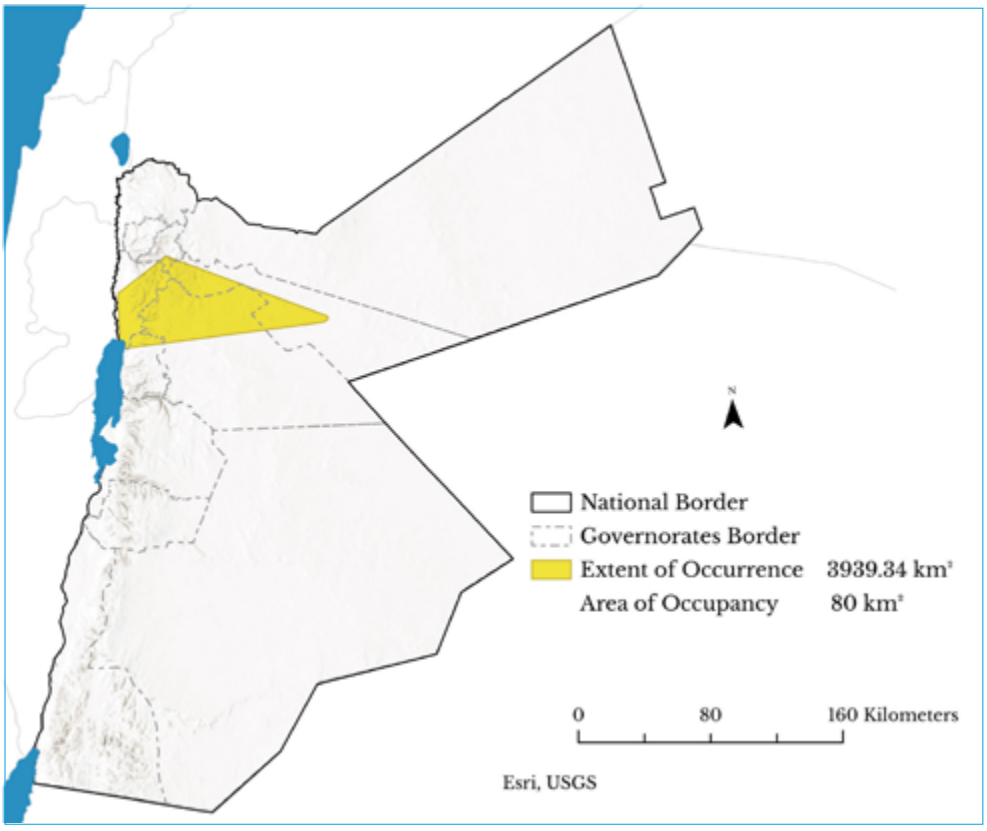
• **Conservation Status:** The Little Ringed Plover is globally listed as Least Concern and is covered under AEWA for migratory water bird conservation. Nationally, it is protected under Appendix III of the Agricultural Law No. 13 of 2015 (Regulation No. 43/2008) and under Environment Law No. 6/2017; internationally, it is included in CMS Appendix II.

- **Major Threats:** The breeding habitat of Little Ringed Plover is severely impacted by agricultural expansion, water extraction, and dams, which alter natural water flow (Khoury, 1996; Khoury & Körner, 2018). Nest destruction by feral dogs, livestock and shepherding, recreational disturbance, and water pollution are further threats to breeding sites.

- **Recommended Conservation and Research:** This species should be considered in a multi-species action plan focussing on the protection of birds breeding in wetlands, including streams and marshlands. Research should focus on breeding population size and distribution.



Little Ringed Plover (Charadrius dubius); photo: © Raed Al-Btosh



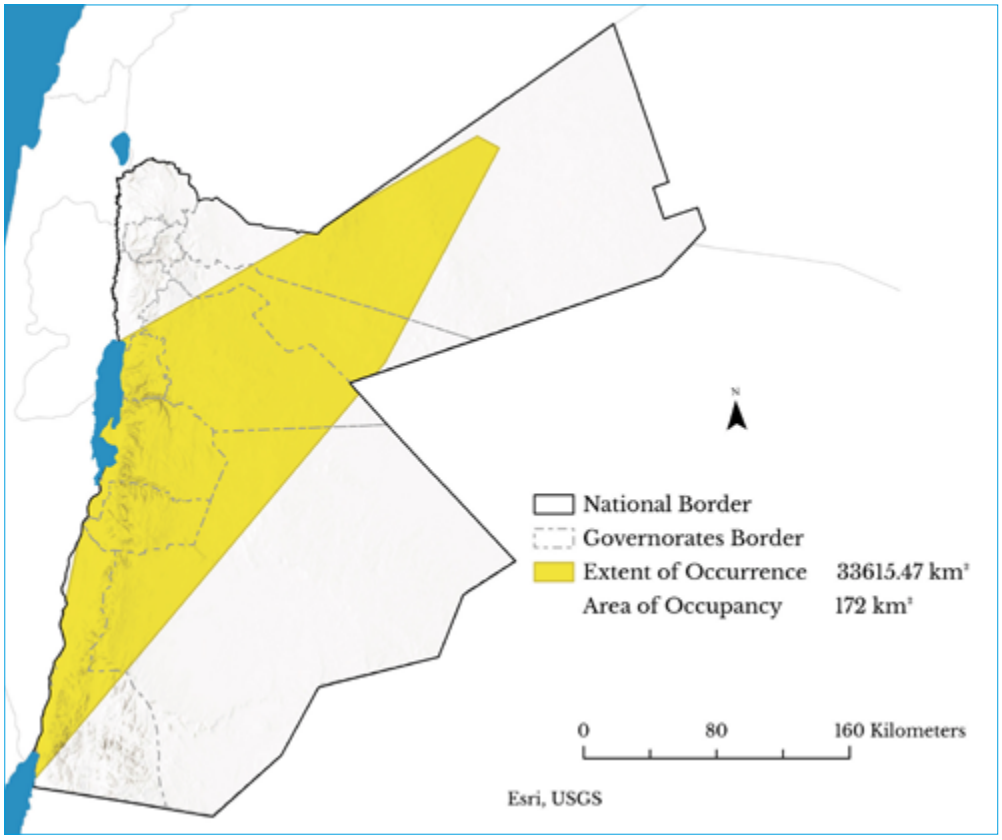
Kentish Plover

Order: Charadriiformes
Family: Charadriidae
Scientific Name: *Charadrius alexandrinus* (Linnaeus, 1758)
Arabic Name:
قطقاط اسكندراني
National Red List Status: LC
Population Trend: Stable (Locally Decreasing)
Status in Jordan: Resident, passage migrant, winter visitor

- **Justification:** The Kentish Plover has a national population that likely exceeds 1,000 mature individuals in some years. Numbers fluctuate annually in response to rainfall and flooding events on desert mudflats. Although localized declines occur in dry years, the species is well adapted to irregular flooding cycles and regularly reappears in substantial numbers following wet winters. There is no evidence of a sustained national-level decline, and strong recruitment during favorable years supports population stability.

- **Distribution:** The Kentish Plover breeds across Eastern Europe and Asia, with resident populations in North Africa and South Asia, and a winter range extending into Sub-Saharan Africa and South Asia. **In Jordan**, it is present year-round as a winter visitor, summer breeder, and passage migrant. Breeding occurs mainly on flooded mudflats in central and eastern Jordan, with possible breeding in brackish sites in the Jordan Valley. At the same time, winter records are concentrated in flooded desert areas and at Aqaba.

- **Habitats and Ecology:** The Kentish Plover breeds around shallow brackish or seasonal ponds and lakes, including freshwater and brackish wetlands, sandy shorelines, and water storage areas (Khoury, 1996). It feeds on invertebrates probed from mud, nests on the ground, and often forms flocks outside the breeding season.



- **Conservation Status:** The Kentish Plover is globally listed as Least Concern and is covered under AEWA as a migratory shorebird. In Jordan, it is protected under Environment Law No. 6/2017 and occurs within protected and internationally recognized habitats, including the Azraq Wetlands Reserve and the Azraq Ramsar Site.

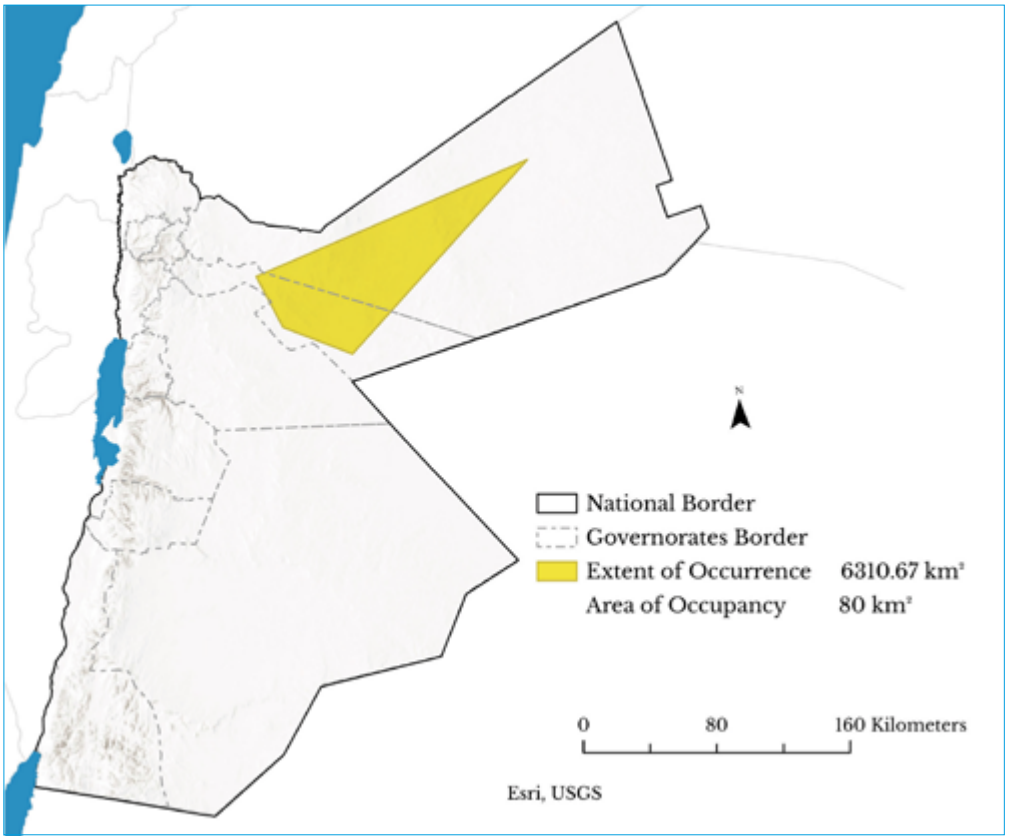
- **Major Threats:** The Kentish Plover is affected by habitat loss and degradation caused by agricultural expansion, water abstraction and damming along wadis, and recreational disturbance at breeding and foraging sites. Nest predation by feral dogs is a rising threat in protected and unprotected areas.

- **Recommended Conservation and Research:** This species would benefit from a multi-species action plan focussing on the protection of birds breeding in temporary wetlands and mudflats. Research priorities include studying ecological factors that influence the species' population dynamics and breeding success.

Greater Sand Plover

Order: Charadriiformes
Family: Charadriidae
Scientific Name: *Charadrius leschenaultii* (R.Lesson, 1826)
Arabic Name:
قطقاط الرمل الكبير
National Red List Status: EN D1
Population Trend: Stable (Locally Declining in some Localities)
Status in Jordan: Summer visitor, passage migrant

- **Justification:** The Greater Sand Plover has an extremely small national breeding population, probably not exceeding 250 mature individuals even in wet years. This meets the threshold for Endangered (EN) under criterion D. Breeding is confined to a few sites in the northeastern desert, with a relatively small Area of Occupancy, and densities remain low despite rainfall-driven fluctuations. The population is geographically isolated from other breeding areas, with no evidence of immigration that could reinforce the national population.



- **Distribution:** The Greater Sand Plover is a summer visitor across the Middle East and into Central Asia, wintering along the coasts of Northeast Africa, South Asia, and Australia. **In Jordan**, it is a scarce summer visitor to flooded mudflats in the eastern desert. It is otherwise recorded as a scarce passage migrant and a rare winter visitor at Aqaba.

- **Habitats and Ecology:** The Greater Sand Plover breeds around shallow, brackish ponds and lakes, including seasonal freshwater and brackish pools. It feeds on invertebrates probed from mud, nests on the ground, and is typically seen alone or in small flocks.

- **Conservation Status:** The Greater Sand Plover is listed as Least Concern globally and is included in AEWA and CMS Appendix II. In Jordan, it occurs within protected and Ramsar-listed wetlands, such as Azraq, and is legally protected under Agricultural Law No. 13/2015 and Environment Law No. 6/2017.

- **Major Threats:** The Greater Sand Plover is threatened by reduced wetland availability due to water abstraction and damming along wadis in desert ecosystems, as well as recreational disturbance such as off-road driving at key breeding and feeding sites. The spread of feral dogs poses a novel threat to all ground-nesting birds breeding near inhabited areas.

- **Recommended Conservation and Research:** This species would benefit from a multi-species action plan focussing on the protection of birds breeding in temporary wetlands and mudflats. . Research priorities include studying ecological factors that influence the species' population dynamics and breeding success.

Spur-winged Lapwing

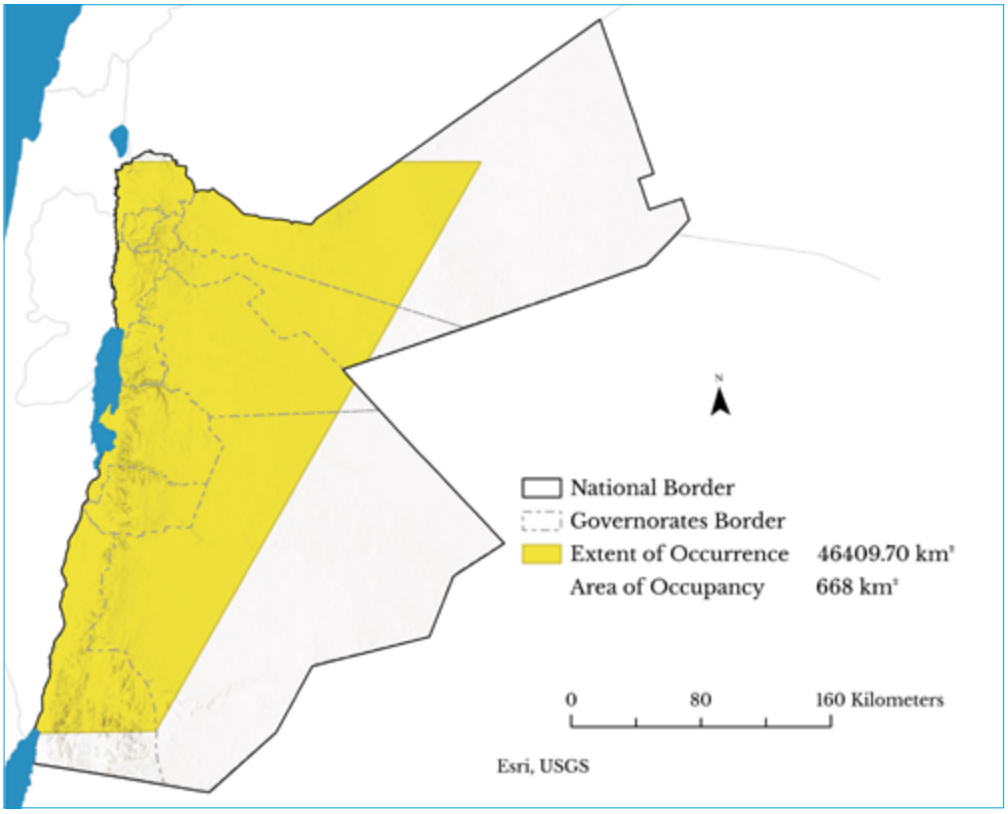
Order: Charadriiformes
Family: Charadriidae
Scientific Name: *Vanellus spinosus* (Linnaeusm 1758)
Arabic Name:
قطاط أشوك
National Red List Status: LC
Population Trend: Stable
Status in Jordan: Resident

- **Justification:** The Spur-winged Lapwing is widespread, abundant, and increasing in many parts of Jordan. The national population exceeds 2,000 mature individuals, with no evidence of decline, and the species has benefited from irrigation schemes and agricultural expansion. Although some natural habitats are under pressure, these factors are not causing measurable reductions in national distribution or abundance.

- **Distribution:** The Spur-winged Lapwing is widely distributed across Africa and the Middle East, with resident populations extending from sub-Saharan Africa into the Levant and Mesopotamian region. **In Jordan**, it is a resident and widespread breeding species, recorded across a broad range of wetlands and irrigated habitats.

- **Habitats and Ecology:** In Jordan, the Spur-winged Lapwing occupies diverse freshwater habitats, including permanent streams, seasonal lakes, marshes, ponds, water storage areas, wastewater treatment sites, and seasonally flooded agricultural fields. It frequents open wet areas such as reservoirs and flooded mudflats. The species primarily feeds on invertebrates, occasionally consuming small fish, lizards, and frogs. It nests on the ground and is generally solitary during breeding, forming loose aggregations in the non-breeding season.

- **Conservation Status:** The Spur-winged Lapwing is globally classified as Least Concern and is legally protected in Jordan under Environment Law No. 6/2017. It is listed under AEWA and CMS Appendix II and occurs within protected and Ramsar-designated wetlands, which support the conservation of its breeding and foraging habitats.



- **Major Threats:** The species faces habitat loss and degradation driven by water abstraction and drought conditions. Recreational and agricultural disturbances further reduce habitat suitability. Three individuals were documented as killed based on evidence from a Facebook post (Eid & Handal, 2018).

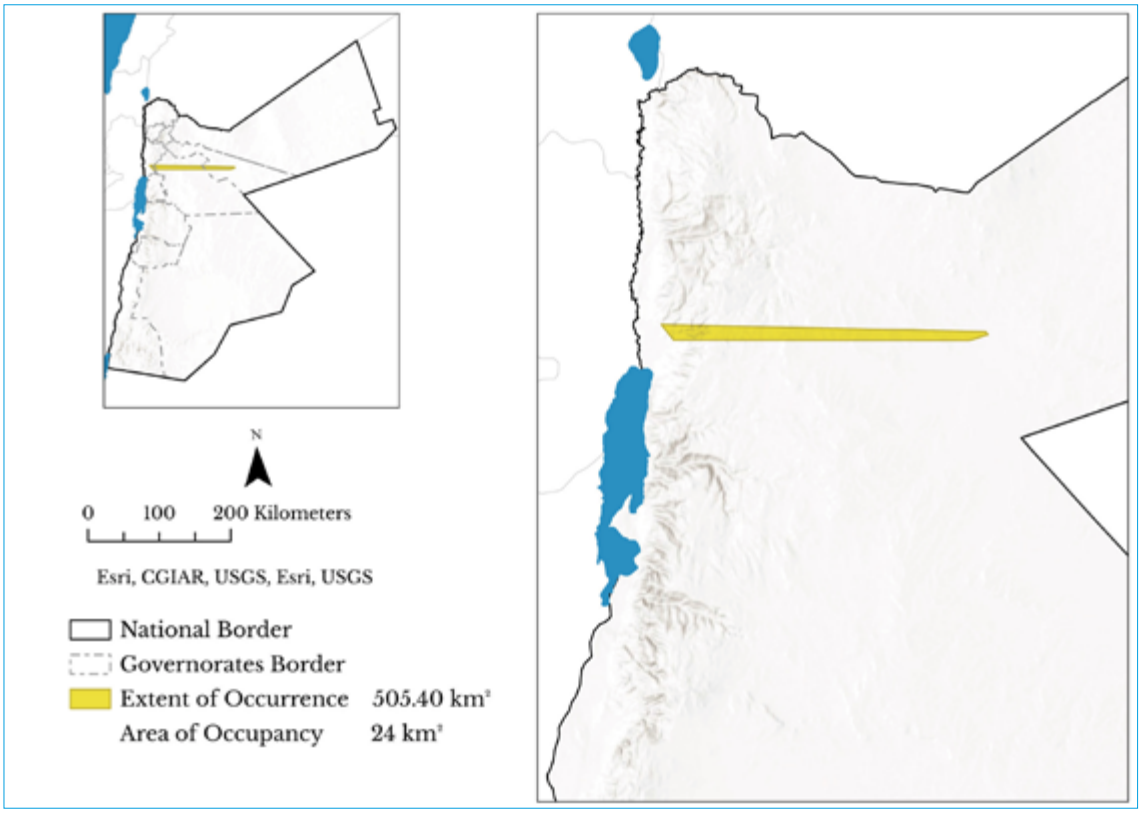
- **Recommended Conservation and Research:** The breeding population of this species will be maintained by implementing a multi-species action plan focussing on the protection and recovery of bird populations depending on wetland habitats.

Little Tern

Order: Charadriiformes
Family: Laridae
Scientific Name: *Sternula albifrons* (Pallas, 1764)
Arabic Name:
خرشنة صغيرة
National Red List Status: CR D1
Population Trend: Unknown
Status in Jordan: Passage migrant, (irregular) summer visitor, and breeder

- **Justification:** The Little Tern has an extremely small national breeding population, typically fewer than 50 mature individuals, with breeding possibly occurring irregularly at the Azraq mudflat and in the Jordan Valley. The Area of Occupancy is very limited (around 24 km^2), and breeding sites are poorly known, unstable, and dependent on unpredictable wetland conditions. A rescue effect is unlikely due to local pressures and limited breeding habitat area and quality. The very small and highly vulnerable breeding population, therefore, faces an extremely high risk of national extinction.

- **Distribution:** The Little Tern is a summer visitor across Eurasia and a resident in parts of western and southeastern Asia and West Africa, wintering mainly



along the Red Sea, the Arabian Gulf, the Indian Ocean, and into Oceania. **In Jordan**, it is a scarce passage migrant and a rare summer breeder, being irregular at least at Azraq. Summering birds are recorded primarily at the Azraq mudflat and a few locations in the Jordan Valley.

- **Habitats and Ecology:** In Jordan, the Little Tern uses permanent and seasonal freshwater pools, seasonal brackish lakes and flats, and water storage areas. It nests on the ground on sandy or rocky islands within inland wetlands, breeding irregularly at the Azraq mudflats and occasionally at water reservoirs and dykes in the Jordan Valley. The species primarily feeds on small fish and crustaceans and has been observed consuming tadpole shrimps in flooded mudflats. Breeding typically occurs between April and June.

- **Conservation Status:** The Little Tern is globally classified as Least Concern and is listed under AEWA and CMS Appendix II. In Jordan, it is protected under Environment Law No. 6/2017 and included in Appendix III of the wildlife protection regulations under the Agricultural Law No. 13/2015. Its breeding sites fall within managed wetland and water management areas that offer partial conservation support.

- **Major Threats:** The Little Tern is threatened by habitat loss and degradation in inland wetlands, agricultural activities that alter water levels and disturb nesting areas, and periodic droughts that create unstable breeding conditions and reduce the availability of suitable habitat (Andrews 1991, 1995).

- **Recommended Conservation and Research:** This species would benefit from a multi-species action plan that focuses on protecting birds breeding in temporary wetlands and mudflats. Research priorities include studying ecological factors that influence the species' population dynamics and breeding success.

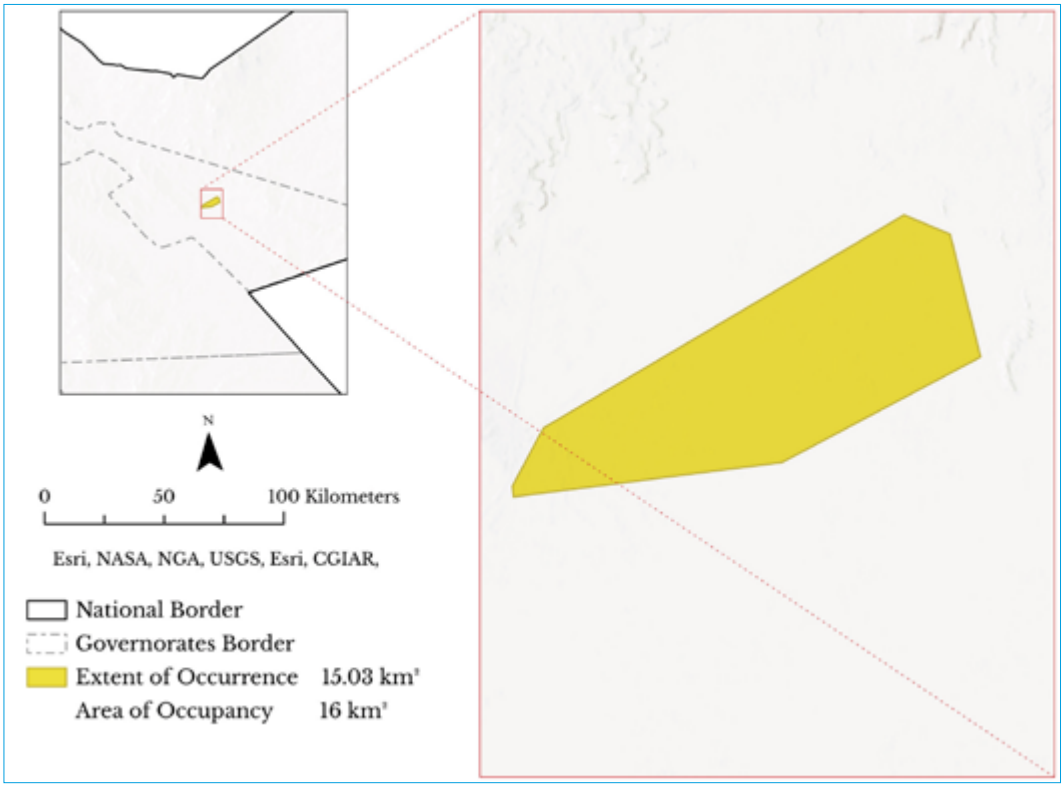
Gull-billed Tern

Order: Charadriiformes
Family: Laridae
Scientific Name: *Gelochelidon nilotica* (J.F.Gmelin, 1789)
Arabic Name:
خرشنة نيلية
National Red List Status: DD
Population Trend: Fluctuating Annually
Status in Jordan: Passage migrant, irregular summer visitor, and breeder

- **Justification:** The Gull-billed Tern is assessed as Data Deficient (DD) because it currently breeds irregularly at the Azraq mudflat, with a very small and annually fluctuating population (0–25 pairs). Data are generally lacking to determine long-term trends, colony persistence, or the severity of current threats, including the fluctuating conditions at mudflats, which are exacerbated by dams that prevent water flow into them. Breeding occurs only under suitable hydrological conditions, and the available information does not allow a reliable assessment of whether it falls into threatened or non-threatened categories.

- **Distribution:** The Gull-billed Tern occurs across six continents, inhabiting inland wetlands and coastal regions as both a resident and a visitor. In Europe and western and eastern Asia, it is a summer visitor, with these migratory populations wintering in Australia, South Asia, and parts of Africa. **In Jordan**, it is a passage migrant recorded at Azraq, Aqaba, and the Jordan Valley, and currently breeds only irregularly on the Azraq mudflats in spring and early summer when suitable conditions occur.

- **Habitats and Ecology:** The Gull-billed Tern uses coastal and inland wetlands, including seasonal brackish flats and water storage areas. In Jordan, it breeds at Azraq on small islands within the flooded mudflat (Qa'). The species favors expansive marshlands and brackish or saline lakes. Its diet includes insects, crustaceans, small vertebrates, and chicks of other birds, taken from both the water surface and the ground.



- **Conservation Status:** The Gull-billed Tern is globally assessed as Least Concern and is listed under AEWA and CMS Appendix II. In Jordan, it is protected under Environment Law No. 6/2017 and included in Appendix III of the wildlife protection regulations under the Agricultural Law No. 13/2015. These frameworks provide legal protection to their breeding and passage habitats.

- **Major Threats:** The national breeding population of Gull-billed Tern is threatened by habitat degradation and loss resulting from prolonged droughts and from dams that alter natural water flow and prevent flooding of mudflats.

- **Recommended Conservation and Research:** This species would benefit from a multi-species action plan that focuses on the protection of birds breeding in temporary wetlands and mudflats. Research priorities include annual fluctuations in the number of breeding pairs; studying ecological factors that influence the species' population dynamics and breeding success.

Pin-tailed Sandgrouse

Order: Pterocliformes
Family: Pteroclidae
Scientific Name: *Pterocles alchata* (Linnaeus, 1766)
Arabic Name:
قطا عراقي
National Red List Status: DD
Population Trend: Decreasing
Status in Jordan: Rare or former resident and breeder

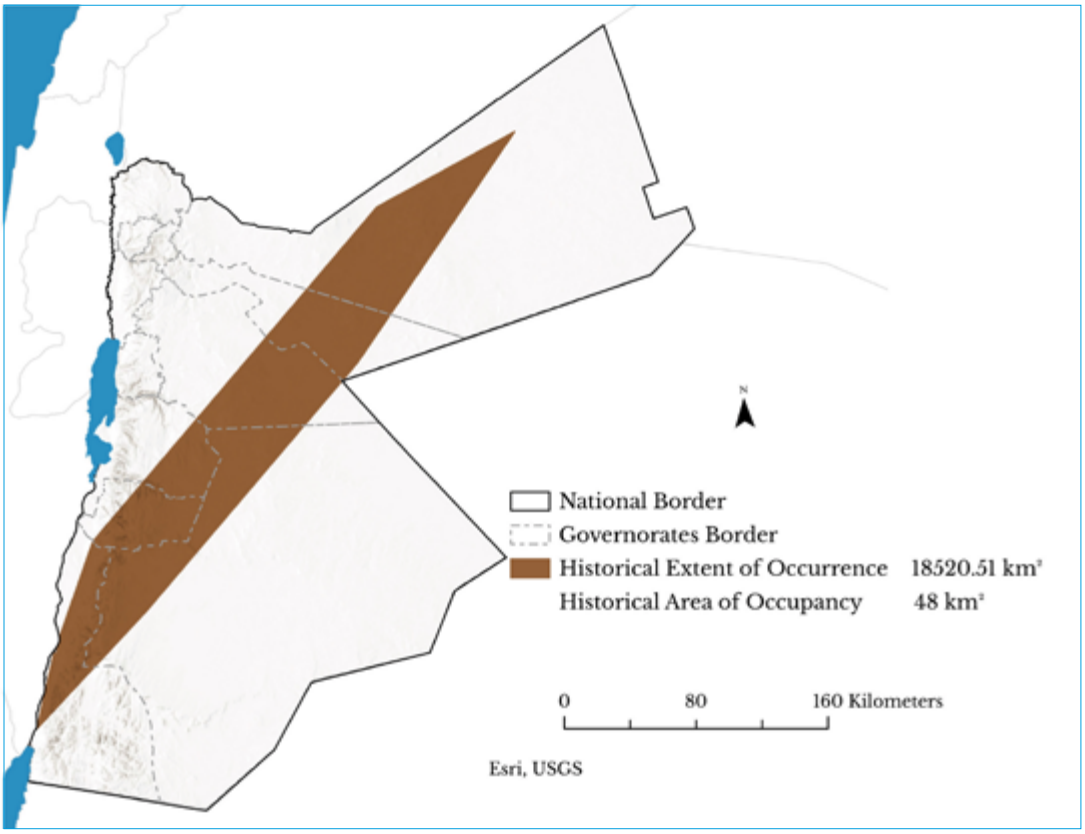
- **Justification:** The Pin-tailed Sandgrouse has an uncertain current status in Jordan, as its population size, distribution, and breeding status are unknown. Although the species was historically widespread, it has declined due to intensive hunting, egg collection, habitat degradation, and drought, and there are no recent surveys to confirm whether the national breeding population is extinct. The species may still breed in remote areas of the Basalt Desert, but available information is still insufficient to assess extinction risk using quantitative criteria.

- **Distribution:** The Pin-tailed Sandgrouse occurs across the Iberian Peninsula, southern France, northwest Africa, the Middle East, southeastern Turkey, Iran, Uzbekistan, and southern Kazakhstan. **In Jordan**, it has been recorded in Wadi Araba, the central and eastern basalt deserts, and reported by local inhabitants to have bred in the past on the Sharra highland plateau. It may still breed sporadically or irregularly in northeast Jordan and in remote areas near Ma'an. Past observations include large nomadic flocks in Wadi Araba and more widespread breeding.

- **Habitats and Ecology:** The Pin-tailed Sandgrouse inhabits temperate shrublands and hot desert areas, breeding in semi-arid steppe, dry mudflats, and cereal fields, usually near waterholes. It nests on the ground and feeds mainly on seeds. In winter, it becomes nomadic, forming large flocks. Local accounts indicate it formerly bred abundantly on the eastern Sharrah plateau.

- **Conservation Status:** The Pin-tailed Sandgrouse is globally classified as Least Concern and is protected under AEWA and Jordan's Environment Law No. 6/2017.

- **Major Threats:** The Pin-tailed Sandgrouse is threatened by intensive hunting and by loss and degradation of desert and steppe habitats due to agricultural and infrastructural expansion. Additional pressures include disturbances from off-road vehicle use and climate-related hydrological shifts, which further reduce habitat suitability.



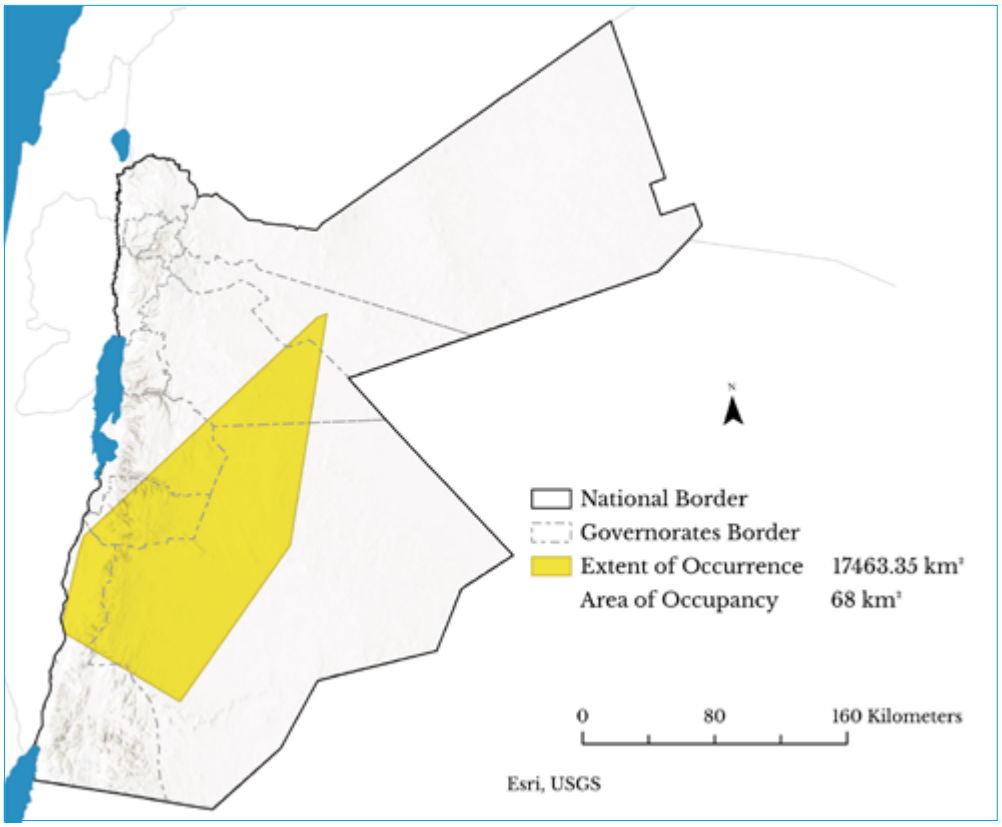
• **Recommended Conservation and Research:** The breeding populations of all Sandgrouse species would benefit from an action plan focussing on the protection and recovery of all Sandgrouse and other game birds.

Spotted Sandgrouse

Order: Pterocliformes
Family: Pteroclidae
Scientific Name: *Pterocles senegallus* (Linnaeus, 1771)
Arabic Name:
كدرية ذنوب
National Red List Status: EN A2cd
Population Trend: Decreasing
Status in Jordan: Resident

• **Justification:** The Spotted Sandgrouse has undergone a severe population decline in Jordan, with an inferred reduction exceeding 50% driven by intense and ongoing exploitation at desert waterholes and widespread habitat degradation. Field observations indicate that only very small groups now occur at traditional drinking sites, suggesting a markedly reduced national breeding population. Continued high hunting pressure and deterioration of desert habitats indicate that the decline is ongoing and has not ceased.

• **Distribution:** The Spotted Sandgrouse occurs from North Africa across the Middle East to Pakistan. **In Jordan**, it inhabits the open hamada deserts of Wadi Araba and eastern Jordan, within the Saharo-Arabian and Sudanian penetration zones. Large flocks were common in Wadi Araba until the late 1990s, but now only small numbers are found. It is, nevertheless, the most frequently encountered sandgrouse species in the country.



• **Habitats and Ecology:** In Jordan, the Spotted Sandgrouse inhabits arid semi-deserts and hot deserts with sparse vegetation, including sandy–gravel hamada plains and scattered scrub. It feeds mainly on seeds and relies on waterholes within several kilometers of its habitat. The species nests on the ground, is resident but becomes nomadic in winter, and is often observed flying in flocks (Al-Shamlih *et al.*, 2005).

• **Conservation Status:** The Spotted Sandgrouse is globally listed as Least Concern and is protected under Jordan's Environment Law No. 6/2017 and under Appendix III of the Agricultural Law No. 13/2015. It is also included under AEWA, providing additional regional protection for the species.

• **Major Threats:** The Spotted Sandgrouse is threatened by illegal, intensive hunting, habitat loss, and degradation from agricultural and infrastructural expansion, and the drying of waterholes in spring and summer. Additional pressures include various developments, livestock grazing, and climate-driven drought and altered precipitation patterns (Al-Shamlih *et al.*, 2005; Khoury & Al-Shamlih, 2006; Khoury *et al.*, 2007).

• **Recommended Conservation and Research:** The breeding populations of all Sandgrouse species would benefit from an action plan focussing on the protection and recovery of gamebirds from hunting, habitat destruction, and disturbances at nesting sites.

Crowned Sandgrouse

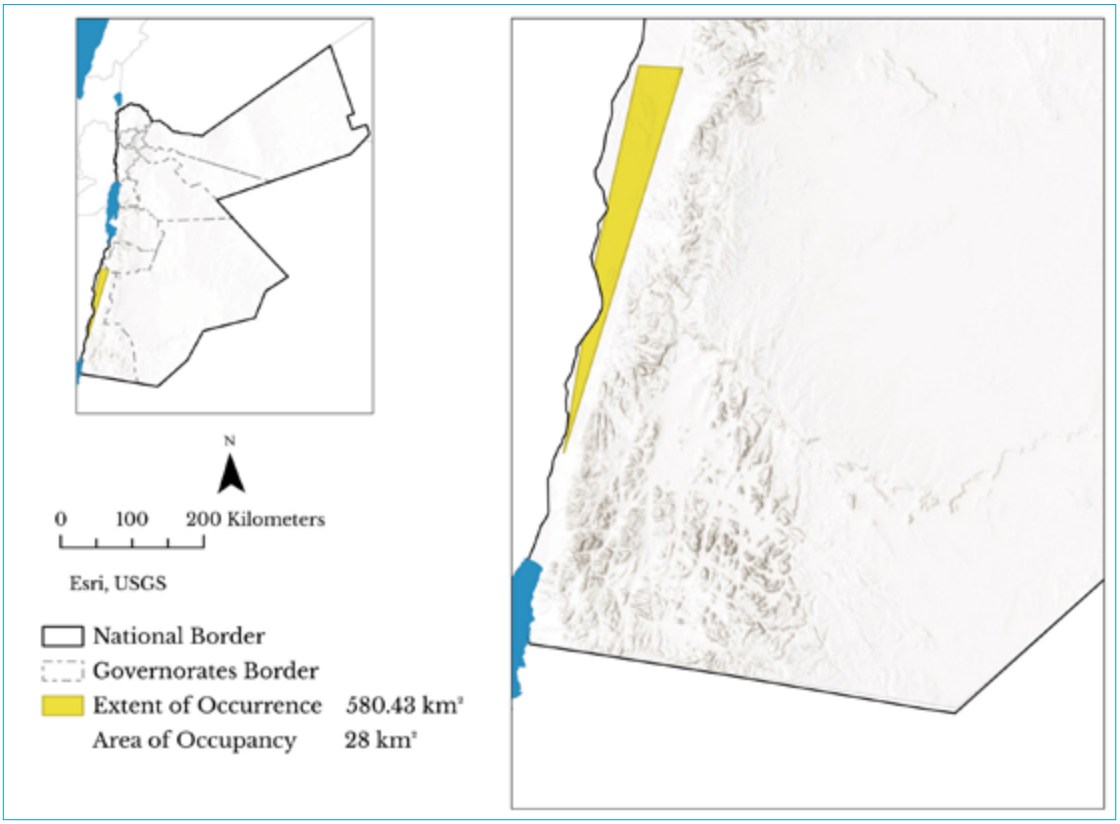
Order: Pterocliformes
Family: Pteroclidae
Scientific Name: *Pterocles coronatus* (Lichtenstein, 1823
Arabic Name:
قطا متوج
National Red List Status: CR B2a C2(i) D1
Population Trend: Decreasing
Status in Jordan: Resident

- **Justification:** The Crowned Sandgrouse has an extremely small national population, estimated at ≤50 mature individuals, indicating an extremely high risk of extinction. Breeding is probably confined to Wadi Araba, with all or nearly all mature individuals concentrated in one very small subpopulation. The Area of Occupancy is highly restricted, and a continuing decline is inferred due to intensive hunting at desert waterholes and the loss of traditional drinking sites. These pressures are ongoing and have not ceased, placing sustained pressure on the remaining population.

- **Distribution:** The Crowned Sandgrouse occurs from North Africa across the Middle East to Pakistan. **In Jordan**, it is restricted to the open desert of Wadi Araba and possibly other areas in the south, within the Saharo-Arabian and Sudanian bioclimatic zones of penetration.

- **Habitats and Ecology:** The Crowned Sandgrouse inhabits open sandy–gravel desert and hilly stony semi-desert within hot desert zones. It feeds mainly on seeds and is closely associated with nearby waterholes. The species nests on the ground, is resident but becomes nomadic outside the breeding season, and often travels to waterholes in flocks.

- **Conservation Status:** The Crowned Sandgrouse is globally listed as Least Concern and is covered under AEWA as a migratory species. In Jordan, it occurs within protected desert reserves such as Azraq, Shaumari, and Burqu. It is legally protected



under Appendix III of Agricultural Law No. 13/2015 and the general provisions of the Environmental Protection Law of 2017.

- **Major Threats:** The Crowned Sandgrouse is threatened by intensive, illegal hunting sport that has increased even among men in rural areas, and by the degradation and loss of desert habitats resulting from infrastructure expansion, overgrazing, quarrying, energy-related projects, and an overall increase in human disturbance. Additional pressures come from climate-related hydrological shifts that reduce water availability at key sites.

- **Recommended Conservation and Research:** An action plan focussing on the protection and recovery of gamebirds including Sandgrouse is urgently required, and should include development of effective mechanisms for implementing hunting regulations. Research priorities include monitoring population size and distribution, and assessing grazing and harvesting impacts.

Lichtenstein's Sandgrouse

Order: Pterocliformes
Family: Pteroclidae
Scientific Name: *Pterocles lichtensteinii* (Temminck, 1825)
Arabic Name:
قطا مخطط
National Red List Status: CR D1
Population Trend: Decreasing
Status in Jordan: Resident



Lichtenstein's Sandgrouse (Pterocles lichtensteinii); photo: © Firas Rahahleh

- **Justification:** The Lichtenstein's Sandgrouse has an extremely small national breeding population, likely no more than 50 mature individuals, confined to a very restricted area in southern Wadi Araba. The population is under increasing pressure from urban expansion and major infrastructure development around Aqaba, indicating a continued decline in habitat suitability and population viability. The very small population size alone indicates an extremely high risk of national extinction.

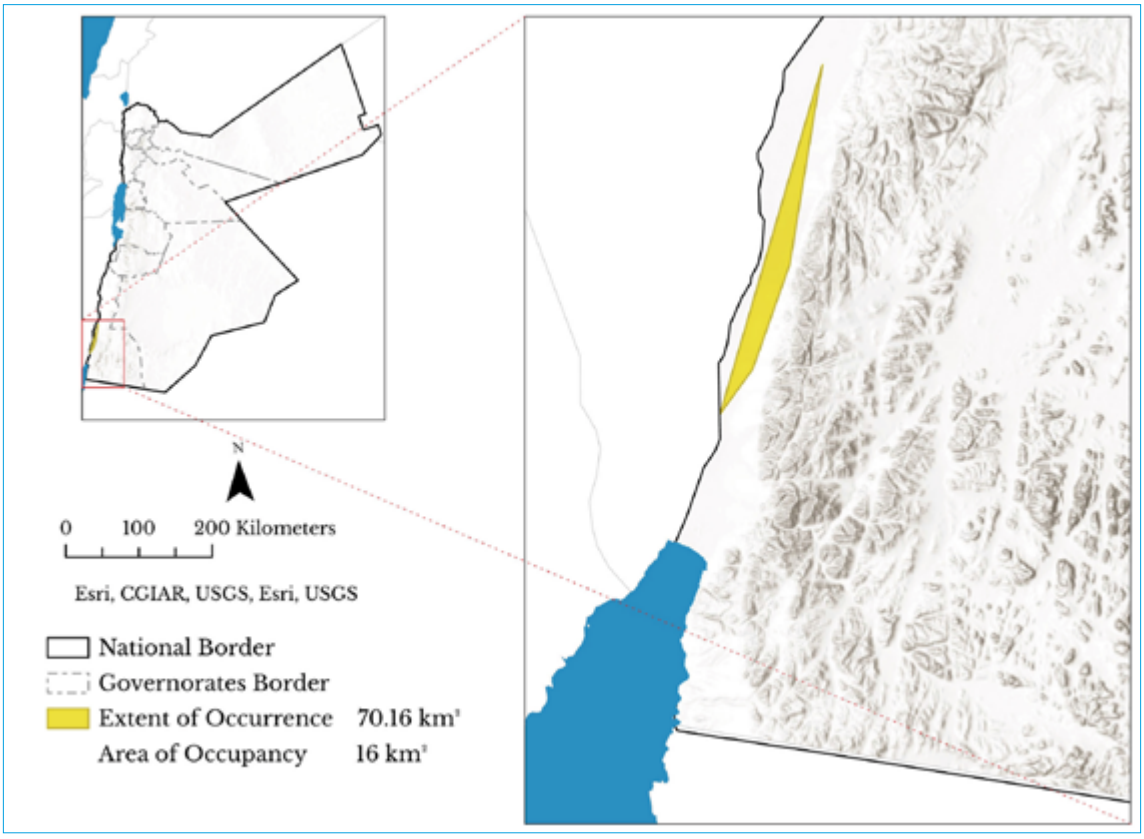
- **Distribution:** Lichtenstein's Sandgrouse has a discontinuous range extending from North and East Africa through Sinai, Arabia, Iran, and Pakistan. **In Jordan**, a small resident population occurs in the lower parts of the southern Rift margins between Rahma and Aqaba, and possibly farther east along the Saudi border. There are recent records of adult and juvenile birds near the political border, just north of Aqaba.

- **Habitats and Ecology:** Lichtenstein's Sandgrouse occupies dry savannah habitats and rocky mountain wadis, particularly at wadi mouths with scrub and scattered acacias (Al-Shamlih *et al.*, 2005).

- **Conservation Status:** Lichtenstein's Sandgrouse is listed as Least Concern globally and is included in AEWA. In Jordan, it is protected under Environment Law No. 6/2017 and is listed in Appendix II of the wildlife protection regulations under Agricultural Law No. 13/2015.

- **Major Threats:** Lichtenstein's Sandgrouse is threatened by habitat loss and degradation from agricultural and structural expansion in Wadi Araba; road construction and ecotourism sites near wadis and water points; hunting and poaching at drinking sites, and increasing grazing pressure.

- **Recommended Conservation and Research:** An action plan focussing on the protection and recovery of gamebirds including Sandgrouse is urgently required. Research priorities include monitoring population size and distribution, assessing grazing and harvesting impacts, evaluating threats, and guiding conservation actions.



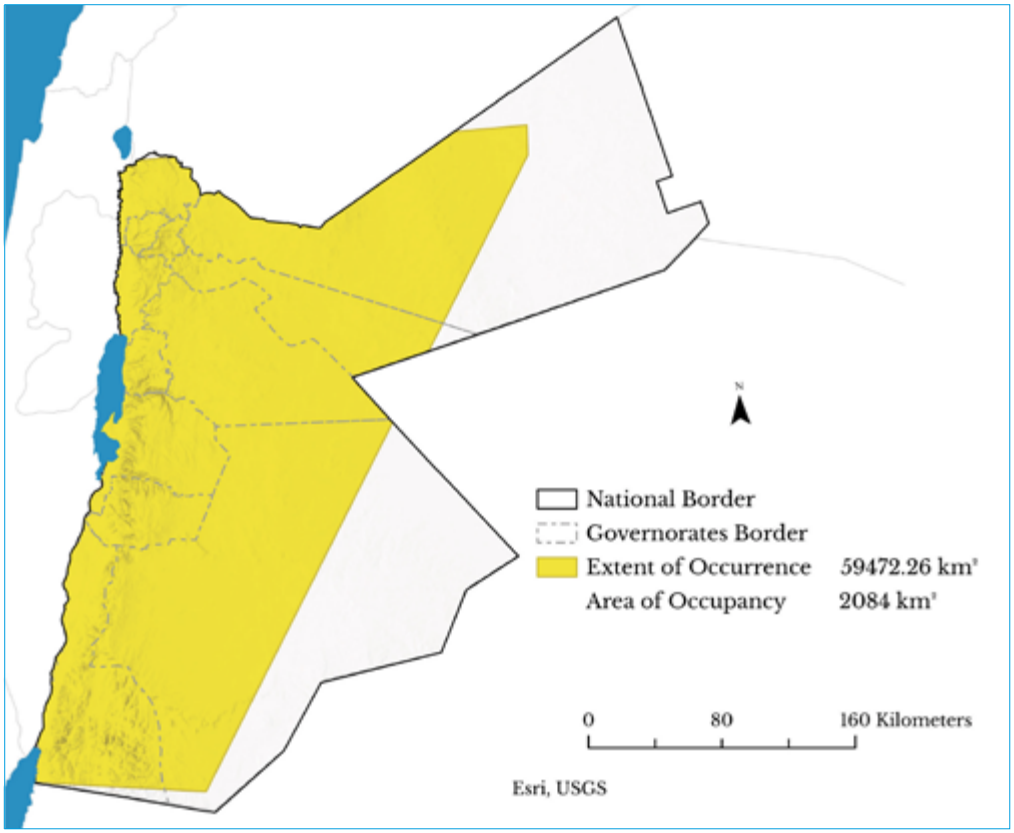
Rock Dove

Order: Columbiformes
Family: Columbidae
Scientific Name: *Columba livia* (J.F.Gmelin, 1789)
Arabic Name:
يمامة برية
National Red List Status: LC
Population Trend: Stable
Status in Jordan: Resident

- **Justification:** The Rock Dove is widespread and remains common across Jordan, with a stable national population. Although excessive hunting may have caused localized declines in some areas, there is no evidence of a significant overall population reduction, severe fragmentation, or a continuing decline at the national scale. The potential effects of hybridization with feral doves are not yet well understood, but do not currently indicate an elevated extinction risk.

- **Distribution:** The Rock Dove is widely distributed across North and Central Africa and throughout Eurasia, occupying temperate, subtropical, and arid regions. **In Jordan**, it is widespread across all regions and climatic zones, but is most common along the margins of the Rift Valley and in the Rum Desert. Frequent hybridization with feral pigeons complicates distinguishing pure wild individuals from feral or hybrid forms in many areas.

- **Habitats and Ecology:** In Jordan, the Rock Dove primarily inhabits cliffs, rocky outcrops, and inland rocky areas, particularly within the Mediterranean biogeographical zone, and also occurs in open and urban habitats. Non-feral individuals nest in rock crevices and on cliff ledges. The species is non-migratory, forages in groups in open areas, and feeds mainly on seeds and other plant material, traveling long distances daily to reach food and water.



- **Conservation Status:** The Rock Dove is globally assessed as Least Concern (LC), reflecting its wide distribution, large population size, and overall stability despite localized threats.

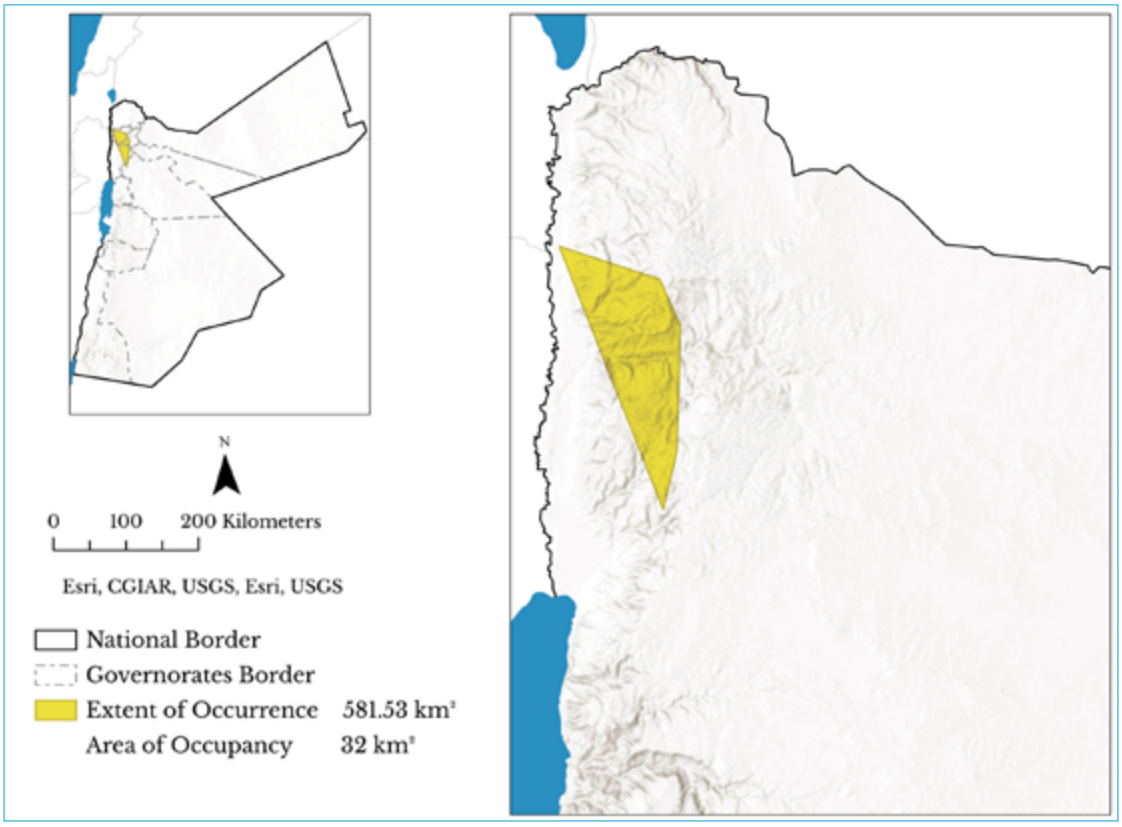
- **Major Threats:** Local threats to the species include hunting, habitat loss associated with intensive agriculture and mining that affect cliff habitats, and hybridization with feral pigeons. Large numbers of individuals were documented as killed based on evidence from Facebook posts (Eid & Handal, 2018). International trade records for birds indicate reported trade, including specimens listed as wild-sourced, which require further verification.

- **Recommended Conservation and Research:** An action plan focussing on the protection and recovery of gamebirds including Doves is urgently required. This should include the development of effective mechanisms for implementing hunting regulations. Research priorities include monitoring population size and distribution, and evaluating major threats.

Common Woodpigeon

Order: Columbiformes
Family: Columbidae
Scientific Name: *Columba palumbus* (Linnaeus, 1758)
Arabic Name:
ورشان
National Red List Status: EN D1
Population Trend: Decreasing
Status in Jordan: Resident, winter visitor

- **Justification:** The Common Woodpigeon has a very small national breeding population, recently confirmed in northwestern Jordan and unlikely to exceed 250 mature individuals. The species was historically recorded mainly as a winter visitor, and recent breeding records indicate either a range expansion or a previously undetected small breeding population. Despite indications of expansion, the



limited population size increases vulnerability to stochastic events and to severe hunting pressure on doves and pigeons, particularly because dove hunting is permitted after the main breeding season, with no practical regulatory measures. Although the species breeds in neighboring Syria and Lebanon, numbers and trends in these countries are unknown; thus, a rescue effect cannot be considered in the current assessment.

- **Distribution:** The Common Woodpigeon is resident in Western Europe, northwestern Africa, and parts of western Asia, with migratory populations wintering in the Levant and adjacent regions. **In Jordan**, it was historically a winter visitor but has recently expanded into northwestern areas, where it now occurs as a resident breeder in wooded habitats.

- **Habitats and Ecology:** In Jordan, the Common Woodpigeon occurs mainly in wooded habitats, including forest edges, riparian areas, gardens, and tree plantations, and also forages in agricultural and urban landscapes. It nests high in trees, feeds mainly on seeds, and is resident or a short-distance migrant, with large wintering flocks recorded historically.

- **Conservation Status:** The Common Woodpigeon is afforded legal protection under Environment Law No. 6/2017 and is covered under the general frameworks of AEWA as a migratory bird species.

- **Major Threats:** The Common Woodpigeon is threatened by hunting pressure and, locally, by tree loss and woodland fragmentation.

- **Recommended Conservation and Research:** An action plan focussing on the protection and recovery of gamebirds including Doves is urgently required. This should include the development of effective mechanisms for implementing hunting regulations. Research priorities include monitoring population size and distribution, and evaluating major threats.

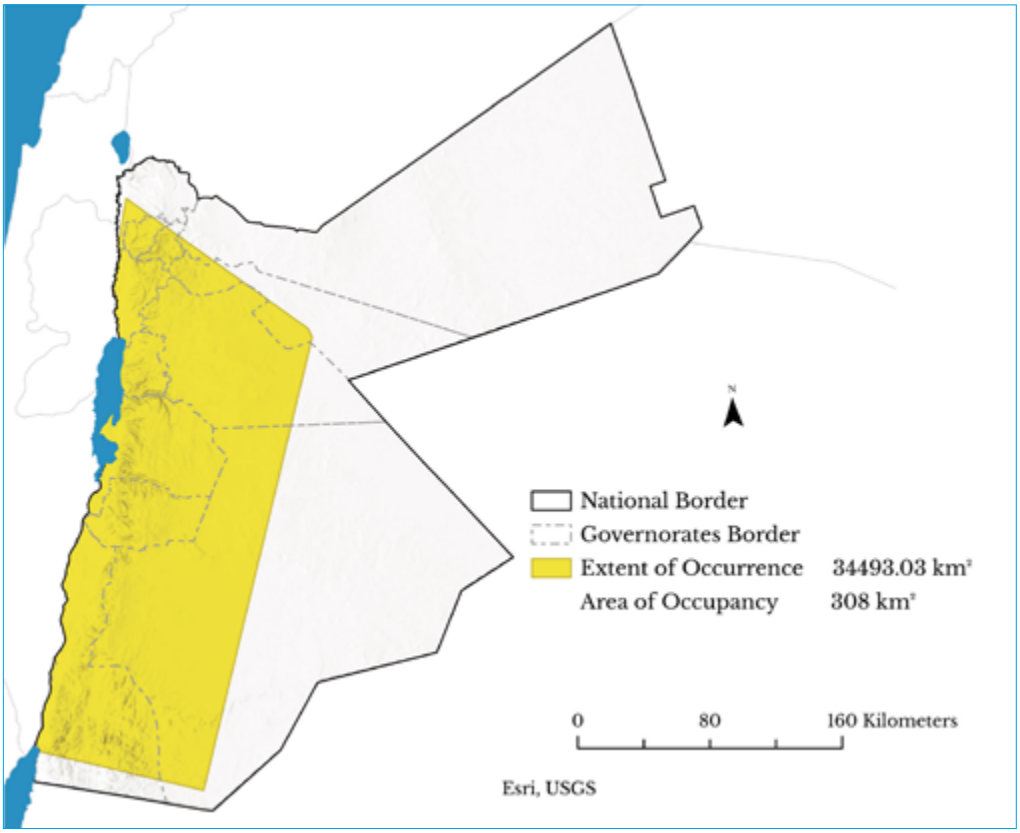
Namaqua Dove

Order: Columbiformes
Family: Columbidae
Scientific Name: *Oena capensis* (Linnaeus, 1766)
Arabic Name:
حمحمة
National Red List Status: LC
Population Trend: Stable
Status in Jordan: Resident, summer visitor, passage migrant

- **Justification:** The Namaqua Dove is a widespread and locally common species that has recently expanded its range in Jordan, particularly along the Rift Valley and adjacent areas. The national population is likely to exceed 1,000 mature individuals, and there is no evidence of a population decline or significant threats at the national scale. The species, therefore, does not approach thresholds for any threatened category.

- **Distribution:** The Namaqua Dove occurs in sub-Saharan Africa, the Arabian Peninsula, and the southern Levant. **In Jordan**, it was rare before the 1990s but has expanded rapidly ever since, becoming a common resident in the Jordan Valley, in addition to Aqaba, Azraq, and other agricultural areas in semi-arid to arid regions. It was previously recorded as a summer visitor at Azraq, but in recent years it has been recorded there year-round.

- **Habitats and Ecology:** The Namaqua Dove inhabits flat, lowland areas with scattered shrubs, including near-desert habitats, dry savanna, subtropical dry shrubland, wetlands with shrub cover, and agricultural land. In Jordan, it benefits from agricultural activities and has expanded rapidly as a breeding species in the Jordan Valley, around Azraq, and at Aqaba. It is a partial migrant as indicated by records outside its breeding range in spring. It generally prefers the Sudanian Penetration and Saharo-Arabian bioclimatic zones.



- **Conservation Status:** The Namaqua Dove is listed globally as Least Concern (LC) and is protected under the AEWA. In Jordan, it occurs within protected areas such as the Azraq Wetland Reserve and the Fifa reserve. It is legally protected under the Environment Law No. 6/2017 and the Agricultural Law No. 13/2015 (Regulation No. 43/2008).

- **Major Threats:** Local threats include habitat loss from intensive agriculture and urban expansion, although small-scale agriculture has also facilitated recent range expansion.

- **Recommended Conservation and Research:** Priority actions include protecting remaining scrub and valley-edge habitats, managing grazing to maintain suitable ground cover, and monitoring agricultural use. Research should focus on population surveys, habitat use in urban and peri-urban areas, waterhole use, and the effects of grazing on seed availability.

Eurasian Collared Dove

Order: Columbiformes
Family: Columbidae
Scientific Name: *Streptopelia decaocto* (Frivaldszky, 1838)
Arabic Name:
يمام مطوق أوراسي
National Red List Status: LC
Population Trend: Stable
Status in Jordan: Resident

- **Justification:** The Eurasian Collared Dove is widespread and locally common across Jordan, with a large and stable population likely exceeding 10,000 mature individuals. Although unregulated hunting may cause temporary local declines, there is no evidence of a significant population reduction at the national scale. The species has also benefited from irrigated agriculture in arid areas, supporting its continued stability.

- **Distribution:** Originally native to regions from China to India, the Eurasian Collared Dove

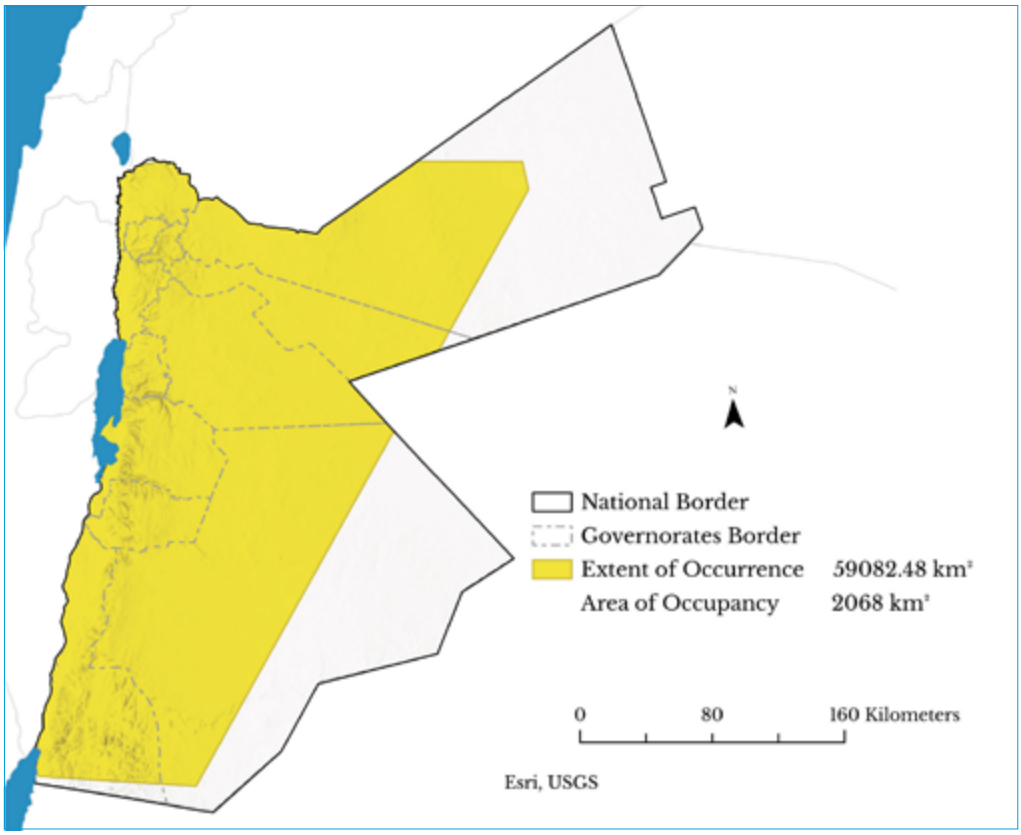
has expanded widely across Eurasia, including the Middle East, and has also been introduced to North America. **In Jordan**, it was confined to the northwest in the 1970s but has since expanded and is now widespread, occurring in wooded and open areas with trees and tall shrubs across the country.

- **Habitats and Ecology:** The Eurasian Collared Dove occupies agricultural areas, urban and rural gardens, plantations, open woodland, and shrubland wherever trees or tall shrubs are present. It is present in all bioclimatic zones of Jordan. It nests on trees and shrubs, feeds mainly on seeds, produces multiple broods annually, and is resident. Individuals may travel several kilometers daily to reach food and water.

- **Conservation Status:** The Eurasian Collared Dove is protected under Jordan's Environment Law No. 6/2017, is included under migratory bird frameworks of AEWA, and occurs within several protected areas in Jordan.

- **Major Threats:** Local threats include logging, intensive agriculture, and urbanization. Direct persecution through hunting and predator control is substantial, with large numbers being hunted based on evidence from Facebook posts (Eid & Handal, 2018), in addition to illegal trade as reported from the Friday Animal Market in Amman city (Eid *et al.*, 2010).

- **Recommended Conservation and Research:** An action plan focussing on the protection and recovery of gamebirds including Doves is urgently required. This should include the development of effective mechanisms for implementing hunting regulations. Research priorities include monitoring population size and distribution, and evaluating major threats.

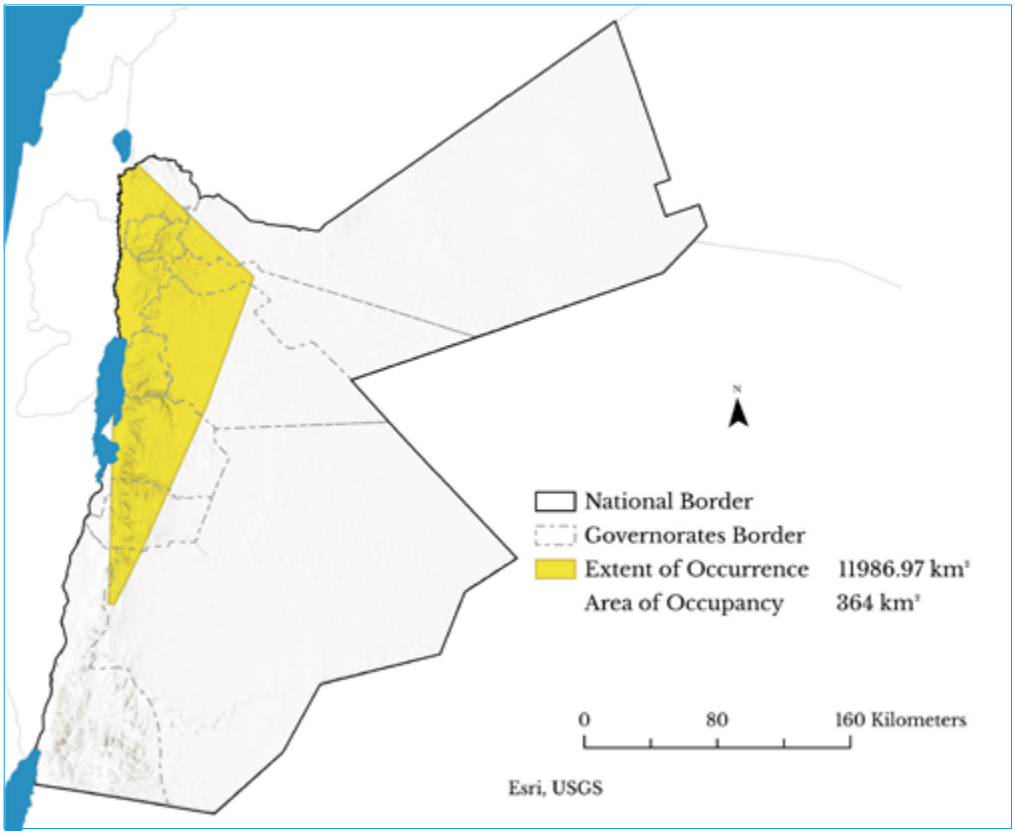


European Turtle Dove

Order: Columbiformes
Family: Columbidae
Scientific Name: *Streptopelia turtur* (Linnaeus, 1758)
Arabic Name:
قمري
National Red List Status: EN A2cd
Population Trend: Decreasing
Status in Jordan: Summer visitor, passage migrant

- **Justification:** The European Turtle Dove has undergone a severe national population decline, inferred to exceed 50% over the past two decades, based on survey results conducted in certain breeding areas, such as the Northern Highlands, Rift margins, and *Tamarix* sp. stands in the Jordan Valley. This decline is driven by ongoing habitat degradation and fragmentation, as well as intense hunting pressure, and is likely to have additional impacts along migration routes. These drivers have not ceased and continue to affect the species. These conditions meet the Endangered thresholds under criterion A2. Although breeding populations occur in neighboring countries, they are also in decline, and immigration is unlikely to offset ongoing losses at the national level.

- **Distribution:** The European Turtle Dove is a widespread summer visitor across Europe, North Africa, and western and central Asia, wintering in the Sahel of Sub-Saharan Africa. **In Jordan**, it occurs as a passage migrant and summer breeder, mainly in the northern highlands, Rift margins, and Jordan Valley, breeding in Mediterranean woodlands, pine forests, *Tamarix* sp. stands, and, less frequently, gardens and irrigated orchards.



- **Habitats and Ecology:** In Jordan, the European Turtle Dove inhabits open woodlands, orchards, farmland, and riparian habitats, including pine–oak forests, Mediterranean shrubland, and *Tamarix* sp. thickets. It breeds in woodlands, riparian vegetation, and citrus groves, feeds mainly on seeds, and nests in trees.The species is strictly migratory, occurring in flocks outside the breeding season.

- **Conservation Status:** The European Turtle Dove is recorded within protected areas and Special Conservation Areas (SCAs) in Jordan. It is covered under AEWA and CMS Appendix II, and is legally protected under Jordan's Environment Law (2017).

- **Major Threats:** Major threats include habitat loss and degradation caused by agricultural intensification, urban expansion, logging, and overgrazing, as well as invasive mesquite shrubs, particularly impacting *Tamarix* sp. thickets (Khoury & Körner, 2018). The species is also subject to significant hunting pressure and illegal trade in Jordan (Eid et al, 2010; Eid & Handal, 2018).

- **Recommended Conservation and Research:** An action plan focussing on the protection and recovery of gamebirds including Doves from hunting, habitat degradation, and disturbances at nesting sites is urgently required. This should include protection of woodlands and the development of effective mechanisms in implementing hunting regulations. Research priorities include monitoring population size and distribution, and evaluating major threats.



European Turtle Dove (Streptopelia turtur); photo; © Waseem Al-Hayek

Laughing Dove

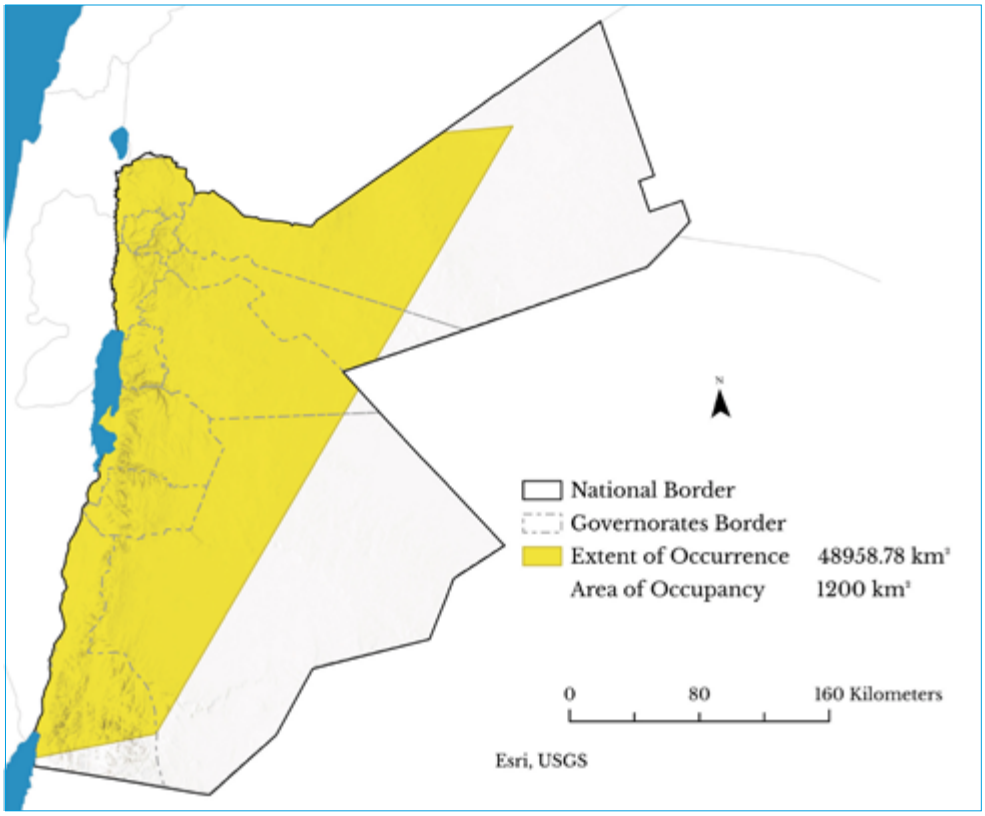
Order: Columbiformes
Family: Columbidae
Scientific Name: *Spilopelia senegalensis* (Linnaeus, 1766)
Arabic Name:
فاختة النخيل
National Red List Status: LC
Population Trend: Stable
Status in Jordan: Resident

- **Justification:** The Laughing Dove is widespread and common across Jordan and has expanded rapidly into rural and urban areas across all bioclimatic zones. Although it is locally hunted, there is no evidence of a population decline at the national level. Its high reproductive rate, extended breeding season, and frequent occurrence in inhabited areas with limited hunting pressure support continued population stability.

- **Distribution:** The Laughing Dove is widely distributed across Africa, the Middle East, and western to central Asia. **In Jordan**, it is widespread in urban and agricultural areas across the country, absent mainly from remote uninhabited regions, and continues to expand its range.

- **Habitats and Ecology:** The Laughing Dove occupies a wide range of habitats near human habitation and farmland, including dry savanna, rural gardens, and urban areas. It is closely associated with settlements, nesting on trees, rock cavities, cliff ledges, and artificial structures, and feeds mainly on seeds and insects.

- **Conservation Status:** The Laughing Dove is legally protected under Jordan's Environment Law No. 6/2017, is covered by AEWA, and occurs within various protected areas that support its continued persistence despite local pressures.



- **Major Threats:** Local threats include habitat degradation associated with urban expansion and agricultural intensification, loss of nesting sites due to tree removal and landscaping, reduced food availability linked to pesticide use, and localized hunting or capture. A total of 390 individuals were documented as killed based on evidence from Facebook posts (Eid & Handal, 2018).

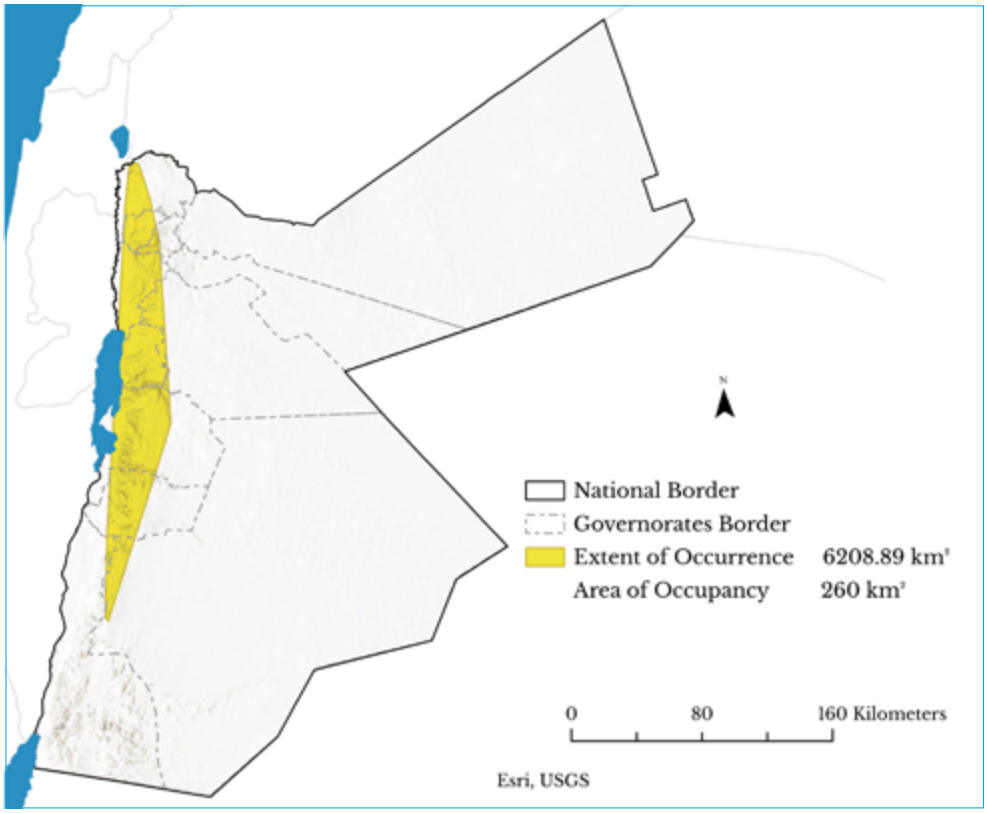
- **Recommended Conservation and Research:** Priority actions include protecting urban trees and park habitats, reducing pesticide use in agricultural and peri-urban areas, and monitoring and regulating local hunting. Research should focus on population surveys, disease screening, and the assessment of predation impacts.

Common Cuckoo

Order: Cuculiformes
Family: Cuculidae
Scientific Name: *Cuculus canorus* (Linnaeus, 1758)
Arabic Name:
وقواق شائع
National Red List Status: DD
Population Trend: Unknown
Status in Jordan: Summer visitor, passage migrant

- **Justification:** The Common Cuckoo is assessed as Data Deficient (DD) at the national level because reliable information on its population size, distribution, and trends in Jordan is lacking. Although breeding is indicated by singing males along the Rift margins in spring, no targeted surveys have been conducted, and its brood-parasitic and elusive behavior makes detection difficult. While its open scrubland habitats are subject to overgrazing and agricultural and urban expansion, the magnitude of any population decline cannot be assessed.

- **Distribution:** The Common Cuckoo is a summer visitor across Eurasia, wintering in South Asia and Sub-Saharan Africa. **In Jordan**, it occurs as a passage migrant and scarce summer breeding visitor, with breeding mainly confined to the Rift margins.



• **Habitats and Ecology:** The Common Cuckoo inhabits open and semi-open habitats, including forest edges, shrubland, and riparian vegetation. In Jordan, it breeds mainly along the higher Rift margins and is a brood parasite dependent on insectivorous hosts, including the Long-billed Pipit and Scrub Warbler. Breeding activity in Jordan begins early, in February, and continues throughout the spring season.

• **Conservation Status:** The Common Cuckoo is protected under the general provisions of Agricultural Law No. 13/2015 and Environmental Law No. 6/2017 in Jordan.

• **Major Threats:** The Common Cuckoo is threatened by degradation and loss of open shrubland habitats and by pesticide use, which may reduce the availability of insect prey and host species.

• **Recommended Conservation and Research:** Priority actions focus on improving knowledge of the species. Research is needed on population size and trends, life history and ecology, and the nature and impact of threats affecting the Common Cuckoo in Jordan.

Great Spotted Cuckoo

Order: Cuculiformes
Family: Cuculidae
Scientific Name: *Clamator glandarius* (Linnaeus, 1758)
Arabic Name:
وقواق مرقط كبير
National Red List Status: NT
Population Trend: Probably Stable
Status in Jordan: Summer visitor, passage migrant

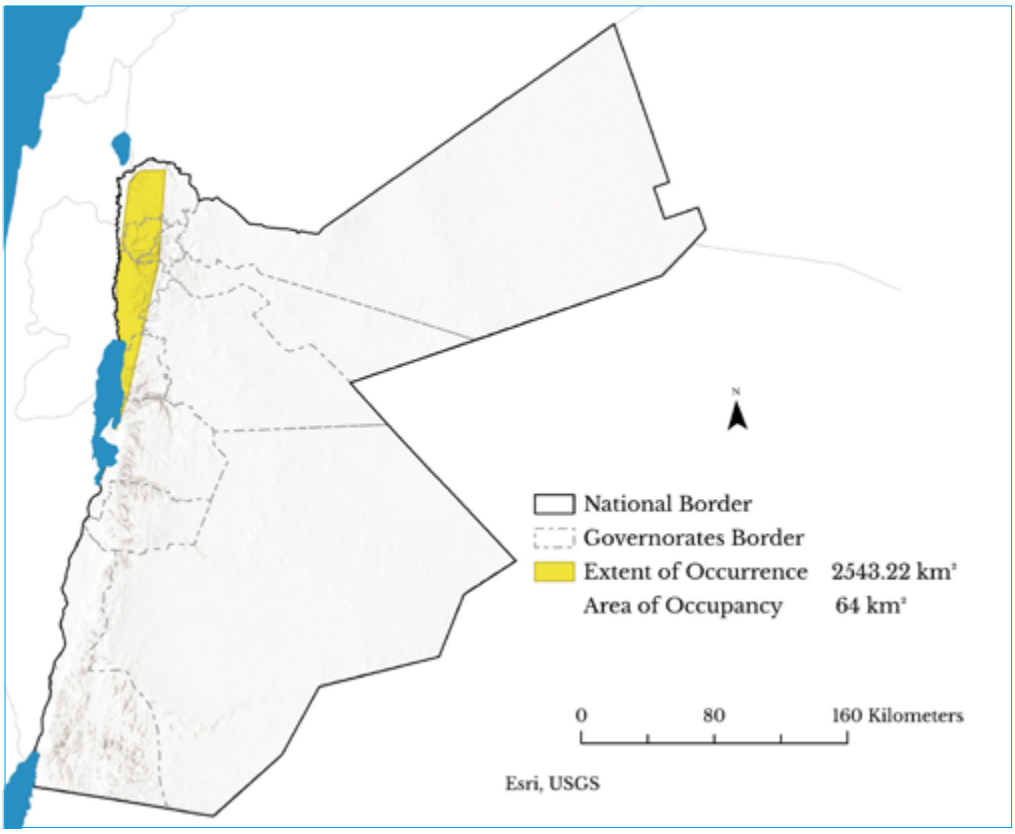
• **Justification:** The Great Spotted Cuckoo has a limited breeding range in Jordan and is thinly distributed, with a relatively small national population of less than 1000 mature individuals, which would qualify it as Vulnerable under criterion D. The restricted distribution and small population size could increase vulnerability to stochastic events and localized habitat loss or degradation. However, the population appears stable, and its corvid host species are widespread and common, and a rescue effect from other regional breeding populations is possible. Moreover, there is currently insufficient evidence of a continuing decline or severe fragmentation to support placement in a threatened category; it is therefore assessed as Near-Threatened.

• **Distribution:** The Great Spotted Cuckoo is a summer visitor across southern Europe and western Asia, wintering in Africa. **In Jordan**, it occurs as a passage migrant and a thinly distributed summer breeder, mainly in the Jordan Valley and along the northern Rift margins.

• **Habitats and Ecology:** The Great Spotted Cuckoo inhabits open shrubland and sparse woodland with scattered trees. It primarily feeds on large insects, especially caterpillars, and is an obligate brood parasite that breeds mainly in Hooded Crow nests; the breeding population in Jordan is migratory.



Great Spotted Cuckoo (Clamator glandarius); photo: © Waseem Al-Hayek



- **Conservation Status:** The Great Spotted Cuckoo occurs within protected areas in Jordan, is covered under AEWA, and is legally protected under Jordan's Environment Law No. 6/2017.

- **Major Threats:** The Great Spotted Cuckoo is threatened by habitat loss and degradation due to land-use change, as well as by pesticide use, which reduces the availability of insect prey.

- **Recommended Conservation and Research:** Priority actions include protecting remnant shrublands from conversion, limiting pesticide use, enforcing hunting restrictions, and monitoring migrant and breeding populations, with support for community outreach. Research should focus on seasonal population surveys, assessments of hunting impacts, evaluations of pesticide effects on caterpillar availability, and monitoring of habitat condition.

Eurasian (Byzantine) Eagle Owl

Order: Strigiformes
Family: Strigidae
Scientific Name: *Bubo bubo interpositus* (Rothschild & Hartert, 1910)
Arabic Name:
بوهة اوراسية
National Red List Status: EN B2ab(iii); D1
Population Trend: Unknown
Status in Jordan: Resident

- **Justification:** This species has a very small national population, estimated at fewer than 250 mature individuals, confined to northwestern Jordan. Surveys indicate a thin, fragmented distribution, with an Area of Occupancy of less than 500 km^2 and a limited Extent of Occurrence, reflecting a highly restricted national range. A continuing decline is inferred due to increasing disturbance at nesting cliffs, habitat degradation, persecution, and illegal collection and trade. Although the species occurs in neighboring regions such as northern Palestine and the Golan Heights, the ongoing urbanization, disturbance at nesting sites, and trapping within Jordan are likely to limit successful immigration, reducing the likelihood of a rescue effect.

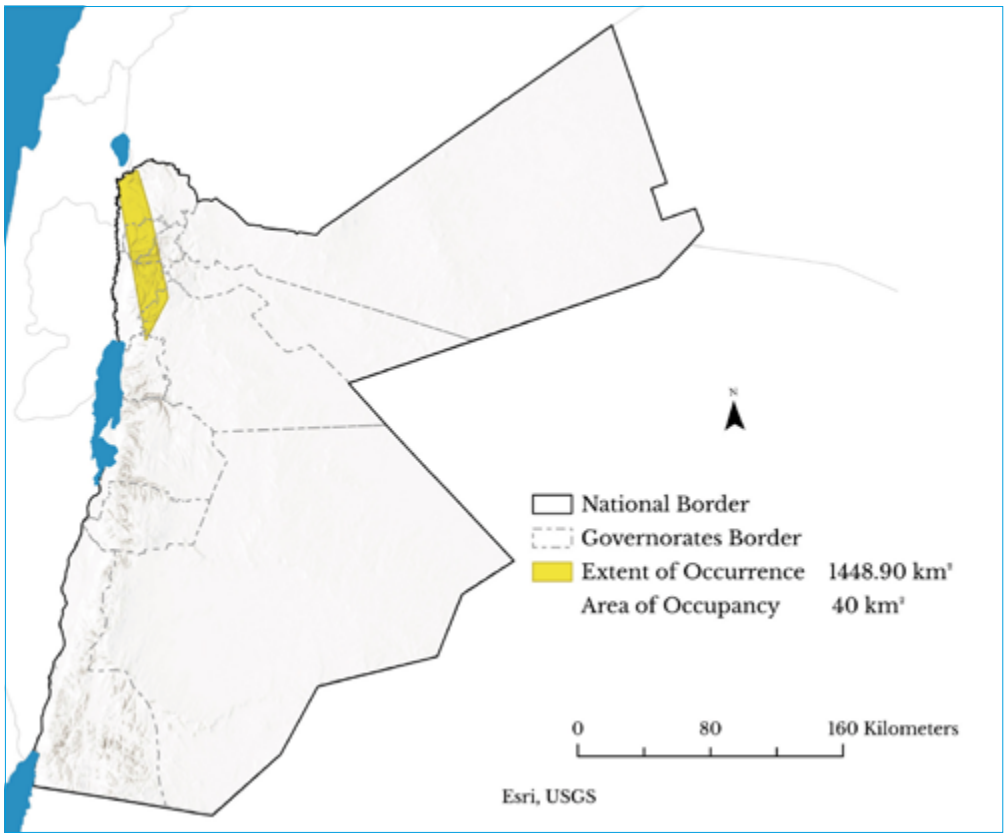
- **Distribution:** The Eurasian Eagle-Owl is widespread across Europe and Asia. **In Jordan**, the Byzantine subspecies is a resident with a restricted range in the northwest, occurring from the Yarmuk Valley to Wadi Hesban, mainly in the Northern Highlands, Rift margins, and the northern parts of the Jordan Valley.

- **Habitats and Ecology:** The Eurasian (Byzantine) Eagle Owl breeds in rugged, rocky inland sites in Mediterranean and steppe-like shrubland, in sparsely populated landscapes. It requires secluded nesting and roosting sites and forages over open or lightly wooded terrain, including grasslands and agricultural valleys (Khoury et al 2023).

- **Conservation Status:** The Eurasian (Byzantine) Eagle Owl is protected under the general provisions of Agricultural Law No. 13/2015 and Environmental Law No. 7/2017. A small number of breeding pairs occur within protected areas, including Yarmouk and Ajloun Reserves, which provide partial refuge from disturbance and persecution.

- **Major Threats:** The species is threatened by habitat loss associated with urban expansion, persecution and intentional killing, illegal collection and trade, and disturbance from recreational activities, including rock climbing (Khoury *et al*, 2023). Prolonged drought further degrades habitat quality and prey availability. Two individuals were documented as killed based on evidence from Facebook posts (Eid & Handal, 2018).

- **Recommended Conservation and Research:** Research priorities include assessing population size, distribution, and historical trends; evaluating threats; identifying effective conservation actions; and developing a species action or recovery plan.



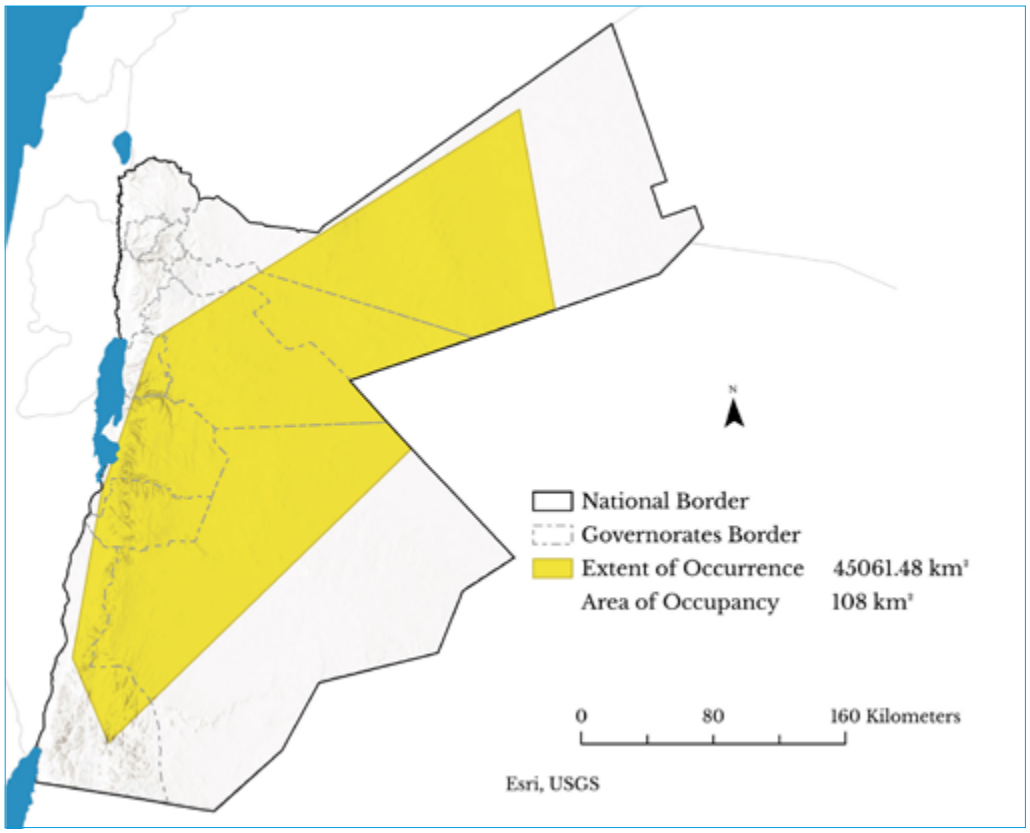
Pharaoh Eagle Owl

Order: Strigiformes
Family: Strigidae
Scientific Name: *Bubo ascalaphus* (Savigny, 1809)
Arabic Name:
بوهة فرعونية
National Red List Status: VU A3c
Population Trend: Stable
Status in Jordan: Resident

- **Justification:** The Pharaoh Eagle Owl is widespread in arid and semi-arid areas of Jordan, but a future population reduction exceeding 30% is suspected due to projected habitat loss and degradation from mining, industrial and energy developments, tourism infrastructure, new railways, and road expansion. These pressures are expected to reduce the extent and quality of suitable breeding habitat and increase disturbance and mortality. Although the species occurs in neighboring countries, future habitat degradation within Jordan is likely to limit successful colonization and recruitment, reducing the likelihood of a rescue effect.

- **Distribution:** The Pharaoh Eagle Owl occurs across North Africa, the Middle East, and the Arabian Peninsula. **In Jordan**, it is a widespread but thinly distributed resident of arid and semi-arid regions, including the Dead Sea and Southern Rift margins, the Southern Highlands, Wadi Araba, and the interior deserts.

- **Habitats and Ecology:** The Pharaoh Eagle Owl inhabits rocky inland areas in hot desert environments, including rocky hills, mountains, and wadis (Khoury *et al.*, 2023). It forages mainly on rodents but has an opportunistic diet that also includes birds, reptiles, and invertebrates. Breeding occurs from January to March, with eggs laid in rock crevices or on the ground.



- **Conservation Status:** The Pharaoh Eagle Owl is protected under Agriculture Law No. 56/2015 and is listed in CITES Appendix II, regulating international trade. It is also strictly protected under the Bern Convention (Appendix II) at the regional level.

- **Major Threats:** The Pharaoh Eagle Owl is threatened by habitat loss and fragmentation from mining, quarrying, energy and renewable energy projects, intensive agriculture, and tourism developments. Additional pressures include road mortality, disturbance from recreational activities, persecution, hunting, and illegal collection and trade (Khoury *et al.*, 2023).

- **Recommended Conservation and Research:** Priority actions include enforcing bans on illegal capture, trade, and persecution; protecting nesting and roosting sites on rocky outcrops, wadis, and cliffs; reducing the risk of poisoning from rodenticides and other chemicals; and mitigating infrastructure-related hazards. Research should focus on assessing population size, distribution, trends, and the effectiveness of conservation actions.



Pharaoh Eagle Owl (Bubo ascalaphus); photo: © Fares Khoury

Brown Fish Owl

Order: Strigiformes
Family: Strigidae
Scientific Name: *Ketupa zeylonensis* (J.F.Gmelin, 1788)
Arabic Name:
بومة سمك بنية
National Red List Status: RE
Population Trend: Extinct
Status in Jordan: Extinct, formerly bred

- **Justification:** The Brown Fish Owl is considered extinct at the national level, as there is no reasonable doubt that the last individuals capable of reproduction in Jordan have disappeared. The species was historically known only from the Yarmouk Valley, and no reliable records have been reported for more than 50 years. Its disappearance has also been confirmed in adjacent areas across the Yarmouk River, indicating the absence of any neighboring source populations and making natural recolonization highly unlikely.

- **Distribution:** The Brown Fish Owl occurs in parts of Southern Turkey, Palestine (now extinct), southern Iran, Southeastern Pakistan, Northwestern India, extending eastward to Sri Lanka, Myanmar, Thailand, and Southeastern China. **In Jordan**, the species is extinct, with historical records limited to the Yarmouk Valley.

- **Habitats and Ecology:** The Brown Fish Owl is closely associated with permanent rivers, streams, and creeks, requiring undisturbed wadis and valleys with trees and dense vegetation near freshwater sources in hilly landscapes. It feeds primarily on fish, frogs, and crabs. Breeding occurs in tree hollows near water bodies, reflecting its strong dependence on intact riparian habitats.

- **Conservation Status:** The Brown Fish Owl is protected under the general provisions of the Agricultural Law No. 13 of 2015 and the Environmental Protection Law No. 6 of 2017. It is listed in CITES Appendix II, regulating international trade. At the national level, it is included in Appendix I to the Agricultural Law No. 13 of 2015, based on Regulation No. 43 of 2008.

- **Major Threats:** Major threats included tourism and recreational development, small-holder farming, persecution, and human disturbance in river valleys. Additional impacts arose from conflict-related activities and from river modification through dams and water management, resulting in severe degradation of freshwater habitats.

- **Recommended Conservation and Research:** Recommended actions focus on restoring and protecting riparian habitats and enforcing bans on poisoning and shooting.

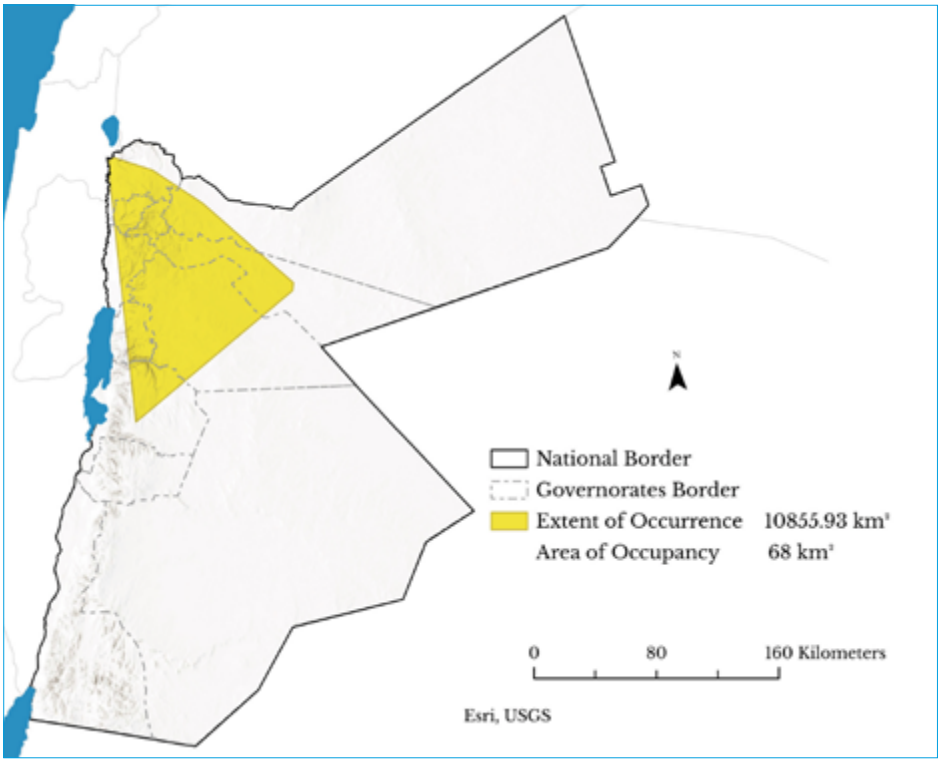
Long-eared Owl

Order: Strigiformes
Family: Strigidae
Scientific Name: *Asio otus* (Linnaeus, 1758)
Arabic Name:
بومة أذناء
National Red List Status: LC
Population Trend: Stable
Status in Jordan: Resident, passage migrant, and winter visitor

- **Justification:** The species is widespread and frequently recorded in northwestern Jordan, occupying a variety of habitats including open woodlands and rural and semi-urban areas with suitable nesting and foraging conditions. Although precise population size and trends are difficult to quantify due to nocturnal behavior and survey limitations, regular records across its known breeding range indicate population persistence. Habitat fragmentation and localized declines in habitat quality are suspected but are not currently severe enough to drive significant population reductions. Occasional illegal trapping and sale have been recorded, but to date, there is no evidence that these pressures have resulted in measurable national-level declines.

- **Distribution:** The Long-eared Owl has a broad Holarctic distribution across Eurasia and North America. **In Jordan**, it is resident in the northwest, including the Northern Jordan Valley and its Rift Margins, the Northern Highlands, and Northern Steppes south to Madaba and Karak. It has also been recorded in the Azraq area. Aggregations of wintering birds have been observed in the Shaumari Reserve and in a plantation near Al-Mafraq.

- **Habitats and Ecology:** The Long-eared Owl inhabits temperate forests, Mediterranean shrubland, farmland, plantations, and urban areas. It favors dense trees or scrub near open habitats, nests in abandoned stick nests within groves or riparian trees, and roosts communally in winter. In Jordan, it commonly occurs in agricultural and urban areas, including some neighborhoods in Amman (Khoury *et al*, 2023).



- **Conservation Status:** The Long-eared Owl is protected under the Agricultural Law (2015) and the Environmental Protection Law (2017). It is listed in CITES Appendix II, which regulates international trade, and is included under Annex II of the Bern Convention at the regional level.

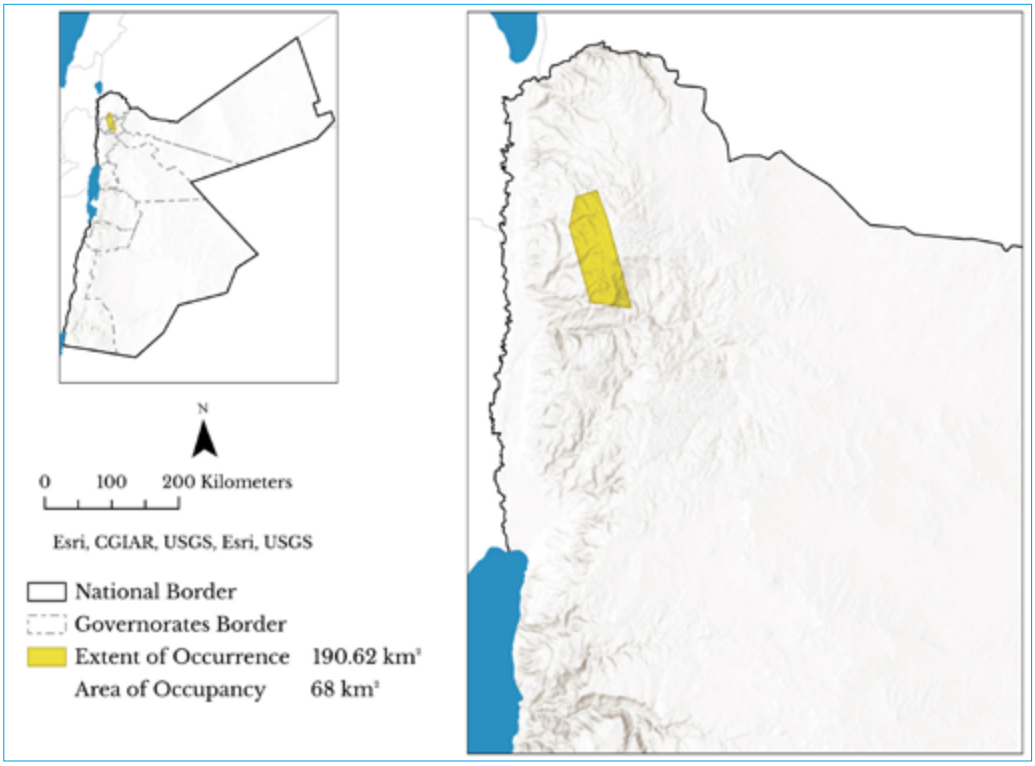
- **Major Threats:** The Long-eared Owl is affected by urban expansion in combination with tree logging and loss of open areas for hunting. Additional pressures include illegal trapping, collection of nestlings, and trade (Khoury *et al*, 2023).

- **Recommended Conservation and Research:** Priority actions include enforcing hunting and trade regulations and retaining or restoring suitable roosting and nesting structures. Research should focus on assessing population size and distribution, historical trends, and identifying and quantifying key threats.

Tawny Owl

Order: Strigiformes
Family: Strigidae
Scientific Name: *Strix aluco* (Linnaeus, 1758)
Arabic Name:
خبل أوروبي
National Red List Status: EN B1ab(iii)+2ab(iii)
Population Trend: Decreasing
Status in Jordan: Resident

- **Justification:** The species has a highly restricted distribution in Jordan, occurring at fewer than five locations within a very small national range. It is confined to woodland habitats that are undergoing a continuing decline in extent and quality, resulting in a limited and fragmented Area of Occupancy and Extent of Occurrence. This geographical restriction meets the threshold and sub-criteria for Endangered under B. The national population is small, estimated at approximately 200–400 mature individuals, and is subject to additional pressures from occasional persecution and nestling collection. Although the species occurs in neighboring countries, there is no evidence that effective dispersal into Jordan occurs due to a lack of suitable ecological corridors, and immigration is unlikely to offset the isolation and ongoing decline of suitable habitat within the country.



• **Distribution:** The Tawny Owl is widely distributed across Europe and western Asia, from the British Isles and southern Scandinavia eastward to western Siberia, and southward through the Mediterranean, North Africa, the Levant, Iran, and the western Himalayas. **In Jordan**, it is a localized resident confined to dense woodland habitats in the Northern Highlands.

• **Habitats and Ecology:** In Jordan, the Tawny Owl inhabits temperate forests and Mediterranean-type shrubland within the Mediterranean biogeographical zone, particularly broadleaved and mixed woodlands such as Dibeen and Ajlun. It feeds on small mammals, birds, and invertebrates and breeds in tree cavities, cliffs, or other natural hollows. The species is restricted to a relatively small area in the Northern Highlands within the Mediterranean bioclimatic zone (Khoury et al, 2023).

• **Conservation Status:** The Tawny Owl is protected under the general provisions of the Agricultural Law (2015) and the Environmental Protection Law (2017). It is listed in CITES Appendix II and is included in Appendix II of the Bern Convention as strictly protected fauna. Within EU range states, it is generally protected under Article 1 of the EU Birds Directive, although it is not listed in Annex 1.

• **Major Threats:** The Tawny Owl is threatened by habitat loss and degradation resulting from urban and agricultural expansion, tourism development, deforestation, and small-scale logging in woodland areas. Additional pressures include road mortality, persecution, and collection for illegal trade. Disturbance from recreational activities, exposure to herbicides and pesticides, and grazing-related habitat degradation further affect the species. Climate change, particularly the increasing frequency of drought, is expected to exacerbate habitat decline and pose a growing threat (Khoury *et al*, 2023).

• **Recommended Conservation and Research:** Urgent action is needed to protect and manage remaining woodland habitats. Priority measures include safeguarding existing habitat patches and regulating land-use change. Research should focus on establishing reliable estimates of population size and trends to support timely and effective conservation action.



Tawny Owl (Strix aluco); photo: © Waseem Al-Hayek

Desert Owl

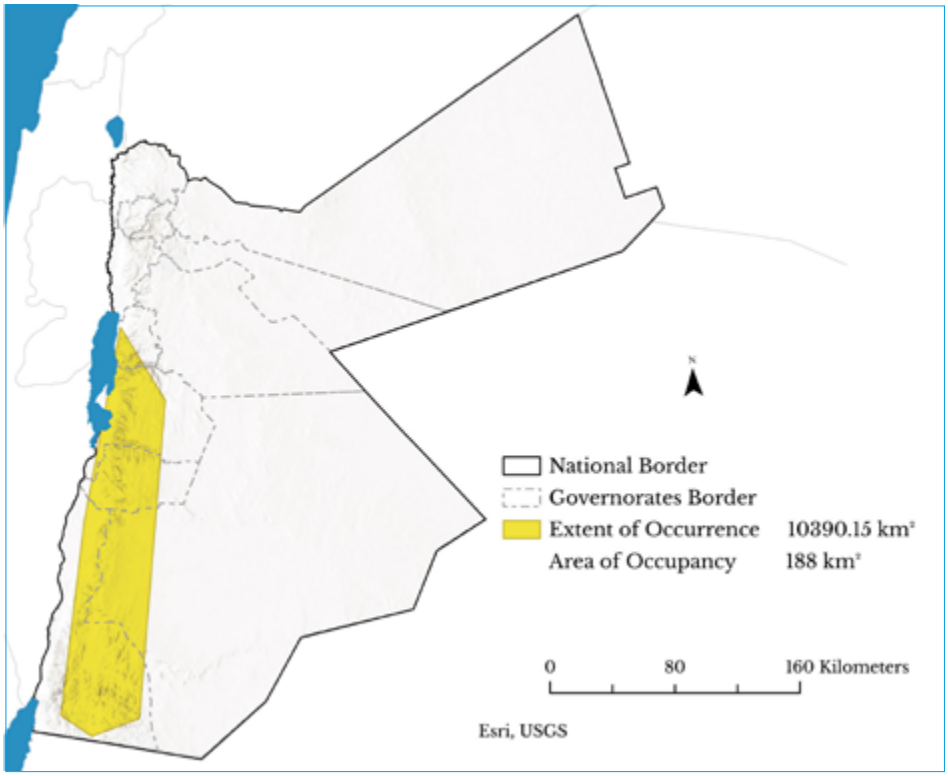
Order: Strigiformes
Family: Strigidae
Scientific Name: *Strix hadorami* (Kirwan, Schweizer & Copete, 2015)
Arabic Name:
خبل عربي
National Red List Status: VU B2ab(iii); D1
Population Trend: Decreasing
Status in Jordan: Resident

• **Justification:** The species has a relatively small national population, estimated at approximately 250-1,000 mature individuals, and is restricted to cliffs and deep gorges, resulting in a limited and patchy distribution. The Area of Occupancy is limited, with relatively high densities at a few sites but small and isolated subpopulations overall. A local population decline has been documented in Wadi Rum due to tourism-related disturbance, and additional pressures from expanding tourism and potential mining projects indicate a continuing decline in habitat quality. Although the species occurs in neighboring countries, there is no evidence that immigration provides sufficient demographic support to offset national-level declines.

• **Distribution:** The Desert Owl occurs in the deserts of eastern and southern Palestine and Jordan, the Sinai Peninsula, the Red Sea Mountains of east Egypt and northeastern Sudan, and patchily across the Arabian Peninsula. **In Jordan**, it is a resident of rocky gorges and barren mountains in the southwest, from the Dead Sea and Southern Rift margins south to the Rum Desert and Aqaba Mountains.

• **Habitats and Ecology:** The Desert Owl is a habitat specialist of inland rocky areas in hot desert environments, inhabiting rocky gorges and canyons in semi-desert and desert landscapes (Khoury *et al.*, 2023). It feeds on rodents, lizards, geckos, small birds, insects, and other invertebrates, and breeds between March and August, nesting in cavities or caves. The species is strictly sedentary and entirely nocturnal.

• **Conservation Status:** The Desert Owl is listed in Appendix II for wildlife protection under Agricultural



Law No. 13 of 2015, based on Regulation No. 43 of 2008, and is covered under CITES Appendix II. It has been documented within protected areas, including Petra Archaeological Park and the Dana Biosphere Reserve, which provide partial habitat protection.

- **Major Threats:** The Desert Owl is threatened by large-scale habitat loss and disturbance from mining, quarrying, and planned energy and renewable energy projects in rocky desert landscapes. Additional pressures include tourism and recreation development, road construction, human disturbance from recreational activities, and increasing noise pollution, all of which degrade breeding and roosting sites in cliff and gorge habitats (Khoury *et al.*, 2023).

- **Recommended Conservation and Research:** Priority actions include protecting and managing key wadi and cliff habitats and enforcing hunting regulations, as part of a multi-species plan to protect cliff-breeding raptors. Research should focus on population size, distribution, and trends.

Little Owl (Lilith Owlet)

Order: Strigiformes
Family: Strigidae
Scientific Name: *Athene noctua* (Scopoli, 1769)
Arabic Name:
بومة أم قويق
National Red List Status: LC
Population Trend: Stable
Status in Jordan: Resident

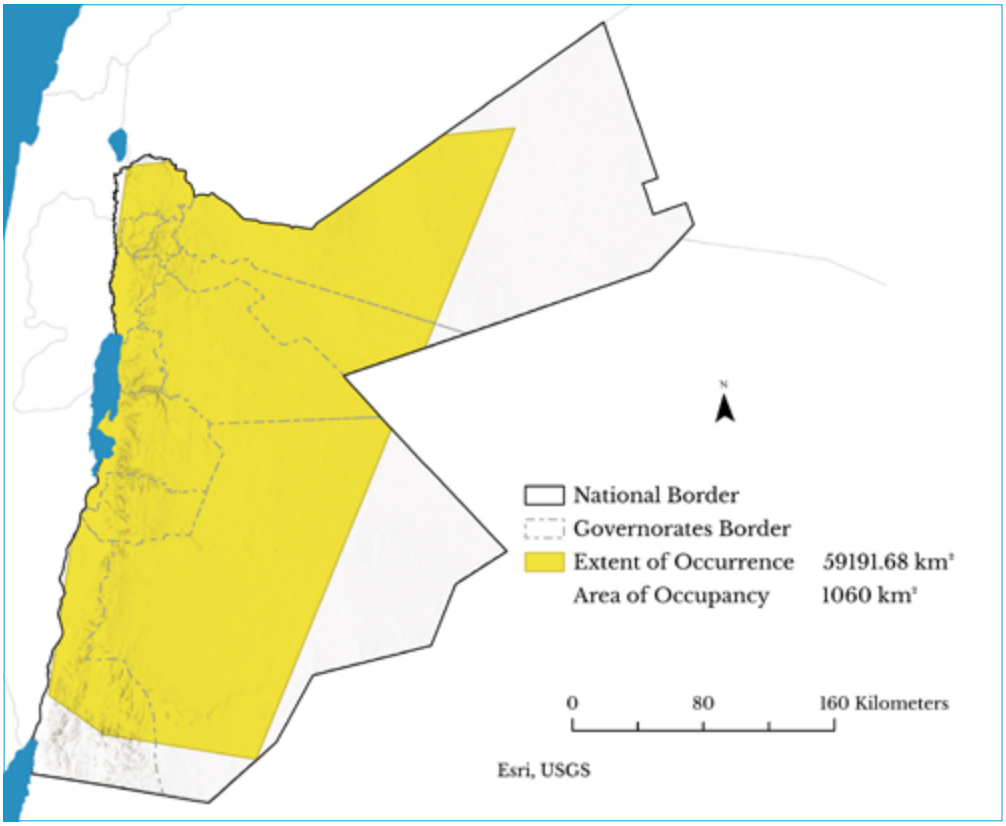
- **Justification:** A widespread species across Jordan, with a large extent of occurrence and area of occupancy, and a national population probably exceeding 1,000 mature individuals. Although local declines have been recorded, and threats are emerging and expected to intensify, these pressures are currently localized and have not resulted in a documented population decline approaching threatened thresholds. The species remains common in many parts of the country, and its overall extinction risk at the national scale remains low at present.

- **Distribution:** The Little Owl occurs in Cyprus and across the inland Middle East from southeastern Turkey south to the southern Sinai, with additional subspecies distributed across Europe, Asia, and Africa. **In Jordan**, it is widely distributed, particularly in western regions from the Yarmouk Valley south to the northern edges of the Rum Desert. It is frequently found in the Northern and Southern Highlands, along all Rift margins, and in the Northern Steppes. It occurs at lower densities in true desert habitats.

- **Habitats and Ecology:** The Little Owl inhabits a wide range of open and semi-open habitats, including dry shrubland, Mediterranean scrub, temperate grassland, rocky inland areas, and arable land. It is commonly found in steppes, rural landscapes, ruins, rocky slopes, wadis, and open woodlands with old trees, feeding on small mammals, birds, insects, and other invertebrates. Breeding occurs in cavities from March to August. The species is most common in the Mediterranean and Irano-Turanian regions of Jordan and is much less frequent in the true desert areas of the east and south (Khoury *et al.*, 2023).

- **Conservation Status:** The Little Owl is listed in CITES Appendix II and is included in Appendix II of the Bern Convention as strictly protected fauna in Europe.

- **Major Threats:** The Little Owl is affected by habitat loss and fragmentation resulting from urban expansion, intensive agriculture, and associated infrastructure development. These pressures are compounded by road construction and exposure to pesticides in agricultural landscapes. Intentional hunting and collection for illegal trade further threaten local populations, as evidenced by the species being recorded for sale on social media outlets and at the Friday Animal Market (Eid *et al.*, 2010; Khoury *et al.*, 2023).



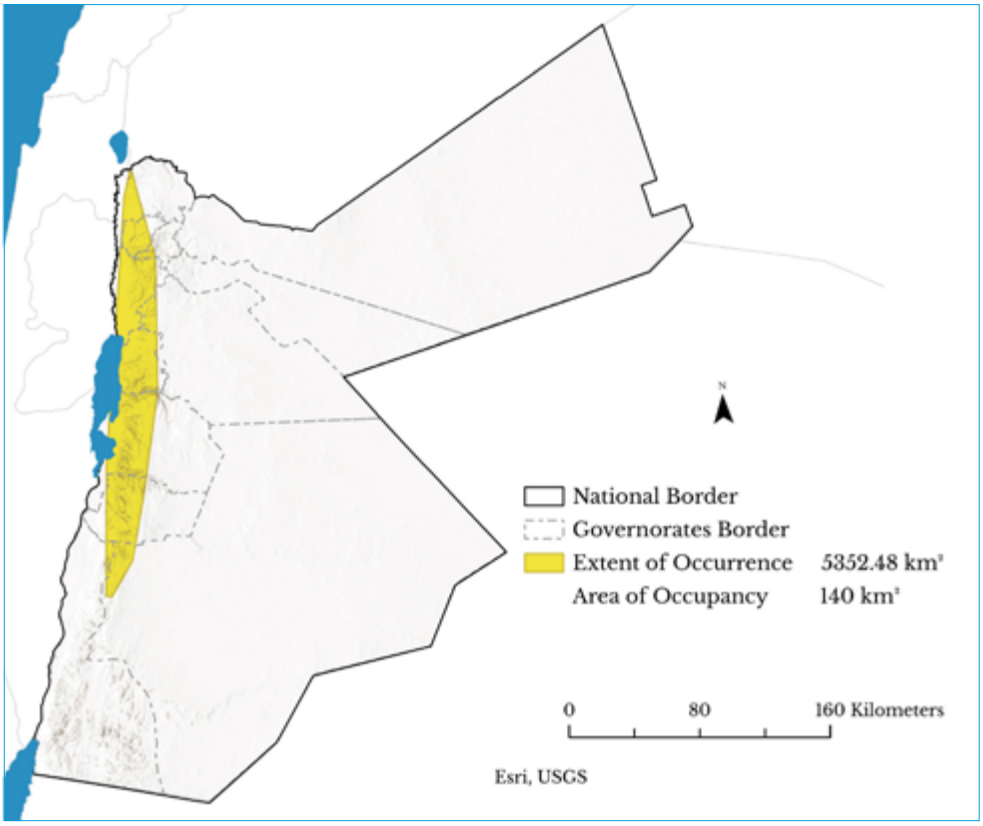
• **Recommended Conservation and Research:** Priority actions include enforcing hunting and trade regulations. Research should focus on taxonomy, population size, distribution and trends, threat assessment, and evaluation of conservation actions.

Eurasian Scops Owl

Order: Strigiformes
Family: Strigidae
Scientific Name: *Otus scops* (Linnaeus, 1758)
Arabic Name:
ثبج أوراسي
National Red List Status: VU B1ab(iii)+2ab(iii)
Population Trend: Decreasing
Status in Jordan: Summer visitor, passage migrant

• **Justification:** The species has a geographically restricted breeding range in Jordan, occurring at a limited number of locations. Its Extent of Occurrence and Area of Occupancy are restricted, and it is dependent on open woodland habitats that are largely unprotected. These habitats are undergoing a continuing decline in area and quality due to land-use change and other human pressures. Although the species occurs in neighboring countries, there is no evidence that immigration provides sufficient support to offset ongoing habitat-related threats within Jordan.

• **Distribution:** The Eurasian Scops Owl breeds across Eurasia and parts of North Africa and winters mainly in the Sahel region. **In Jordan**, it is locally common, occurring as a summer visitor to the Rift margins, the Northern Highlands, and parts of the Jordan Valley, where some individuals may be resident. It is also a fairly common passage migrant recorded across various parts of the country during migration seasons.



• **Habitats and Ecology:** The Eurasian Scops Owl inhabits open woodlands, dry savanna, Mediterranean scrub, orchards, and gardens. It feeds mainly on insects, occasionally taking small vertebrates, and nests in tree cavities or other suitable holes. The breeding population in Jordan is completely or partially migratory (Khoury *et al.*, 2023).

• **Conservation Status:** The Eurasian Scops Owl is protected under Jordan's Agricultural Law No. 13 of 2015 and the Environmental Protection Law No. 6 of 2017. It is listed in CITES Appendix II and is covered by the CMS Raptors Memorandum of Understanding, to which Jordan is a signatory.

• **Major Threats:** The Eurasian Scops Owl is threatened by habitat loss and degradation resulting from tree cutting, urban expansion, and agricultural development. Additional pressures include small-scale logging, road construction, exposure to herbicides and pesticides, and increasing drought associated with climate change, all of which reduce the availability and quality of suitable breeding habitats (Khoury *et al.*, 2023).

• **Recommended Conservation and Research:** Priority actions include site and habitat protection, improved management and restoration of open woodland habitats, regulation of harvest and trade, and implementation of species recovery measures. These should be supported by education and awareness programs, strengthened national legislation, and effective compliance and enforcement. Research should focus on population size, distribution, and trends, as well as a detailed assessment of threats.



Eurasian Scops Owl (Otus scops); photo: © Fares Khoury

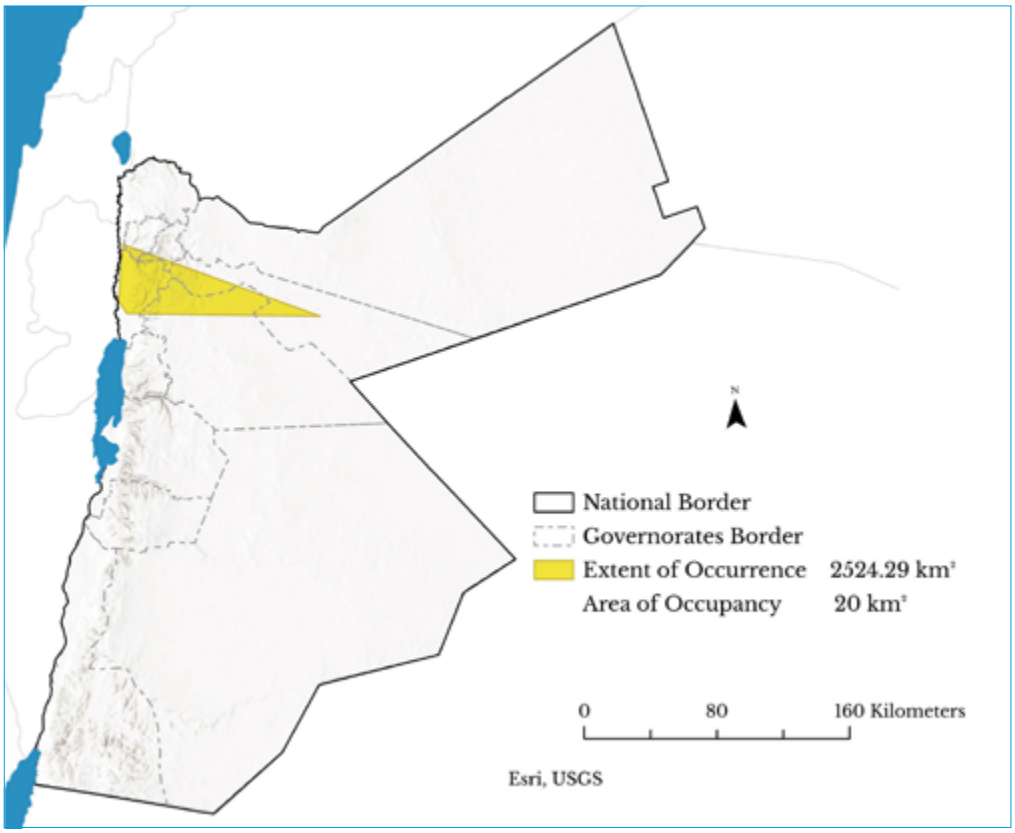
Pallid Scops Owl

Order: Strigiformes
Family: Strigidae
Scientific Name: *Otus brucei* (Hume, 1872)
Arabic Name:
ثبج مخطط
National Red List Status: DD
Population Trend: Unknown
Status in Jordan: Resident, winter visitor (?)

- **Justification:** Although recent evidence confirms breeding in Jordan, the species was unexpectedly recorded only in agricultural landscapes of the Jordan Valley and Azraq, and reliable information on its population size, distribution, number of locations, and trends is currently lacking. While the known extent of occurrence and very small area of occupancy suggest a potentially restricted range and a small national population, available data are insufficient to determine whether the species meets the thresholds for a threatened category.

- **Distribution:** The Pallid Scops Owl has a wide distribution from eastern Tajikistan and southern Pakistan to western India, with several subspecies occurring across Central and Western Asia, including parts of the Middle East. **In Jordan**, resident breeding populations have recently been confirmed in Azraq and the Jordan Valley. Other records, such as those from Wadi Butm, are considered to represent passage migrants and/or winter visitors rather than established breeding populations. There are also records from *Acacia* habitats at Disi and Wadi Araba, of possibly wintering Pallid/Eurasian Scops Owl.

- **Habitats and Ecology:** The Pallid Scops Owl inhabits semi-open dry savannas and dry shrublands, as well as arable land and plantations, including mature palm groves (Khoury *et al.*, 2023). It primarily feeds on insects and small mammals and breeds in tree hollows or similar cavities, with a fledging period of approximately one month.



- **Conservation Status:** The Pallid Scops Owl is protected under national agricultural and environmental legislation and is listed in CITES Appendix II. It is included in Appendix II of the Bern Convention as strictly protected fauna in Europe and is listed under Category 2 of the CMS Raptors Memorandum of Understanding.

- **Major Threats:** The Pallid Scops Owl is threatened by disturbance at palm plantations and other agricultural sites where it breeds. Additional pressures include small-scale logging and wood harvesting, which remove nesting trees; human disturbance from farming and related activities; and exposure to pesticides in agricultural landscapes (Khoury *et al.*, 2023).

- **Recommended Conservation and Research:** Priority actions include protecting and retaining nesting and roosting trees within agricultural landscapes and minimizing pesticide use. Research should focus on population size, distribution, trends, identification of threats, and evaluation of conservation actions.

Western Barn Owl

Order: Strigiformes
Family: Tytonidae
Scientific Name: *Tyto alba* (Scopoli, 1769)
Arabic Name:
بومة الحظائر (هامة)
National Red List Status: LC
Population Trend: Stable
Status in Jordan: Resident

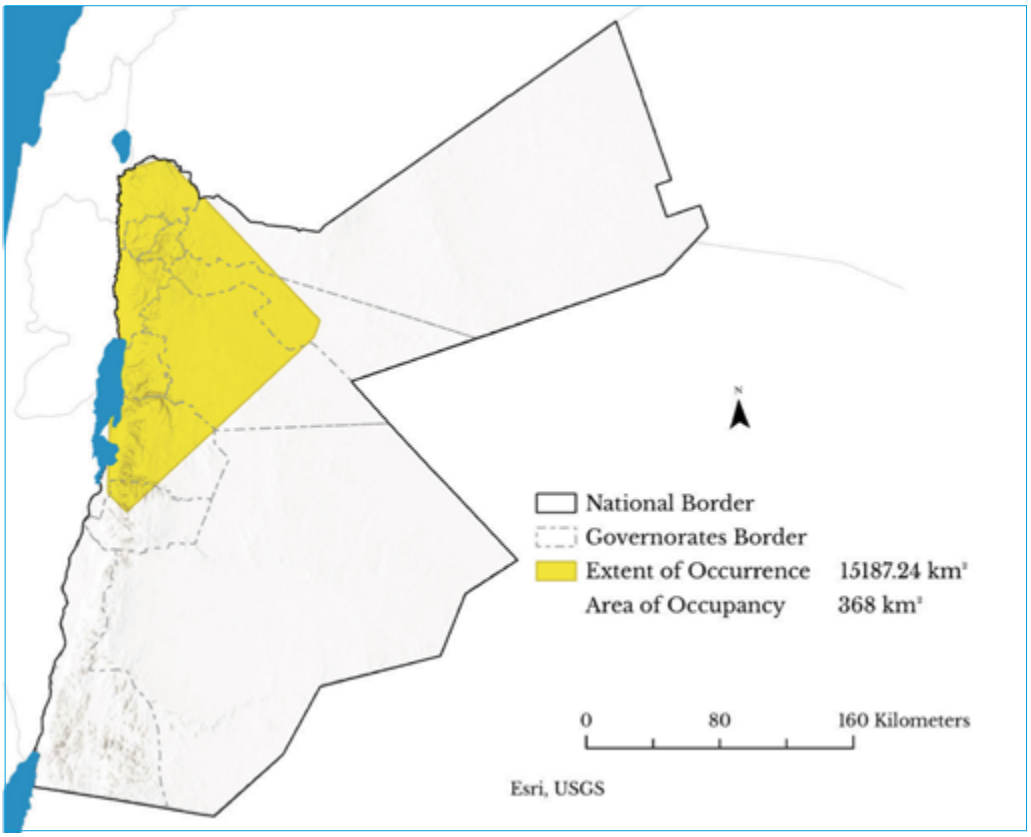
- **Justification:** The species is locally common and widely distributed across urban and rural areas in Jordan, with frequent records. Although previous national surveys did not adequately cover the species due to access constraints on private lands and in border areas, regular observations and high nest-box occupancy rates in agricultural landscapes indicate a healthy, stable population. Despite the relatively small Area of Occupancy, there is no evidence of population decline or threats operating at a scale sufficient to warrant classification as threatened.

- **Distribution:** The Western Barn Owl has a wide global distribution across the British Isles, Europe, Africa (excluding the Sahara), the Arabian Peninsula, and introduced populations in the Seychelles. **In Jordan**, it breeds primarily in the northwestern regions, including the Jordan Valley, the Northern Rift margins, and the Northern Steppes, with sporadic records elsewhere.

- **Habitats and Ecology:** The Western Barn Owl inhabits open shrublands, grasslands, arable land, and pasture in Jordan, mainly within the Mediterranean zone. It favors open areas with buildings or cliffs for roosting and nesting, and with abundant prey, and is common in agricultural landscapes, while avoiding dense forests and rugged mountains (Khoury *et al.*, 2023; Eid *et al.*, 2024).

- **Conservation Status:** The Western Barn Owl is protected under the Agricultural Law No. 13 of 2015 and the Environmental Protection Law No. 6 of 2017 and is listed in Appendix III for wildlife protection under Regulation No. 43 of 2008. It is included in CITES Appendix II, and Jordan is a signatory to the CMS Raptors MoU. National conservation measures include an active nest-box program in agricultural areas to support populations and control rodent pests.

- **Major Threats:** The Western Barn Owl is affected by habitat modification resulting from agricultural intensification and urban expansion, thereby reducing prey availability. Additional threats include persecution, collection for illegal trade, and exposure to pollution and pesticides in agricultural landscapes (Khoury *et al*, 2023).



- **Recommended Conservation and Research:** Priority actions include reducing rodenticide use, promoting the installation of nest boxes in agricultural areas as both a conservation tool and an awareness-raising measure, and enforcing wildlife protection laws against poaching and illegal collection. Research should focus on conducting a national survey to identify nesting sites and estimate population size.

Egyptian Nightjar

Order: Caprimulgiformes
Family: Caprimulgidae
Scientific Name: *Caprimulgus aegyptius* (M.H.K.Lichtenstein, 1823)
Arabic Name:
سبد مصري
National Red List Status: CR D1
Population Trend: Unknown
Status in Jordan: Passage migrant, rare summer visitor

- **Justification:** The Egyptian Nightjar has a very small breeding population in Jordan, with fewer than 50 mature individuals estimated in recent surveys, thus meeting the threshold for Critically Endangered under Criterion D1. The breeding population is highly localized, largely confined to Azraq, and there is no reliable evidence of regular or significant immigration that could provide a meaningful rescue effect.

- **Distribution:** The Egyptian Nightjar is widely distributed across North Africa, the Arabian Peninsula, and parts of Eurasia, and winters primarily in the Sahel. **In Jordan**, it is a rare and highly localized summer visitor and breeder, with confirmed breeding concentrated at Azraq. A limited number of additional sites in the Eastern Desert and along the Rift Valley may support breeding, though this remains unconfirmed. Some spring records are likely attributable to passage migrants rather than established breeders.

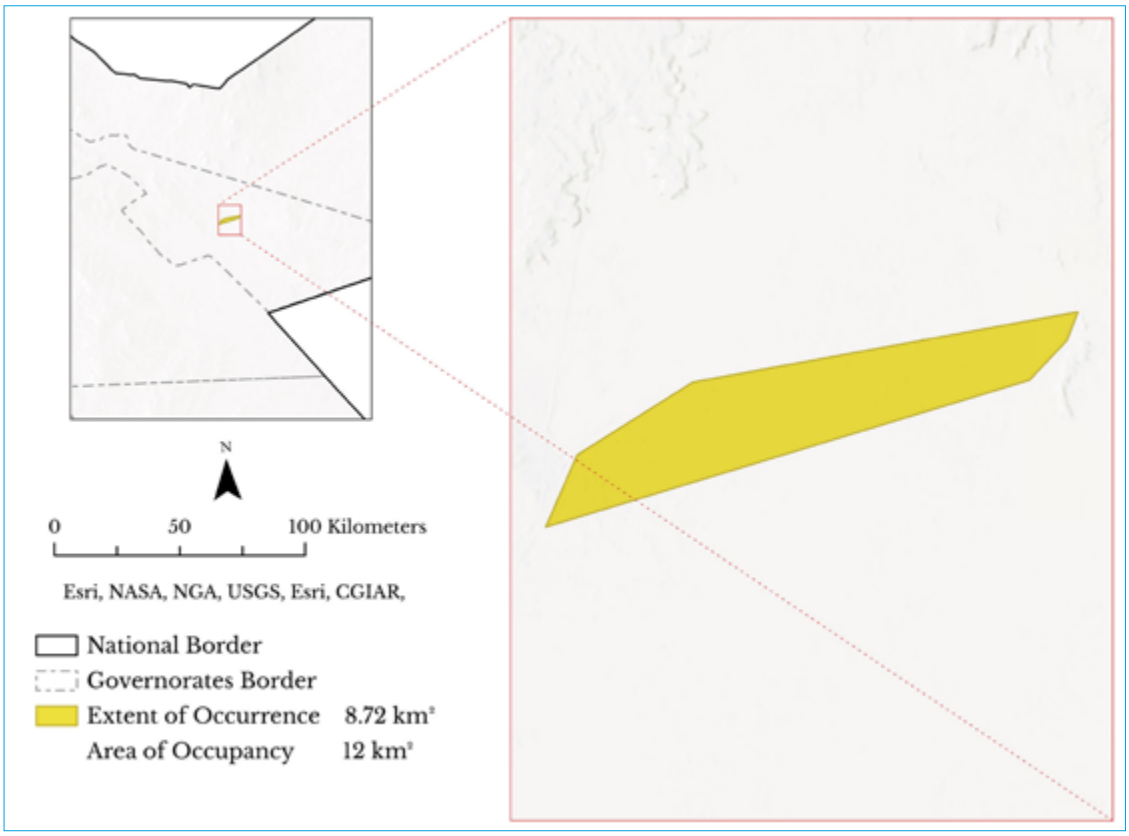
- **Habitats and Ecology:** The species inhabits desert and semi-desert environments, frequently near springs and oases, including hot desert and

temperate shrubland systems. It is a nocturnal insectivore that primarily feeds on beetles, moths, and crickets, foraging close to the ground. Nesting occurs directly on the ground, typically among stones or within shallow depressions. In Jordan, it is primarily a summer visitor, migrating to Africa during the non-breeding season.

- **Conservation Status:** The species is listed under Appendix II of the Convention on the Conservation of Migratory Species of Wild Animals (CMS) and is included in the Agreement on the Conservation of African-Eurasian Migratory Waterbirds (AEWA), reflecting its migratory nature and the need for coordinated international conservation measures.

- **Major Threats:** Threats are poorly understood, but agricultural expansion and pesticide use are considered the main threats. Feral dogs are a further direct threat to ground-nesting nightjars.

- **Recommended Conservation and Research:** Priority actions include protecting and managing desert and semi-desert habitats, particularly around key breeding areas, to minimize degradation and disturbance. Controlling feral dogs at the Azraq Wetland Reserve and regularly monitoring breeding populations are needed.

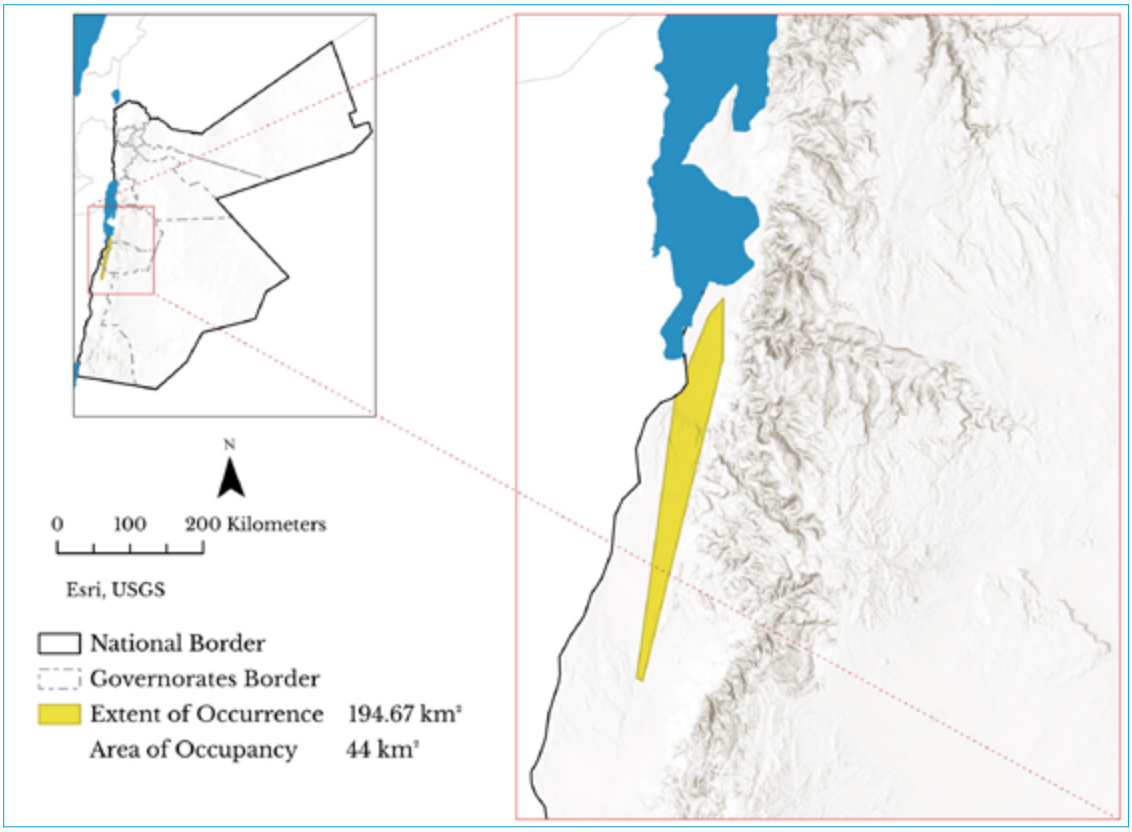


Nubian Nightjar

Order: Caprimulgiformes
Family: Caprimulgidae
Scientific Name: *Caprimulgus nubicus* (M.H.K.Lichtenstein, 1823)
Arabic Name:
سبد نوبي
National Red List Status: CR A3c, B1ab(iii)+2ab(iii), C1
Population Trend: Unknown
Status in Jordan: Resident

- **Justification:** The Nubian Nightjar has a highly restricted breeding distribution in Jordan, confined to a small area south of the Dead Sea, with more than half of the national population concentrated in Fifa Reserve. The national population is small, estimated at 60–100 mature individuals, and is suspected to be declining. A future population reduction of ≥80% is inferred due to ongoing and planned agricultural expansion and continued loss and degradation of breeding habitat, including the projected removal of approximately 40% of Fifa Reserve, leading to severe habitat fragmentation and deterioration in habitat quality, and other projects related to mining and railway establishment at this location. The Area of Occupancy is very limited, and the Extent of Occurrence is restricted, with the species occurring at very few locations. The national population thus meets several thresholds and sub-criteria for Critically Endangered under criteria A, B, and C, and Endangered under D. The species is very rare in neighboring countries, making a rescue effect unlikely.

- **Distribution:** The Nubian Nightjar is distributed across eastern and northeastern Africa, extending discontinuously northwards along the Rift Valley to the southern Levant and southwest Arabia, including Socotra. **In Jordan**, it is a resident species with a highly restricted range, confined to areas south of the Dead Sea, notably Safi, Fifa, and Al-Bweirdah, and a small area on the political border in Wadi Araba.



- **Habitats and Ecology:** The species occupies open scrub and shrubland habitats, typically in close association with seasonal streams, freshwater springs, and oases, including subtropical seasonally flooded grasslands and subtropical moist shrublands. It is a nocturnal aerial insectivore that feeds mainly on moths and other flying insects.

- **Conservation Status:** Approximately 50% of the national population occurs within Fifa Nature Reserve, providing partial protection to this otherwise highly vulnerable species. It is also covered by the African-Eurasian Migratory Landbirds Action Plan (AEMLAP), which supports coordinated regional conservation efforts.

- **Major Threats:** The species is threatened primarily by agricultural expansion, potash mining, road and railway development, water abstraction, and overgrazing, all of which lead to habitat loss and degradation. Additional pressures include recreational disturbance (notably off-road vehicles), invasive alien species, agricultural pollution, and increasing frequency of drought, all of which negatively affect habitat quality and prey availability.

- **Recommended Conservation and Research:** Key research priorities include improved understanding of population size, distribution, and trends; life history and ecology; threat assessment; evaluation of conservation actions; and the development and implementation of an urgently needed species-specific action plan in Fifa and Wadi Araba.

Common Swift

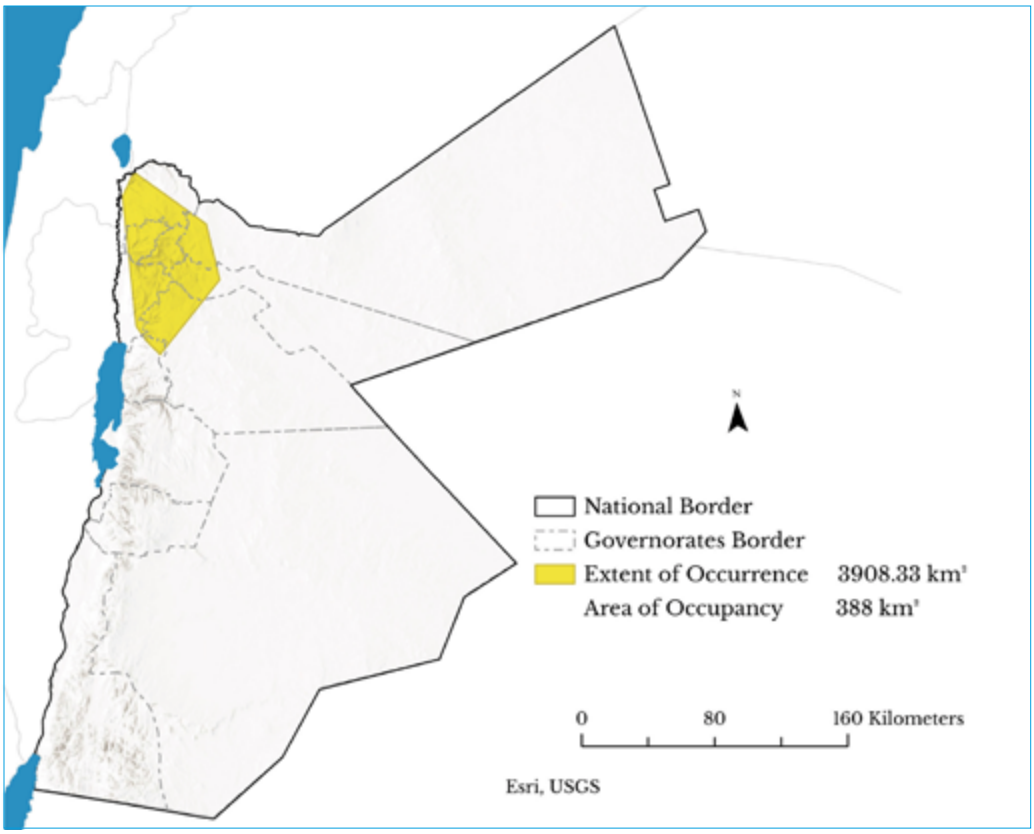
Order: Apodiformes
Family: Apodidae
Scientific Name: *Apus apus* (Linnaeus, 1758)
Arabic Name:
سمامة شائعة
National Red List Status: LC
Population Trend: Stable
Status in Jordan: Summer visitor, passage migrant, winter visitor

- **Justification:** The Common Swift has a widespread breeding distribution in urban areas of northwestern Jordan, with colonies established and expanding for at least two decades. The national breeding population is likely to exceed 1,000 mature individuals and is currently considered stable, with no evidence of significant declines, severe fragmentation, or major threats at the regional level.

- **Distribution:** The Common Swift has a vast Palearctic breeding range and winters across sub-Saharan Africa. **In Jordan**, it is a common passage migrant and a locally fairly common summer visitor and breeder, mainly in the northwestern part of the country. It is widely distributed in major cities such as Amman, Zarqa, Irbid, and south to Madaba. Breeding on cliffs in northern valleys is suspected but not yet confirmed. First arrivals occur in February, and most breeding colonies are vacated by late August. Outside the breeding season, it is a common migrant and a possible scarce winter visitor in the southern Jordan Valley (Fifa, Safi) and Wadi Hassa in the Jordan Valley.

- **Habitats and Ecology:** A highly migratory aerial species, the Common Swift breeds in urban and rural areas where buildings or cliffs provide nesting crevices. It forages over a wide range of habitats, including Mediterranean-type shrubland, rocky areas, arable land, rural gardens, urban areas, and ponds, feeding on a diverse assemblage of flying insects. Breeding occurs in large colonies, often comprising tens to hundreds of pairs, and successful reproduction depends on the availability of suitable nest sites and insect-rich foraging areas.

- **Conservation Status:** The species is listed under CMS Appendix II and AEWA as a migratory species. In Jordan, it remains widespread and common, with stable or increasing populations in many urban areas.



- **Major Threats:** Potential threats include loss of nesting sites associated with urban development and pesticide use, which reduces prey availability.

- **Recommended Conservation and Research:** Protect nesting sites on buildings and natural cliffs, maintain insect-rich habitats by reducing pesticide use, raise public awareness, and monitor breeding colonies. Further information is needed on distribution, population size and trends, and life history and ecology.

Alpine Swift

Order: Apodiformes
Family: Apodidae
Scientific Name: *Tachymarptis melba* (Linnaeus, 1758)
Arabic Name:
سمامة البية
National Red List Status: VU D1
Population Trend: Decreasing
Status in Jordan: Summer visitor, passage migrant

- **Justification:** The Alpine Swift has a restricted, fragmented breeding distribution in Jordan, with evidence of local extirpation and an inferred ongoing decline linked to urban expansion and the loss of nesting sites. Although the exact breeding population size is unknown, it is likely to be fewer than 1,000 mature individuals due to the limited number of breeding colonies. Available information is insufficient to quantify population reduction or apply distribution-based criteria, but the small population size indicates elevated vulnerability to ongoing pressures and stochastic events, according to criterion D1.

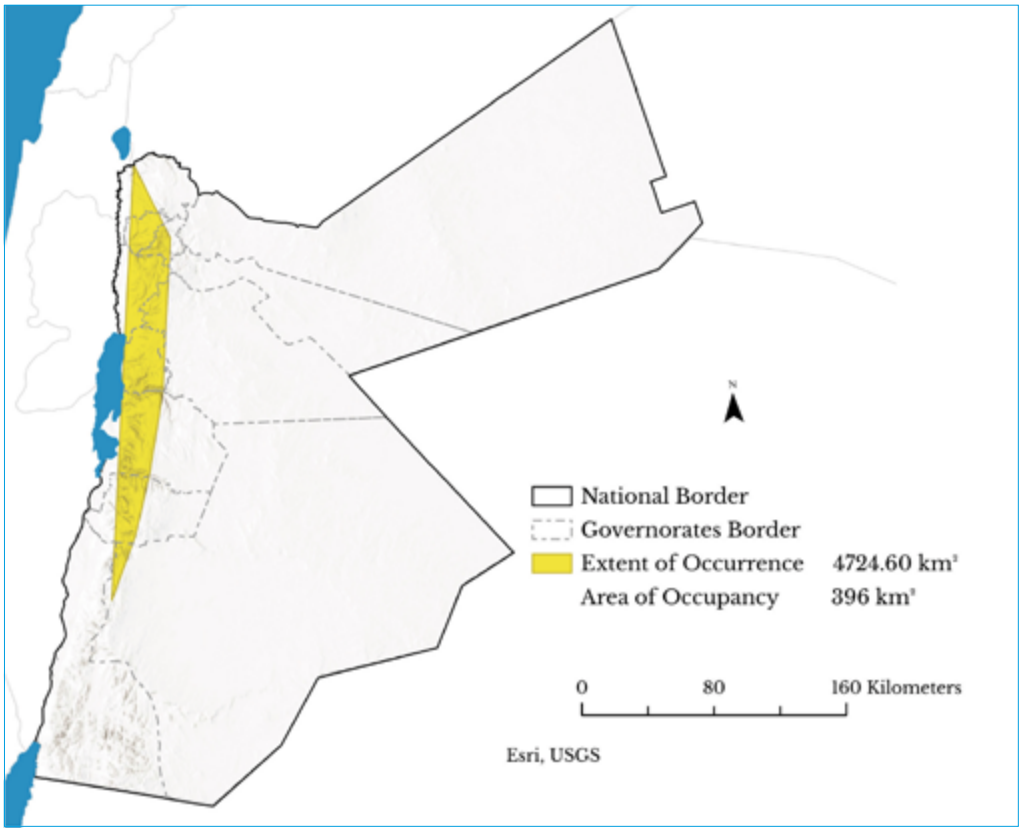
• **Distribution:** The Alpine Swift has a wide global distribution, ranging from southern Europe across Asia Minor to northwestern Iran, and extending across much of Africa and parts of southern Asia. **In Jordan**, it occurs as a summer visitor and passage migrant, with colonial breeding restricted to cliffs in mountainous terrain, mainly at higher elevations along the margins of the Rift Valley.

• **Habitats and Ecology:** In Jordan, the Alpine Swift is primarily associated with inland rocky areas within the Mediterranean biogeographical zone. It is a fairly common passage migrant and an uncommon summer visitor, breeding colonially on cliff ledges along the margins of the Rift Valley. A highly aerial insectivore, it forages across all habitat types, often far from nesting sites.

• **Conservation Status:** The Alpine Swift is protected under the general provisions of the Agricultural Law No. 13 of 2015 and the Environmental Law No. 6 of 2017. It is also listed under Appendix II of the Convention on the Conservation of Migratory Species of Wild Animals (CMS) and included in AEWA, reflecting its status as a migratory species and the need for international conservation cooperation.

• **Major Threats:** Key threats include loss of nesting sites associated with urban development and pesticide use, which reduces prey availability. Additional pressures include mining and quarrying, and road development.

• **Recommended Conservation and Research:** Priority actions include conducting a national survey of nesting colonies to map breeding sites and accurately estimate population size; protecting and managing cliff-nesting habitats to reduce disturbance; and monitoring breeding populations over time. Additional measures include raising public awareness to minimize human disturbance and controlling habitat degradation and overgrazing around key breeding areas.



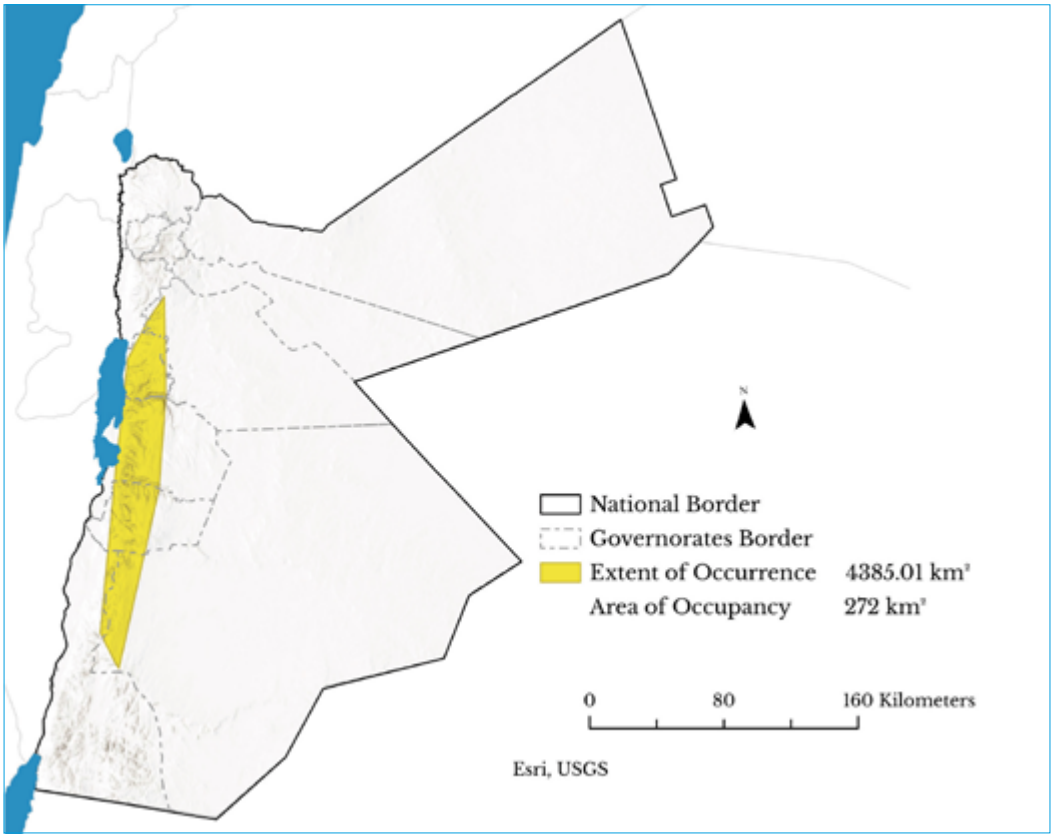
Pallid Swift

Order: Apodiformes
Family: Apodidae
Scientific Name: *Apus pallidus* (Shelley, 1870)
Arabic Name:
سمامة باهتة
National Red List Status: LC
Population Trend: Stable
Status in Jordan: Summer visitor, passage migrant, winter visitor

- **Justification:** The Pallid Swift has a relatively wide Extent of Occurrence in Jordan and a national population estimated to be at least 1,000 mature individuals. It is locally common along the margins of the Rift Valley, particularly in the south (e.g., Wadi Dana and Petra). Recent summer records in Amman indicate urban breeding, suggesting ecological flexibility. There is no evidence of a population decline, and available information does not indicate that the species approaches thresholds for a threatened category. Although some data gaps remain and potential future threats exist, current evidence indicates a low risk of extinction at the national level.

- **Distribution:** The Pallid Swift has a wide distribution across the southwestern Palearctic, extending from Western Europe to the Middle East, and winters mainly in the Sahel. **In Jordan**, it occurs as a summer visitor, passage migrant, and scarce winter visitor. Breeding occurs in colonies along the western parts of the country, particularly in the Dead Sea area and along the southwestern margins of the Rift. Recent records also indicate breeding in urban environments, including Amman.

- **Habitats and Ecology:** The Pallid Swift inhabits rocky habitats and urban areas in Jordan, breeding on cliff faces, in gorges, and in building crevices. It is a highly aerial species that forages across a wide range of habitats. The diet consists mainly of flying insects. The species is migratory, occurring across various parts of Jordan during migration periods.



- **Conservation Status:** The Pallid Swift is protected under national environmental legislation and the Agriculture Law No. 13/2015. Internationally, it is listed in Appendix II of the Bern Convention as a strictly protected species and is protected under Article 1 of the EU Birds Directive. It is also covered by the African–Eurasian Migratory Landbirds Action Plan (AEMLAP) under the Convention on Migratory Species (CMS), supporting coordinated conservation across its migratory range.

- **Major Threats:** The Pallid Swift is primarily threatened by habitat loss, particularly the destruction or disturbance of natural cliff nesting sites caused by urban development, tourism and resort construction, mining and quarrying, and road infrastructure. Additional disturbance arises from recreational activities such as rock climbing. The widespread use of herbicides and pesticides further poses a risk by reducing the availability of insect prey.

- **Recommended Conservation and Research:** Priority conservation actions for the Pallid Swift include protecting natural cliffs, reducing insecticide use to maintain prey availability, and ensuring effective site protection and management of key breeding areas. Further research is needed to improve knowledge of distribution, population size, and trends; to better understand threats and habitat dynamics; and to clarify aspects of the species' life history and ecology, thereby supporting long-term conservation planning.

Little Swift

Order: Apodiformes
Family: Apodidae
Scientific Name: *Apus affinis* (J.E.Gray, 1830)
Arabic Name:
سمامة صغيرة
National Red List Status: VU D1
Population Trend: Unknown
Status in Jordan: Resident

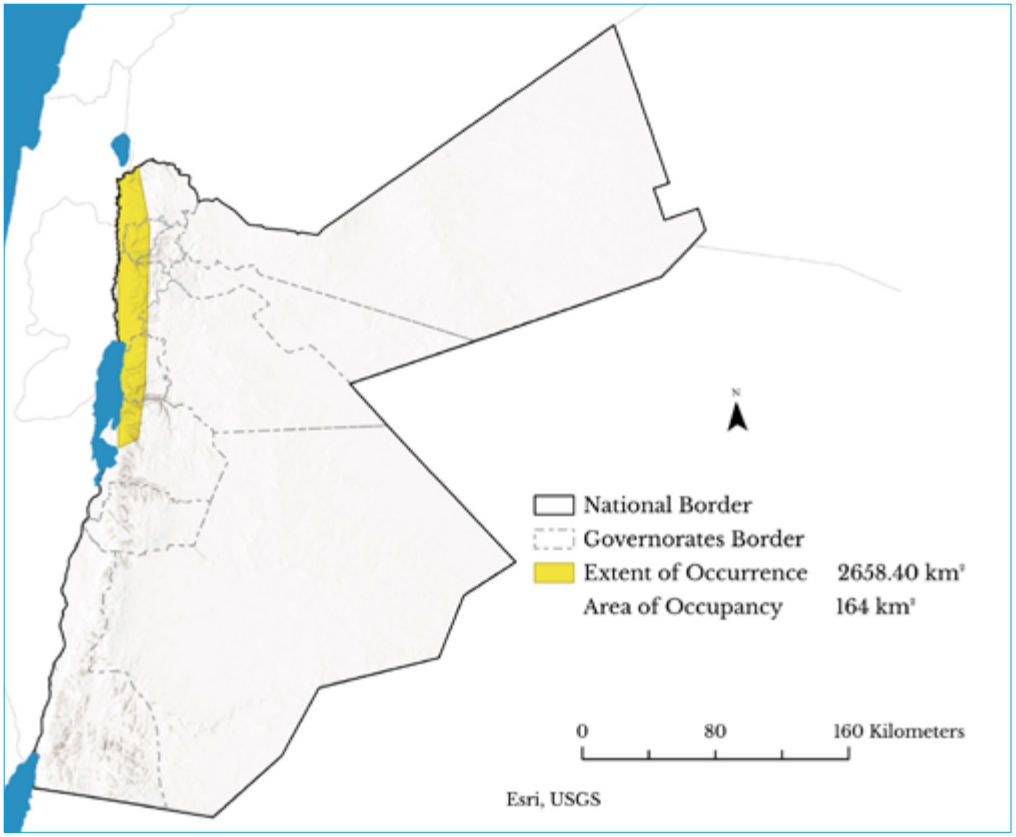
- **Justification:** The Little Swift has a narrow, highly restricted breeding range in Jordan, confined to a limited number of cliff sites along the Rift Margins, with at least six known breeding colonies. Although comprehensive counts are lacking, the national breeding population likely comprises fewer than 1,000 mature individuals, meeting the Vulnerable category under criterion D1. The Area of Occupancy is small, but available information is insufficient to demonstrate the required sub criteria for applying distribution-based criteria, and data are inadequate to quantify population reductions. The estimated small population size indicates elevated vulnerability to localized pressures and stochastic events. The species is declining in neighboring countries, diminishing the possibility of a rescue effect.

- **Distribution:** The Little Swift has a wide distribution across Africa, extending from northwest Africa eastwards to Uzbekistan and Pakistan, and also occurs in parts of southern Asia. **In Jordan**, it is restricted to the Rift Valley margins, occurring along large wadis from the Yarmouk Valley south to Wadi Karak. It breeds colonially on cliffs and is frequently observed foraging aerially in valleys, over wetlands, and in irrigated agricultural areas.

- **Habitats and Ecology:** The Little Swift breeds colonially on cliffs in narrow valleys associated with permanent streams and subtropical shrubland. It is a highly aerial insectivore, foraging over valleys, irrigated fields, wetlands, and occasionally near human settlements, while largely avoiding arid areas.

- **Conservation Status:** The Little Swift is covered under AEWA as a migratory species, supporting coordinated conservation measures across its range.

- **Major Threats:** The Little Swift is threatened primarily by habitat loss and disturbance at breeding sites. Key pressures include urban and tourism development, recreational activities, agricultural expansion, mining and quarrying, and road construction, all of which affect cliff habitats and



adjacent valleys. Additional threats arise from surface and groundwater abstraction, pesticide use, and increasing drought frequency, which further degrade foraging habitats.

- **Recommended Conservation and Research:** Key actions include protecting and maintaining nesting sites on cliffs and limiting human activity in their vicinity, and reduce pesticide use, as part of a plan to protect cliff-nesting swifts. Research priorities focus on improving knowledge of population size, distribution, and trends, identifying and quantifying threats.

Common Hoopoe

Order: Bucerotiformes
Family: Upupidae
Scientific Name: *Upupa epops* (Linnaeus, 1758)
Arabic Name:
هدهد أوراسي
National Red List Status: LC
Population Trend: Stable
Status in Jordan: Resident, passage migrant

- **Justification:** A locally common species in Jordan, occurring across steppe habitats and open shrublands. It has a large Extent of Occurrence and Area of Occupancy, with a national population estimated at more than 2000 mature individuals. The population is considered stable, with no evidence of decline, fragmentation, or major threats.

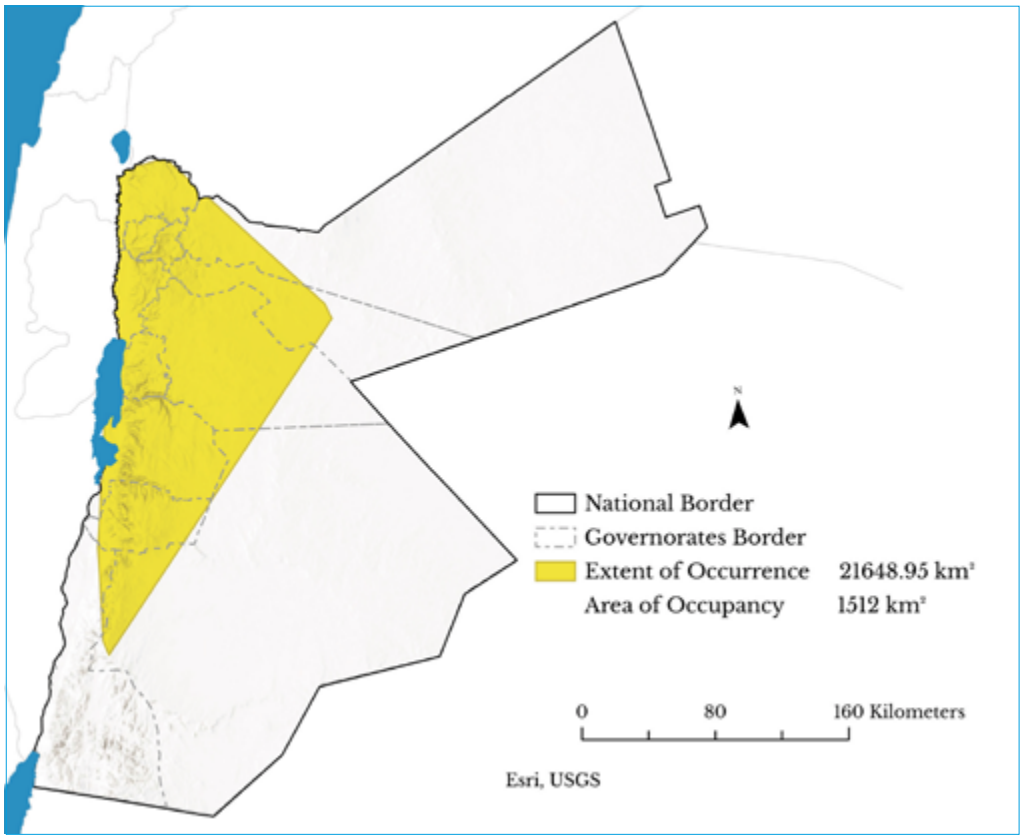
- **Distribution:** The Eurasian Hoopoe breeds across much of Eurasia and Africa, south of 53°N. **In Jordan**, it occurs mainly as a resident species in the western parts of the country, from Yarmouk and Mafraq south to Ras En-Naqqab, and is also present in the Jordan Valley and Azraq. Elsewhere, it is recorded primarily as a passage migrant.

- **Habitats and Ecology:** In Jordan, the Eurasian Hoopoe occupies open habitats, including dry savanna, temperate and subtropical shrublands, Mediterranean-type vegetation, temperate grasslands, arable land, and pastureland. It requires soft ground for foraging, mainly on arthropods, and nesting cavities in trees, on the ground, or in other structures. The species is a territorial breeder, most common in steppe and rural landscapes, while largely avoiding arid deserts, dense woodland, and very rugged areas.

- **Conservation Status:** The Eurasian Hoopoe is listed under Appendix II of the Convention on the Conservation of Migratory Species of Wild Animals (CMS) and is covered by AEWA.

- **Major Threats:** The Eurasian Hoopoe is primarily affected by habitat degradation and loss that reduce food availability and habitat quality, driven by urban expansion, agricultural intensification, and road development, which diminish suitable foraging areas. Additional pressures include hunting and collecting, as well as agricultural pollution, particularly herbicide and pesticide use, that negatively impact insect prey populations. The species was recorded at the Friday Animal Market (Eid et al, 2010).

- **Recommended Conservation and Research:** Key actions include protecting and managing open steppe and shrubland habitats, encouraging traditional agricultural landscapes, reducing pesticide use to sustain insect prey, and monitoring populations to address habitat loss from urbanization. Research priorities focus on improving knowledge of population size and trends and on a better understanding of current and emerging threats.



European Bee-eater

Order: Coraciiformes
Family: Meropidae
Scientific Name: *Merops apiaster* (Linnaeus, 1758)
Arabic Name:
قارية اوروبية (وروار اوروبي)
National Red List Status: NT
Population Trend: Unknown
Status in Jordan: Summer visitor, passage migrant



European Bee-eater (Merops apiaster); photo: © Raed Al-Btosh

- **Justification:** The European Bee-eater has a wide Extent of Occurrence and Area of Occupancy in Jordan, and the national breeding population probably exceeds 1,000 mature individuals. While local colony losses and persecution have been recorded (e.g., west of Amman), there are no robust quantitative data demonstrating population reductions sufficient to meet the criteria for applying a measured decline. Increasing persecution pressure and localized impacts raise concern that the species may approach thresholds for a threatened category if these pressures continue.

- **Distribution:** The European Bee-eater is widely distributed across Europe, Asia, and Africa, wintering in Africa. **In Jordan**, it is a summer visitor and a colonial breeder in the Rift Margins, Northern Highlands, and Steppes, and the Jordan Valley. It is also a very common passage migrant throughout the country, with major stopover sites including Aqaba, the Jordan Valley, the highlands, and Azraq.

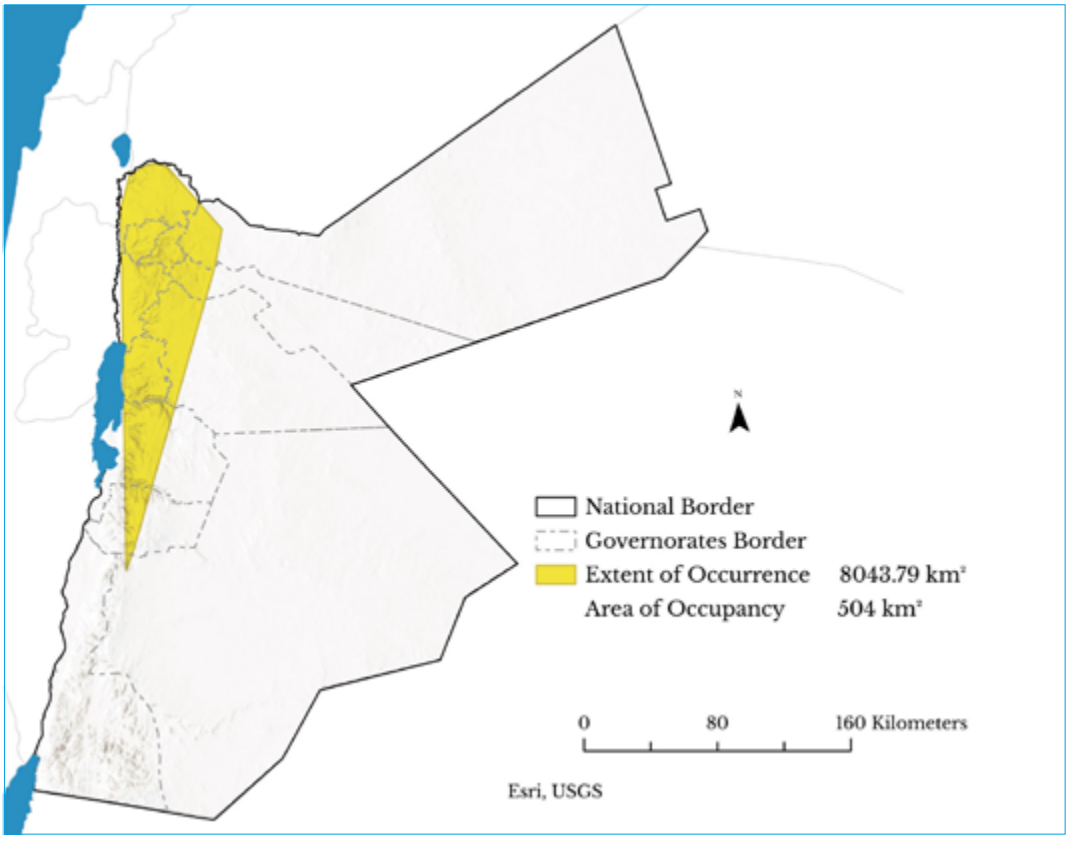
- **Habitats and Ecology:** The European Bee-eater inhabits open, sunny habitats, including temperate forests and shrublands, Mediterranean-type vegetation, steppe grasslands, arable land, and pastureland. It nests colonially in sandy banks, hillslopes, or cliffs and forages in nearby areas rich in flying insects. Successful breeding depends on high insect availability, and during migration, the species is frequently observed hunting bees, including Indian dwarf bees in Aqaba.

- **Conservation Status:** The European Bee-eater is protected under the general provisions of the Agricultural Law No. 13 of 2015 and the Environmental Law No. 6 of 2017. It is also listed under Appendix II of the Convention on the Conservation of Migratory

Species (CMS) and covered by AEWA, reflecting its migratory status. In Jordan, the species breeds in small numbers within protected areas such as Dibeen and Dana. However, most breeding colonies occur outside protected sites, where they are more exposed to local threats.

- **Major Threats:** The European Bee-eater is affected mainly by habitat loss and degradation. Key pressures include urban expansion, agricultural expansion, quarrying, and road development, which lead to the loss or disturbance of nesting and foraging habitats. In addition, persecution by some beekeepers and pesticide use reduces survival and food availability (Authors' personal observation).

- **Recommended Conservation and Research:** Priority actions include protecting nesting colonies from disturbance and destruction, encouraging traditional agricultural methods and reducing pesticide use, monitoring population trends during both breeding and migration periods, and raising awareness among beekeepers to reduce persecution. Research should focus on improving knowledge of population size, distribution, and trends to support effective conservation planning.



Blue-cheeked Bee-eater

Order: Coraciiformes
Family: Meropidae
Scientific Name: *Merops persicus* (Pallas, 1773)
Arabic Name:
وروار ازرق الخدين (قارية)
National Red List Status: EN B2ab(iii)
Population Trend: Decreasing
Status in Jordan: Summer visitor, passage migrant

• **Justification:** The species has a restricted national distribution, largely confined to the Jordan Valley, with a very limited Area of Occupancy. It has undergone a documented local decline, reflected in the loss of former breeding colonies at sites such as Azraq, Sweimah, and Wadi Al-Kharrar, primarily due to habitat degradation and alterations, and human disturbance. A continuing decline in habitat quality and in the number of breeding sites is inferred, meeting the threshold and sub-criteria for Endangered under criterion B2. Although the species is migratory, it is declining in neighboring countries, and there is no evidence that immigration would have a significant rescue effect in the near future.



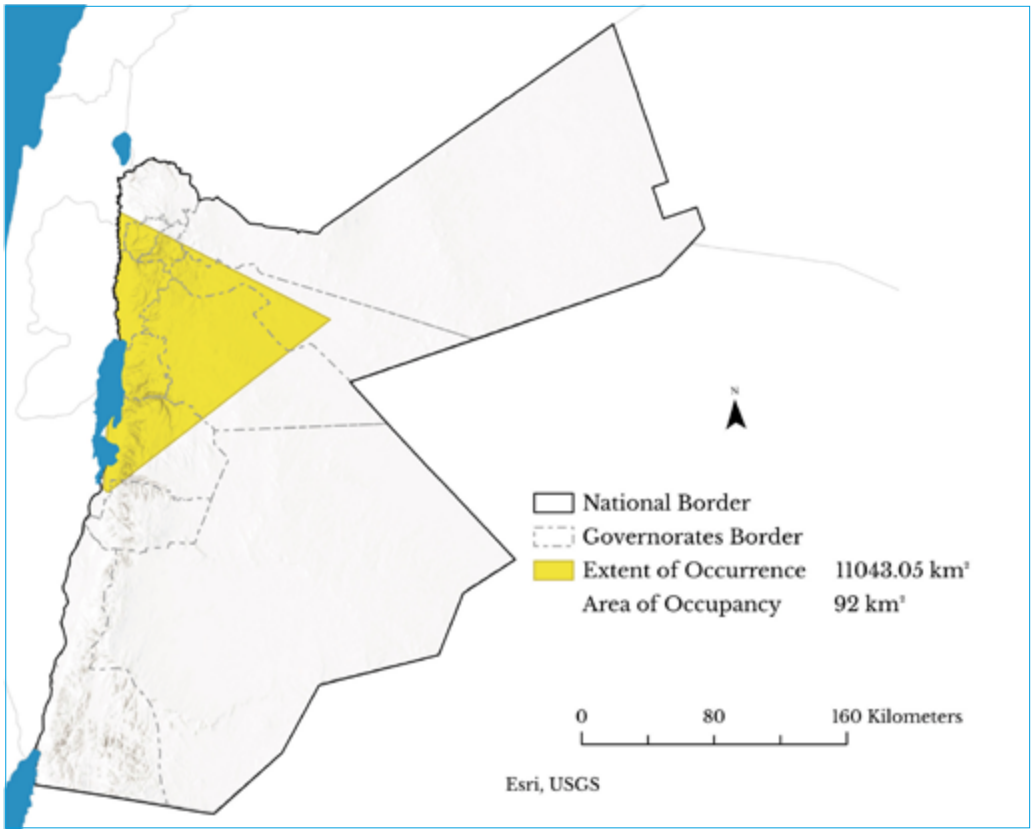
Blue-cheecked Bee-eater (Merops persicus); photo: © Ammar Al-Omari

• **Distribution:** The Blue-cheeked Bee-eater is widely distributed across Eurasia, from the Middle East and Central Asia to India, and winters in sub-Saharan Africa. **In Jordan**, it is a summer visitor that breeds primarily in the Jordan Valley along the Jordan River. It is a former breeder at Azraq, where breeding ceased in the 1980s, although recent evidence indicates limited resumption of breeding. Elsewhere, it occurs as a passage migrant, stopping over at various sites.

• **Habitats and Ecology:** The species inhabits semi-deserts, steppes, and lowland grasslands, often near permanent and seasonal water bodies, including streams and saline flats. It breeds colonially, excavating burrows in sandy ground and wadi banks, and feeds on a wide range of flying insects, including dragonflies. It frequently forages in agricultural areas, especially after the breeding season.

• **Conservation Status:** The species is protected under the general provisions of the Agricultural Law No. 13 of 2015 and the Environmental Law No. 7 of 2017. In Jordan, a small number of breeding pairs have been recorded within or adjacent to protected areas, notably in Fifa Reserve and along the borders of the Azraq Wetland Reserve; however, most breeding pairs are in unprotected areas.

• **Major Threats:** Main threats include habitat loss and disturbance at nesting sites due to tourism development, agro-industrial farming, and military activities. Water abstraction, pesticide use, the spread of invasive species, and persecution by some beekeepers are additional threats (Khoury *et al.*, 2005; Khoury & Körner, 2018).



• **Recommended Conservation and Research:** Priority actions include implementing a single-or multi-species action plan to protect remnant wetlands in the Jordan Valley, safeguarding nesting colonies, reducing pesticide use in key foraging areas, restoring Jordan Valley ecosystems, and controlling invasive species. Research should focus on population size, distribution, threats, and a population viability analysis.

Arabian Green Bee-eater

Order: Coraciiformes
Family: Meropidae
Scientific Name: *Merops cyanophrys* (Cabanis & Heine, 1860)
Arabic Name:
وروار اخضر صغير (قارية خضراء)
National Red List Status: LC
Population Trend: Stable (Probably Increasing)
Status in Jordan: Resident

• **Justification:** This species has a relatively wide national range within the Rift Valley, a stable or increasing population trend, and an estimated national population exceeding 1,000 individuals. The species has recently expanded its range, and there is no evidence of ongoing decline in population size, distribution, or habitat quality. Despite its restricted range in the Rift Valley, current data indicate that the species does not meet the thresholds for a threatened category under regional criteria.

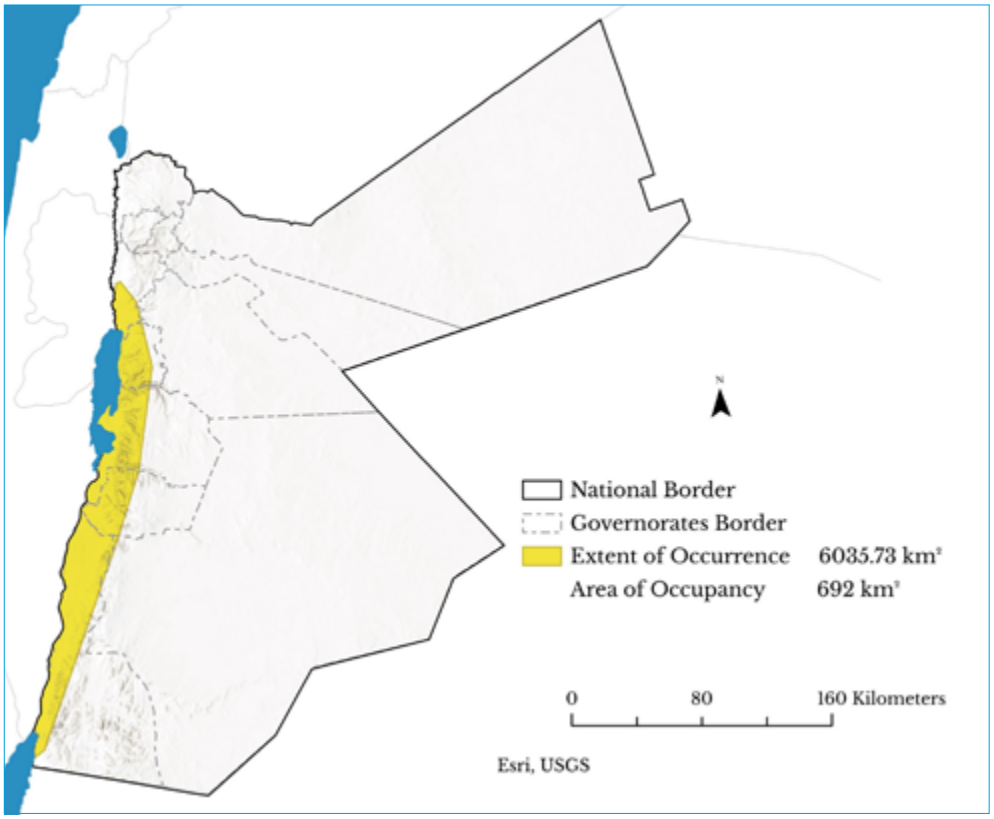
• **Distribution:** The Arabian Green Bee-eater occurs across the Middle East, from Palestine and Jordan to southern Iran, mainly in vegetated lowland areas, avoiding hyper-arid zones. **In Jordan**, it is a resident of the Rift Valley, ranging from the central Jordan Valley (Al-Karama) south to Aqaba, and extending into side wadis along the lower rift margins. The species has expanded northwards within the central Jordan Valley in recent decades.



Arabian Green Bee-eater (Merops cyanophris); photo: © Raed Al-Btosh

• **Habitats and Ecology:** Occupies arid and semi-arid habitats, including dry savannah, shrubland, hot desert, and areas along seasonal streams, and is common near cultivated land and rural gardens. A non-migratory species, it feeds on flying insects and breeds solitarily, excavating burrows in sandy ground and dry wadi banks (Al-Shamlih *et al.*, 2005).

• **Conservation Status:** The Arabian Green Bee-eater is covered under the Convention on the Conservation of Migratory Species Appendix II and the Agreement on the Conservation of African-Eurasian Migratory Waterbirds. In Jordan, it is protected under the general provisions of the Agricultural Law No. 13 of 2015 and the Environmental Law No. 6 of 2017. It occurs within protected areas, including Fifa and Mujib Nature Reserves.



- **Major Threats:** Potential threats include habitat loss and climate change, driven mainly by urban expansion, tourism development, large-scale agro-industrial farming, and excessive pesticide use (Khoury *et al.*, 2007; Khoury & Körner, 2018).

- **Recommended Conservation and Research:** Further research and monitoring are needed to address gaps in knowledge on population size, trends, and threats, with priority given to systematic monitoring within protected areas.

European Roller

Order: Coraciiformes
Family: Coraciidae
Scientific Name: *Coracias garrulus* (Linnaeus, 1758)
Arabic Name:
شقراق أوروبي
National Red List Status: VU° D1
Population Trend: Unknown (Probably Decreasing)
Status in Jordan: Summer visitor, passage migrant

- **Justification:** The species has a very small national breeding population, estimated at fewer than 250 mature individuals, restricted to the Jordan Valley and the northern and southern margins of the Dead Sea Rift. This small number falls within the threshold for Endangered under criterion D1. Its Area of Occupancy and Extent of Occurrence are relatively small in Jordan. Although quantitative trend data are lacking, a decline is suspected based on habitat pressures and the species' restricted distribution. Breeding populations occur in neighboring countries, and a rescue effect is possible. The conservation status of the national breeding population is therefore downlisted to Vulnerable.

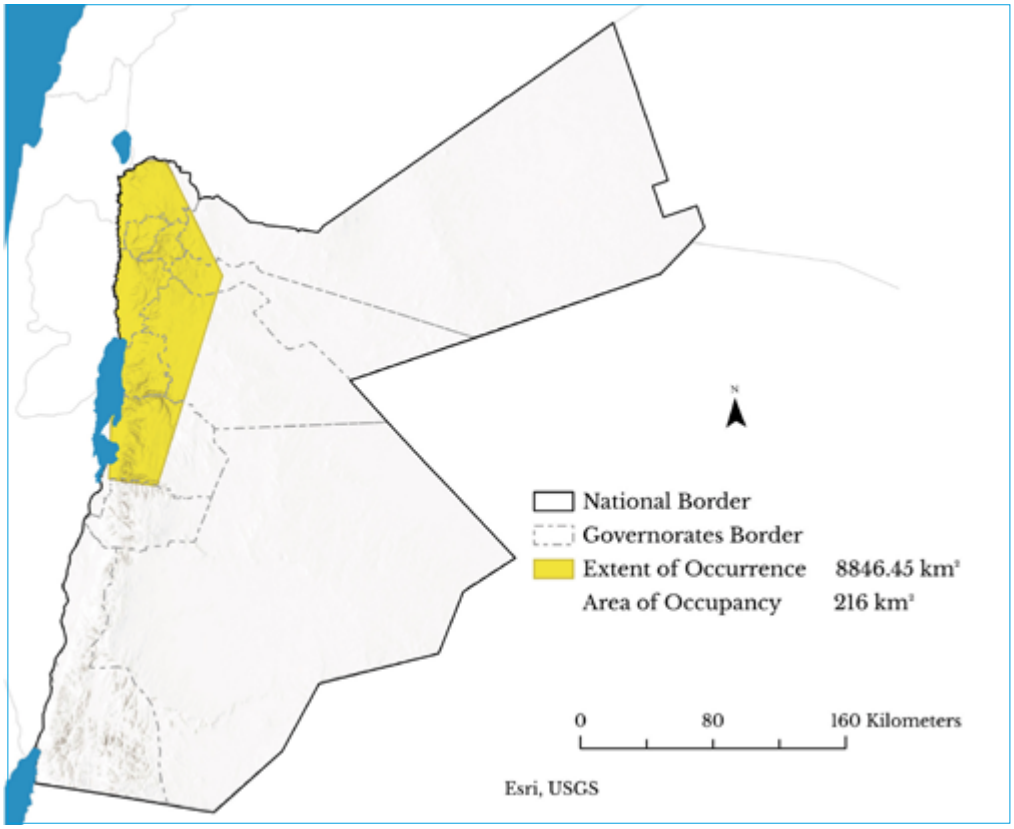
- **Distribution:** The European Roller breeds widely across Europe, Asia Minor, and western Asia, wintering in sub-Saharan Africa. **In Jordan**, it is a summer visitor to the northern Jordan Valley and northern and Dead Sea Rift margins. It breeds in various bioclimatic zones, and occurs as a fairly common spring migrant throughout the country.

- **Habitats and Ecology:** In Jordan, the species inhabits open lowland habitats, including dry savanna, dry shrubland, Mediterranean shrubland, steppe grassland, arable land, and pastureland. It requires open areas with scattered trees, rocky outcrops, or small cliffs. The species feeds mainly on large insects and nests in tree cavities or rock crevices.



European Roller (Coracias garrulus); photo: © Waseem Al-Hayek

- **Conservation Status:** The species is protected in Jordan under the general provisions of the Agricultural Law (2015) and the Environmental Law (2017). Internationally, it is listed under the Convention on the Conservation of Migratory Species (Appendix II and Appendix I) and is covered by a dedicated CMS European Roller Flyway Action Plan (ERFAP). It is also strictly protected under the Bern Convention (Appendix II) and listed in Annex I of the EU Birds Directive.



- **Major Threats:** The species is affected by habitat loss and modification, as well as pesticide use. Key pressures include urban expansion, tourism and recreational developments, agricultural expansion, quarrying, hunting, disturbance from recreational activities, and impacts from invasive species (mesquite and the Common Myna).

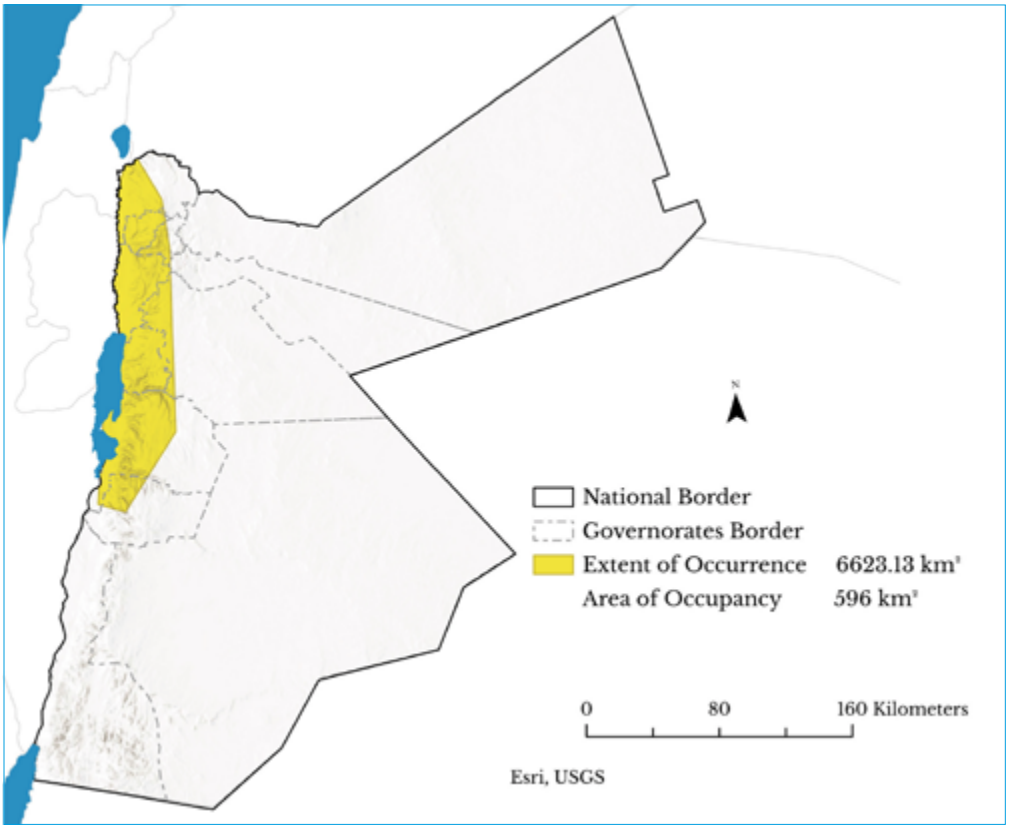
- **Recommended Conservation and Research:** Priority actions include reducing pesticide use and protecting key breeding sites. Research should focus on defining the exact breeding range, population size, population trends, and habitat trends to support effective conservation planning and action.

White-throated Kingfisher

Order: Coraciiformes
Family: Alcedinidae
Scientific Name: *Halcyon smyrnensis* (Linnaeus, 1758)
Arabic Name:
قاوند أبيض الصدر
National Red List Status: LC
Population Trend: Stable
Status in Jordan: Resident

- **Justification:** The species has a stable population trend in Jordan, with a national population estimated to exceed 1,000 mature individuals. Although breeding is restricted to the Jordan Valley and the northern and southern margins of the Dead Sea Rift, it occupies a continuous and relatively extensive national range. It is locally common along wadis from the Yarmouk Valley to Wadi Hassa. There is no evidence of population decline or significant range contraction.

- **Distribution:** The White-throated Kingfisher has a wide distribution from western and southern Turkey through the Middle East to Pakistan, India, and parts of Southeast Asia. **In Jordan**, it is a common resident in the Jordan Valley and along the Rift margin wadis, and an uncommon visitor to Azraq and Aqaba.



- **Habitats and Ecology:** Occupies a wide range of open habitats near water, including streams, ponds, irrigation channels, and water storage areas, and is also recorded in arable land and rural gardens. It requires open areas with scattered trees and shrubs, feeds on a diverse diet of insects, fish, amphibians, reptiles, and small mammals, and breeds in burrows excavated in earthen banks during the warmer months.

- **Conservation Status:** The species is protected in Jordan under the general provisions of Environmental Law No. 6 of 2017, which prohibit killing, capture, and habitat destruction.

- **Major Threats:** The species is mainly threatened by habitat degradation and loss, particularly along watercourses, and by pesticide use, which reduces prey availability and may cause direct mortality (Khoury & Körner, 2018).

- **Recommended Conservation and Research:** Research priorities include improving knowledge of distribution, population size, and trends, identifying key threats, and assessing habitat trends to support long-term conservation planning.



Pied Kingfisher (Ceryle rudis); photo: © Fares Khoury

Pied Kingfisher

Order: Coraciiformes
Family: Alcedinidae
Scientific Name: *Ceryle rudis* (Linnaeus, 1758)
Arabic Name:
صياد السمك الأبقع
National Red List Status: VU A3c
Population Trend: Stable (Locally Declining in some Localities)
Status in Jordan: Resident

- **Justification:** The species has a restricted breeding range in the Jordan Valley, extending from the Yarmouk Valley to the southern Ghor, with a national population probably smaller than 1000 mature individuals. Although the population appears stable in some areas at present, a future population decline of at least 30% over the next 100 years is suspected due to the continuing reduction and degradation of wetland habitats essential for feeding and nesting. Ongoing and planned land-use change, water abstraction, and habitat modification are expected to reduce habitat area and quality. While the species also breeds in neighboring countries and can use some man-made reservoirs, these factors are not expected to offset the projected loss and degradation of natural wetlands within Jordan.

- **Distribution:** The Pied Kingfisher has a wide distribution across Africa, Asia, and the Middle East, avoiding arid regions. **In Jordan**, it is restricted to permanent wetlands in the Jordan Valley and major valleys, such as the Yarmouk and Wadi Zarqa. It has

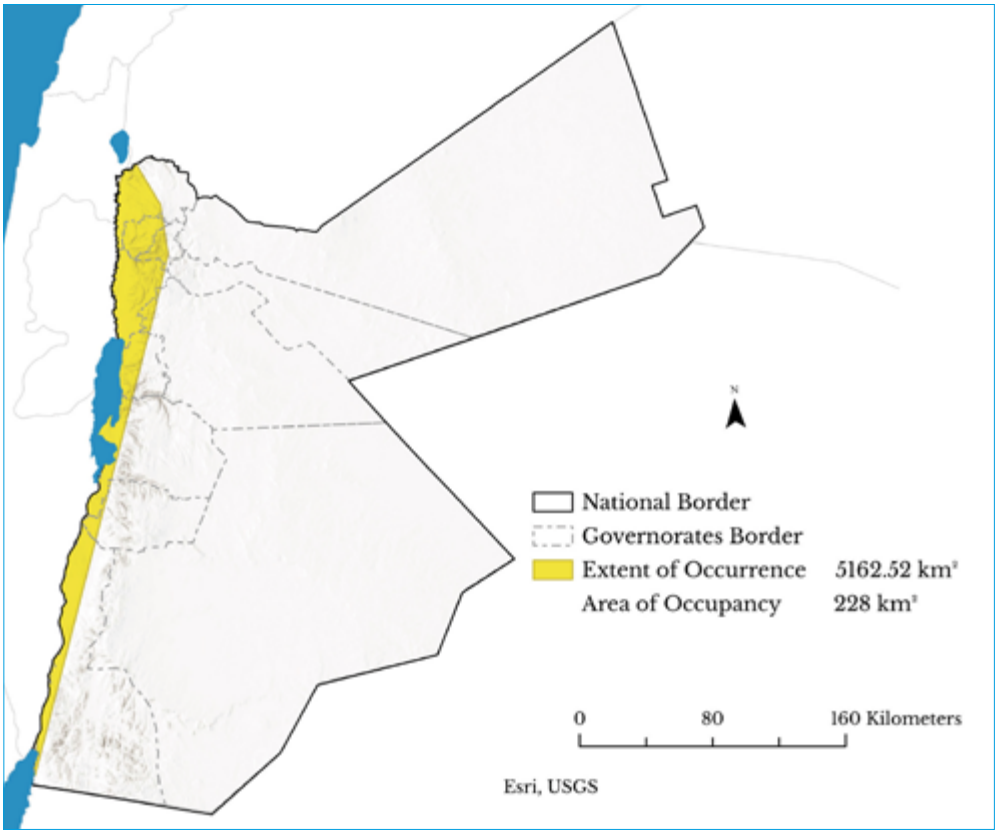
been observed attempting to breed at the Aqaba Bird Observatory and is a rare visitor to the Azraq Wetland Reserve.

- **Habitats and Ecology:** Occupies permanent freshwater habitats, including rivers, marshes, lakes, irrigated land, and water storage areas, where suitable perches are available for fishing. It primarily feeds on fish and breeds by excavating burrows in earthen banks near water; nesting is usually solitary, although small colonies have been recorded along the Jordan River (Khoury *et al.*, 2005).

- **Conservation Status:** The species is protected in Jordan under the general provisions of Environmental Law No. 6 of 2017, which prohibit killing, capture, and habitat destruction.

- **Major Threats:** The species is threatened by dam construction, surface and groundwater abstraction, pesticide use, and bioaccumulation of contaminants in prey fish, as well as by drought, which reduces the extent and quality of suitable wetland habitats. One individual was documented as killed based on evidence from a Facebook post (Eid & Handal, 2018).

- **Recommended Conservation and Research:** An action plan for protecting and restoring wetland habitats is urgently required. Research priorities include improving knowledge of distribution, population size and trends, and identifying key threats.



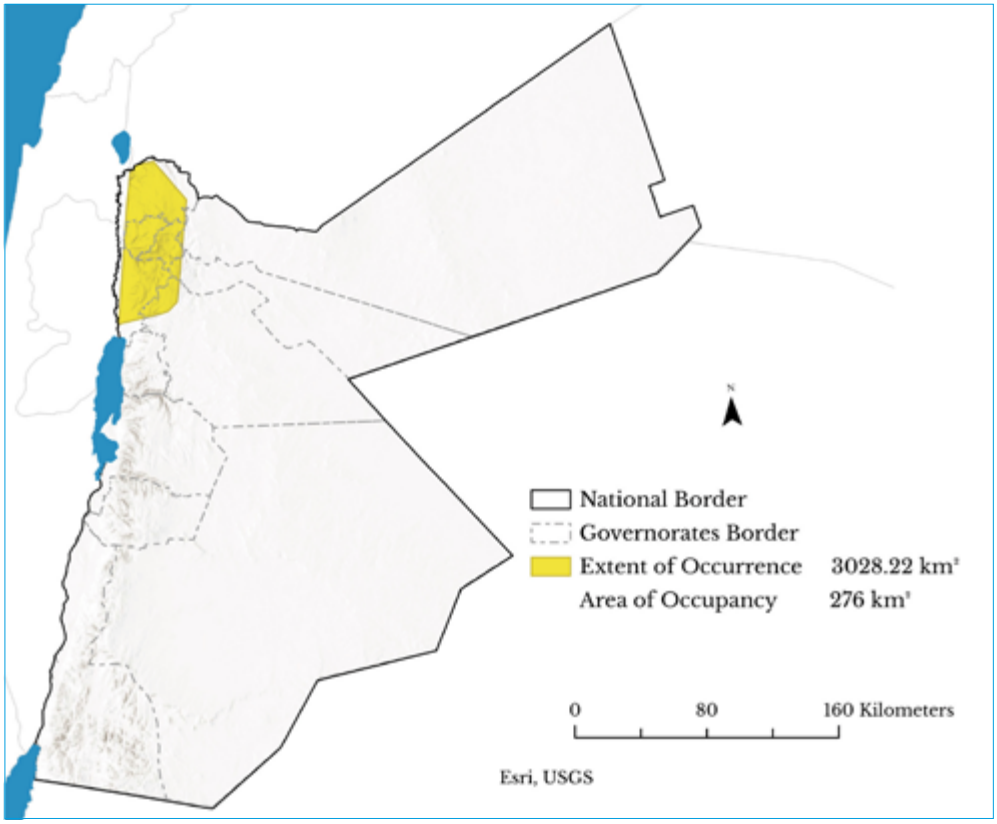
Syrian Woodpecker

Order: Piciformes
Family: Picidae
Scientific Name: *Dendrocopos syriacus* (Hemprich & Ehrenberg, 1833)
Arabic Name:
نقار الخشب السوري
National Red List Status: NT
Population Trend: Stable (Locally Declining in some Localities)
Status in Jordan: Resident

- **Justification:** This species has a restricted national distribution but is locally common and tolerates some human-modified habitats, including traditional farming areas and urban parks. There is currently no evidence of population decline, and the species occurs widely in neighbouring Levantine countries, suggesting potential connectivity. However, rapid urban expansion and intensive agriculture, particularly in northern Jordan, are causing ongoing loss of suitable woodland habitats, and a future decline exceeding 25% is suspected if these pressures continue. The species does not meet any category thresholds but qualifies as Near Threatened, warranting close monitoring.

- **Distribution:** The Syrian Woodpecker has a wide Palearctic distribution, from central and eastern Europe to the Balkans, Turkey, the Levant, and parts of Iran. **In Jordan**, it is a resident species occurring in wooded areas and olive groves in the Northern Highlands and northern Rift margins, with sporadic breeding records in the Jordan Valley, along the Jordan River.

- **Habitats and Ecology:** In Jordan, the species occupies mainly Mediterranean-zone habitats, including Mediterranean-type woodlands, mature olive plantations and orchards, and riparian woodland. It also occurs in parks and areas near human habitation, feeding on insects, fruits, nuts, seeds, and sap. Breeding involves excavating nest holes in trees or wooden poles, with clutches of 3–7 eggs laid from mid-April to June.



- **Conservation Status:** In Jordan, the species occurs within several protected areas, including Dibeen, Ajloun, and Yarmouk. Globally, it is listed as Least Concern by the International Union for Conservation of Nature, and it is protected under the EU Birds Directive within its European range.

- **Major Threats:** The species is mainly affected by habitat loss and modification, driven by logging, urban expansion, tourism and resort development, agricultural expansion, and road infrastructure.

- **Recommended Conservation and Research:** Priority actions include preserving mature nesting trees and integrating species requirements into woodland and woody habitat management plans. Research should focus on population size, distribution, and trends, as well as habitat trends, supported by systematic population surveys and habitat assessments.



Syrian Woodpecker (Dendrocopos syriacus); photo: © Waseem Al-Hayek

Crested Lark

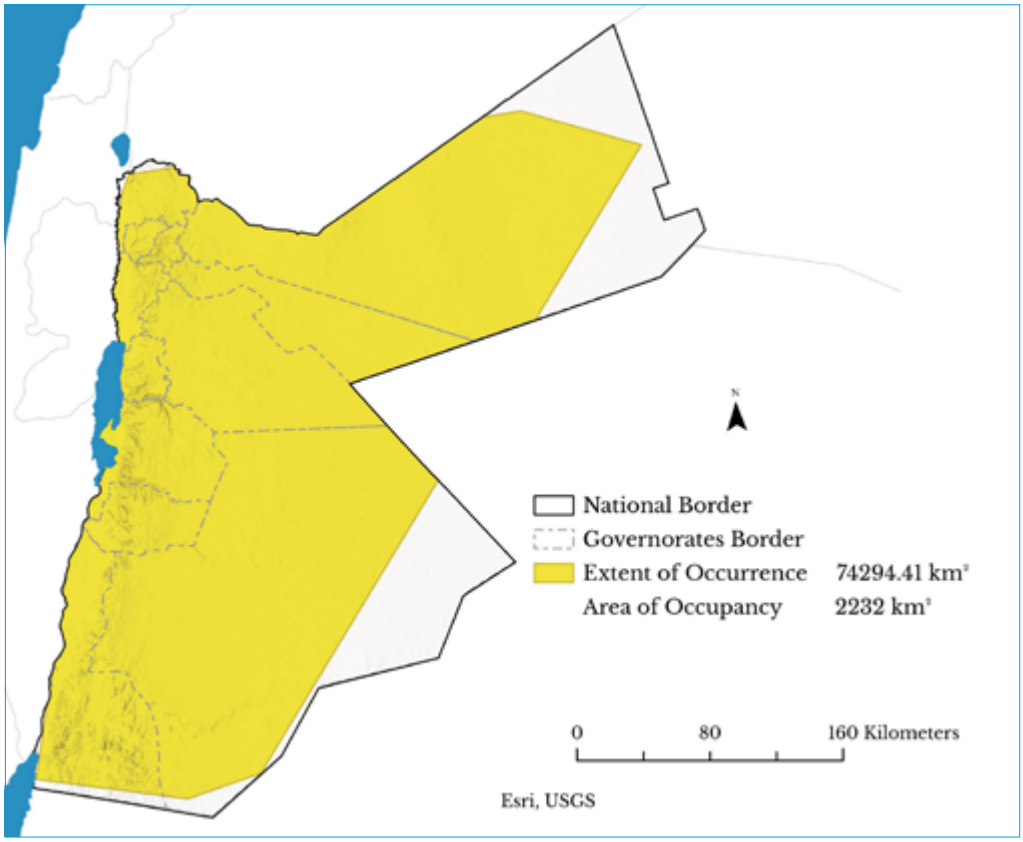
Order: Passeriformes
Family: Alaudidae
Scientific Name: *Galerida cristata* (Linnaeus, 1758)
Arabic Name:
قبرة متوجة
National Red List Status: LC
Population Trend: Increasing
Status in Jordan: Resident

- **Justification:** This species is widely distributed and common in Jordan, with a large and increasing population estimated at >10,000 mature individuals. It occupies a broad national range and has expanded into arid areas due to human activities and development; there is no evidence of decline.

- **Distribution:** The Crested Lark is widely distributed across Eurasia and northern Africa. **In Jordan**, it is a widespread resident occurring across all climatic zones, mainly in open steppe-like habitats, agricultural areas, and near human settlements.

- **Habitats and Ecology:** An opportunistic species occupying a wide range of open habitats, including dry savanna, shrublands, arable land, pastureland, rural gardens, and urban areas, often near human settlements. It nests on the ground and feeds on seeds, plant material, and arthropods.

- **Conservation Status:** The species is protected in Jordan under the general provisions of the Agricultural Law No. 13 of 2015 and the Environmental Law No. 6 of 2017.



- **Major Threats:** The species is mainly affected by habitat loss driven by large-scale urban expansion, including housing developments, roads, and associated infrastructure.

- **Recommended Conservation and Research:** Research should focus on impacts of various agricultural activities on this species.

Woodlark

Order: Passeriformes
Family: Alaudidae
Scientific Name: *Lullula arborea* (Linnaeus, 1758)
Arabic Name:
قبرة غابية
National Red List Status: CR D1
Population Trend: Unknown
Status in Jordan: Resident, winter visitor

- **Justification:** The national breeding population is currently extremely small, with fewer than 50 mature individuals, which falls within the threshold for Critically Endangered under criterion D1. Breeding is known from only two locations, resulting in a very limited Area of Occupancy, and breeding has not been confirmed recently at former sites (e.g., Ajloun), indicating a suspected population decline of approximately 50%. Although the species breeds in neighboring Levantine countries, the Jordanian population is highly localized and extremely small, and there is no evidence of regular immigration capable of providing an effective rescue effect.

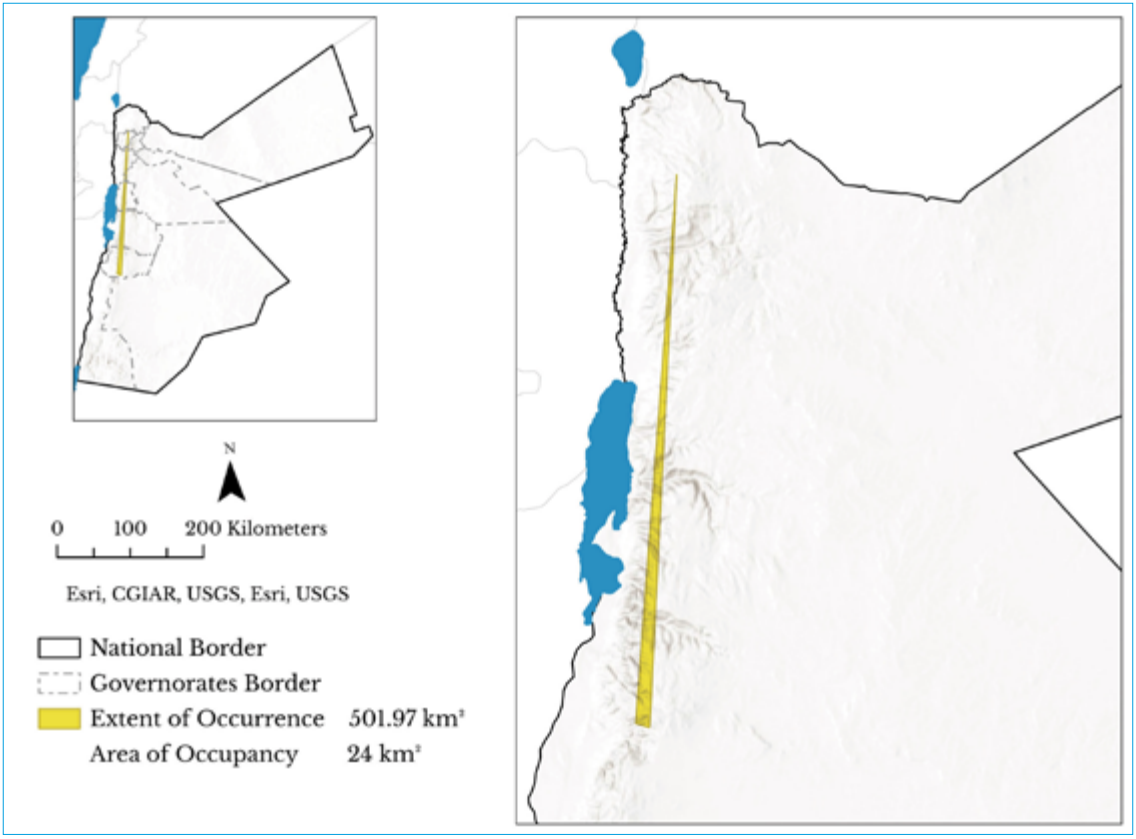
- **Distribution:** The Woodlark is widely distributed across Europe, extending east to Central Asia and into Northwest Africa, with northern and eastern populations that are migratory and winter mainly in the Middle East and North Africa. **In Jordan**, it is a fairly common winter visitor in the highlands and adjacent Rift margins, and a rare, localized resident breeder at Dana Reserve and in the Ajloun Mountains.

- **Habitats and Ecology:** In Jordan, the species inhabits temperate shrubland, Mediterranean-type shrubby vegetation, and arable land within the Mediterranean biogeographical zone. For breeding, it requires open woodlands with extensive glades or unmanaged farmland, whereas in winter it occurs in small groups in open, steppe-like habitats. It nests on the ground under low shrubs or grasses and feeds on invertebrates, seeds, and other plant material.

- **Conservation Status:** The species is protected under the general provisions of Jordan's Environmental Protection Law (2017) and the Agricultural Law, and is listed in Annex I of the EU Birds Directive, requiring special conservation measures within its European range.

- **Major Threats:** Habitat loss and degradation are driven by logging, inappropriate reforestation, farming and grazing, urban and tourism development, road construction, and recreational disturbance, resulting in the conversion and fragmentation of open woodland. Additional pressures include increased fire frequency and drought associated with climate change, further reducing habitat suitability.

- **Recommended Conservation and Research:** Priority actions include implementing habitat management, protecting all remaining native woodlands, providing incentives for landowners to protect native woods on their private land, preventing the logging of ancient trees and afforestation with non-native species, integrating species requirements into reserve management plans, and raising awareness. Research should include targeted population surveys in potential breeding areas, habitat quality assessments, and bioacoustic monitoring.



Greater Short-toed Lark

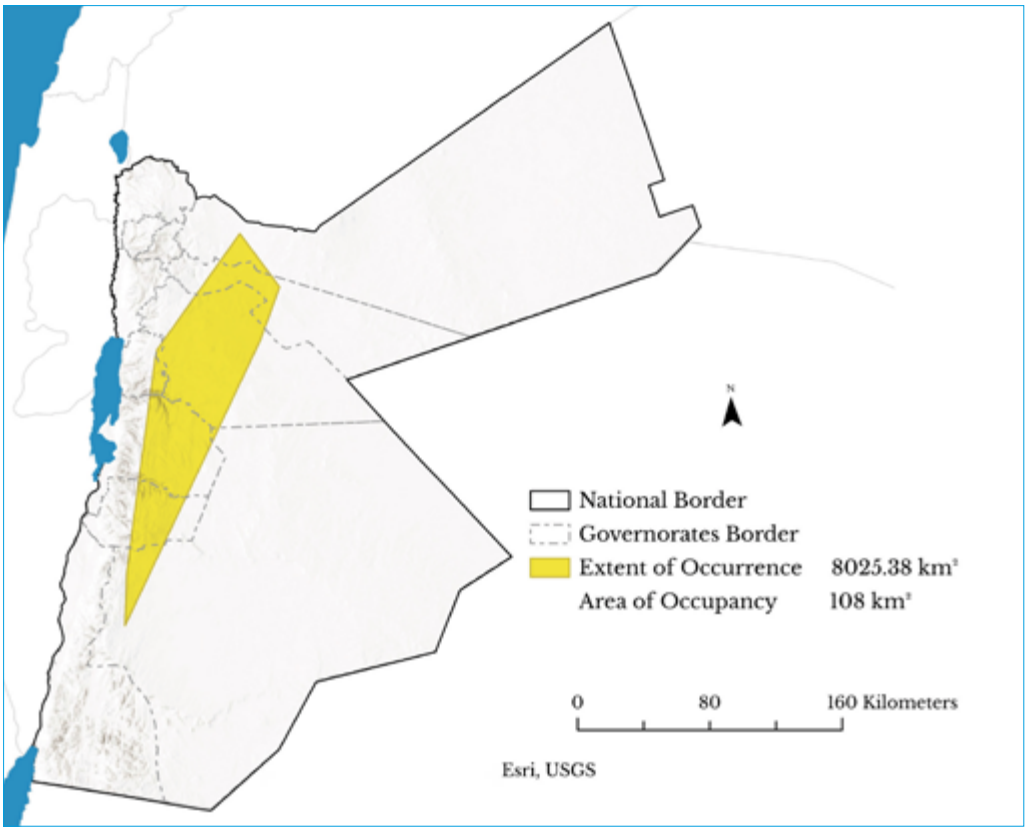
Order: Passeriformes
Family: Alaudidae
Scientific Name: *Calandrella brachydactyla* (Leisler, 1814)
Arabic Name:
قبرة صبيعاء كبيرة
National Red List Status: VU A3c
Population Trend: Decreasing
Status in Jordan: Summer visitor, passage migrant

- **Justification:** The species has a restricted national breeding distribution in steppe habitats and rain-fed fields of the Northern Steppes and Sharah Highlands, with a limited Area of Occupancy. Although the national population might exceed 1,000 mature individuals, ongoing and planned habitat loss and degradation driven by urban expansion, agricultural intensification, overgrazing, and increasing drought are expected to continue. Steppe habitats are among the most threatened ecosystems in Jordan, and the rapid reduction in habitat area and quality is projected to result in a population decline exceeding 30% within the next 100 years.

- **Distribution:** The Greater Short-toed Lark is a summer visitor with some resident populations, breeding from southern Europe east to central Asia and northwest Africa, and wintering in the Sahel, Arabia, and western South Asia. **In Jordan**, it is a summer breeder in the northern steppes and southern highlands. It is also a common passage migrant across the country.

- **Habitats and Ecology:** In Jordan, the species breeds in semi-arid steppe habitats, including dwarf-shrub steppes, semi-arid grasslands, and cereal fields, mainly within the Mediterranean and Irano-Turanian biogeographical zones. Although the breeding distribution is restricted, it occurs locally at high densities (Khoury 1998a,c).

- **Conservation Status:** The species is protected in Jordan under the general provisions of the Agriculture Law and the Environmental Law, and



occurs in some protected areas. Internationally, it is listed under the Convention on the Conservation of Migratory Species (Appendix II) and the Agreement on the Conservation of African-Eurasian Migratory Waterbirds, both of which reflect its migratory status.

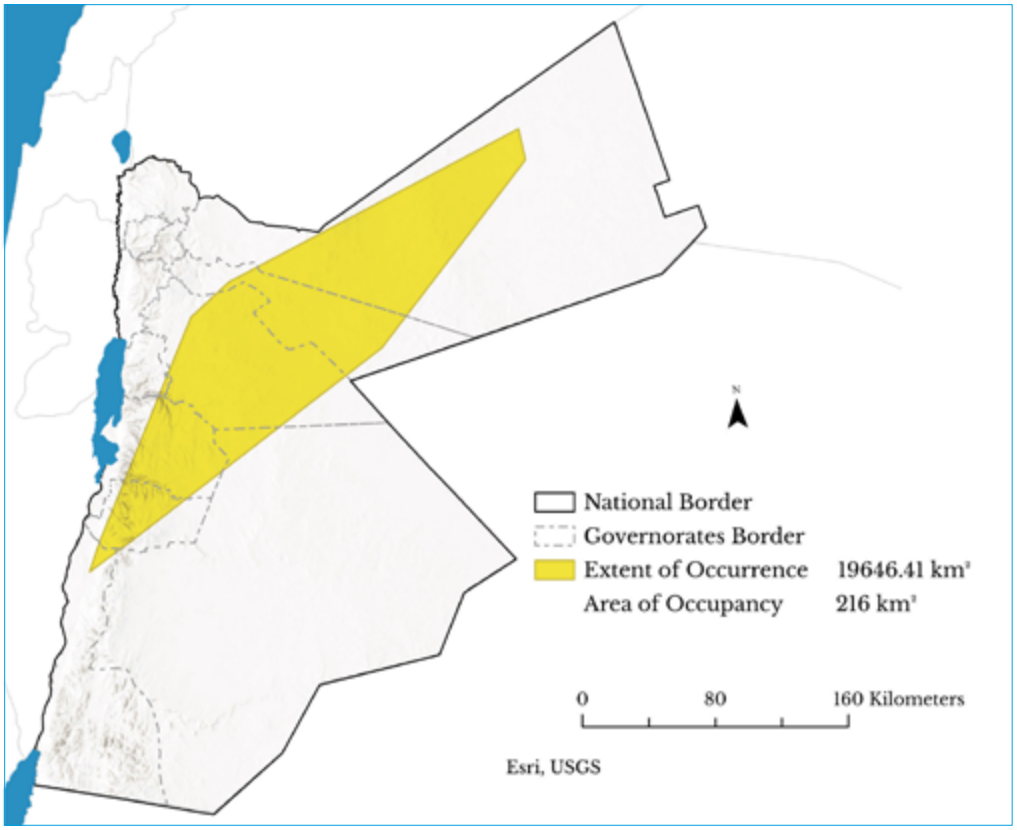
- **Major Threats:** The species is primarily threatened by habitat loss and degradation, and by hunting, driven by urban expansion, agro-industrial farming, nomadic grazing, renewable energy development, and road and railway infrastructure. Additional pressure comes from direct hunting and drought, which further degrade steppe and cereal-field habitats (Khoury, 1998).

- **Recommended Conservation and Research:** Priority actions include maintaining and protecting steppe and semi-desert habitats and monitoring population trends, particularly during migration. Research should address gaps in population size, distribution, and habitat use, supported by regular surveys during breeding and migration periods and habitat condition assessments in steppe and semi-desert areas.

Mediterranean Short-toed Lark

Order: Passeriformes
Family: Alaudidae
Scientific Name: *Alaudala rufescens* (Vieillot, 1819)
Arabic Name:
قنبرة قصيرة الأصابع
National Red List Status: LC
Population Trend: Stable
Status in Jordan: Summer visitor, passage migrant, winter visitor

- **Justification:** The breeding population undergoes natural annual fluctuations, but in good years, the estimated national population probably exceeds 1,000 mature individuals, with a broad, but patchy distribution. It is locally common in suitable habitats such as mudflats and flooded desert plains, where numbers vary mainly with rainfall. There is no evidence of a sustained population decline, and



most of its habitats are not significantly affected by human activities.

- **Distribution:** The Mediterranean Short-toed Lark occurs in resident or partially migratory populations across southwestern Europe, the Middle East, and northwest Africa. **In Jordan**, it is a localized resident or summer breeder in part of the Northern Steppes, Interior Desert, and Wadi Araba. It occurs elsewhere as a passage migrant and winter visitor.

- **Habitats and Ecology:** Breeds in dry steppe habitats with dense low vegetation, in temperate and subtropical grasslands, often in flat depressions and around seasonal freshwater and saline wetlands (Khoury, 1996).

- **Conservation Status:** The species is protected in Jordan under the general provisions of the Agricultural Law No. 13 of 2015 and the Environmental Law No. 7 of 2017.

- **Major Threats:** The species is primarily affected by habitat degradation and loss resulting from agro-industrial farming, intensive grazing, and small-dam construction. Drought and reduced rainfall further degrade breeding habitats, especially seasonally flooded plains and mudflats.

- **Recommended Conservation and Research:** Priority actions include protecting semi-arid grasslands and steppe habitats, restoring degraded areas, and establishing monitoring to track population changes and habitat quality. Research should focus on population size, distribution, past and current trends, key threats, and habitat trends.

Desert Lark

Order: Passeriformes
Family: Alaudidae
Scientific Name: *Ammomanes deserti* (Lichtenstein, 1823)
Arabic Name:
قنبرة صحراوية
National Red List Status: LC
Population Trend: Stable
Status in Jordan: Resident

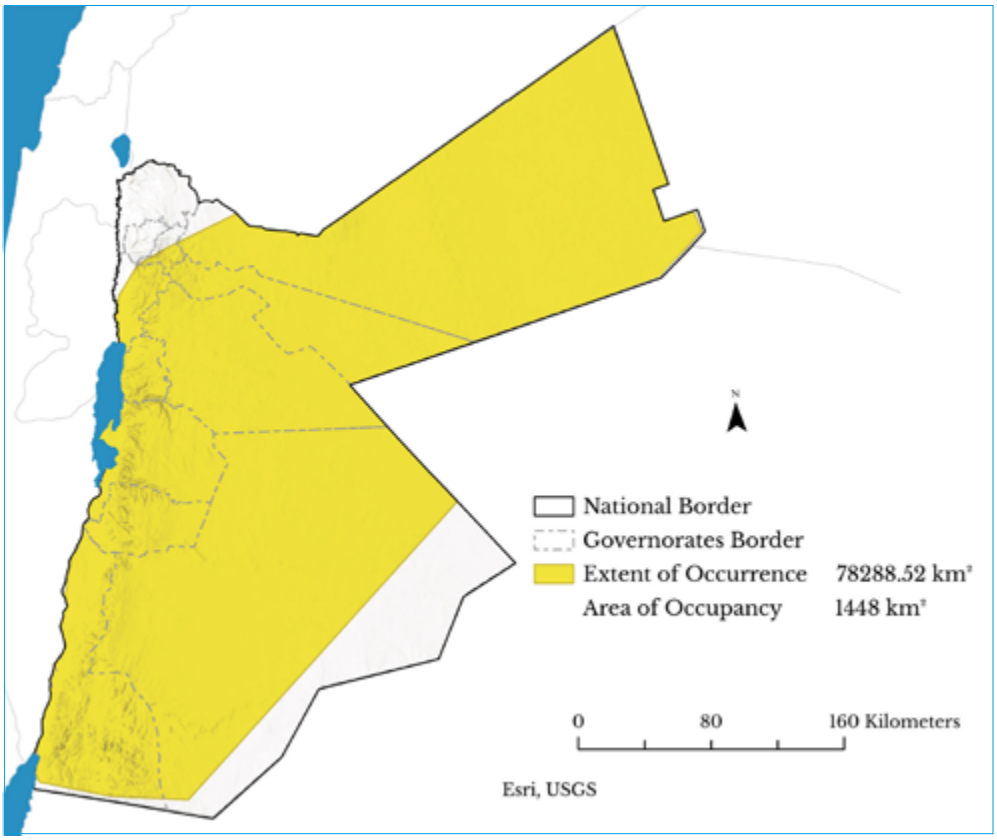
- **Justification:** The two subspecies, *A. d. isabellina* and *A. d. annae*, are common and widespread in Jordan, with stable population trends and a national population estimated to exceed 1,000 mature individuals. They occupy a very large national range, and there is no evidence of population decline or significant threats operating at the national scale.

- **Distribution:** The Desert Lark is widely distributed across North Africa, the Middle East, and parts of Asia, occupying desert and semi-desert habitats. **In Jordan**, it is widespread in arid, rocky areas of the central, southern, and eastern regions. It is also common in the Dead Sea and along the southern Rift margins, parts of the northern Rift margins, the Jordan Valley, and Wadi Araba. The subspecies annae is resident in the Basalt Desert, and intermediate, darkish Desert Larks are also frequent in the eastern desert.

- **Habitats and Ecology:** Restricted to arid and semi-arid environments, occupying rocky and stony slopes, escarpments, temperate grasslands, and hot desert habitats, at various elevations. It is well adapted to hot, dry conditions, forages on the ground among stones, and feeds on seeds and invertebrates, with chicks mainly fed on insects. Individuals may visit water sources in summer, but can persist without permanent water (Khoury, 1998a; Al-Shamlih *et al.*, 2005).

- **Conservation Status:** The species is protected in Jordan under the general provisions of the Agricultural Law No. 13 of 2015 and the Environmental Law No. 6 of 2017.

- **Major Threats:** The species is primarily threatened by habitat loss due to urban and agricultural expansion and mining activities.



• **Recommended Conservation and Research:** Priority actions include protecting desert habitats from overgrazing, off-road vehicle disturbance, and land degradation, and monitoring populations to detect changes in distribution and abundance. Research should focus on breeding ecology, and the assessment of threats from overgrazing and habitat degradation.

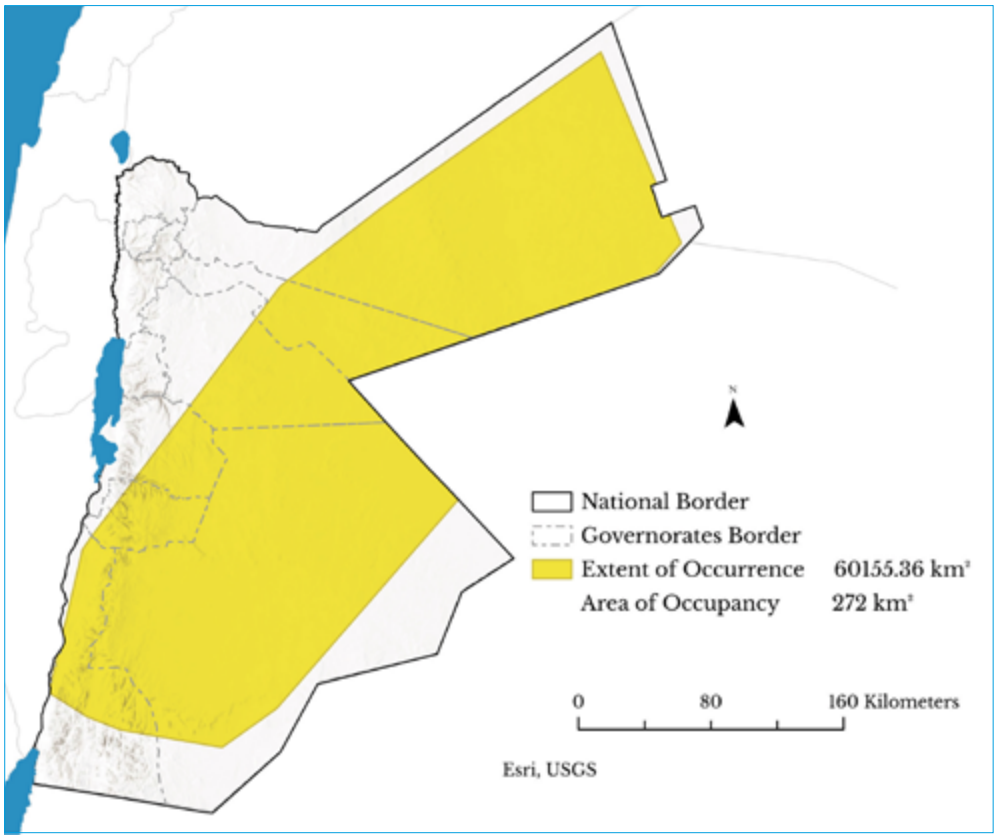
Bar-tailed Lark

Order: Passeriformes
Family: Alaudidae
Scientific Name: *Ammomanes cinctura* (Gould, 1839)
Arabic Name:
قبرة رملية (حمرة صبغاء)
National Red List Status: LC
Population Trend: Stable
Status in Jordan: Resident

• **Justification:** This species is widespread across Jordan's deserts, with a stable population trend and an estimated national population likely exceeding 1,000 mature individuals. It occupies a very large national range and remains locally common, particularly in Wadi Araba and parts of the eastern desert. Most breeding habitats are largely unthreatened by human development, and there is no evidence of decline.

• **Distribution:** The Bar-tailed Lark is widely distributed across the Sahara Desert, the Middle East, and parts of the Arabian Peninsula. **In Jordan**, it is a resident species occurring primarily in Wadi Araba and the vast desert of central and eastern Jordan.

• **Habitats and Ecology:** Restricted to hot desert habitats, inhabiting the hammada and gravel–sandy deserts within the Saharo-Arabian and Sudanian penetration zones. It also inhabits wide wadis and the edges of the Basalt Desert. It is a widely distributed resident species with some local dispersal, usually seen singly or as pairs, feeding on seeds, leaves, and insects, and nesting in a shallow ground scrape, often shaded by a dwarf shrub (Al-Shamlih, 2005).



- **Conservation Status:** The species is protected in Jordan under the general provisions of the Agricultural Law No. 13 of 2015 and the Environmental Law No. 6 of 2017.

- **Major Threats:** The main threat is localized habitat loss, observed particularly in Wadi Araba, caused by agricultural expansion (annual and perennial non-timber crops, agro-industrial farming) (Khoury & Al-Shamlih, 2006; Khoury *et al.*, 2007).

- **Recommended Conservation and Research:** Priority actions include protecting desert habitats from overgrazing, off-road vehicle use, and land degradation, and monitoring population trends and distribution. Research should focus on population size and trends.

Arabian Lark

Order: Passeriformes
Family: Alaudidae
Scientific Name: *Eremalauda eremodites* (R.Meinertzhagen, 1923)
Arabic Name:
قبرة عربية
National Red List Status: DD
Population Trend: Unknown
Status in Jordan: Resident, nomadic

- **Justification:** This species has a very limited known range in Jordan. Its population size, breeding status, and distribution are poorly known. Occurrence appears strongly dependent on rainfall, with probable annual fluctuations, making it difficult to assess population trends or confirm regular breeding. Due to the lack of reliable data on abundance, trends, and breeding ecology at the national level, the species cannot be assessed against threatened category thresholds and is therefore best classified as Data Deficient, despite being common elsewhere in the Arabian Peninsula.

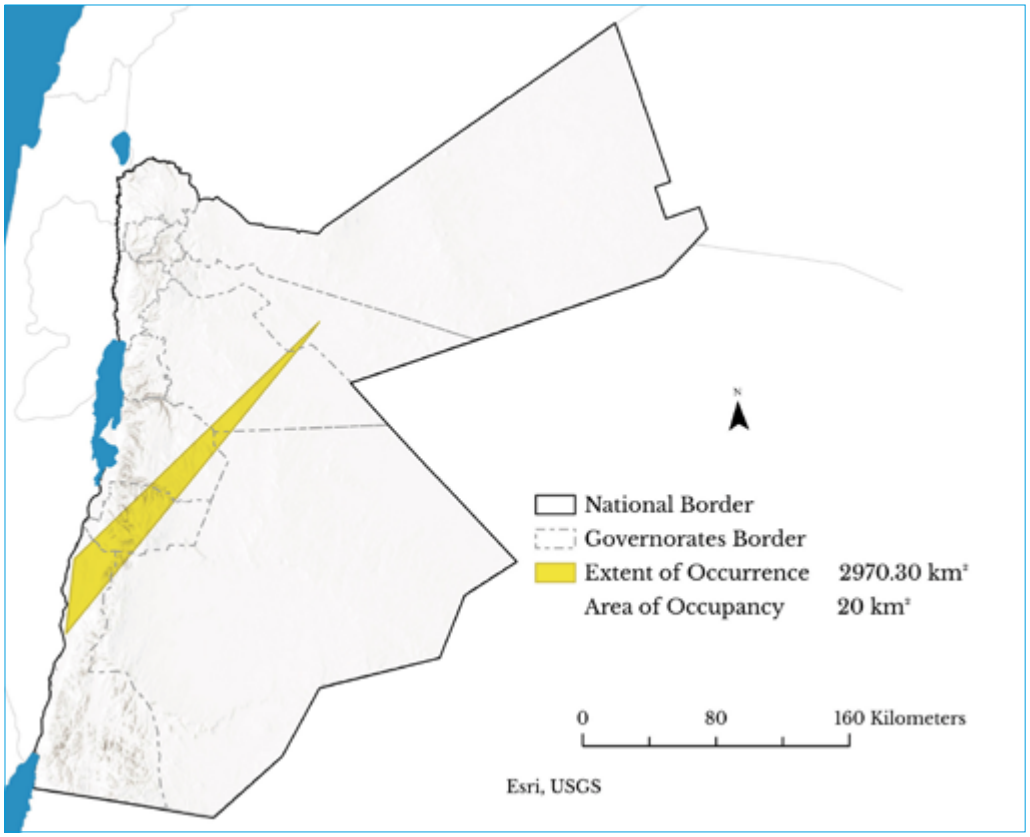
- **Distribution:** The Arabian Lark occurs across the Arabian Peninsula and the southern Levant. **In Jordan**, it has been recorded in Wadi Araba and the eastern desert around Azraq. Its distribution and breeding status are not well understood due to its nomadic behavior.

- **Habitats and Ecology:** Occupies hot desert and subtropical dry lowland grassland within the Saharo-Arabian and Sudanian penetration zones. It prefers open sandy or stony plains with scattered shrubs and grasses, avoiding rocky slopes, and is nomadic, occurring mainly after heavy rainfall and temporary flooding in desert areas.

- **Conservation Status:** The species is protected in Jordan under the general provisions of the Agricultural Law No. 13 of 2015 and the Environmental Law No. 6 of 2017.

- **Major Threats:** The species is potentially threatened by habitat loss due to agricultural expansion, particularly the development of annual and perennial non-timber crops in its limited known range in Jordan.

- **Recommended Conservation and Research:** Further research is required to clarify the species' seasonal and spatial occurrence in Jordan and, where possible, to estimate population size.



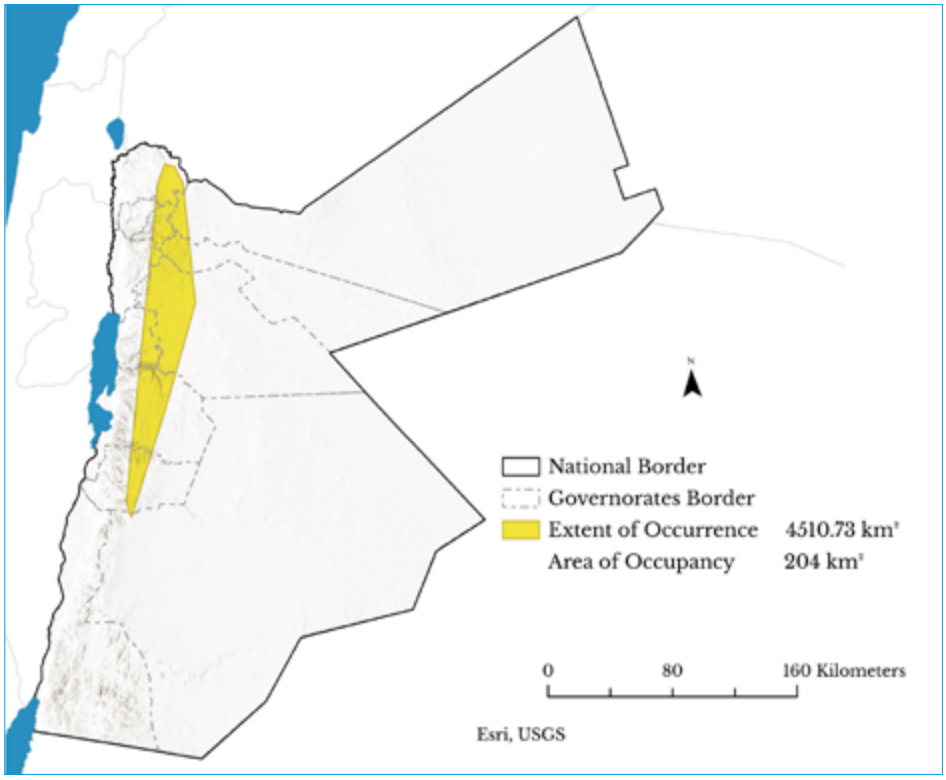
Calandra Lark

Order: Passeriformes
Family: Alaudidae
Scientific Name: *Melanocorypha calandra* (Linnaeus, 1766)
Arabic Name:
علعل
National Red List Status: VU A3c; B2ab(iii)
Population Trend: Unknown
Status in Jordan: Resident, winter visitor

- **Justification:** The Calandra Lark has undergone a local decline in Jordan, with a national population estimated at 500–2000 mature individuals and a small Area of Occupancy despite a large Extent of Occurrence. Its breeding grassland–steppe habitats are severely fragmented and continue to decline in extent and quality due to overgrazing, recurrent drought, abandonment of traditional wheat cultivation, and ongoing urban expansion, particularly in northern Jordan. A future population reduction exceeding 30% within less than 100 years is suspected based on these persistent pressures, meeting criterion A3c. The small Area of Occupancy, severe fragmentation, and continuing decline in habitat quality also meet criterion B2ab(iii). Although the species breeds in neighboring Levantine countries, this does not offset the ongoing national decline caused by habitat loss, and a significant rescue effect is unlikely.

- **Distribution:** The Calandra Lark occurs in resident and migratory populations from southwestern Europe to Central Asia, wintering in southeastern Europe, northeastern Africa, and the Middle East. **In Jordan**, it is mainly a resident breeder in the northern and central steppes and southern highlands, with large winter flocks recorded in northern Jordan, which winter visitors may augment. It occurs primarily in the Mediterranean bioclimatic zone, extending into semi-arid areas during winter.

- **Habitats and Ecology:** Occupies grassland steppes and rain-fed fields. Nests on the ground and feeds on seeds, occasionally on arthropods (Khoury, 1998).



- **Conservation Status:** The species is protected in Jordan under the general provisions of the Agricultural Law No. 13 of 2015 and the Environmental Law No. 6 of 2017.

- **Major Threats:** The species is primarily threatened by habitat loss from urban expansion, particularly around Amman, Madaba, and Irbid. Additional pressures include renewable energy infrastructure, road development, local hunting, and nest predation by feral dogs.

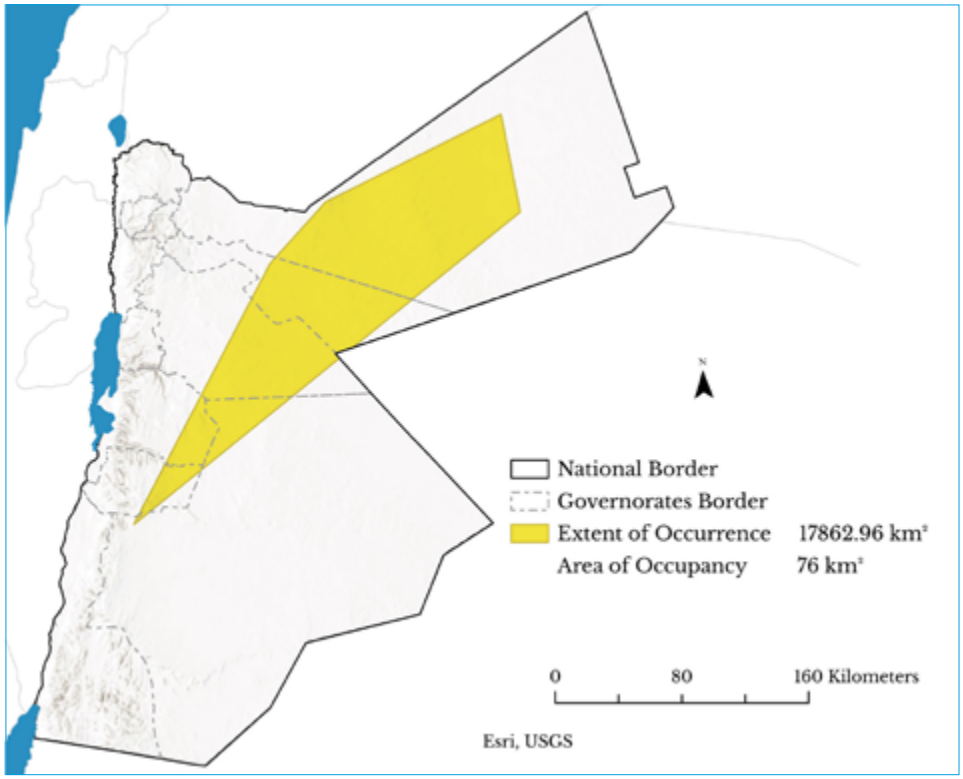
- **Recommended Conservation and Research:** Priority actions include implementing a multi-species plan for protecting steppe and open grassland habitats, to prevent agricultural intensification and urban or industrial conversion, and monitoring population trends across seasons. Research should focus on population size and distribution, past trends, life history and ecology, key threats, conservation actions, and population and habitat trends.

Thick-billed Lark

Order: Passeriformes
Family: Alaudidae
Scientific Name: *Ramphocoris clotbey* (Bonaparte, 1850)
Arabic Name:
قبرة شدقاء
National Red List Status: DD
Population Trend: Unknown
Status in Jordan: Resident

- **Justification:** This species is a scarce resident breeder in Jordan. Although there is no evidence of decline, the lack of quantitative data on abundance, distribution dynamics, and threats prevents assessment against threat thresholds.

- **Distribution:** The Thick-billed Lark occurs in desert regions of northwest Africa and the Middle East, including central Jordan and northern Saudi Arabia. **In Jordan**, it is an uncommon resident of the northeastern–central deserts, inhabiting stony and hammada deserts with sandy wadi beds. It has also



been recorded along the eastern flanks of the Sharah highlands.

- **Habitats and Ecology:** Occupies hot desert and dry lowland grassland habitats, favouring flat or stony terrain and flat, sandy wadi beds. It feeds on seeds, invertebrates, green plant material, and small fruits, and nests in shallow ground scrapes.

- **Conservation Status:** The species is protected in Jordan under the general provisions of the Agricultural Law No. 13 of 2015 and the Environmental Law No. 6 of 2017.

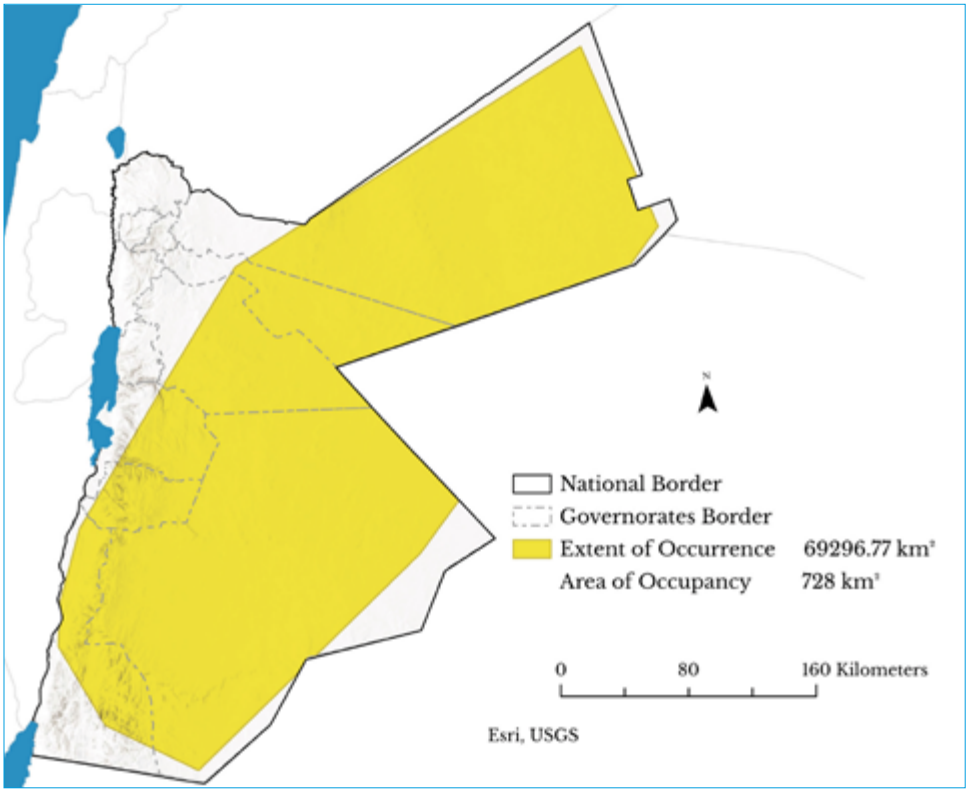
- **Major Threats:** The species is threatened by habitat loss and degradation resulting from quarrying, road development, and off-road driving in desert areas.

- **Recommended Conservation and Research:** Priority actions include protecting and managing desert habitats, monitoring and regulating grazing pressure, integrating the species into reserve management plans, and raising awareness among local communities and reserve staff. Research should focus on population size and exact distribution.

Temminck's Lark

Order: Passeriformes
Family: Alaudidae
Scientific Name: *Eremophila bilopha* (Temminck, 1823)
Arabic Name:
حمرة قرناء صحراوية
National Red List Status: LC
Population Trend: Stable (Increasing in the Southwest)
Status in Jordan: Resident

- **Justification:** This widespread species has a stable population, apparently with a recent range expansion. The national population exceeds 1,000 mature individuals, and the species occupies a very large range. It has expanded its distribution into parts of the Sharrah Highlands and Wadi Araba over the last few decades. There is no evidence of decline or significant threats at the national scale.



- **Distribution:** Temminck's Lark is distributed across North Africa and the Middle East. **In Jordan**, it is widespread, occurring throughout all desert regions and arid steppe habitats.

- **Habitats and Ecology:** Occupies hot desert and dry lowland grassland habitats, arid steppes, favouring flat or stony terrain and sandy wadi beds. It feeds on seeds, invertebrates, green plant material, and small fruits, and nests in shallow ground scrapes.

- **Conservation Status:** The species is protected in Jordan under the general provisions of the Agricultural Law No. 13 of 2015 and the Environmental Law No. 6 of 2017.

- **Major Threats:** The species faces habitat loss from planned mega-projects in the energy and transportation sectors, including roads and railways. Overgrazing and illegal capture and trade may pose additional threats (Eid *et al.*, 2010).

- **Recommended Conservation and Research:** Priority actions include managing grazing pressure and land degradation. Research should focus on documenting the current population size and exact breeding distribution in Jordan.

Greater Hoopoe-Lark

Order: Passeriformes
Family: Alaudidae
Scientific Name: *Alaemon alaudipes* (Desfontaines, 1789)
Arabic Name:
قبرة هدهدية
National Red List Status: LC
Population Trend: Stable
Status in Jordan: Resident

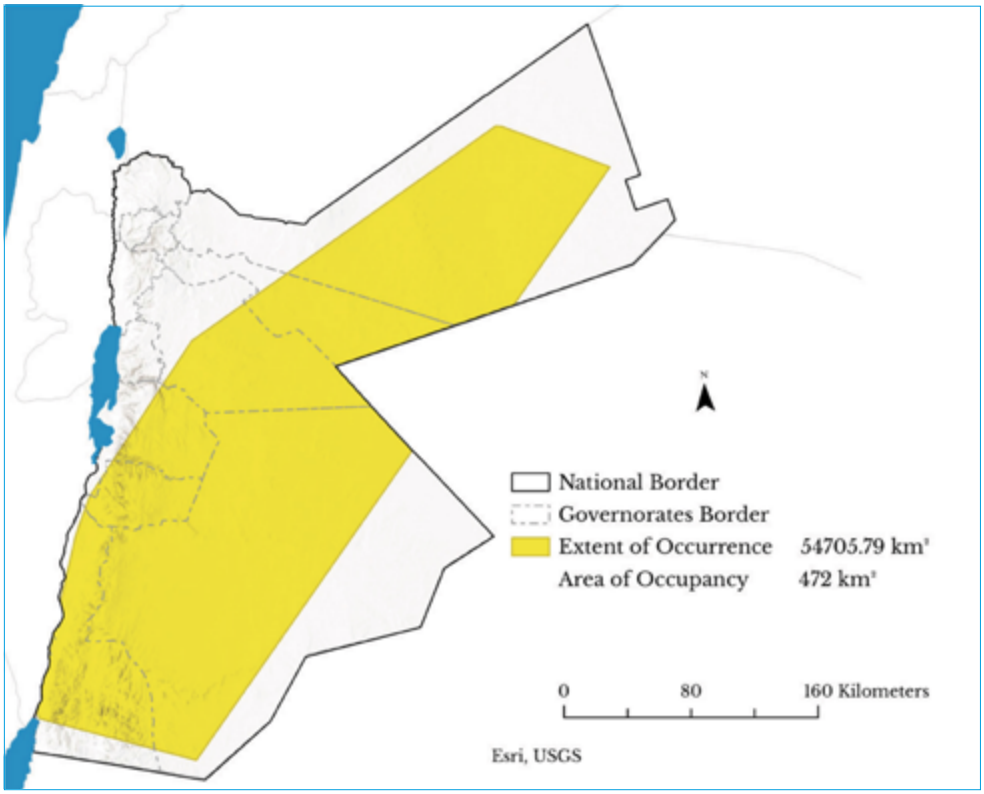
- **Justification:** This species is common and widespread in Jordan, with a stable population trend and an estimated national population exceeding 1,000 mature individuals. It remains a regular breeding species across large areas of the central and eastern desert and Wadi Araba. Although local habitat degradation and destruction occur, these pressures have not resulted in a measurable national decline, and the species occupies a broad range of desert habitats. It therefore does not meet thresholds for a threatened category under regional criteria.

- **Distribution:** The Greater Hoopoe-Lark is widely distributed across the Sahara and Arabian deserts, extending to the Red Sea coast, Iraq, Pakistan, and India. **In Jordan**, it is a widespread resident of flat desert habitats, occurring mainly in the interior desert and Wadi Araba, while avoiding rocky areas.

- **Habitats and Ecology:** Occupies hot desert and dry lowland grassland, favouring flat sandy or gravelly plains with sparse vegetation. It feeds on invertebrates (especially beetles, grasshoppers, and termites), small vertebrates, seeds, and green plant material. Breeding success is rainfall-dependent, with strong year-to-year variation in nesting and fledging.

- **Conservation Status:** The species is protected in Jordan under the general provisions of the Agricultural Law No. 13 of 2015 and the Environmental Law No. 6 of 2017. It is partially protected in the nature reserves of the eastern desert.

- **Major Threats:** The species may become threatened in the future by wholesale destruction of desert habitats, primarily due to agricultural expansion (e.g., in Wadi Araba), planned energy projects, new railways, and roads. Moreover, livestock overgrazing is locally degrading habitats (Khoury & Al-Shamlih, 2006; Khoury *et al.*, 2007).



• **Recommended Conservation and Research:** Priority actions include protecting and managing desert habitats from overgrazing, off-road vehicle disturbance, and land degradation, and monitoring populations to detect changes in abundance and distribution. Research should focus on population size and trends.

Pale Crag-Martin

Order: Passeriformes
Family: Hirundinidae
Scientific Name: *Ptyonoprogne obsoleta* (Cabanis, 1850)
Arabic Name:
سنونو الصخر
National Red List Status: LC
Population Trend: Stable
Status in Jordan: Resident

• **Justification:** This species has a large and stable national population, estimated at over 2000 mature individuals, and it is widely distributed. The species shows ecological adaptability, including successful nesting on artificial structures, and has recently expanded its range into additional regions. No evidence indicates significant population decline, severe fragmentation, or threats operating at a scale that would meet regional thresholds for a threatened category.

• **Distribution:** The Pale Crag-Martin is widely distributed across North Africa and the Middle East, extending eastwards to Pakistan. **In Jordan**, it is a resident species, primarily occurring in the country's western regions, where it is most common along the Dead Sea basin, the southern Rift margins, and the Rum Desert. A recent expansion into urbanized areas near Madaba and Amman is evident.

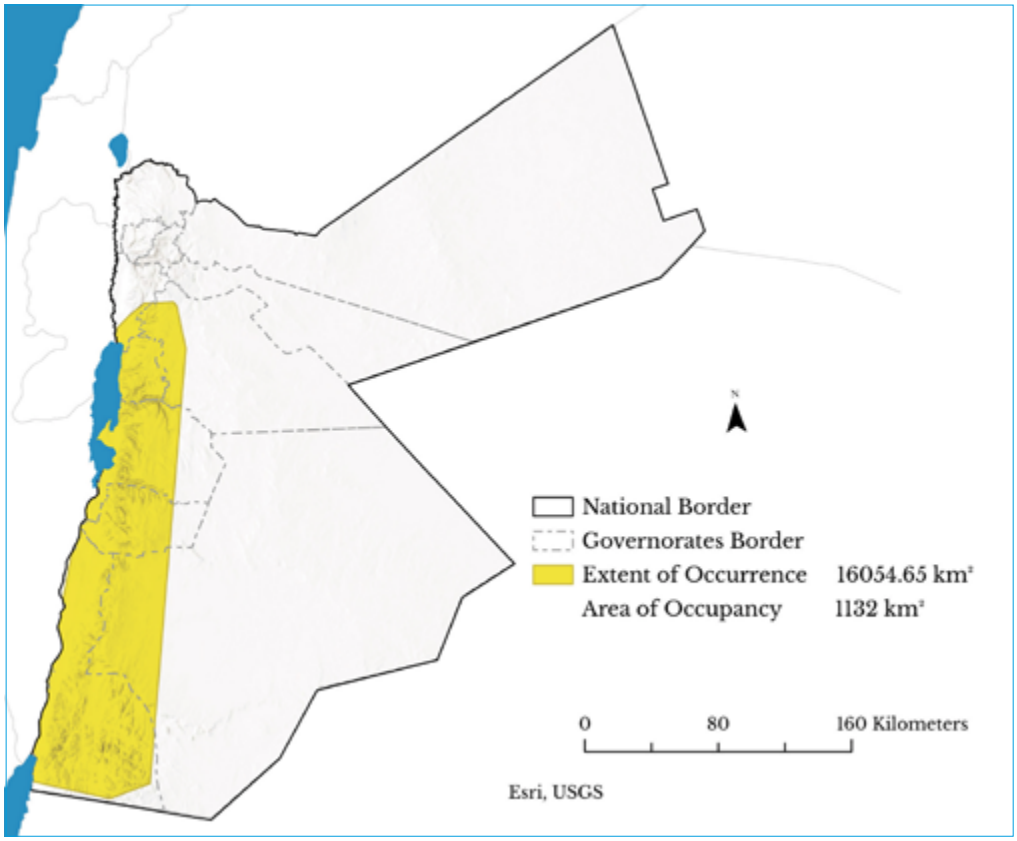
• **Habitats and Ecology:** Occurs in rocky landscapes, wadis, and urban areas, inhabiting cliffs, gorges, and mountainous terrain in arid regions, with recent expansion into rural and urban settings using buildings and bridges for nesting. It feeds on small flying insects, often in large flocks over irrigated fields.

Nests are half-cup structures built by both sexes on rock faces, caves, and man-made structures.

- **Conservation Status:** The species is protected in Jordan under the Agricultural Law No. 13 of 2015 and the Environmental Protection Law No. 6 of 2017, and is covered regionally by the African–Eurasian Migratory Landbirds Action Plan (AEMLAP), which supports habitat conservation and population monitoring.

- **Major Threats:** Local threats include loss of feeding areas and reduced insect prey due to urban expansion, pesticide use, and habitat disturbance from mining and infrastructure development.

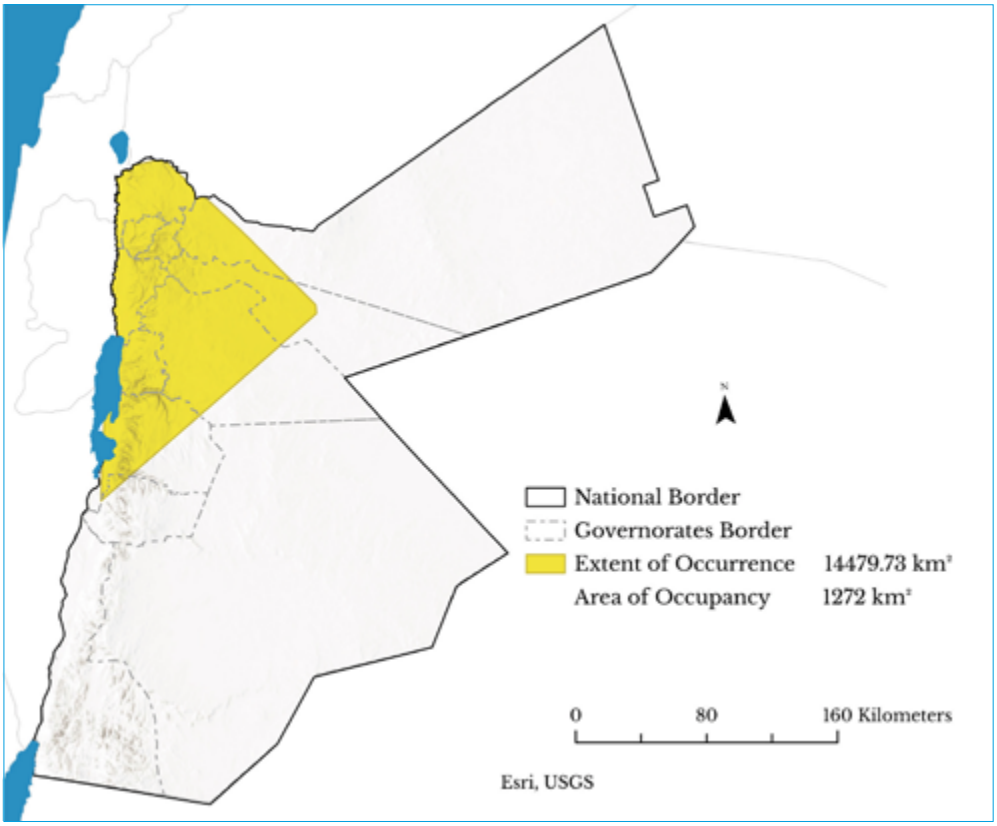
- **Recommended Conservation and Research:** Priority actions include protecting main nesting habitats and reduce pesticide use in agriculture. Research should assess the impacts of disturbance and quarrying on feeding and nesting sites.



Barn Swallow (Levant)

Order: Passeriformes
Family: Hirundinidae
Scientific Name: *Hirundo rustica transitiva* (Hartert, 1910)
Arabic Name:
سنونو شائع
National Red List Status: LC
Population Trend: Increasing
Status in Jordan: Resident, passage migrant

- **Justification:** This species has a large and apparently increasing national population (>2,500 mature individuals), a wide extent of occurrence, and a substantial area of occupancy. The subspecies is very common in the Jordan Valley and the Rift margins and has expanded into rural areas across the Northern Highlands, the Steppes, and the eastern desert regions. There is no evidence of population decline, severe fragmentation, or threats sufficient to trigger a higher risk category at the national level.



• **Distribution:** The Barn Swallow is the world's most widespread swallow, breeding across much of North America and Eurasia and wintering in tropical Africa, southern Asia, northern Australia, and Central and South America. **In Jordan**, the species is an abundant passage migrant. Moreover, the Levantine subspecies is resident in the Jordan Valley, the Northern and Dead Rift margins, and the Northern Highlands and steppes, with recent expansion into Azraq and other settlements in the eastern and central desert, following agricultural development.

• **Habitats and Ecology:** Inhabits open areas and arable land near water and human settlements, nesting on buildings and feeding on flying insects. The Levantine subspecies is mostly resident, breeds mainly from April to August (earlier in the Jordan Valley), and occurs across all bioclimatic regions due to its association with villages and towns.



Barn Swallow (Hirundo rustica transitiva); photo: © Raed Al-Btosh

- **Conservation Status:** Protected in Jordan under the Agricultural Law No. 13 of 2015 and the Environmental Protection Law No. 6 of 2017.

- **Major Threats:** Local threats include habitat loss and degradation from urban expansion and reduced insect availability due to insecticide use in agricultural areas.

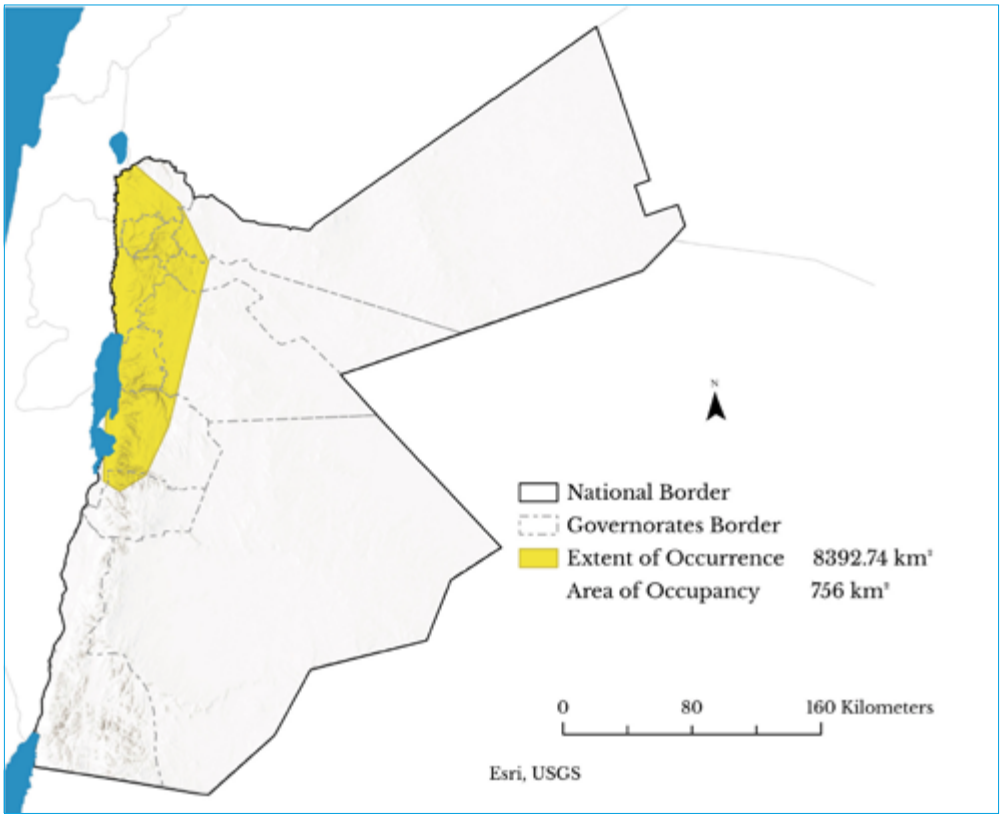
- **Recommended Conservation and Research:** Priority actions include maintaining key foraging habitats, monitoring breeding populations, and reducing impacts from pesticide use. Research should focus on a national survey of nesting sites and population size estimation.*

European Red-rumped Swallow

Order: Passeriformes
Family: Hirundinidae
Scientific Name: *Cecropis rufula* (Temminck, 1835)
Arabic Name:
سنونو احمر عجز
National Red List Status: LC
Population Trend: Stable
Status in Jordan: Summer visitor, passage migrant

- **Justification:** This species has a relatively large national breeding population (>1,000 mature individuals), a moderate extent of occurrence and area of occupancy, and remains locally common across its breeding range in Jordan. There is no evidence of significant range contraction or population decline over recent decades, and current information does not indicate threats operating at a scale sufficient to meet national criteria for a higher risk category.

- **Distribution:** The European Red-rumped Swallow breeds across southern Europe, North Africa, the Middle East, and parts of Asia, and winters in sub-Saharan Africa. **In Jordan**, it is a common passage migrant and summer visitor, breeding mainly in north-western areas along the Northern and Dead Sea Rift margins and the Northern Highlands.



- **Habitats and Ecology:** Occupies a variety of habitats in the Mediterranean and Sudanian zones, including scrubland, shrubby vegetation, permanent streams, rocky areas, and arable land. It inhabits open hilly landscapes, valleys, and small settlements, feeds on flying insects, and builds enclosed mud nests, often on man-made structures, with surface water required near nesting sites.

- **Conservation Status:** The species is protected in Jordan under the Agricultural Law No. 13 of 2015 and the Environmental Protection Law No. 6 of 2017, and is covered by the African–Eurasian Migratory Landbirds Action Plan (AEMLAP), which supports habitat conservation and population monitoring.

- **Major Threats:** The species is affected by habitat loss and modification resulting from residential and tourism development, agro-industrial farming, and water management projects, including surface-water abstraction. Additional pressures include pollution from agricultural effluents and the use of herbicides and pesticides, which reduce food availability and degrade breeding habitats.

- **Recommended Conservation and Research:** Recommended actions include managing disturbance at breeding colonies and reducing excessive insecticide use. Research priorities include monitoring population trends, assessing habitat and nesting resource availability, and tracking emerging threats.

Western House Martin

Order: Passeriformes
Family: Hirundinidae
Scientific Name: *Delichon urbicum* (Linnaeus, 1758)
Arabic Name:
سنونو أبيض البطن
National Red List Status: DD
Population Trend: Unknown
Status in Jordan: Summer visitor, passage migrant

- **Justification:** The Western House Martin has a poorly known national population size and trend, with estimates suggesting it may be ≤1,000 mature individuals, but these estimates are highly uncertain. Although its extent of occurrence and area of occupancy are relatively small, the lack of robust data on abundance, population dynamics, and threats prevents a reliable assessment against national Red List criteria.

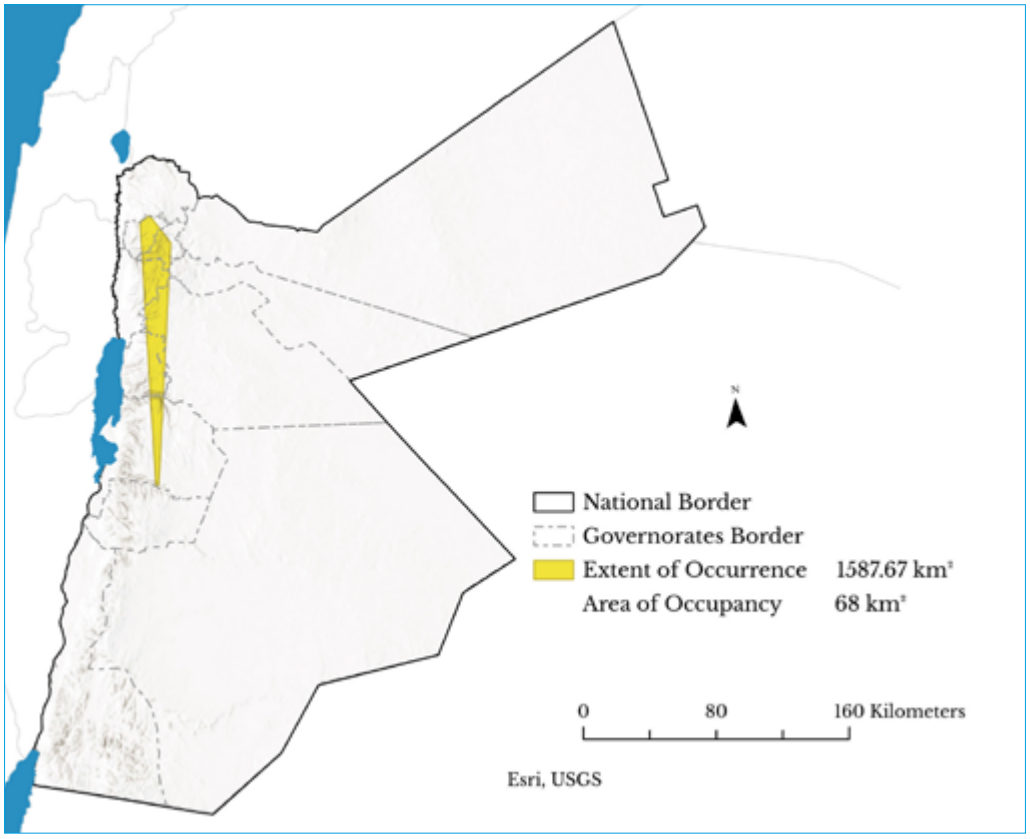
- **Distribution:** The Western House Martin breeds across Europe and Asia and winters in Africa and southwestern Asia. **In Jordan**, it is a relatively common passage migrant and a localized summer visitor, breeding mainly at higher elevations along the Northern and Dead Sea Rift margins and in the Northern Highlands.

- **Habitats and Ecology:** Occurs in Mediterranean-type shrubby vegetation, permanent rivers and streams, arable land, and urban areas. It inhabits open landscapes, valleys, cliffs, and human settlements, feeding on aerial insects. The species breeds colonially, building mud nests on buildings or rock faces, mainly within the Mediterranean biogeographical zone.

- **Conservation Status:** Protected in Jordan under the Agricultural Law No. 13 of 2015 and the Environmental Protection Law No. 6 of 2017, and internationally listed under CMS Appendix II and AEWA as a migratory species.

- **Major Threats:** The species is affected by habitat loss and degradation driven by urban development, agro-industrial farming, and water management projects, including surface-water abstraction, and reduced prey availability resulting from herbicide and pesticide use.

- **Recommended Conservation and Research:** Priority actions include monitoring populations to detect declines and reducing pesticide use to maintain the availability of insect prey. Research should focus on a national baseline survey, population size estimation, distribution, and threat assessment.



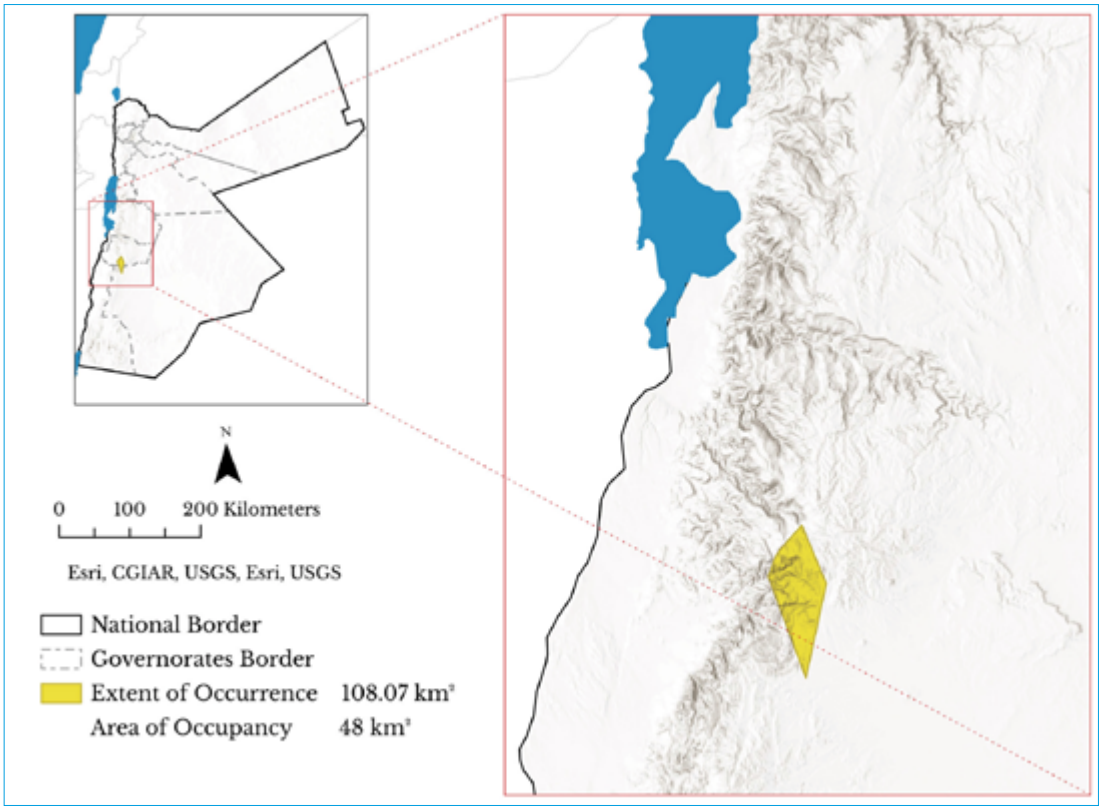
Tawny Pipit

Order: Passeriformes
Family: Motacillidae
Scientific Name: *Anthus campestris* (Linnaeus, 1758)
Arabic Name:
جشنة صماء
National Red List Status: CR B1ab(i,ii,iii); D1
Population Trend: Decreasing
Status in Jordan: Summer visitor, winter visitor, passage migrant

- **Justification:** This species has an extremely small and highly localized breeding population in Jordan, estimated at ≤50 mature individuals, confined to a single location. Breeding occurrences are limited to specific semi-arid, west-facing mountain slopes in the southern Highlands. The Extent of Occurrence is extremely small, and the breeding habitat is undergoing a continuing decline in (i) extent of occurrence, (ii) area of occupancy, and (iii) habitat quality due to overgrazing, prolonged drought, and infrastructure development associated with wind-energy projects. The very small population size alone meets Criterion D1, indicating an extremely high risk of national extinction.

- **Distribution:** The Tawny Pipit breeds across Europe, north-western Africa, and parts of Asia, and winters in sub-Saharan Africa, Arabia, and south-western Asia. **In Jordan**, it occurs as a passage migrant and winter visitor, with confirmed breeding restricted to the southern Highlands.

- **Habitats and Ecology:** Inhabits open, dry steppe and Mediterranean-type shrubby vegetation, feeding mainly on insects. In Jordan, breeding is restricted to highland steppe habitats of the Sharah Highlands south of Tafila, on gentle west-facing slopes above 1,000 m a.s.l., where ground nests are built, and the breeding season extends from March to July (Khoury, 1998c).



- **Conservation Status:** Protected in Jordan under the Agricultural Law No. 13 of 2015 and the Environmental Protection Law No. 6 of 2017.

- **Major Threats:** The species is threatened by the loss and degradation of its highly restricted breeding habitat in south-western Jordan, driven by urban expansion, agricultural intensification, and overgrazing, which impoverish steppe vegetation (Khoury, 1998c). Additional pressures include wind-energy infrastructure development and prolonged droughts, which further reduce habitat quality and breeding suitability.

- **Recommended Conservation and Research:** Priority actions include maintaining open steppe and grassland mosaics, managing grazing pressure and land-use change, and raising local awareness as part of a single or multi-species plan to protect and restore steppe habitats. Research should focus on confirming population size and breeding distribution, assessing threats.

Long-billed Pipit

Order: Passeriformes
Family: Motacillidae
Scientific Name: *Anthus similis* (Jerdon, 1840)
Arabic Name:
جشنة طويلة المنقار
National Red List Status: LC
Population Trend: Stable (Locally Declining in some Localities)
Status in Jordan: Resident

- **Justification:** The species is locally common in Jordan (notably along the Northern Rift Margins) and the national population is likely >1,000 mature individuals, with an overall stable trend despite localized declines linked to habitat loss from urban expansion and agriculture. Based on the information provided, no demonstrated reduction meets threatened thresholds, and the criteria, which depend on a very small population size, are not met.

• **Distribution:** The Long-billed Pipit has a wide distribution across Africa, the Middle East, and parts of Asia, comprising approximately fifteen recognized subspecies that vary in morphology. **In Jordan**, it occurs primarily along the higher Rift margins and adjacent highlands, extending from the Yarmouk River in the north to Wadi Musa in the south. During winter, part of the population descends to lower elevations along the Rift margins, reflecting seasonal, altitudinal movements linked to climatic conditions.

• **Habitats and Ecology:** The Long-billed Pipit occupies stony and rocky hillsides with dwarf shrubs and sparse ground cover, mainly in temperate shrubland, Mediterranean-type shrubby vegetation, and inland rocky habitats (Khoury 1998a, 1998c). In Jordan, it breeds from March to July on rocky slopes mainly along higher margins of the Rift, with some individuals moving to lower, warmer areas in winter.

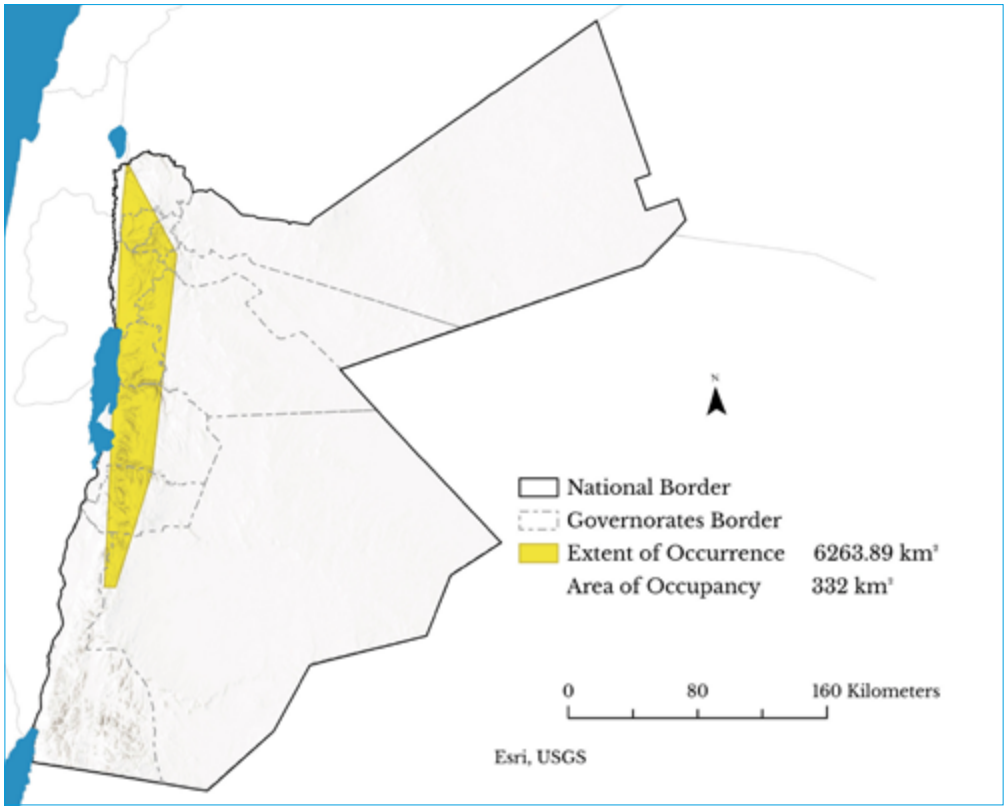
• **Conservation Status:** Protected in Jordan under the Agricultural Law No. 13 of 2015 and the Environmental Protection Law No. 6 of 2017.

• **Major Threats:** The Long-billed Pipit is primarily threatened by habitat loss and degradation, driven by urbanization and housing expansion, particularly in upland and peri-urban areas. Agricultural expansion, including cultivation of annual and perennial crops and small-holder grazing, contributes to the degradation and fragmentation of rocky shrubland habitats. Additional pressures arise from renewable energy developments (notably wind-energy installations) and associated infrastructure, as well as road construction and upgrading, which further fragment breeding habitats and increase disturbance.



Long-billed Pipit (Anthus similis); photo: © Fares Khoury

• **Recommended Conservation and Research:** Priority actions include protecting rocky and open shrubland habitats, monitoring their degradation from overgrazing and urban expansion, and conducting research to clarify population size, distribution, trends, and key threats in Jordan.



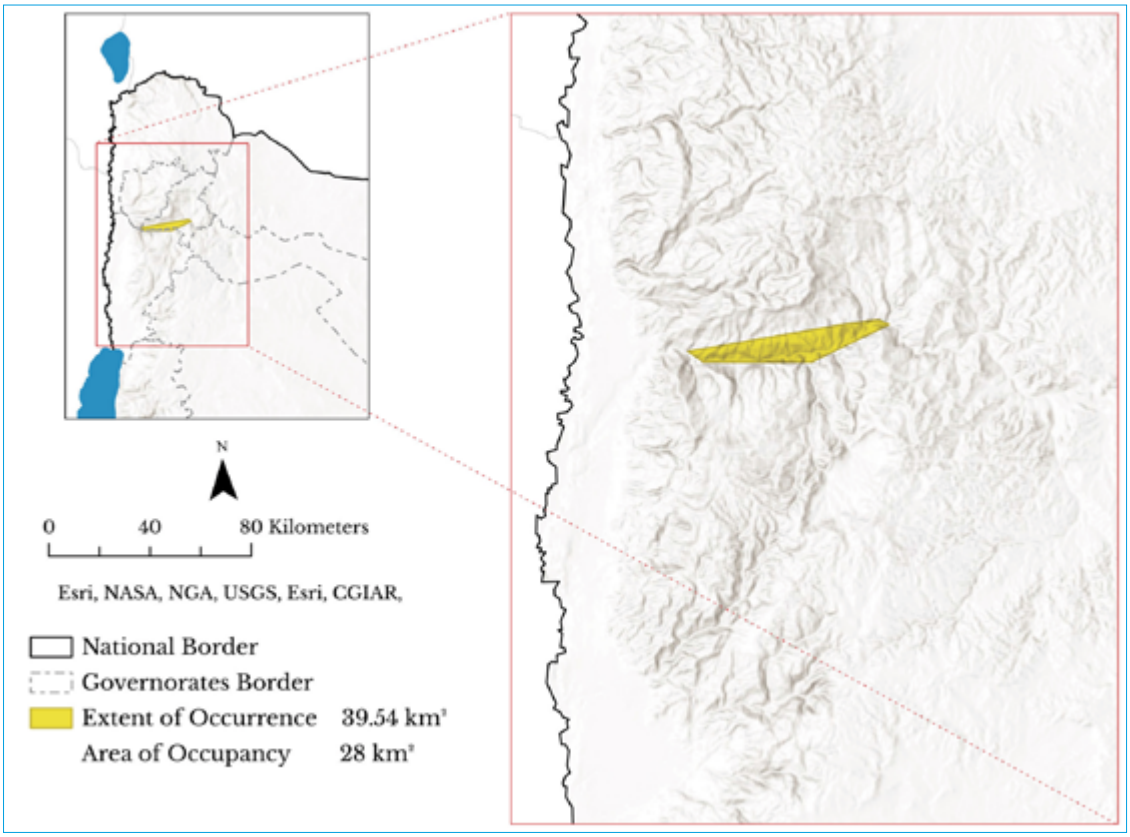
White Wagtail

Order: Passeriformes
Family: Motacillidae
Scientific Name: *Motacilla alba* (Linnaeus, 1758)
Arabic Name:
ذعرة بيضاء
National Red List Status: EN° D1
Population Trend: Unknown
Status in Jordan: Resident, winter visitor, passage migrant

• **Justification:** The Jordanian breeding population is very small, estimated at ≤100 mature individuals, and is highly localized at the southern edge of the species' breeding range. This population size would meet the threshold for Critically Endangered under criterion D1 at the preliminary national stage. However, the species breeds widely across the Levant, and immigration into Jordan is plausible, providing a partial rescue effect that reduces the immediate risk of national extinction. Although a future decline is suspected due to habitat loss from agricultural intensification and pesticide use, population trends are not yet sufficiently quantified to apply criteria based on measured or projected declines. Taking the likely rescue effect into account, the species is therefore assessed as Endangered under criterion D1 at the national level.

• **Distribution:** The White Wagtail breeds widely across the Palearctic and winters across southern Europe, Asia, Africa, and the Middle East. **In Jordan**, it is a very common winter visitor. A small, probably resident breeding population occurs at Wadi Zarqa, where breeding was confirmed in 2025.

• **Habitats and Ecology:** During the breeding season in Jordan, the White Wagtail occupies permanent rivers, streams, and arable land, mainly within the Mediterranean biogeographical zone. It uses a wide range of wet and dry habitats, feeds on diverse invertebrates, and breeds during spring to mid-summer. Nesting occurs in crevices along stream banks. In winter, birds forage in agricultural and artificial habitats and along wetland margins, with communal roosting often documented in rural and urban areas.



- **Conservation Status:** The White Wagtail occurs within several protected areas in Jordan, including Azraq, Burqu, Dana, and Wadi Rum, which provide key wintering habitats and locally support its small breeding population.

- **Major Threats:** The White Wagtail is threatened by habitat loss and modification caused by water abstraction and damming, as well as by agricultural intensification. Additional pressures include pesticide use, which negatively affects food availability and bird health.

- **Recommended Conservation and Research:** Conservation actions should focus on protecting and restoring key wetland sites including streams. Priority research gaps include documenting national population and habitat trends and improving estimates of breeding populations.

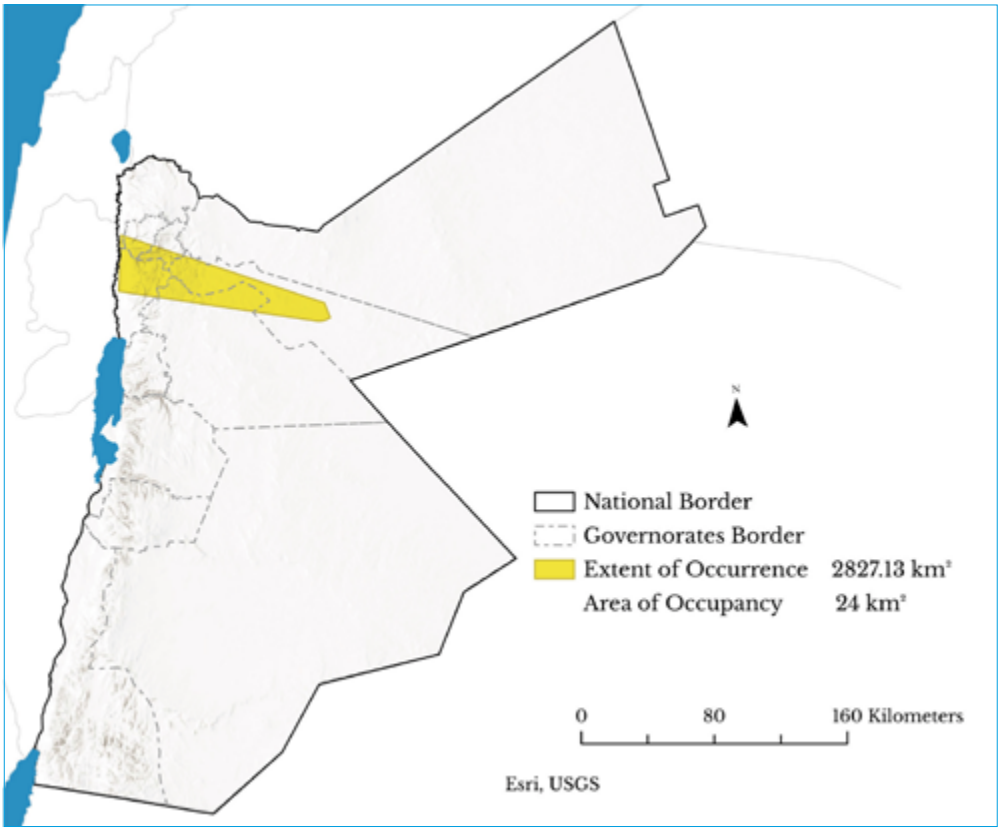


White Wagtail (Motacilla alba); photo: © Ammar Al-Omari

Western Yellow Wagtail

Order: Passeriformes
Family: Motacillidae
Scientific Name: *Motacilla flava* (Linnaeus, 1758)
Arabic Name:
ذعرة صفراء
National Red List Status: VU° B2ab(iii)
Population Trend: Decreasing
Status in Jordan: Summer visitor, passage migrant

- **Justification:** This species has a very small, highly localized breeding population in Jordan, restricted to the Azraq Wetland and the Jordan Valley. Fewer than 250 mature individuals occur at fewer than five locations, with a very limited Area of Occupancy (24 km^2) and a restricted Extent of Occurrence (2,870 km^2). Habitat quality continues to decline due to water scarcity and land-use change, and breeding success is highly sensitive to hydrological conditions, with frequent failures in dry years, particularly at Azraq. These factors meet the conditions for Endangered under criterion B2ab(iii) at the national level. However, the species breeds in neighboring Levantine countries, and immigration into Jordan is plausible, providing partial demographic support and reducing extinction risk at the national scale.



• **Distribution:** The Western Yellow Wagtail has a wide Palearctic breeding range, with multiple subspecies wintering in Africa and South Asia. **In Jordan**, it is a common passage migrant involving several subspecies. Wintering has been recorded at least once near Al-Karama Dam. The black-headed subspecies *feldegg* is a rare summer visitor and local breeder, occurring in irrigated fields of the northern Jordan Valley and at Azraq during years when the mudflat is flooded.

• **Habitats and Ecology:** In Jordan, the Western Yellow Wagtail breeds in moist grasslands and fields, in various bioclimatic zones. It feeds on terrestrial and aquatic invertebrates and nests on the ground. Breeding is limited to a few sites in the Jordan Valley and the Azraq Wetland Reserve. At the same time, passage migrants are more widespread, stopping over mainly at fields and other sites with low vegetation and surface water during the migration seasons (Khoury, 1996).

• **Conservation Status:** The Western Yellow Wagtail is listed under CMS Appendix II and is covered by AEWA. It is protected under Jordan's Environment Protection Law No. 6 (2017), which occurs within several protected areas.

• **Major Threats:** The Western Yellow Wagtail is primarily threatened by habitat loss and degradation caused by agricultural intensification in the Jordan Valley, including agro-industrial farming, excessive pesticide use, and invasive mesquite. These impacts are compounded by surface and groundwater abstraction and drought, which reduce wetland and breeding habitats, as well as broader habitat modification and human disturbance. Additional pressure from illegal capture and trade is indicated by the species being recorded at the Friday Animal Markets (Eid *et al.*, 2010).

• **Recommended Conservation and Research:** Priority actions include protecting and restoring wetlands and natural hydrological processes; controlling invasive plants such as *Prosopis juliflora*; protecting key breeding sites; raising awareness; and implementing regular population monitoring. Research should focus on seasonal surveys during migration and breeding, and habitat condition assessments at priority sites.

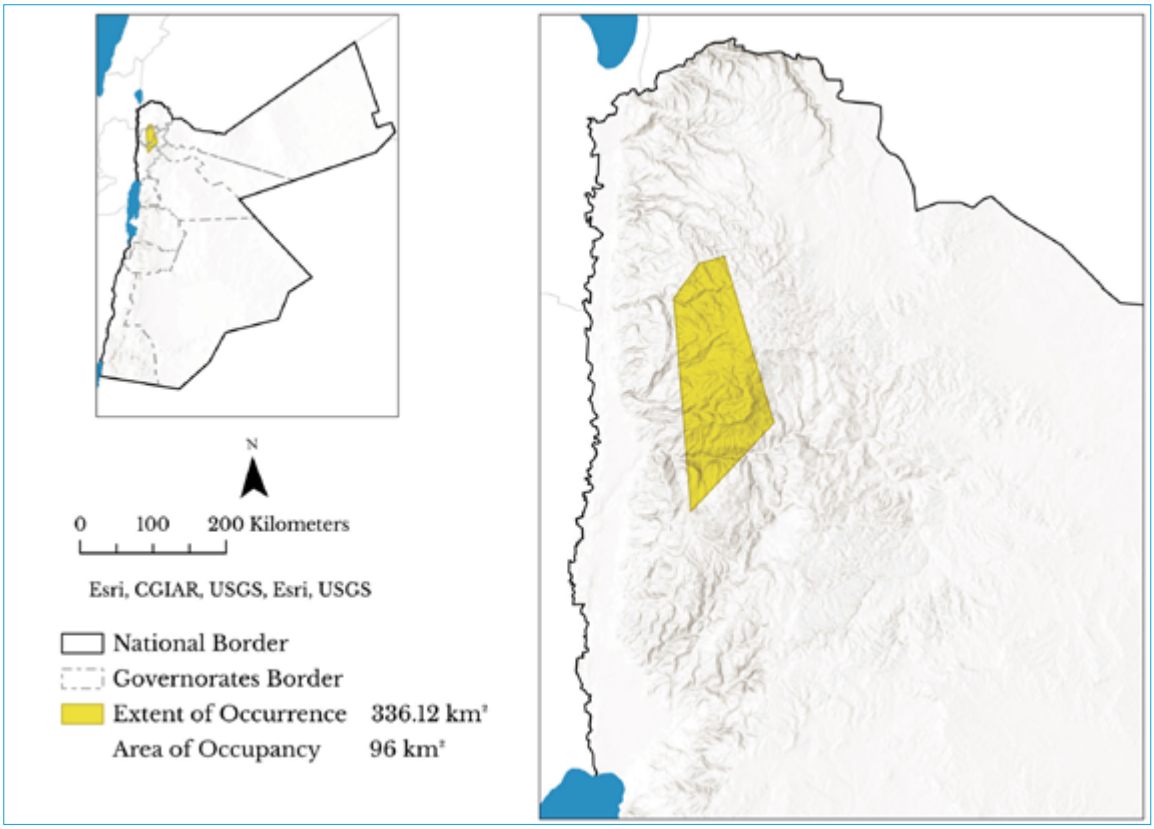
Eurasian Wren

Order: Passeriformes
Family: Troglodytidae
Scientific Name: *Troglodytes troglodytes* (Linnaeus, 1758)
Arabic Name:
ذعرة الكهوف
National Red List Status: VU B1ab(iii)+2ab(iii)
Population Trend: Decreasing
Status in Jordan: Resident

- **Justification:** This species has a restricted national distribution in northern Jordan, confined to dense Mediterranean shrubland and mixed pine–oak forests. Its Extent of Occurrence and Area of Occupancy are limited, its habitat is fragmented, and breeding occurs in very few locations (<5). Although the national population is estimated at 1,000–2,000 mature individuals, a continuing decline in habitat extent and quality is inferred due to ongoing woodland degradation, with a projected reduction of at least 30% in the coming decades. While the species breeds in neighboring Levantine countries, the fragmented nature of suitable habitat in Jordan suggests that immigration is unlikely to provide sufficient demographic support to offset national-level declines.

- **Distribution:** The Eurasian Wren has a wide distribution across Europe, North Africa, and parts of Asia, with numerous subspecies. **In Jordan**, it is a resident species with a restricted range, confined to dense Mediterranean-type woodlands of the Northern Highlands, mainly in the Ajlun Mountains, and, locally, southward along the high Rift margins in Al-Balqa' (Dibbeen - Zai).

- **Habitats and Ecology:** In Jordan, the Eurasian Wren inhabits temperate forests and Mediterranean-type shrubby vegetation within the Mediterranean biogeographical zone. It requires humid or sub-humid climates, and dense vegetation for nesting and foraging, and feeds mainly on invertebrates. In Jordan, the species is locally common in dense oak woodlands receiving over 400 mm of annual rainfall.



- **Conservation Status:** The Eurasian Wren is a resident species in the Dibeen and Ajloun Nature Reserves, where suitable woodland habitats provide local protection.

- **Major Threats:** The Eurasian Wren is threatened primarily by habitat loss and degradation of Mediterranean woodlands resulting from logging, urban and tourism development, agricultural expansion, and road construction. Additional pressures include grazing, human disturbance from recreational activities, and climate change–driven droughts, which reduce habitat quality and moisture levels essential for the species.

- **Recommended Conservation and Research:** Priority actions include management and restoration of Mediterranean-type woodland habitats in the Northern Highlands and Rift Margins, including the maintenance of dense understory vegetation, which is essential for the species. Awareness and technical training for forestry and reserve staff are needed to safeguard key microhabitats. Research should focus on monitoring population trends and changes in habitat extent and quality.

Eurasian Blackbird

Order: Passeriformes
Family: Turdidae
Scientific Name: *Turdus merula* (Linnaeus, 1758)
Arabic Name:
الشحرور
National Red List Status: LC
Population Trend: Stable
Status in Jordan: Resident, winter visitor

- **Justification:** This species is widespread and common in north-western Jordan and locally common farther south. It has a large Extent of Occurrence and Area of Occupancy, a stable population trend, and has expanded into new areas as agriculture has spread into arid regions. There is no evidence of significant population decline, severe fragmentation, or major threats at the national level.

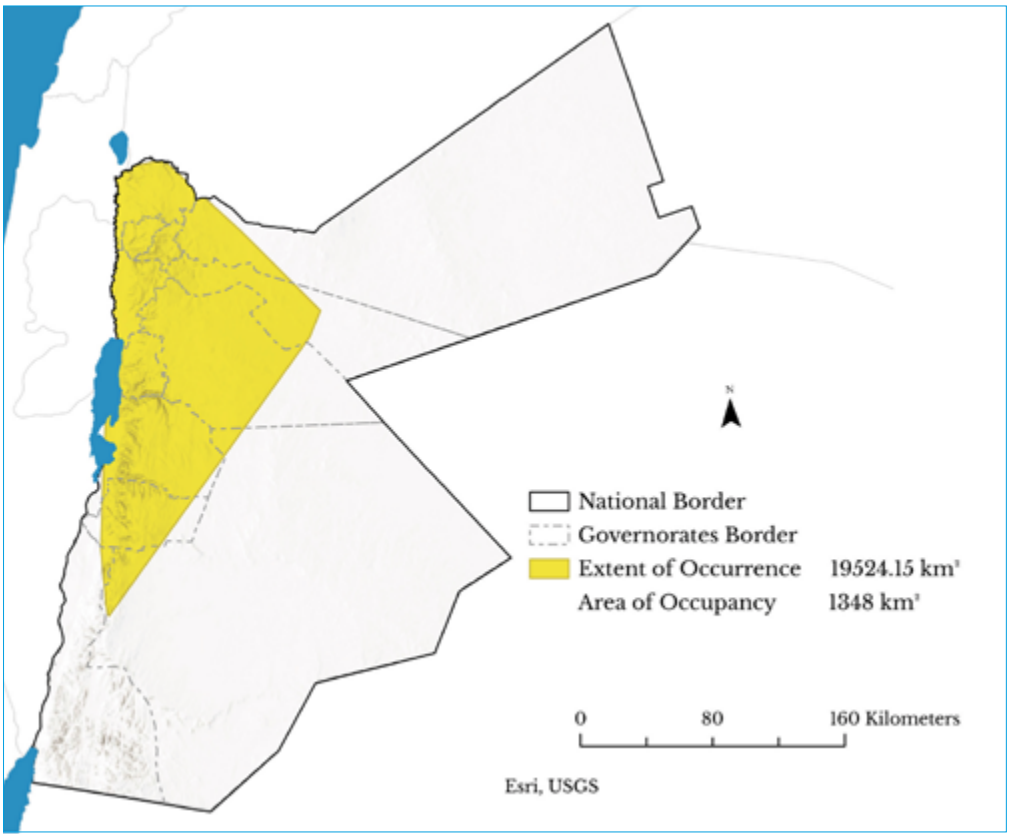
- **Distribution:** The Eurasian Blackbird has a wide native distribution across Europe and parts of Asia and has been introduced to Australia, New Zealand, and nearby islands. **In Jordan**, it is a common resident of the Jordan Valley, northern Rift margins, steppes, and highlands, becoming more localized in southwestern regions. It has also colonized irrigated agricultural areas in arid zones, including Zarqa, Mafraq, and Azraq.

- **Habitats and Ecology:** In Jordan, the Eurasian Blackbird occupies a wide range of habitats, including temperate forests, Mediterranean and dry shrublands, arable land, plantations, rural gardens, and urban areas. It feeds on invertebrates and fruits as available, and breeds from late winter to early summer, nesting in trees, shrubs, or low structures where vegetation cover is sufficient.

- **Conservation Status:** The Eurasian Blackbird is protected under the general provisions of the Agricultural Law No. 13 (2015) and the Environmental Law No. 6 (2017), which provide broad legal protection for wildlife and their habitats in Jordan.

- **Major Threats:** The Eurasian Blackbird faces localized habitat loss and degradation, primarily due to logging and agro-industrial farming. The use of herbicides and pesticides in agricultural areas further affects habitat quality and food availability.

- **Recommended Conservation and Research:** Key actions include protecting and managing woodland habitats, monitoring populations to detect trends and habitat changes, and limiting habitat loss from urban expansion and agricultural intensification. Research should focus on population size, distribution, and long-term trends.



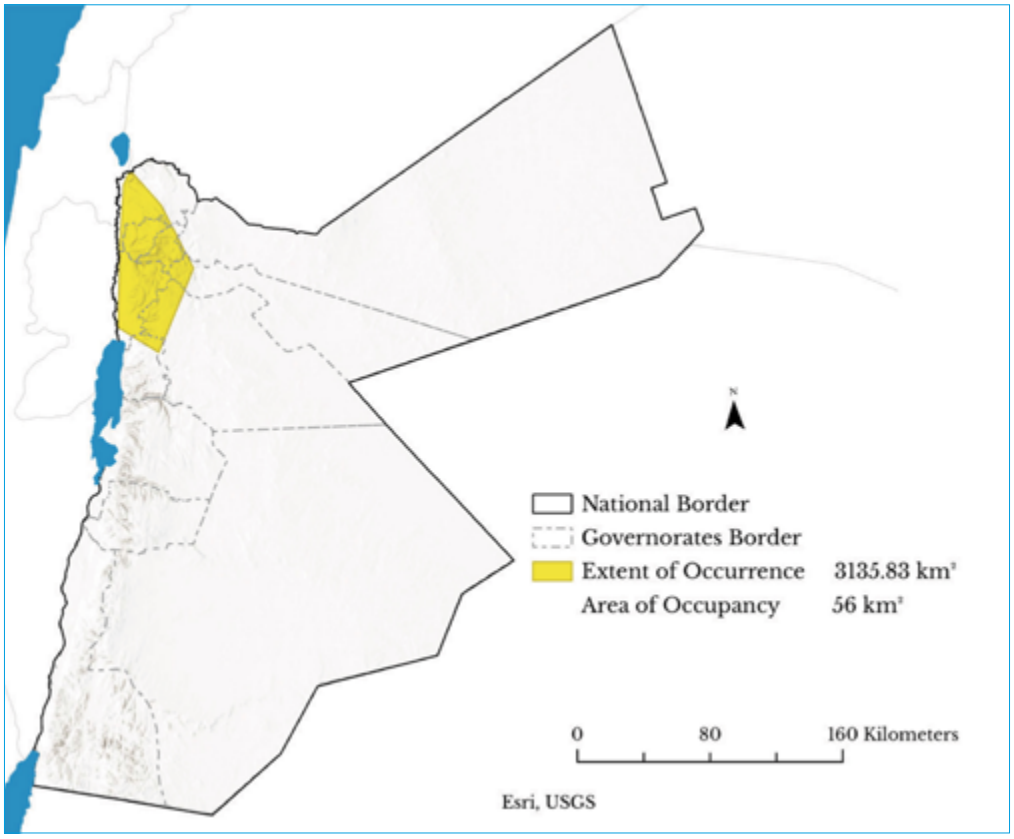
Zitting Cisticola

Order: Passeriformes
Family: Cisticolidae
Scientific Name: *Cisticola juncidis* (Rafinesque, 1810)
Arabic Name:
نمنمة مخططة
National Red List Status: DD
Population Trend: Unknown
Status in Jordan: Resident

- **Justification:** The species has a poorly known national breeding status, with only scarce and localized breeding records in Jordan. The species depends on agricultural habitats and open fields undergoing ongoing modification; the magnitude and direction of any population change cannot be assessed with the available data. The absence of robust information on the exact distribution, abundance, trends, and impacts of threats prevents evaluation against threatened category thresholds.

- **Distribution:** The Zitting Cisticola has a wide global distribution across Europe, Africa, Asia, and Australia, with numerous subspecies showing regional variation. **In Jordan**, it has a patchy, localized distribution in the northwestern parts of the country, with singing birds recorded in agricultural fields, mainly in the Jordan Valley and along Wadi Zarqa, with sporadic records at Madaba and elsewhere.

- **Habitats and Ecology:** This species inhabits arable land within the Mediterranean biogeographical zone, occurring in open grasslands and cultivated croplands where it forages on insects and other invertebrates. In Jordan, it breeds only in moist agricultural fields, as its natural habitats have largely disappeared. Breeding activity varies seasonally, with males constructing characteristic pear-shaped nests in low vegetation. The species is resident but exhibits local movements linked to seasonal and annual changes in habitat suitability, resulting in local elusiveness.



- **Conservation Status:** The species is listed in Appendix II of the Convention on the Conservation of Migratory Species of Wild Animals (CMS/ Bonn Convention), thereby supporting international cooperation in its conservation.

- **Major Threats:** Habitat modification and instability in agricultural landscapes, driven by shifting agriculture and agro-industrial farming practices, alter vegetation structure and moisture conditions required for breeding. Additional pressures include human disturbance from farming activities, impacts of invasive or problematic species, and pollution from herbicides and pesticides, which may reduce the availability of invertebrate prey.

- **Recommended Conservation and Research:** Priority actions include restoring suitable habitats and natural processes, strengthening compliance with existing wildlife protection laws, and engaging local communities through awareness and education campaigns to reduce threats. Further research is needed on population size, distribution, ecology, and trends, as well as habitat trends.

Graceful Prinia

Order: Passeriformes
Family: Cisticolidae
Scientific Name: *Prinia gracilis* (Lichtenstein, 1823)
Arabic Name:
فصية رشيقة
National Red List Status: LC
Population Trend: Stable
Status in Jordan: Resident

- **Justification:** This species is common and widespread in Jordan, with a large population (>5,000 mature individuals), extensive EOO and AOO, and a stable trend. It benefits from agricultural development in arid areas and shows no evidence of decline; thus, it qualifies as Least Concern (LC).

• **Distribution:** The Graceful Prinia is widely distributed across the Middle East, the western and southern Arabian Peninsula, and northeastern Africa. **In Jordan**, it is a resident species occurring from the Yarmuk Valley south to Aqaba and at Azraq. This species is locally very common and has expanded into arid areas of central Jordan following the spread of irrigation.

• **Habitats and Ecology:** The Graceful Prinia occupies a wide range of arid and semi-arid habitats with dense vegetation, including dry shrubland, grasslands, marshes, springs, oases, and irrigated landscapes such as arable land, gardens, canals, and wetlands. It feeds mainly on insects and some plant material and breeds solitarily, constructing nests in tall grass, reeds, or low trees.

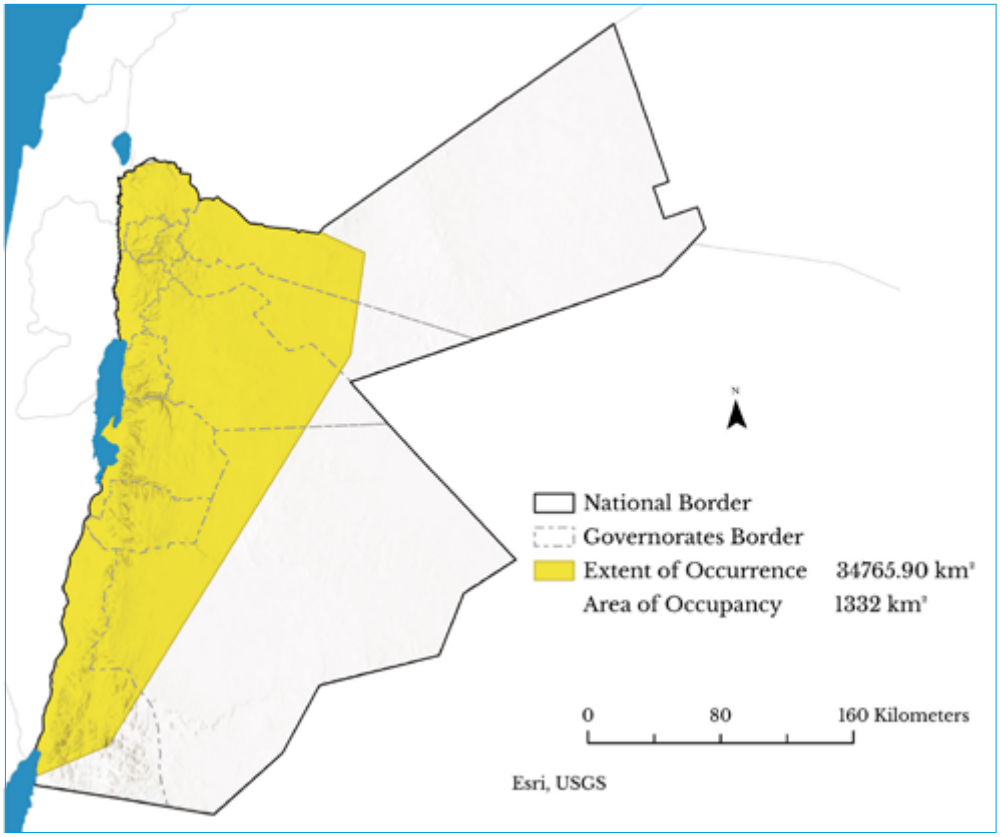
• **Conservation Status:** The species is protected under the general provisions of the Agricultural Law No. 13 (2015) and the Environmental Law No. 6 (2017).

• **Major Threats:** Loss of natural habitats due to housing and urban development, and surface water abstraction for agricultural use. Although the species is well adapted to farmland, the use of herbicides and pesticides may locally reduce habitat quality and food availability.



Graceful Prinia (Prinia gracilis)
photo: © Raed Al-Btosh

• **Recommended Conservation and Research:** Priority actions include conserving and managing shrubland, grassland, and agricultural-edge habitats, and reducing pesticide use.



Streaked Scrub Warbler

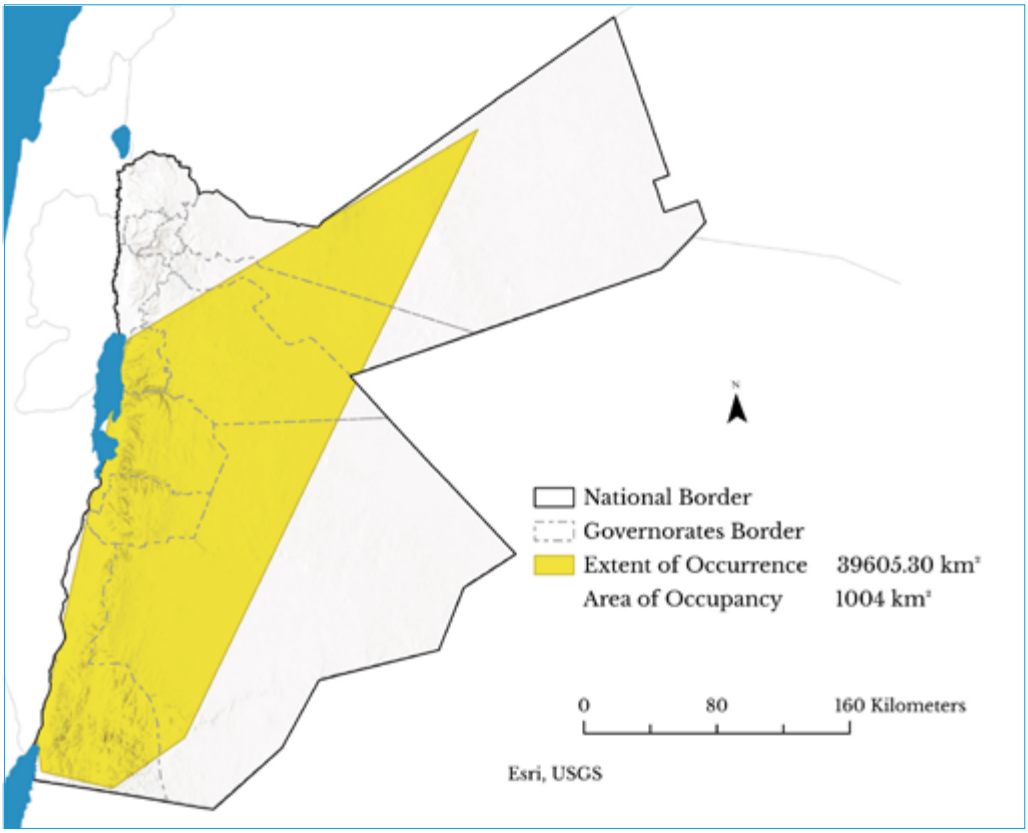
Order: Passeriformes
Family: Cettiidae
Scientific Name: *Scotocerca inquieta* (Cretzschmar, 1830)
Arabic Name:
دخلة شجيرية
National Red List Status: LC
Population Trend: Stable
Status in Jordan: Resident

- **Justification:** This species has a wide distribution in Jordan, with large EOO and AOO, and a population estimated to exceed 1,000 mature individuals. It remains locally common in dense desert scrub despite localized habitat degradation, and there is no evidence of a national-scale decline, supporting a Least Concern assessment.

- **Distribution:** The species has a wide distribution across North Africa, the Middle East, and parts of Central Asia. **In Jordan**, it is widespread, but in the east, it is patchily distributed. It is a resident of the arid scrub habitats along the Dead Sea and Southern Rift Margins, the Desert of central and eastern Jordan, the Southern Highlands, Wadi Araba, Wadi Rum, and the Aqaba Mountains.



Streaked Scrub Warbler (Scotocerca inquieta); photo: © Raed Al-Btosh



• **Habitats and Ecology:** The Streaked Scrub Warbler inhabits arid habitats, often on mountain slopes and in rocky areas with scrub and steppe-like vegetation, mainly within the Saharo-Arabian biogeographical zone, but also occurring in all other bioclimatic zones in Jordan (Khoury 1996, 1998a, Al-Shamlih *et al.* 2005). It feeds primarily on insects and seeds and breeds in low scrub, constructing dome-shaped nests. The species is resident and territorial, with small family groups often observed during and after the breeding season.

• **Conservation Status:** The species is protected under the general provisions of the Agricultural Law No. 13 (2015) and the Environmental Law No. 6 (2017).

• **Major Threats:** Habitat degradation and loss are driven mainly by small-holder agriculture and livestock grazing, particularly nomadic grazing, which reduces vegetation cover in arid scrub habitats. Additional pressure arises from road construction and off-road driving within desert and steppe areas (Khoury & Al-Shamlih, 2006; Khoury *et al.*, 2007).

• **Recommended Conservation and Research:** Priority actions include regular population monitoring to detect temporal changes and maintaining and protecting desert and semi-desert shrub habitats from degradation and overgrazing. Further research is needed on population size estimates and exact distribution, particularly in eastern Jordan, as well as on population and habitat trends.

Common Whitethroat

Order: Passeriformes
Family: Sylviidae
Scientific Name: *Curruca communis* (Latham, 1787)
Arabic Name:
دخلة شائعة
National Red List Status: VU° A3c
Population Trend: Decreasing
Status in Jordan: Summer visitor, passage migrant

• **Justification:** A substantial future population reduction (≥50%) is suspected, driven by ongoing and projected declines in the extent and quality of breeding habitat resulting from agricultural expansion, quarrying, urbanization, and increasing drought. The species has a restricted Area of Occupancy (c. 200 km^2) and a small national breeding range, largely outside protected areas, leaving much of the population exposed to various threats. Although the projected decline could justify a higher risk category at the national stage, breeding populations in neighboring Levantine countries make immigration into Jordan plausible, providing demographic support that reduces national extinction risk.



Common Whitethroat (Curruca communis)
photo: © Ammar Al-Omari

• **Distribution:** The Common Whitethroat has a wide distribution across Europe, parts of Asia, and North Africa, and winters in Africa. **In Jordan**, it is a fairly common passage migrant recorded in many areas during migration, and a localized summer visitor breeding along the northern Rift margins from the Yarmuk Valley south to Wadi Hisban.

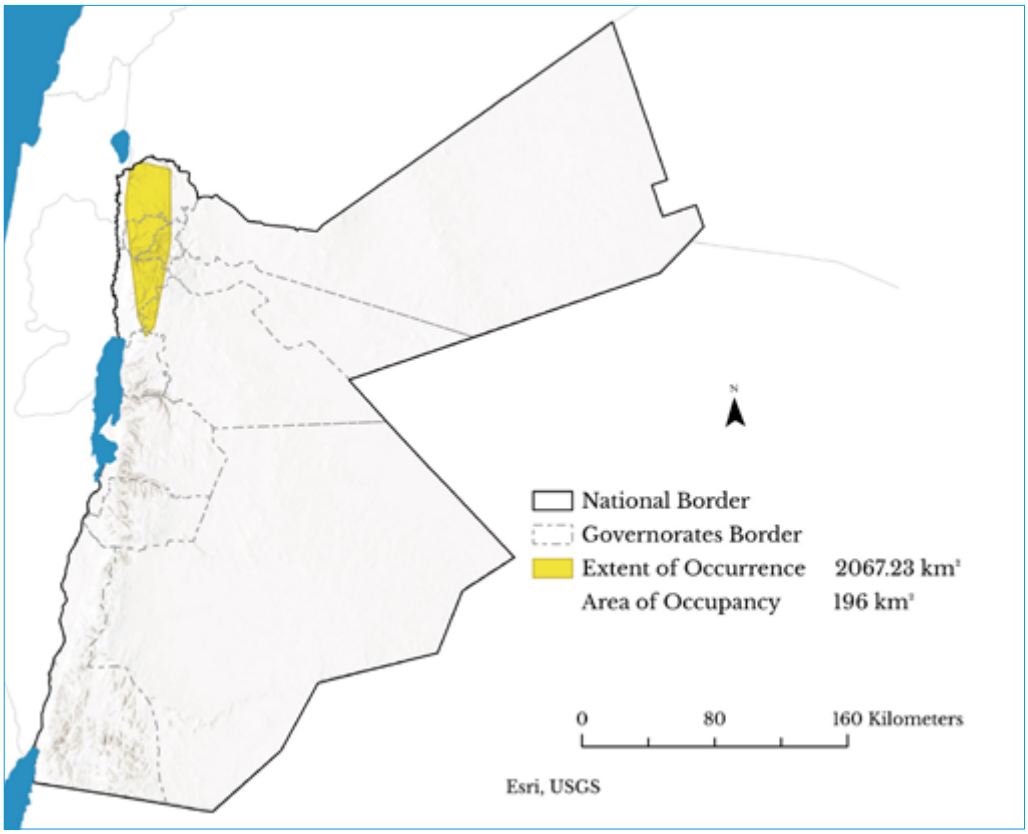
• **Habitats and Ecology:** The Common Whitethroat inhabits open areas with scattered shrubs and low vegetation, including dry shrubland, Mediterranean-type scrub, grasslands, and arable land. In Jordan, it favors open fields with herbaceous cover and scattered Ziziphus and other shrubs. It feeds mainly on insects and berries. Breeding occurs

from late February to May; nests are cup-shaped and placed in low vegetation. Breeding pairs occur along the Rift margins at elevations from -140 to 500 m a.s.l. within the Mediterranean–Sudanian bioclimatic zones.

- **Conservation Status:** The species is listed under the Convention on the Conservation of Migratory Species of Wild Animals (CMS) Appendix II and the Agreement on the Conservation of African-Eurasian Migratory Waterbirds (AEWA), which support international cooperation for its conservation as a migratory species.

- **Major Threats:** Habitat loss and degradation are caused by urban development, smallholder farming and grazing, and the use of herbicides and pesticides in agricultural areas. Increasing drought frequency further reduces habitat quality and food availability within the breeding range.

- **Recommended Conservation and Research:** Priority actions include protecting and managing shrubland-grassland mosaic habitats and reducing pressures from overgrazing and habitat conversion. Further research is needed to clarify population size, distribution, and past trends; to improve understanding of life history and ecology; to assess threats; and to identify appropriate conservation actions.

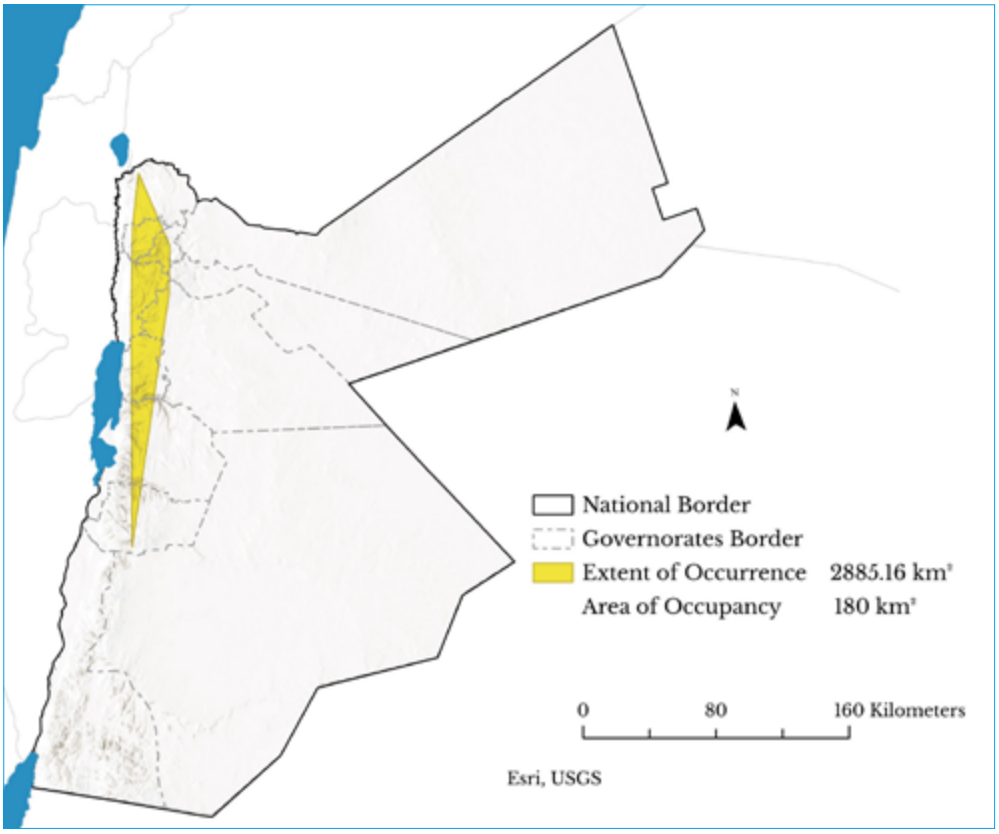


Lesser Whitethroat

Order: Passeriformes
Family: Sylviidae
Scientific Name: *Curruca curruca* (Linnaeus, 1758)
Arabic Name:
دخلة ثرثارة
National Red List Status: NT° B2ab(iii)
Population Trend: Possibly Decreasing
Status in Jordan: Summer visitor, passage migrant

- **Justification:** The breeding population of this species has a restricted Area of Occupancy, occurs at a limited number of locations (<10), and is subject to a suspected continuing decline in the extent and quality of native woodland habitat on which it depends for breeding. Woodland cover in Jordan has declined by around 30% in recent decades and is now estimated at ≤500 km^2, a reduction likely to have led to a parallel decline in the breeding population. The Vulnerable threat category is thus fully met under criterion B2. Despite these pressures, the species remains locally common as a summer breeder, and breeding populations in neighboring Levantine countries suggest that immigration may provide some demographic buffering. Its final assessment is therefore Near-Threatened.

- **Distribution:** The Lesser Whitethroat has a wide distribution across Europe, Asia Minor, the Levant, the Caucasus, and parts of Iran, and winters in Africa and the Middle East, with several subspecies occupying different regions. **In Jordan**, it is a very common passage migrant recorded throughout the country during migration seasons, and a localized summer visitor that breeds mainly in densely wooded areas of the Northern Highlands, with sporadic records of singing birds from open deciduous oak woodland (e.g., Wadi Sir and near Yarmouk) and an isolated singing record from Al-Barrah Forest in Dana.



- **Habitats and Ecology:** The Lesser Whitethroat breeds in Mediterranean-type shrubby vegetation, preferring sites with dense shrubs and trees. It primarily feeds on insects and occasionally fruits and breeds in Jordan from April to July, constructing cup-shaped nests in bushes or trees.

- **Conservation Status:** The species is listed under Appendix II of the Convention on the Conservation of Migratory Species of Wild Animals (CMS).

- **Major Threats:** Habitat loss and degradation resulting from deforestation driven by housing and urban development, tourism and recreational infrastructure, small-holder farming, and small-scale logging and wood harvesting, which reduce and fragment native woodland habitats.

- **Recommended Conservation and Research:** A multi-species action plan for protecting and restoring woodland habitats is recommended. Further research is needed to clarify population size, distribution, and past trends, and to better assess threats.

Eastern Orphean Warbler

Order: Passeriformes
Family: Sylviidae
Scientific Name: *Curruca crassirostris* (Cretzschmar, 1830)
Arabic Name:
دخلة البساتين
National Red List Status: VU° B2ab(iii)
Population Trend: Decreasing
Status in Jordan: Summer visitor, passage migrant

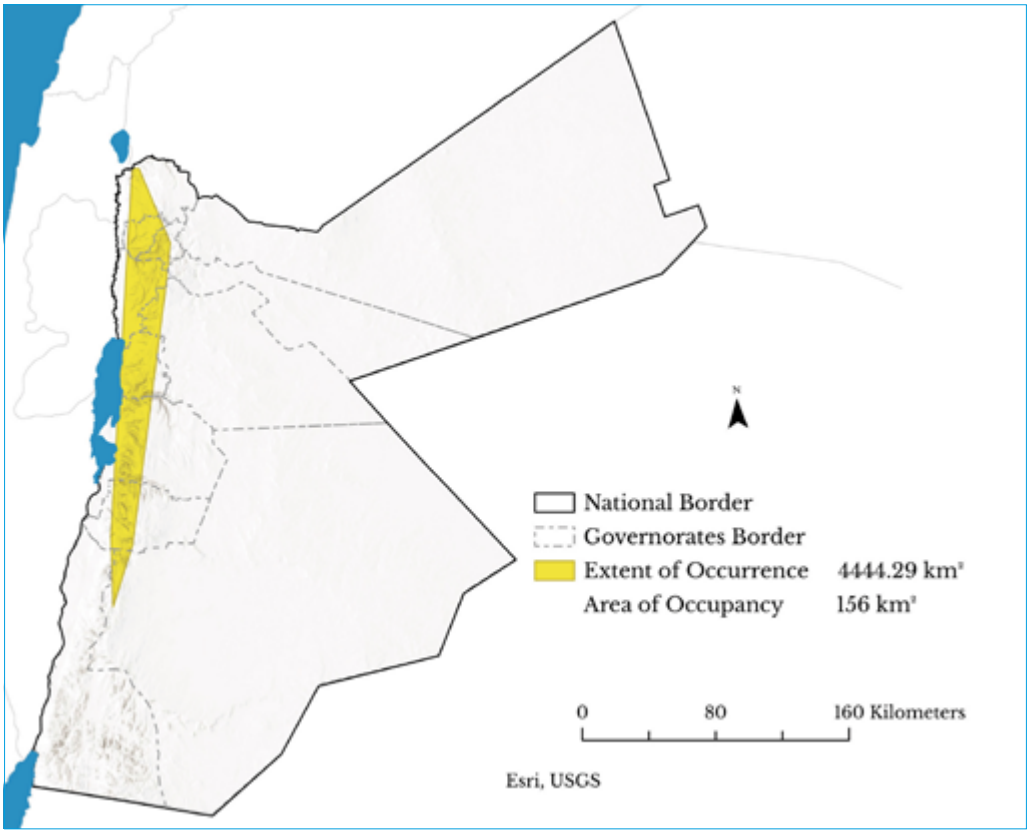
- **Justification:** The species has a restricted Area of Occupancy, unlikely to exceed 500 km^2, occurs at a few and fragmented breeding locations, and shows an inferred continuing decline in the extent and quality of breeding habitat, meeting the conditions for Endangered under criterion B2ab(iii) at the national stage. Habitat degradation and loss are documented at key sites, including within Dana Reserve and surrounding unprotected areas, with local disappearances reported west of Amman. Although the precise rate of decline is unknown and the Area of Occupancy may be slightly underestimated due to incomplete surveys, available evidence indicates ongoing habitat fragmentation and degradation. Breeding populations in adjacent countries make immigration into Jordan plausible, reducing national extinction risk, assuming remaining habitats can recover and are not irreversibly lost.

- **Distribution:** The Eastern Orphean Warbler has a wide distribution across southeastern Europe, the Levant, and parts of Asia, and winters in Africa and the Middle East. **In Jordan**, it is a fairly common passage migrant recorded widely during migration, and a scarce summer visitor breeding locally in the northern highlands and the Rift margins.

- **Habitats and Ecology:** The Eastern Orphean Warbler inhabits Mediterranean-type shrubby vegetation, particularly open woodlands such as maquis with bushes and trees, including oaks and junipers. It feeds on arthropods and berries and is occasionally found along the edges of orchards. Breeding takes place from early spring to summer, with nests built in bushes or low trees. In Jordan, the species breeds only within the Mediterranean bioclimatic zone.

- **Conservation Status:** The species is covered under the Convention on the Conservation of Migratory Species of Wild Animals (CMS) Appendix II and the Agreement on the Conservation of African-Eurasian Migratory Waterbirds (AEWA).

- **Major Threats:** The main threats are a combination of livestock overgrazing, urban development, smallholder agriculture, and small-scale logging and wood harvesting, which are causing significant habitat degradation and loss. Additional pressures include the increasing drought associated with climate change.



• **Recommended Conservation and Research:** Priority actions include protecting and restoring shrubland and open woodland habitats, monitoring breeding and migratory populations to detect changes, and reducing pressures from overgrazing, land conversion, and habitat degradation. Further research is needed on population size and distribution, past trends, key threats, and the effectiveness of conservation actions.

Arabian Warbler

Order: Passeriformes
Family: Sylviidae
Scientific Name: *Curruca leucomelaena* (Hemprich & Ehrenberg, 1833)
Arabic Name:
هازجة عربية
National Red List Status: CR A2ab(iii); C2a(i); D1
Population Trend: Decreasing
Status in Jordan: Resident

• **Justification:** The species has an extremely small national population, estimated at ≤50 mature individuals, a very restricted Area of Occupancy and Extent of Occurrence, and has undergone a severe recent decline estimated at approximately 80%. It is confined to *acacia*-dominated habitats in Wadi Araba. It has disappeared from at least two former breeding sites due to habitat destruction and disturbance, indicating a continuing decline in habitat extent and quality. The remaining population is concentrated in a very small subpopulation, with a recent and probably continuing decline. The total population size alone indicates an extremely high risk of extinction. Immigration is unlikely to provide demographic support, as the adjacent population across the border is small and declining, and populations farther afield show no evidence of connectivity.

• **Distribution:** This species has a wide distribution across arid and semi-arid regions of the Middle East and the Horn of Africa. **In Jordan**, it is restricted to the southwestern part of the country, where it occurs locally in arid shrubland with native *acacia* shrubs and trees.

• **Habitats and Ecology:** The Arabian Warbler inhabits dry savannas dominated by *acacias* and subtropical dry shrublands, primarily within the Sudanian penetration and Saharo-Arabian biogeographical zones (Al-Shamlih *et al.*, 2005). It is a non-migratory species restricted to warm, arid environments with relatively dense *acacia* groves and shrub cover, where it feeds primarily on insects and berries gleaned from trees and bushes. Breeding occurs from late February to mid-June, with territorial nesting in *acacias* and biparental care of the young.

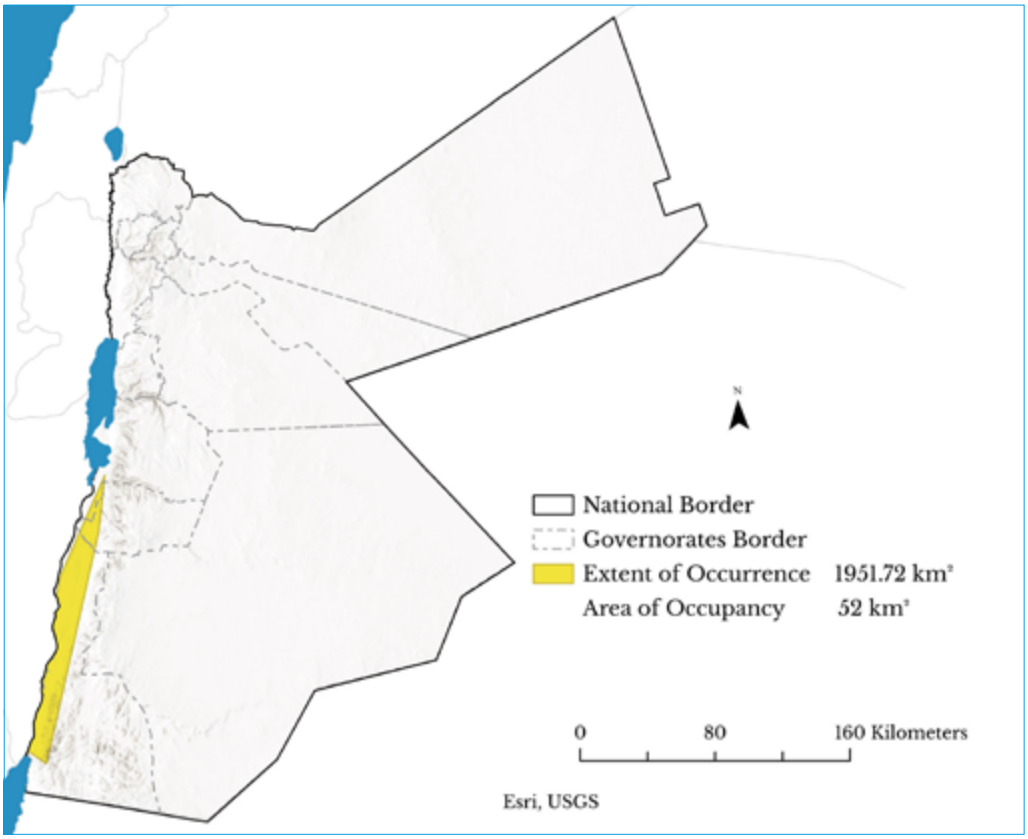
• **Conservation Status:** The species is protected under the general provisions of the Agricultural Law No. 13 (2015) and the Environmental Law No. 6 (2017). It has also been recorded near the boundaries of protected areas, including the lower part of the Dana Biosphere Reserve.



Arabian Warbler (Curruca leucomelaena); photo: © Mohammad Al-Shamlih

• **Major Threats:** A recent survey carried out by JBW researchers revealed a severe decline due to habitat degradation and loss, driven by intensive livestock grazing (including the disturbance of *acacia* trees for fodder), logging and harvesting of *acacias*, and invasion by the alien *Prosopis juliflora* (Khoury *et al.*, 2007). Novel and future threats include expanding agriculture and infrastructure development, such as road widening, new roads, and a railway for potash transport.

• **Recommended Conservation and Research:** Priority actions include developing a targeted species action plan, either a single-species or a multi-species plan, for threatened arid savannah and shrubland birds of Wadi Araba, in light of planned agricultural, mining, and infrastructure expansion. Additional actions include protecting and managing key breeding habitats, monitoring population trends, and controlling habitat degradation and overgrazing.



Sardinian Warbler

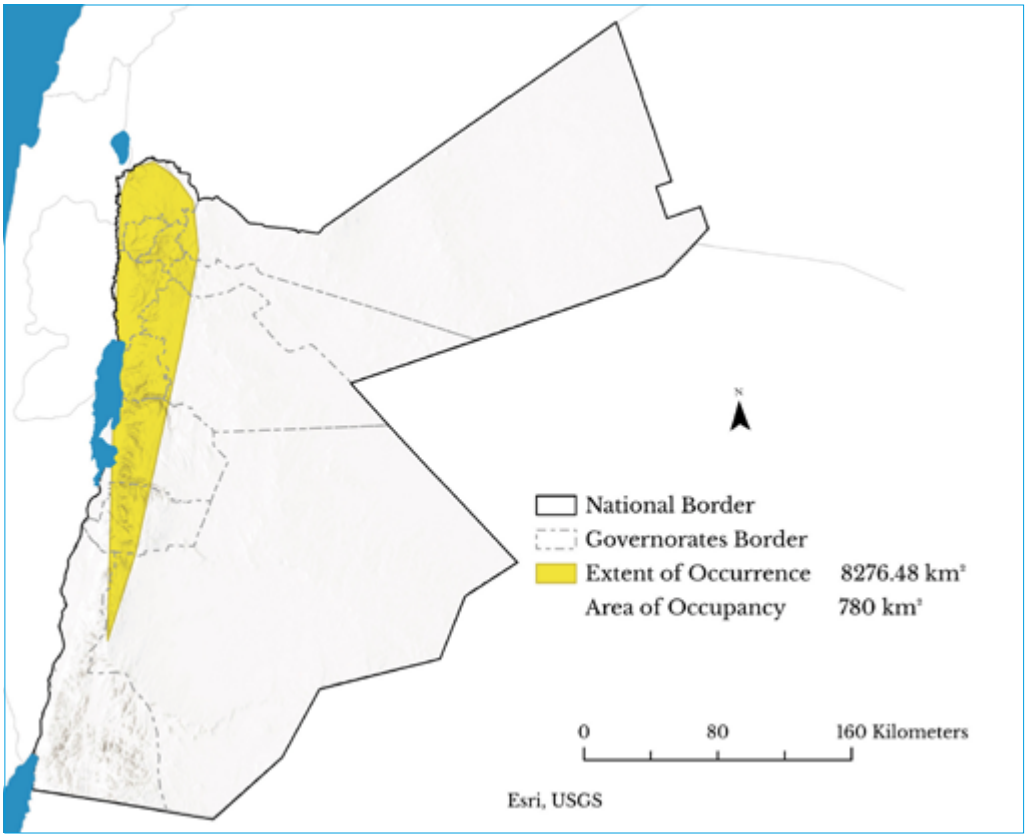
Order: Passeriformes
Family: Sylviidae
Scientific Name: *Curruca melanocephala* (J.F.Gmelin, 1789)
Arabic Name:
هازجة سردينية
National Red List Status: LC
Population Trend: Stable
Status in Jordan: Resident, passage migrant, winter visitor

• **Justification:** This species has a relatively large national Extent of Occurrence and Area of Occupancy, with an estimated population of >2,000 mature individuals. It is locally common, particularly in northern Jordan, and occurs across a broad range, including the highlands, Rift margins, and the Jordan Valley. Although localized habitat loss and degradation occur in parts of its range, there is no evidence of a national-scale decline, severe fragmentation, or extreme fluctuations approaching thresholds for a threatened category.

• **Distribution:** The Sardinian Warbler is widely distributed across southern Europe, the Mediterranean region, North Africa, and the Middle East. **In Jordan**, it is a common resident in the Northern Highlands, along the Rift margins from the Yarmuk Valley south to Dana. It is less common and more localized in the southern Highlands and Rift Margins, as well as in the Jordan Valley. It also occurs as a passage migrant and winter visitor in the Rift Valley and at Azraq.

• **Habitats and Ecology:** The Sardinian Warbler breeds in Mediterranean-type shrubby vegetation, mainly within the Mediterranean biogeographical zone. It occupies shrublands, open woodlands, and the edges of agricultural areas, feeds on arthropods and fruits, and breeds mainly from March to June.

• **Conservation Status:** The species is protected under the general provisions of Jordan's Agriculture Law and Environmental Law, and it occurs within some protected areas, providing partial habitat protection across its range.



- **Major Threats:** Habitat modification and local habitat loss caused by residential and urban development, small-holder agricultural expansion, and small-scale logging and wood harvesting, leading to degradation and fragmentation of shrubland and woodland habitats.

- **Recommended Conservation and Research:** Priority actions include monitoring populations during breeding and migration seasons, conserving and restoring shrubland and Mediterranean-type habitats, and controlling habitat degradation from overgrazing and land conversion. Further research is needed to improve information on population size, distribution, and habitat-specific threats, as well as population and habitat trends.



Sardinian Warbler (Curruca melanocephala); photo: © Raed Al-Btosh

Spectacled Warbler

Order: Passeriformes
Family: Sylviidae
Scientific Name: *Curruca conspicillata* (Temminck, 1820)
Arabic Name:
هازجة مطوقة
National Red List Status: NT
Population Trend: Unknown
Status in Jordan: Resident



Spectacled Warbler (Curruca conspicillata); photo: © Raed Al-Btosh

- **Justification:** This species has a relatively large Extent of Occurrence and a moderate Area of Occupancy, both of which are likely underestimated due to incomplete survey coverage. Although accurate data on population size and trends are lacking, a local decline is suspected, particularly in northern Jordan, inferred from the absence of recent records at previously occupied sites and continuing loss and degradation of suitable habitat, especially near urban areas. However, the species does not currently meet thresholds for a threatened category.

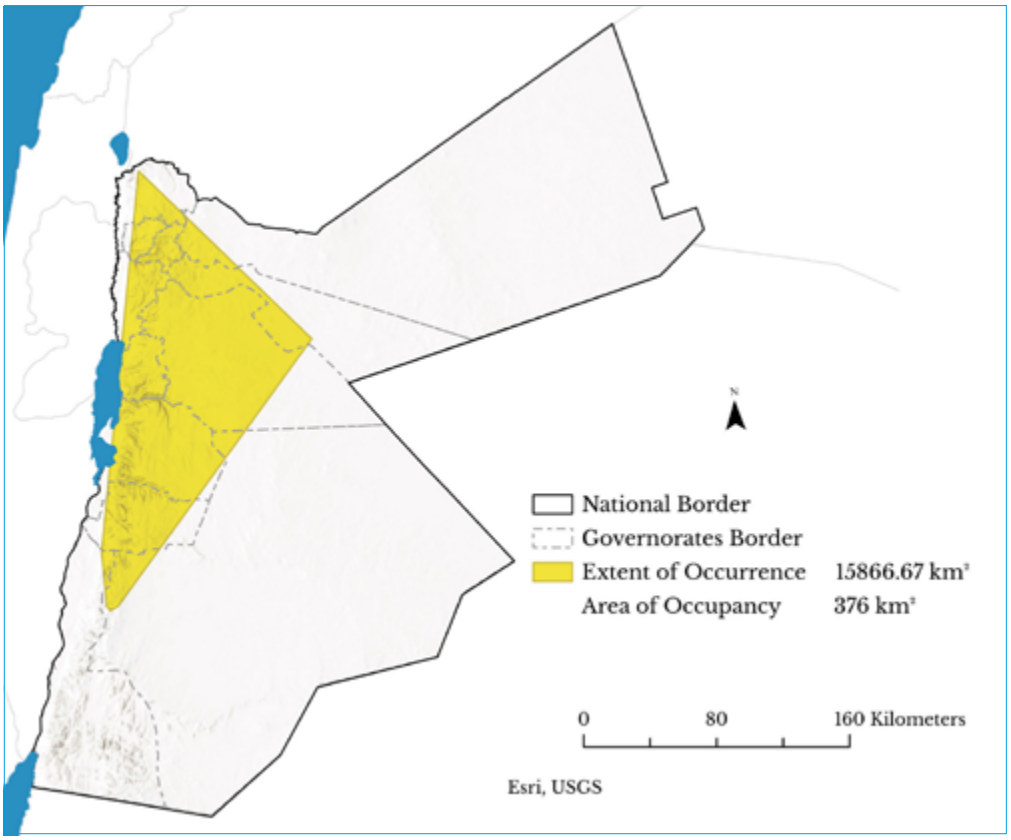
- **Distribution:** The Spectacled Warbler occurs in southern Europe, northwestern Africa, Türkiye, and the Levant. **In Jordan**, it is resident along the Rift margins and parts of the southern Highlands, with a small breeding population recently recorded at Shaumari Wildlife Reserve. It disperses in winter into lower, more arid areas.

• **Habitats and Ecology:** The Spectacled Warbler occupies temperate shrubland, Mediterranean-type shrubby vegetation, and temperate grassland within the Mediterranean biogeographical zone. It inhabits the batha (garrigue) semi-steppe with low, thorny scrub, feeding mainly on small arthropods and insect larvae, and occasionally on berries. Breeding occurs from February to June, with cup-shaped nests built in low scrub (Khoury 1998 a, c).

• **Conservation Status:** The species occurs within several protected areas in Jordan and is protected under the general provisions of the Agriculture Law and the Environmental Law. It is also covered under Appendix II of the Convention on the Conservation of Migratory Species of Wild Animals (CMS) and the Agreement on the Conservation of African-Eurasian Migratory Waterbirds (AEWA).

• **Major Threats:** Habitat loss is caused by residential and commercial development, including housing, tourism and recreational infrastructure, agricultural expansion, and road construction. Livestock overgrazing degrades shrubland habitats used for breeding and foraging.

• **Recommended Conservation and Research:** Priority actions include monitoring populations during breeding and migration periods and protecting shrubland habitats from overgrazing and land conversion. Further research is needed to investigate the unusual occurrence of the species at Shaumari Wildlife Reserve, and to improve population estimates and understanding of key threats. Open Mediterranean Batha (Garrigue) semi-steppe habitats are increasingly being lost irretrievably due to urbanization, requiring urgent action plans.



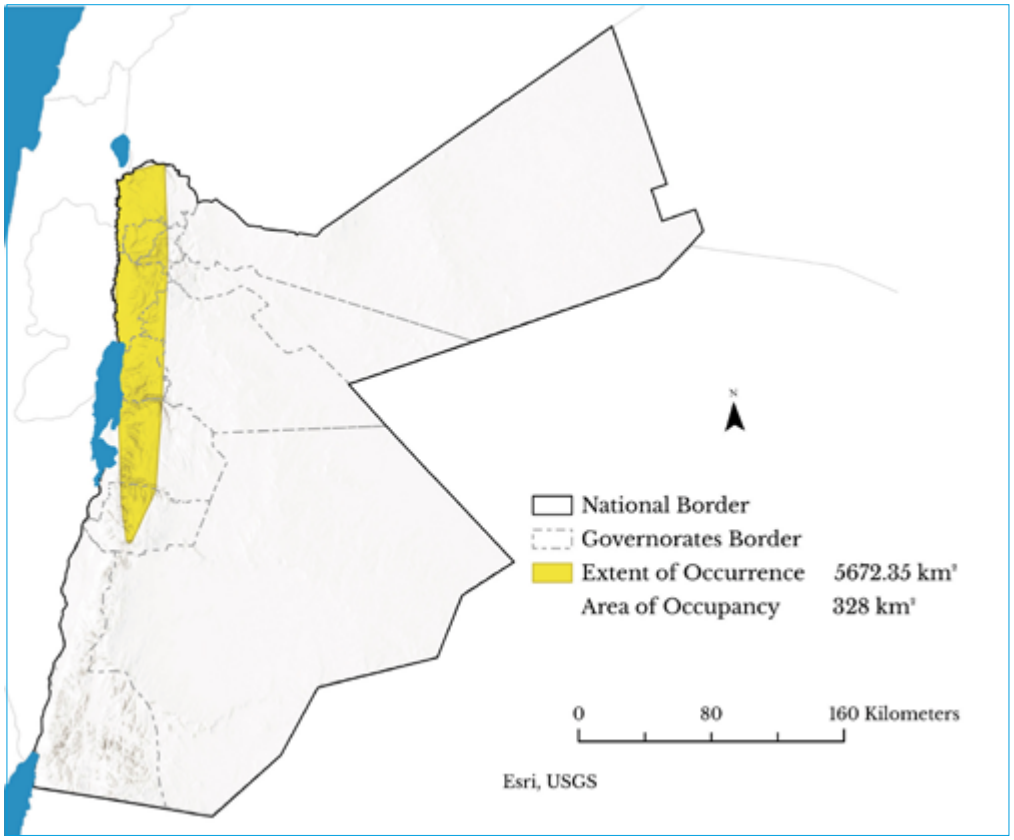
Cetti's Warbler

Order: Passeriformes
Family: Cettiidae
Scientific Name: *Cettia cetti* (Temminck, 1820)
Arabic Name:
دخلة اتشتية
National Red List Status: NT
Population Trend: Unknown
Status in Jordan: Resident

- **Justification:** The species is frequent in Jordan, particularly in the Jordan Valley and several wadis of the Rift Margins. Although local declines and temporary losses have occurred following spring desiccation and habitat degradation, it can use a range of wet and semi-wet habitats and readily recolonize areas once conditions improve. Suitable habitats can recover quickly, and immigration from breeding populations elsewhere in the Levant is plausible given the species' good dispersal ability. As national-level declines do not meet thresholds for a threatened category, the species is best considered Near Threatened.

- **Distribution:** Cetti's Warbler has a wide distribution across Europe, the Mediterranean region, parts of Asia, and North Africa. **In Jordan**, it is a resident along permanent streams, reedbeds, and spring-fed habitats in the Jordan Valley and Rift margins from the Yarmouk Valley south to Dana and Petra, with additional records from Azraq and Aqaba likely representing dispersing individuals rather than breeding populations.

- **Habitats and Ecology:** Cetti's Warbler inhabits wetlands, mainly streams and at water springs with dense vegetation. It primarily feeds on insects and other invertebrates and breeds from March to June, with nests built in dense vegetation. Local populations are resident, although the species is occasionally recorded as a rare migrant at Azraq.



- **Conservation Status:** The species is protected under the general provisions of the Agricultural Law No. 13 (2015) and the Environmental Law No. 6 (2017) in Jordan.

- **Major Threats:** Habitat loss and degradation caused by agricultural expansion and extensive abstraction of surface and groundwater for domestic and agricultural use, leading to the drying of springs and streams. Additional threats include invasion by the alien mesquite (*Prosopis juliflora*), agricultural pesticide use that reduces prey availability, and increased drought frequency, which exacerbates water scarcity and habitat loss (Khoury & Körner, 2018).

- **Recommended Conservation and Research:** Priority actions include protecting and restoring wetland and riparian habitats with dense vegetation, and preventing habitat loss from water extraction and pollution. Further work is needed to improve knowledge of population size, distribution, and past trends; assess threats; define appropriate conservation actions; develop area-based management plans; and monitor population and habitat trends.

Moustached Warbler

Order: Passeriformes
Family: Sylviidae
Scientific Name: *Acrocephalus melanopogon* (Temminck, 1823)
Arabic Name:
دخناء مشوربة
National Red List Status: RE
Population Trend: Extinct
Status in Jordan: Winter visitor, former resident, and breeder

- **Justification:** The species formerly bred at Azraq, where the breeding population has been lost due to severe wetland degradation, and is now recorded only as a rare visitor. Despite occasional sightings along the Jordan River, there is no confirmed or persistent breeding population anywhere in Jordan, and no nests, territorial behavior, or juveniles have been recorded for decades despite continued observation. The historical decline was severe and rapid, driven by widespread loss and degradation of wetland habitats, and there is no evidence of recovery or recolonization.

- **Distribution:** The Moustached Warbler occurs across southern Europe, northwestern Africa, and parts of western Asia. **In Jordan**, it is a rare winter visitor at Azraq and probably along the banks of the Jordan River and major wadis where extensive reedbeds persist. It was formerly a resident breeder at Azraq, where it is now extinct, with only a few pairs possibly breeding irregularly along the northern Jordan River.

- **Habitats and Ecology:** The Moustached Warbler inhabits permanent streams, freshwater marshes, swamps, and pools, showing a strong preference for dense reedbeds with a well-developed lower vegetation layer. It feeds mainly on small arthropods and breeds in late spring and early summer. In the 1960s, an estimated 100–200 pairs bred at Azraq before the collapse of suitable wetland habitat.

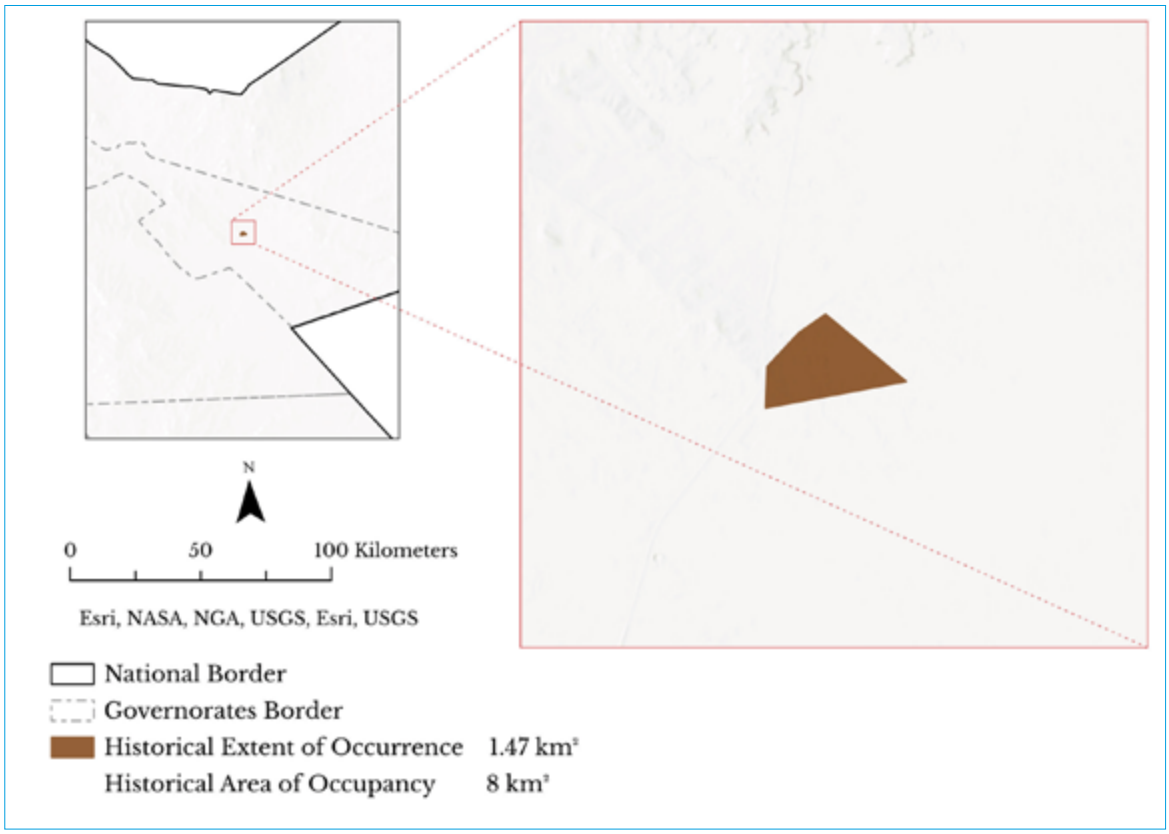
- **Conservation Status:** The species is protected under Jordan's Agricultural Law and Environmental Law. Internationally, it is listed under Appendix II of the Convention on the Conservation of Migratory Species of Wild Animals (CMS/Bonn Convention), Appendix II of the Bern Convention (strictly protected species), and Annex I of the EU Birds Directive in EU range states, reflecting its high conservation priority across its range.

- **Major Threats:** Severe habitat loss and degradation are driven by water abstraction, agricultural expansion (smallholder and agro-industrial farming), livestock grazing (Andrews 1991, 1995), and increasing drought associated with climate change.



Moustached Warbler (Acrocephalus melanopogon); photo: © Waseem Al-Hayek

- **Recommended Conservation and Research:** Priority actions include protecting and restoring wetland habitats through site protection and management, enforcing water-quality regulations and anti-drainage measures, and raising awareness of the ecological value of reedbeds. Further research is required on population size and distribution, past trends, life history and ecology, key threats, and the development of species action and area-based management plans.



Reed Warbler

Order: Passeriformes
Family: Sylviidae
Scientific Name: *Acrocephalus scirpaceus* (Hermann, 1804)
Arabic Name:
دخناء أوراسية
National Red List Status: NT
Population Trend: Unknown
Status in Jordan: Summer visitor, passage migrant

• **Justification:** Recent, and regular observations indicate that the breeding populations of the Reed Warbler in the Azraq Wetland Reserve and along the Jordan River are stable. Although past habitat degradation and wetland drying led to local declines and temporary losses, these impacts have not resulted in a sustained national-level population decline meeting the thresholds for a threatened category. The species uses a range of wetland habitats, can rapidly recolonize when conditions improve, and benefits from partial habitat recovery and management at core sites. Breeding populations in neighboring Levantine countries, along with the species' strong dispersal ability, further provide demographic support. While continued wetland degradation remains a concern, current evidence indicates that the species is close to, but does not meet, the criteria for threatened.

• **Distribution:** The Reed Warbler breeds widely across Europe and extends east through Türkiye, the Caucasus, the Levant, Arabia, Central Asia, and parts of western China, wintering mainly in sub-Saharan Africa. **In Jordan**, it is a common passage migrant with a patchy breeding distribution as a summer visitor in the Jordan Valley, the Rift margins, and the Azraq wetlands.

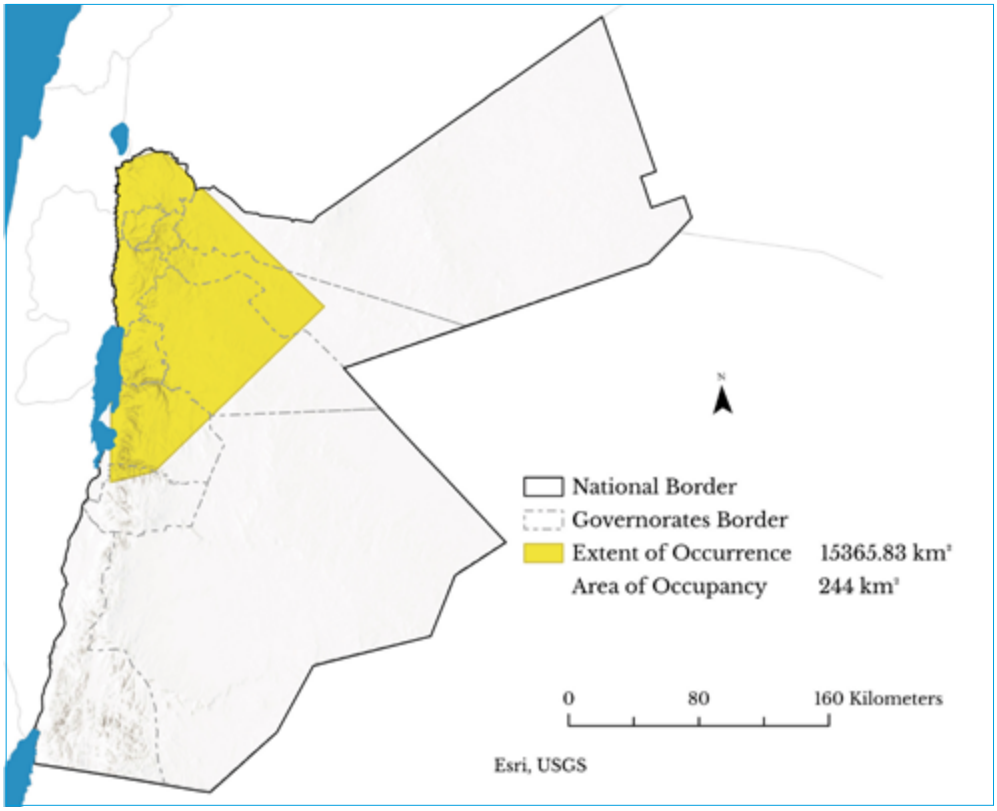
• **Habitats and Ecology:** The Reed Warbler occupies a range of freshwater wetland habitats, including permanent and seasonal rivers, marshes, swamps, springs, canals, and wastewater treatment areas, mainly within the Mediterranean biogeographical zone. It requires mature reedbeds near water bodies for breeding and foraging, feeds primarily on insects and spiders, and builds nests suspended in reeds above water (Khoury 1996, 2001, Khoury *et al.* 2005).



Reed Warbler (Acrocephalus scirpaceus); photo: © Fares Khoury

• **Conservation Status:** The species is protected under the general provisions of the Agricultural Law (2015) and the Environmental Law (2017) in Jordan. Internationally, it is listed under Appendix II of the Convention on the Conservation of Migratory Species of Wild Animals (CMS) and Appendix II of the Bern Convention.

• **Major Threats:** Loss and degradation of reedbeds driven by agricultural expansion, intensive livestock grazing, water abstraction and damming, human disturbance, invasive species (e.g., *Prosopis juliflora*), pesticide use, and increasing drought, associated with global climate change (Khoury & Körner, 2018)



• **Recommended Conservation and Research:** An action plan to protect and restore wetland habitats is urgently required. Further research is needed on population size and exact distribution in western Jordan, as well as on the migratory behavior of the local breeding populations.

Great Reed Warbler

Order: Passeriformes
Family: Sylviidae
Scientific Name: *Acrocephalus arundinaceus* (Linnaeus, 1758)
Arabic Name:
دخناء وادية
National Red List Status: RE
Population Trend: Extinct
Status in Jordan: Passage migrant, formerly bred

• **Justification:** This species was formerly bred at Azraq (at least 22 pairs in the 1960s) and is now recorded only as a passage migrant. There is no recent or confirmed evidence of breeding either at Azraq or along the Jordan River, indicating the species no longer maintains a viable breeding population in Jordan.

• **Distribution:** The Great Reed Warbler breeds across much of Europe, northwest Africa, the Levant, Türkiye, and eastwards to the Volga Basin, Caucasus, and Caspian region, with a separate eastern subspecies extending from northern Iraq and Iran to northwestern Mongolia and southern Tajikistan; all subspecies winter in sub-Saharan Africa. **In Jordan**, it is currently a common migrant. It may still be a rare summer visitor, breeding only along the northern banks of the Jordan River. It formerly bred at Azraq, but recent breeding evidence is lacking in Jordan.

• **Habitats and Ecology:** The Great Reed Warbler inhabits tall reedbeds associated with permanent rivers, marshes, swamps, and freshwater or brackish pools. It feeds mainly on insects and other



Great Reed Warbler (Acrocephalus arundinaceus); photo: © Fares Khoury

invertebrates, occasionally taking small vertebrates, and breeds in cup-shaped nests built within dense reeds. The former breeding population at Azraq is extinct, and any current breeding is likely restricted, if occurring at all, to reedbeds along the northern banks of the Jordan River.

- **Conservation Status:** The species is listed under Appendix II of the Convention on the Conservation of Migratory Species of Wild Animals (CMS) and is covered by the Agreement on the Conservation of African-Eurasian Migratory Waterbirds (AEWA) as a migratory water bird.

- **Major Threats:** Severe habitat loss and degradation of reedbeds are driven by agricultural expansion, human disturbance, and the abstraction of surface and groundwater for domestic, commercial, and agricultural use. Additional pressures include invasive species and agricultural pollution, particularly herbicides and pesticides, which further reduce habitat quality and prey availability.

- **Recommended Conservation and Research:** The implementation of an action plan for protecting and restoring wetland habitats in the Jordan Valley and at Azraq is urgently required to make recolonization possible. Research is needed on current breeding status along the Jordan River.

Clamorous Reed Warbler

Order: Passeriformes
Family: Sylviidae
Scientific Name: *Acrocephalus stentoreus* (Hemprich & Ehrenberg, 1833)
Arabic Name:
هازجة الغاب المصرية
National Red List Status: VU B1ab(i,ii,iii)+B2ab(i,ii,iii); A2C
Population Trend: Decreasing
Status in Jordan: Resident

- **Justification:** The species has a restricted Extent of Occurrence and a small Area of Occupancy, with breeding confined to approximately 10 locations in fragmented reedbeds along streams and irrigation canals. A continuing decline is inferred and observed in (i) the extent of Occurrence, (ii) the area of Occupancy, and (iii) the extent and quality of wetland habitat, driven primarily by reduced surface water availability and ongoing wetland degradation in the Jordan Valley. A population reduction of at least 30% is suspected to have occurred recently, consistent with habitat loss and the local extirpation of breeding pairs. These conditions meet thresholds and sub-criteria under criteria A and B. Although the species occurs more widely elsewhere in the Levant, regional wetland habitats are under pressure, and the populations are largely resident and isolated, making immigration unlikely to compensate for national declines.

- **Distribution:** Widely but patchily distributed from Egypt and northeast Africa across the Middle East, Central Asia, the Indian Subcontinent, and southwest China, extending to Java, Borneo, and the Lesser Sundas. Central Asian populations are largely migratory, while those in the Middle East, South Asia, and Africa are resident. **In Jordan**, it is resident in patches of reed in the Jordan Valley and in some

wadis of the Rift Margins, from the Yarmouk south to Wadi Al-Hassa. The breeding population at Azraq disappeared in the 1980s.

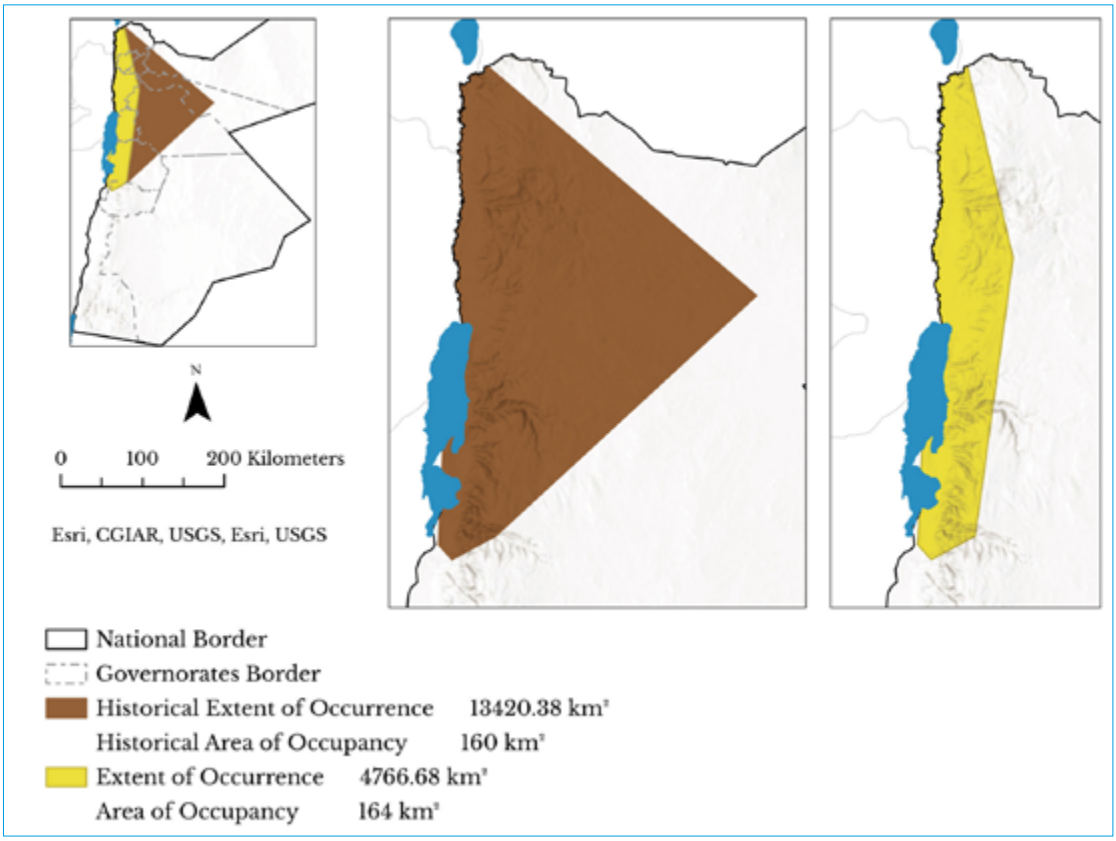
- **Habitats and Ecology:** The species inhabits freshwater marshes, permanent rivers and streams, reedbeds, springs, oases, and canals, nesting close to or above water within dense emergent vegetation. It forages mainly within reedbeds, on floating vegetation, or along water margins, feeding primarily on insects and other invertebrates, with occasional consumption of small vertebrates, mollusks, and plant material; it may also occasionally use adjacent crop fields.

- **Conservation Status:** The species is protected under the general provisions of the Agricultural Law No. 13 of 2015 and the Environmental Protection Law No. 6 of 2017 in Jordan. It is listed under Appendix II of the Convention on the Conservation of Migratory Species of Wild Animals (CMS). It is covered by the Agreement on the Conservation of African-Eurasian Migratory Waterbirds (AEWA) as a migratory water bird. Nationally, it is also included in Appendix II for wildlife protection under Agricultural Law No. 13 of 2015, pursuant to Regulation No. 43 of 2008.



Clamorous Reed Warbler (Acrocephalus stentoreus); photo: © Waseem Al-Hayek

- **Major Threats:** Habitat loss and degradation of reedbeds and wetlands due to agricultural expansion, tourism and infrastructure development, human disturbance, and water abstraction for agriculture and domestic use, including impacts from dams. Additional threats include invasive species, agricultural pollution (including herbicides and pesticides), and increasing drought, which together reduce habitat extent and quality (Khoury & Körner 2018, 2019).



• **Recommended Conservation and Research:** Implement a multi-species plan to protect wetland habitats, including reedbeds. Research should focus on population size and trends, life history and ecology, threats,

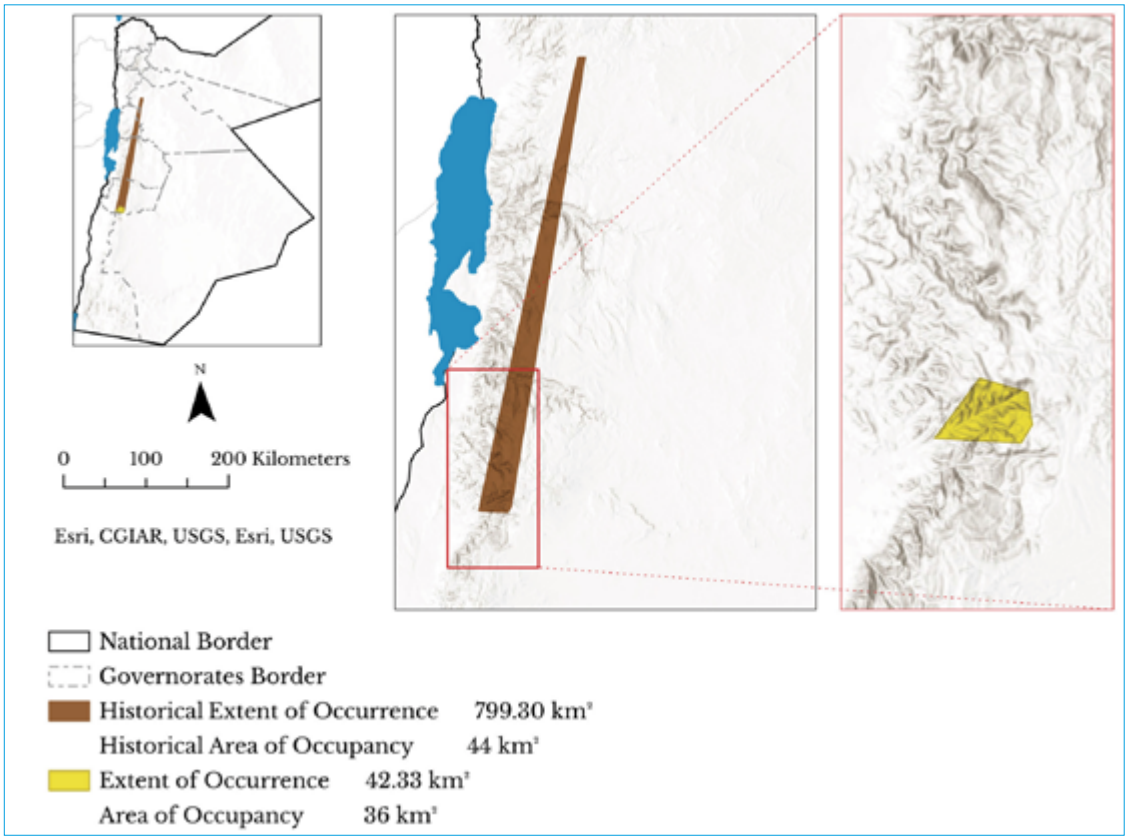
Upcher's Warbler

Order: Passeriformes
Family: Sylviidae
Scientific Name: *Hippolais languida* (Hemprich & Ehrenberg, 1833)
Arabic Name:
دحناء وادية
National Red List Status: EN B1ab(iii)+B2ab(iii)
Population Trend: Decreasing
Status in Jordan: Summer visitor, passage migrant

• **Justification:** The species has an extremely restricted range, with breeding currently confirmed at a single location in Jordan. Habitat quality at this site is declining due to ongoing degradation, leading to a reduction in habitat quality. The national population is very small, and a reduction of at least 10% is suspected in recent years. Although the species breeds elsewhere in the Levant, the Jordanian population is highly localized, small, and affected by site-specific habitat loss so that no effective rescue effect can be expected. These factors meet criteria B1ab(iii) and B2ab(iii) and justify the Endangered assessment at the national level.

• **Distribution:** Upcher's Warbler occurs locally across central and southern Türkiye, Syria, Palestine, the southern Caucasus, Iran, and from southwestern Kazakhstan and Turkmenistan eastwards through mountainous regions to Tajikistan, Afghanistan, and southwestern Pakistan, wintering in eastern Africa. **In Jordan**, it is a passage migrant recorded at several sites and a highly localized summer visitor, currently breeding at Dana and formerly near Amman.

• **Habitats and Ecology:** In Jordan, the species inhabits Mediterranean-type shrubby vegetation within the Mediterranean biogeographical



zone, occurring in open woodlands and occasionally along the edges of orchards and olive groves. It feeds primarily on insects and other invertebrates and breeds from April to July; the species is migratory (Khoury, 1998a).

- **Conservation Status:** The species is protected under the general provisions of Jordan's Agriculture Law (2015). It is listed under Appendix II of the Convention on the Conservation of Migratory Species of Wild Animals (CMS). It is covered by the Agreement on the Conservation of African-Eurasian Migratory Waterbirds (AEWA) as a migratory species.

- **Major Threats:** Habitat loss and degradation from overgrazing, leading to loss of vegetation and increased soil erosion, logging of trees and shrubs, and urban expansion. Additional pressures include human disturbance and increasing drought associated with climate change, both of which reduce habitat quality and suitability.

- **Recommended Conservation and Research:** Priority actions include protecting open woodland and shrublands, monitoring breeding populations to detect trends, protecting and mitigating habitat loss caused by overgrazing and land conversion. Research should focus on population and habitat trends, the identification of additional breeding sites in Karak and northern Jordan, and the assessment of the impacts of grazing, logging, and uncontrolled recreational activities in Al-Barrah woodland in the Dana Nature Reserve.



Upcher's Warbler (Hippolais languida); photo: © Fares Khoury

Eastern Olivaceous Warbler

Order: Passeriformes
Family: Sylviidae
Scientific Name: *Iduna pallida* (Hemprich & Ehrenberg, 1833)
Arabic Name:
خنشع الزيتون
National Red List Status: LC
Population Trend: Stable
Status in Jordan: Summer visitor, passage migrant

- **Justification:** This species is widespread and locally very common in Jordan, with a large Extent of Occurrence, Area of Occupancy, and an estimated population exceeding 5,000 mature individuals. The population trend is stable or even expanding, largely due to the species' adaptability and positive response to agricultural development and the availability of shrubs and trees in arid landscapes. The species does not meet thresholds for any threatened category, and no significant threats or declines are evident at the national level.

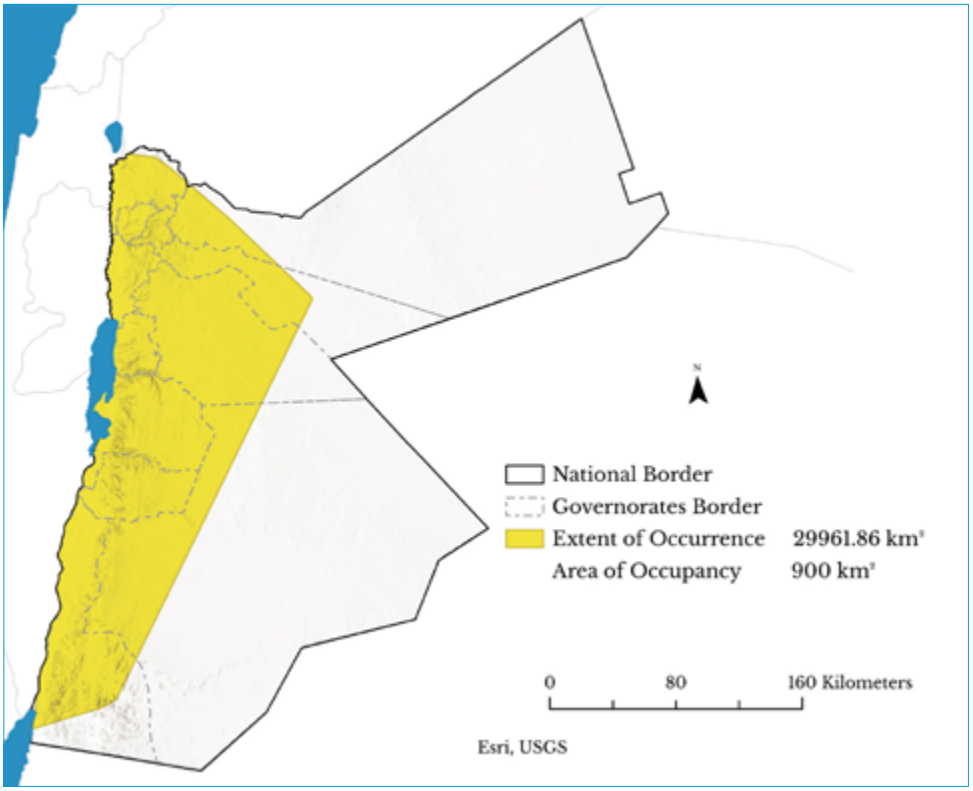
- **Distribution:** The Eastern Olivaceous Warbler is widely distributed across Eurasia, ranging from southeast Europe and Türkiye to Central Asia, and winters in the Sahel region of Africa. **In Jordan**, it is a common passage migrant and a widespread summer visitor, breeding across western Jordan from the Yarmouk area south to Petra, as well as at Azraq and in farmland within the arid regions of central Jordan, where its range has expanded in response to agricultural development.

- **Habitats and Ecology:** The species occupies subtropical and Mediterranean-type shrublands, shrub-dominated wetlands, freshwater marshes, springs and oases, as well as arable land, plantations, rural gardens, and urban areas. It inhabits trees and tall shrubs, often near water sources, feeds primarily on invertebrates,

with some fruit, and breeds from May to June in cup-shaped nests.

- **Conservation Status:** The species is protected under Jordan's Agricultural Law (2015) and the Environmental Protection Law (2017). It is listed under Appendix II of the Convention on the Conservation of Migratory Species of Wild Animals (CMS).

- **Major Threats:** Localised habitat loss and degradation due to urban expansion, which is encroaching on shrublands and rural areas. Further local threats include degradation of wetland vegetation by overgrazing and the spread of invasive mesquite shrubs (Khoury & Körner, 2018).

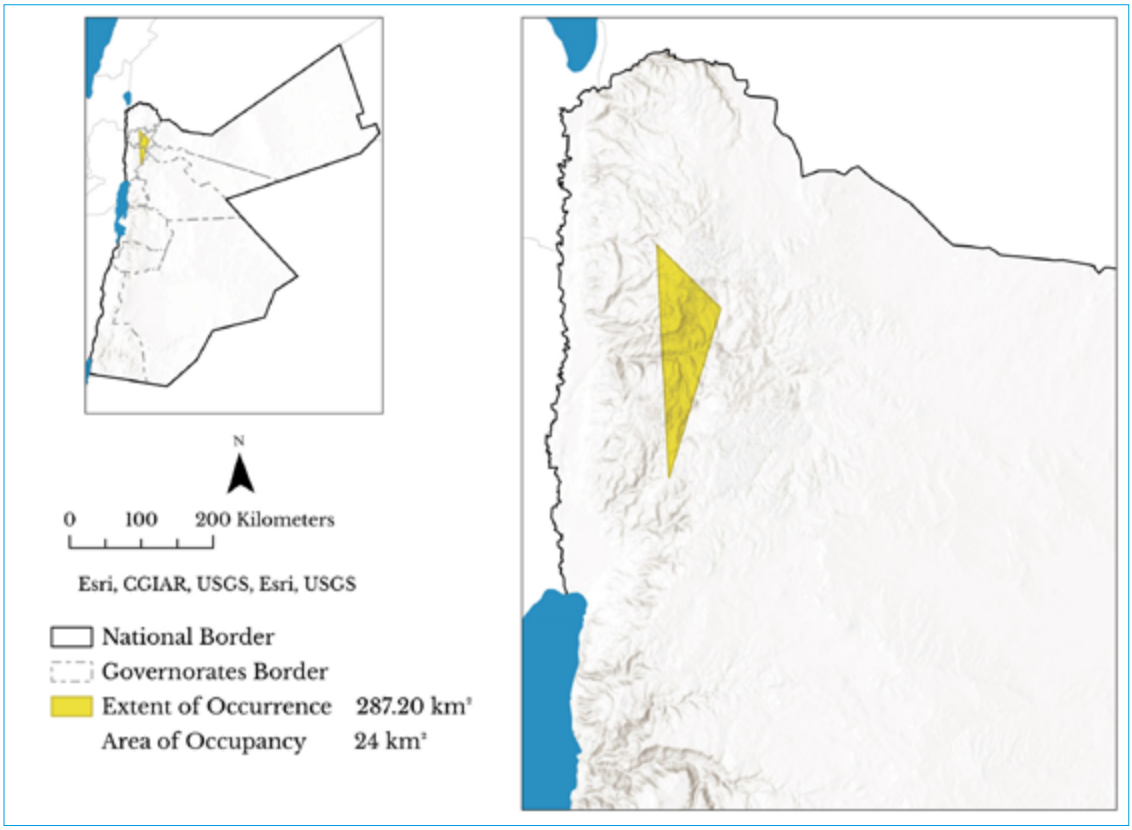


- **Recommended Conservation and Research:** Priority actions include protection of open woodlands, riparian vegetation and reduction of pesticide use.

Eastern Bonelli's Warbler

Order: Passeriformes
Family: Sylviidae
Scientific Name: *Phylloscopus orientalis* (C.L.Brehm, 1855)
Arabic Name:
نقشارة بونلي الشرقية
National Red List Status: EN B2ab(iii)
Population Trend: Decreasing
Status in Jordan: Summer visitor, passage migrant

- **Justification:** The species has a very small national breeding population, estimated at fewer than 250 mature individuals. Its Area of Occupancy is extremely restricted (24 km^2), and the breeding range is limited, with a continuing inferred decline in habitat quality due to agricultural expansion, tourism development, and urbanization, meeting B2ab(iii). Although the species breeds elsewhere in the Levant, the Jordanian population is highly localized within a small area of suitable habitat and faces site-specific



threats. Such conditions are unlikely to allow effective demographic rescue.

• **Distribution:** The species breeds in southeastern Europe and western Asia and winters in eastern Africa. **In Jordan**, it is a fairly common passage migrant, recorded mainly in March- early April across various parts of the country, particularly in western regions, and a scarce summer visitor to the northern highlands and adjacent Rift Margins, with confirmed breeding in Dibeen and Ajlun woodlands. It has recently been recorded in the Wadi Sir area during the summer.

• **Habitats and Ecology:** The species breeds in Mediterranean-type shrubby vegetation, mainly in open oak and oak–pine woodlands and along the edges of dense forests, occasionally near orchards. It feeds on insects gleaned from foliage, breeds within the Mediterranean bioclimatic zone above 600 m a.s.l., and is migratory.

• **Conservation Status:** The species is listed under Appendix II of the Convention on the Conservation of Migratory Species of Wild Animals (CMS) and is covered by the Agreement on the Conservation of African-Eurasian Migratory Waterbirds (AEWA) as a migratory species. The small breeding population is partly protected within the Dibbeen and Ajloun Nature Reserves.

• **Major Threats:** Habitat loss, fragmentation, and degradation are caused mainly by logging, farming, and urban expansion.

• **Recommended Conservation and Research:** Priority actions include protecting and managing Mediterranean-type woodland habitats, monitoring populations to detect changes in abundance and distribution. Research should focus on population size, distribution, and past trends, as well as on identifying and assessing threats.

Blue Rock Thrush

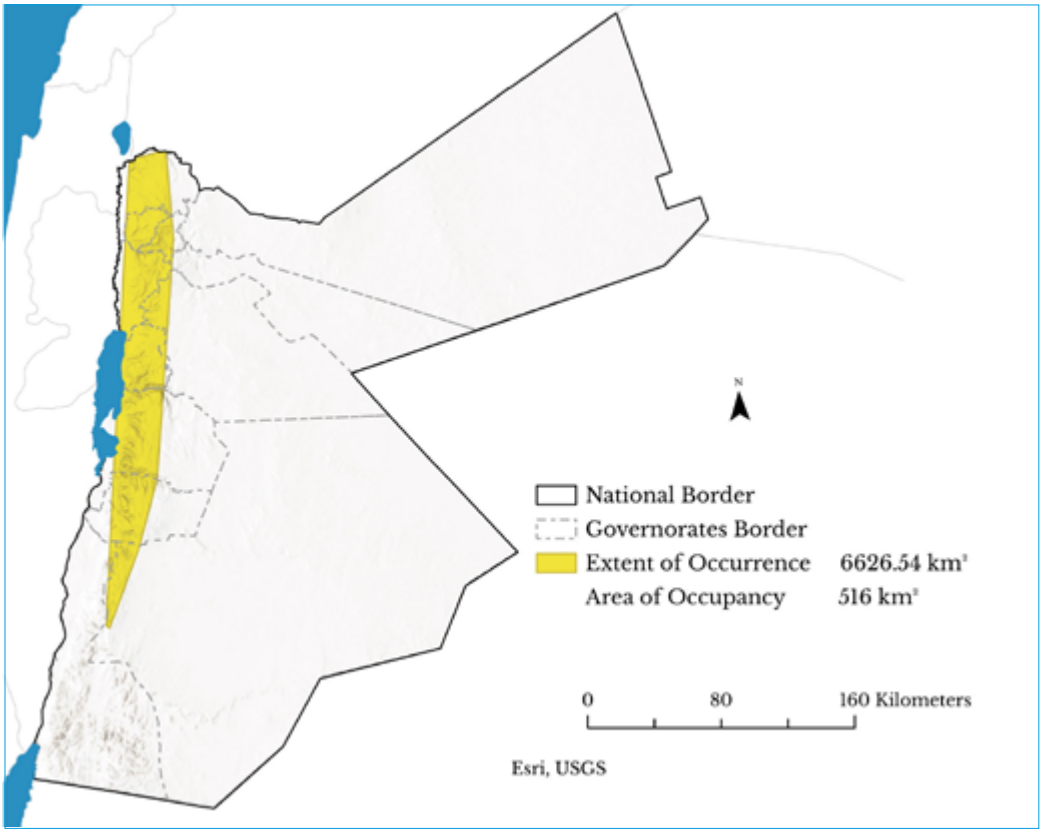
Order: Passeriformes
Family: Muscicapidae
Scientific Name: *Monticola solitarius* (Linnaeus, 1758)
Arabic Name:
سمّنة صخرية زرقاء
National Red List Status: LC
Population Trend: Stable
Status in Jordan: Resident, passage migrant

- **Justification:** The Blue Rock Thrush remains fairly common in rocky habitats along the Rift margins in Jordan. It has a relatively large Extent of Occurrence and Area of Occupancy. Although localized habitat loss occurs due to quarrying, mining, and road construction, these pressures are limited in extent, and only a slight population reduction is inferred. There is no evidence of rapid decline, severe fragmentation, or population thresholds approaching those of a threatened category.

- **Distribution:** The Blue Rock Thrush has a wide range extending from Northwest Africa and Southern Europe through parts of Asia to the Himalayas and Southeast Asia. **In Jordan**, it occurs as a passage migrant across various regions and as a resident breeder along the Rift margins, occupying cliffs and rocky outcrops from the Yarmuk River south to Petra and Rajif.

- **Habitats and Ecology:** The Blue Rock Thrush inhabits inland rocky areas, including cliffs and gorges, mainly within the Mediterranean bioclimatic zone (Khoury, 1998a). It feeds on invertebrates, small vertebrates, and fruit, and breeds in spring-early summer, nesting in rock crevices and other sheltered sites.

- **Conservation Status:** The Blue Rock Thrush is protected under the general provisions of the Agricultural Law No. 13 (2015) and the Environmental Law No. 6 (2017). Breeding pairs occur within protected areas, including Dana and Mujib Reserves, which provide partial habitat protection.



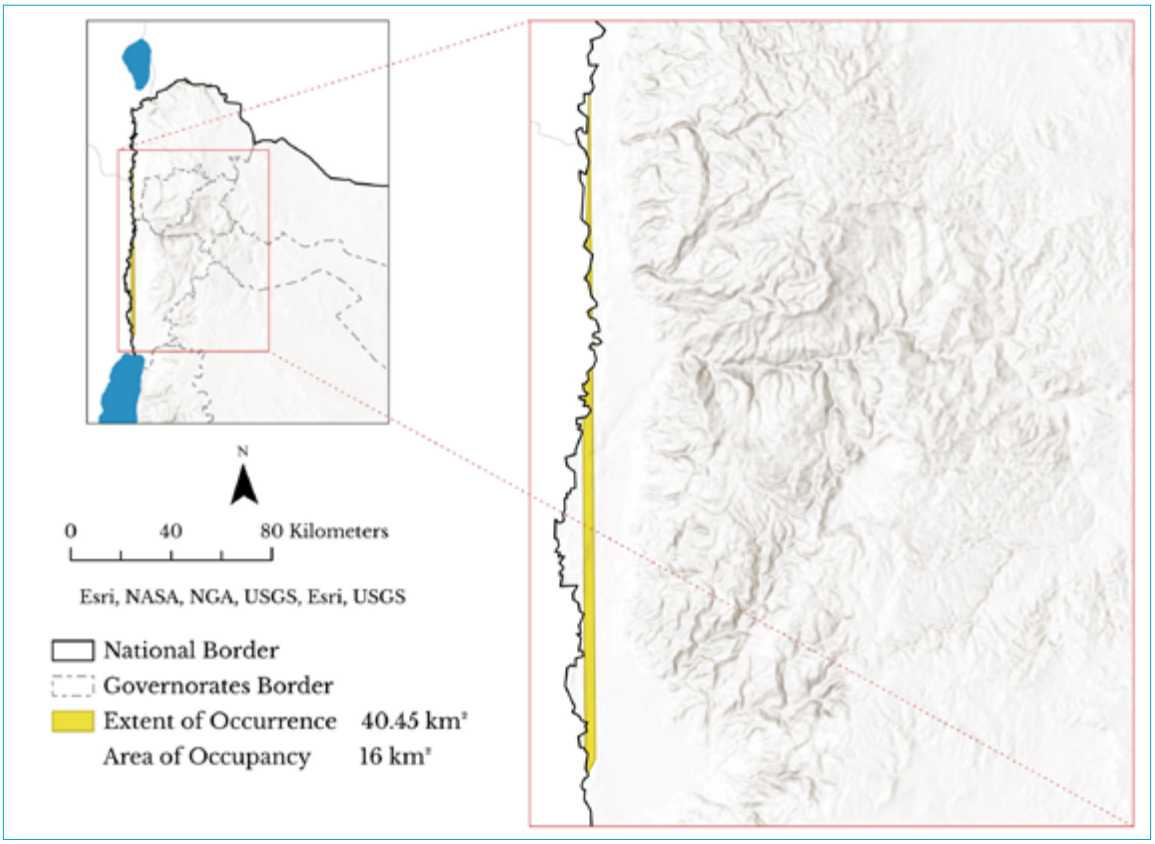
- **Major Threats:** The Blue Rock Thrush is affected by localized habitat loss resulting from urban and housing development, mining and quarrying in rocky areas, and road construction, which fragments cliff and inland rocky habitats in the Mediterranean biogeographical zone.

- **Recommended Conservation and Research:** Priority actions include protecting and managing rocky habitats to reduce degradation and human disturbance, and monitoring populations to detect potential declines. Research should focus on population size and distribution, as well as the assessment of localized threats.

Common Nightingale

Order: Passeriformes
Family: Muscicapidae
Scientific Name: *Luscinia megarhynchos* (C.L.Brehm, 1831)
Arabic Name:
هزار
National Red List Status: EN B2ab(iii)
Population Trend: Decreasing
Status in Jordan: Summer visitor, passage migrant

- **Justification:** The Common Nightingale has a very small, highly restricted breeding population in Jordan, confined to a narrow strip of suitable habitat along the Jordan River and to a few adjacent sites. The Area of Occupancy is only 16 km^2, the population occurs at less than five locations, and the number of mature individuals is estimated at ≤100. The species has disappeared from at least one former breeding site, and a continuing decline in habitat quality and extent is inferred to be driven by agricultural expansion, spring and stream drying, and disturbance. Although the species breeds in neighboring countries, its extreme habitat restriction and ongoing local habitat loss make the rescue effect uncertain.



- **Distribution:** The Common Nightingale has a wide breeding range from Northwest Africa across Europe and eastward through Türkiye, the Caucasus, Iran, and Central Asia to northwestern China, and winters mainly in Africa. **In Jordan**, it is a common passage migrant, widely recorded, but a rare summer visitor, breeding only along the banks of the Jordan River and at a few adjacent sites.

- **Habitats and Ecology:** In Jordan, the Common Nightingale inhabits dense shrubland and wet habitats along permanent rivers, streams, and shrub-dominated wetlands. It requires thick vegetation near water for nesting and foraging, feeds mainly on invertebrates, and supplements its diet with berries and seeds later in the season. Breeding occurs from late April to mid-July, with ground nests placed in dense cover (Khoury, 2001; Khoury & Körner, 2018; Khoury, 2018).

- **Conservation Status:** The Common Nightingale is protected under the general provisions of the Agricultural Law No. 13 (2015) and the Environmental Law No. 6 (2017). It is also listed under CMS Appendix II and covered by AEWA as a migratory species.

- **Major Threats:** The Common Nightingale is threatened primarily by habitat loss and degradation along the Jordan River, driven by agricultural expansion and water abstraction from surface and groundwater sources. Overgrazing at some sites further degrades dense riparian vegetation and leads to the spread of invasive mesquite shrubs (Khoury & Körner, 2018). Additional pressures include small-scale logging, pollution from agricultural herbicides and pesticides, and increasing drought linked to climate change, all of which reduce habitat quality and breeding suitability.

- **Recommended Conservation and Research:** Priority actions include protecting and managing riparian and wetland habitats, monitoring population trends, and mitigating the threats mentioned above. Research should focus on population size and distribution, past and ongoing trends, key threats, evaluation of conservation actions, and the development of a single or multi-species action plan for humid, riparian habitats.

Rufous-tailed Scrub Robin

Order: Passeriformes
Family: Muscicapidae
Scientific Name: *Cercotrichas galactotes* (Temminck, 1820)
Arabic Name:
شوالة
National Red List Status: LC
Population Trend: Stable
Status in Jordan: Summer visitor, passage migrant

- **Justification:** The Rufous-tailed Scrub Robin is widespread and locally common in Jordan, with a large Extent of Occurrence and Area of Occupancy. The national breeding population is estimated to exceed 2000 mature individuals and is considered stable. There is no evidence of significant population decline, severe fragmentation, or major threats at the national level.

- **Distribution:** The Rufous-tailed Scrub Robin has a wide range from the Iberian Peninsula and North Africa through the Middle East to Central Asia, with different subspecies wintering in Africa. **In Jordan**, it occurs as a passage migrant and summer visitor, breeding widely in the Jordan Valley and locally along the Rift margins, in the highlands, in Azraq, and in some irrigated agricultural areas in the central arid regions.

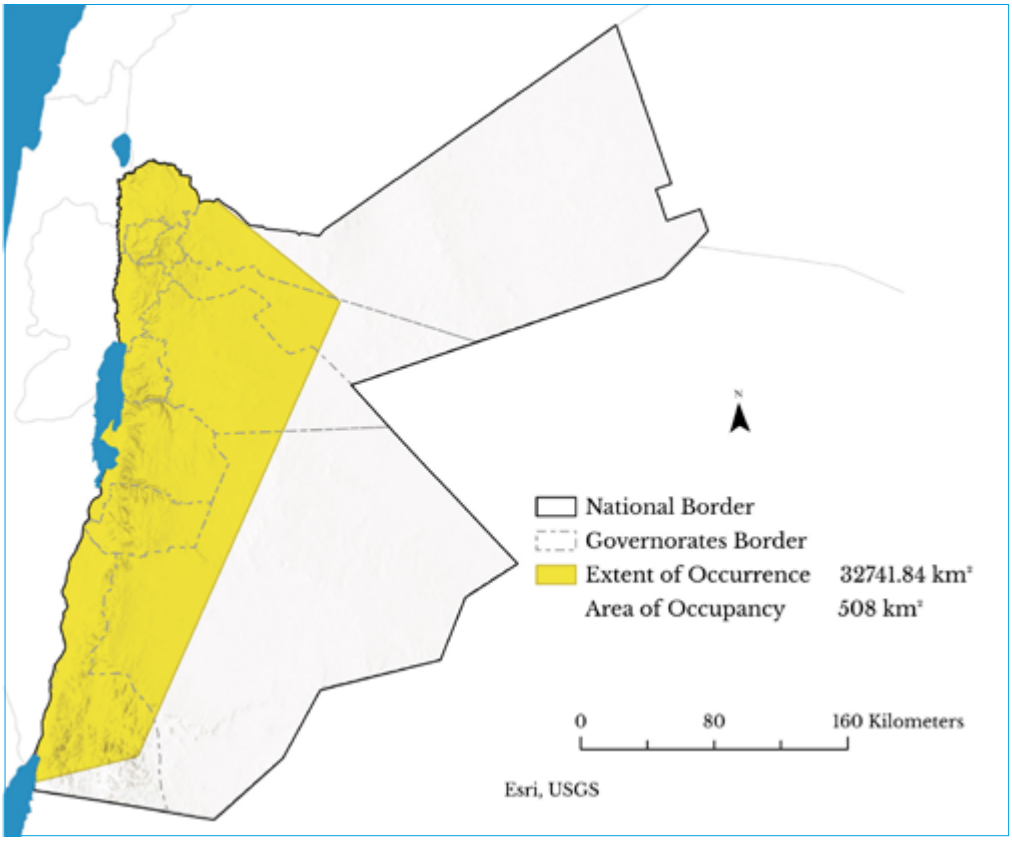
- **Habitats and Ecology:** In Jordan, the Rufous-tailed Scrub Robin occupies dry shrubland, Mediterranean scrub, riparian habitats, wetlands, freshwater springs and oases, and arable land, mainly within the Mediterranean biogeographical zone (Khoury, 1998a; Khoury & Körner, 2018). It favors open woodland and bushy vegetation near

water, feeds mainly on insects with some fruits and seeds, and breeds from April to August, nesting in dense vegetation or man-made structures.

- **Conservation Status:** The Rufous-tailed Scrub Robin is protected under the general provisions of Jordan's Agricultural Law (2015). It is listed on CMS Appendix II and the Bern Convention Appendix II, and is generally protected under Article 1 of the EU Birds Directive (though not listed in Annex I).

- **Major Threats:** The Rufous-tailed Scrub Robin is affected by habitat modification resulting from agricultural expansion and intensification, as well as livestock overgrazing. Additional threats include invasive non-native plant species that degrade scrub habitats, and pollution from agricultural herbicides and pesticides, which reduce habitat quality and food availability (Khoury & Körner, 2018).

- **Recommended Conservation and Research:** Priority actions include maintaining and restoring dry scrub–shrub mosaics and reducing pesticide use.



Isabelline Wheatear

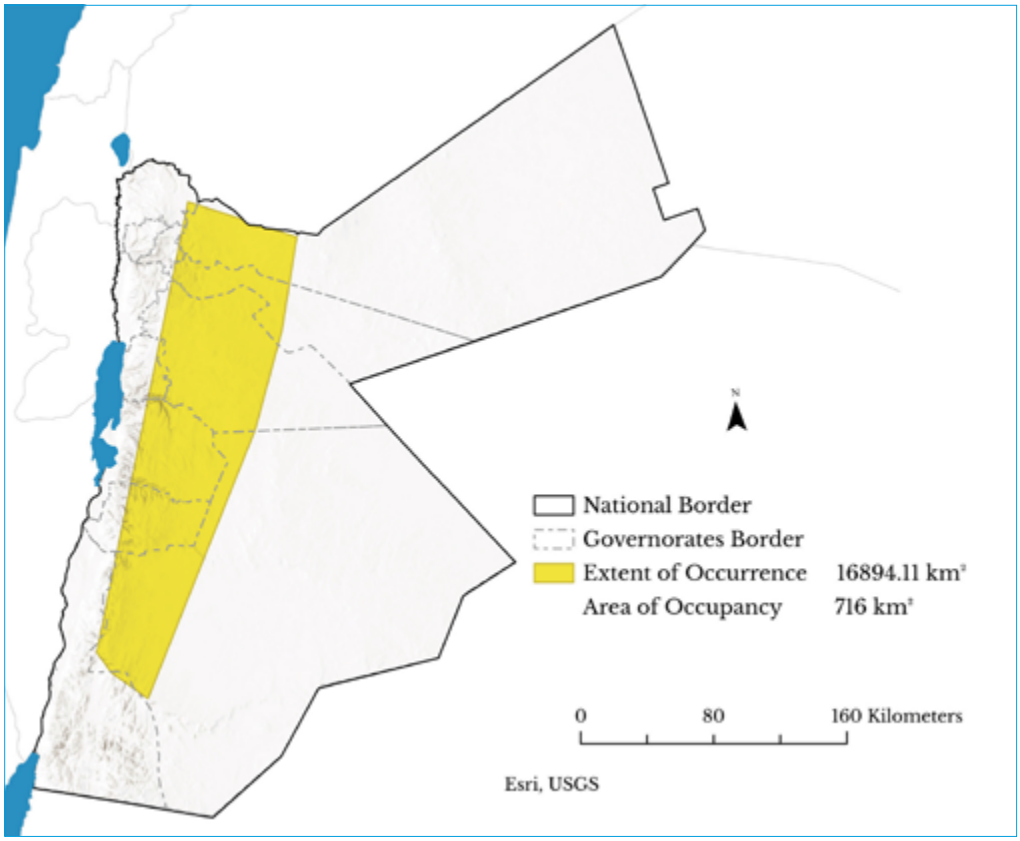
Order: Passeriformes
Family: Muscicapidae
Scientific Name: *Oenanthe isabellina* (Temminck, 1829)
Arabic Name:
أبلق أشهب
National Red List Status: LC
Population Trend: Stable
Status in Jordan: Summer visitor, passage migrant, resident

• **Justification:** A widespread and locally common breeding species in Jordan, with an estimated national population of > 1000 mature individuals. The species has a large Extent of Occurrence and Area of Occupancy, both well above the thresholds for any threatened category. Although localized declines have been observed, particularly around Zarqa due to urban expansion and agricultural intensification, these impacts are not causing a rapid or widespread population reduction at the national scale. The overall population trend is considered generally stable.

• **Distribution:** This species breeds across south-central Eurasia and winters in northeastern Africa, the Arabian Peninsula, and the Indian subcontinent. **In Jordan**, it is a common passage migrant recorded throughout the country, with a few winter records from the Jordan Valley. It also occurs as a summer visitor or resident (possibly a partial migrant) in the northern steppe regions and the southern highlands (Khoury, 1998c).

• **Habitats and Ecology:** It inhabits open semi-arid steppe (temperate shrubland), often near rain-fed barley fields. It feeds mainly on insects and breeds from March to May, nesting in rodent burrows. In Jordan, breeding is confined to mid- to high-altitude steppe habitats within the Irano-Turanian region, from the Syrian border south to Ras en-Nagab.

• **Conservation Status:** It is listed in Appendix II of the Convention on the Conservation of Migratory



Species of Wild Animals (CMS). It is recognized under AEWA as a migratory species, providing an international framework for coordinated conservation across its migratory range.

- **Major Threats:** It is primarily affected by steppe habitat degradation and loss resulting from urban expansion, intensive livestock grazing (nomadic, smallholder, and agro-industrial), renewable energy development, and increasing drought associated with climate change.

- **Recommended Conservation and Research:** Conservation priorities include protecting and managing steppe habitats to prevent degradation and land conversion. Population monitoring during the breeding season and migration is recommended, along with research on population size, distribution, past trends, and key threats.

Eastern Black-eared Wheatear

Order: Passeriformes
Family: Muscicapidae
Scientific Name: *Oenanthe melanoleuca* (Güldenstädt, 1775)
Arabic Name:
أبلق اغشى
National Red List Status: VU B1 a,b(iii)
Population Trend: Decreasing
Status in Jordan: Summer visitor, passage migrant

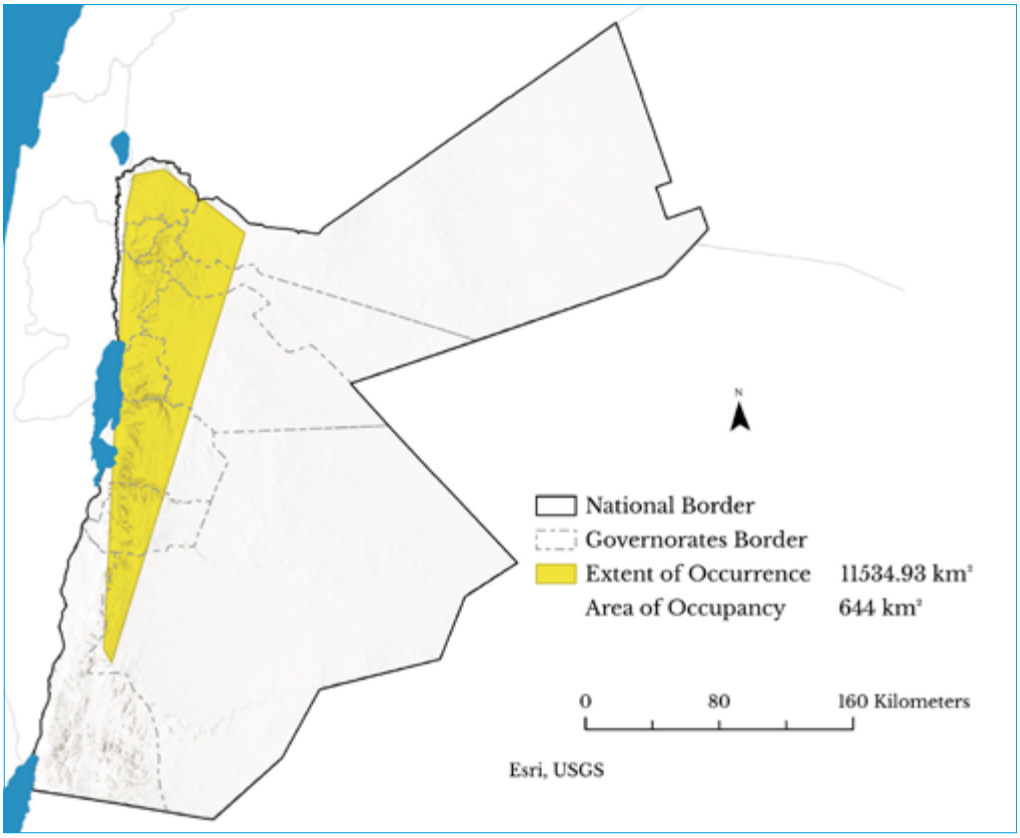
- **Justification:** The species has a small and declining breeding population, with a continuing reduction in habitat extent, quality, and number of breeding pairs, particularly in northern Jordan, where urbanization has caused significant habitat loss and fragmentation. Its restricted breeding range and documented local population reductions meet the thresholds for Vulnerable under criterion B1ab(iii). Although populations in other parts of the Levant are relatively stable, the deterioration of suitable breeding habitat in Jordan limits the likelihood of a significant rescue effect.

- **Distribution:** *Oenanthe melanoleuca* breeds in southeastern Europe and Turkey, through the Levant to western Iran and southwestern Kazakhstan, and winters in the Sahel. **In Jordan**, it is a common passage migrant nationwide and a summer breeder in the highlands and rift margins from Yarmuk south to Rajif, occurring mainly in Mediterranean and transitional bioclimatic zones between 50 and 1,600 m a.s.l.

- **Habitats and Ecology:** It inhabits Mediterranean-type shrubby vegetation and temperate steppe grassland, favoring stony, scrubby slopes and open woodland. It feeds on invertebrates, berries, and seeds and breeds from April to July, nesting in rock crevices. In Jordan, it occurs during the breeding season in the Mediterranean bioclimatic zone and adjacent transitional areas to the Irano-Turanian and Sudanian regions, at elevations of about 50–1,100 m a.s.l. in the north and 700–1,600 m a.s.l. in the south.



Black-eared Wheatear (Oenanthe melanoleuca); photo: © Fares Khoury



- **Conservation Status:** It is protected under the general provisions of Jordan's Agricultural Law No. 13 of 2015 and Environmental Protection Law No. 6 of 2017. Breeding pairs have been recorded within protected areas, including the Dana and Yarmouk Nature Reserves, thereby contributing to the safeguarding of part of its breeding population.

- **Major Threats:** It is primarily threatened by habitat loss and fragmentation caused by urban expansion and associated infrastructure development, including housing, commercial and industrial areas, and road networks. Additional pressures arise from agricultural intensification, small-holder grazing, and increasing drought linked to climate change, which further reduce habitat extent and quality.

- **Recommended Conservation and Research:** An action plan is required for protecting Mediterranean shrubland vegetation threatened by rapid urbanization. Targeted research is needed on population size, distribution, past trends, and the identification and assessment of key threats.

Mourning Wheatear

Order: Passeriformes
Family: Muscicapidae
Scientific Name: *Oenanthe lugens* (Lichtenstein, 1823)
Arabic Name:
أبلق حزين
National Red List Status: LC
Population Trend: Stable
Status in Jordan: Resident

- **Justification:** This species is the most widespread wheatear species in Jordan and is locally common, with an estimated national population exceeding 2,500 mature individuals. The population trend is stable, and the species occupies a wide range of habitats across the country. There is no evidence of significant population decline, severe fragmentation, or range restriction.

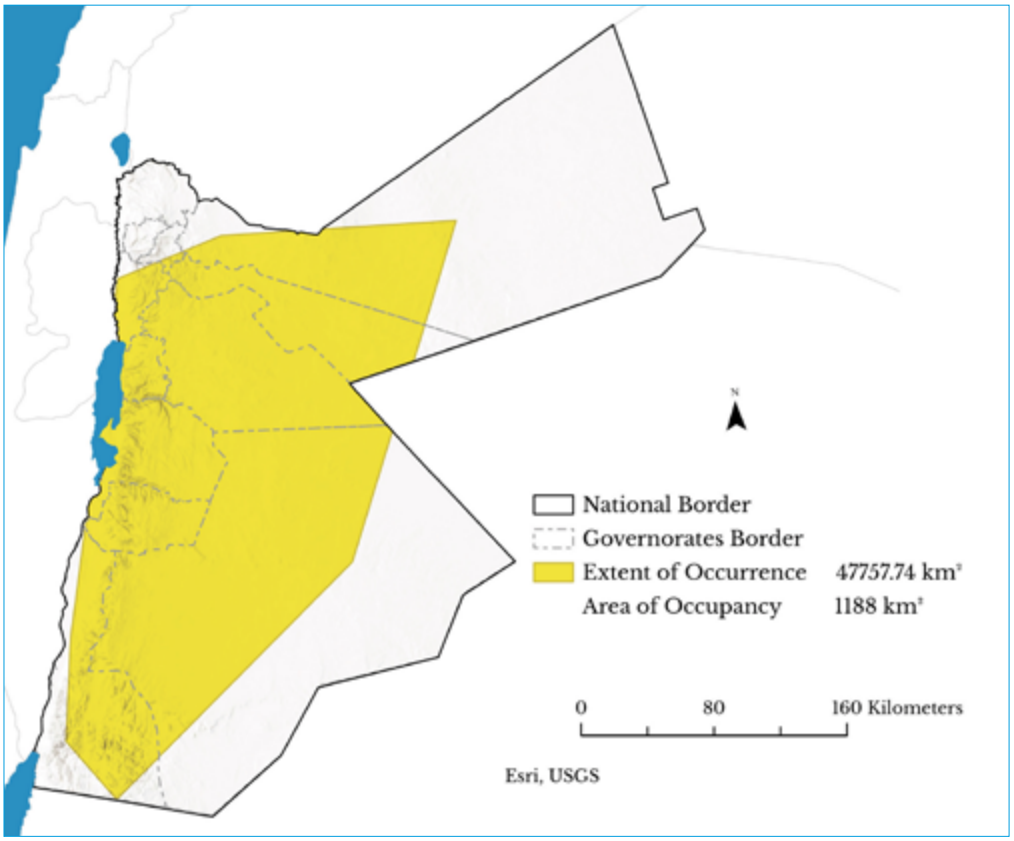
- **Distribution:** This species has a wide distribution across the Middle East, North Africa, and parts of Southwest Asia. **In Jordan**, it is widespread, most common along the Dead Sea and the southern Rift margins, and in the Rum Desert. It also occurs in suitable habitats of central-eastern Jordan, the Aqaba Mountains, and the Jordan Valley. The rare subspecies *O. l. warriae* (Basalt Wheatear) is confined to hilly basalt areas in northeastern Jordan and is assessed separately.

- **Habitats and Ecology:** It inhabits rocky desert and semi-desert environments, including temperate shrublands, rocky inland areas, hot deserts, and stony mountain slopes with rock outcrops. It feeds mainly on insects such as ants and beetles and breeds from March to June, nesting in rock crevices or holes and often producing multiple broods. Pairs protect their territories against conspecifics and members of similar species. The species is largely resident in Jordan, with local altitudinal movements, particularly in the southwest (Khoury & Boulad, 2010).

- **Conservation Status:** It is protected under Jordan's Agricultural Law and Environmental Protection Law. It occurs within several protected areas, including the Mujib, Dana, Al-Dahek, and Wadi Rum Protected Areas, which help conserve its populations and habitats.

- **Major Threats:** It is locally affected by habitat disturbance and loss associated with tourism and recreational development, mining and quarrying, and the expansion of transportation infrastructure, including road networks. Additional pressures arise from human recreational activities that disturb these habitats, particularly in rocky desert and mountain habitats.

- **Recommended Conservation and Research:** Conservation priority actions include strengthening site protection and land-use planning for rocky desert habitats and managing disturbance from off-road driving, quarrying, and pesticide use. Research should focus on exact distribution and seasonal movements.

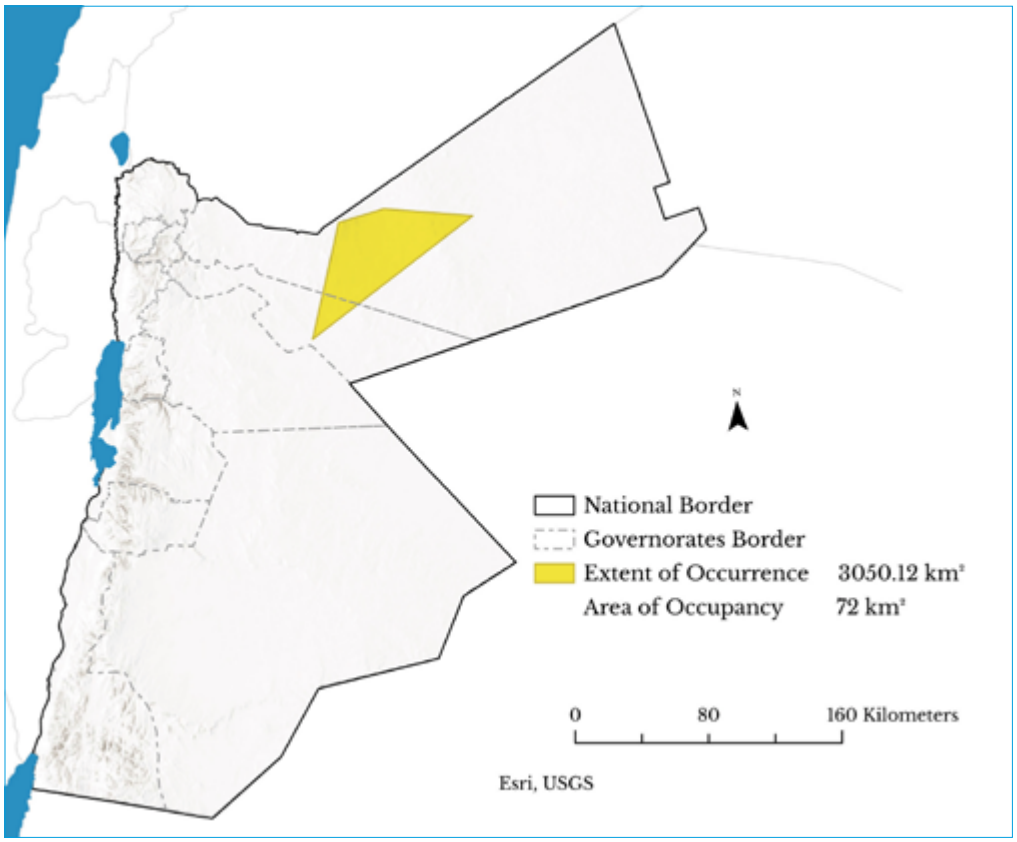


Basalt Wheatear

Order: Passeriformes
Family: Muscicapidae
Scientific Name: *Oenanthe lugens* subsp. *warriae* (Shirihai & Kirwan, 2011)
Arabic Name:
أبلق حزين اسود (أبلق الحرّة)
National Red List Status: CR D1
Population Trend: Decreasing
Status in Jordan: Resident

- **Justification:** The Basalt Wheatear has an extremely small national population in Jordan, estimated at ≤50 mature individuals, meeting Criterion D1 for Critically Endangered. It is restricted to the basalt desert of northeastern Jordan, with a very limited Area of Occupancy and Extent of Occurrence. Breeding pairs have apparently declined markedly over the past ~15 years, inferred from the absence of recent records at historically occupied sites despite extensive surveys. There is no evidence of a rescue effect from adjacent Syria, where the subspecies is also rare and very restricted. The combination of an extremely small population size, inferred ongoing decline, and the lack of immigration supports the assessment of Critically Endangered.

- **Distribution:** This subspecies has a very restricted distribution in the basalt deserts of the northern Arabian Levant, occurring in adjacent basalt deserts in southern Syria. There are occasional records of dispersing or wintering birds in the Naqab Desert of Palestine. **In Jordan**, it is confined to the hilly basaltic landscapes of the northeastern Badia, where it is locally endemic within the Al Harra basalt fields. The Basalt Wheatear is a resident or partial migrant, with evidence of altitudinal movement or short-distance migration. There is a single unusual record of a male Basalt Wheatear in a mixed pair at Rajeb in the Sharra Highlands (Khoury *et al.*, 2013).



- **Habitats and Ecology:** The species is strongly associated with basaltic desert habitats, particularly rocky hills, escarpments, and wadis within Al Harra, where abundant boulders, steep slopes, and broken terrain provide suitable nesting and shelter sites. It forages mainly on flatter ground, including road margins. The Basalt Wheatear avoids extensive, uniform boulder fields and instead selects areas with heterogeneous topography, such as rock piles, road cuttings, and natural bluffs, which support higher prey availability (Khoury *et al.*, 2010).

- **Conservation Status:** It is protected under Jordan's Agricultural Law and Environmental Protection Law.

- **Major Threats:** The species is threatened primarily by habitat degradation and loss within its restricted range. Key pressures include overgrazing by nomadic livestock, road construction and associated disturbance, quarrying of basalt formations, and increasing frequency of drought, which likely reduces arthropod prey availability. Given the small population size, these threats have a disproportionate impact on this rare taxon.

- **Recommended Conservation and Research:** Priority conservation actions include protecting and managing rocky basalt desert habitats to limit degradation, quarrying, and human disturbance. Regular, standardized monitoring is required to detect changes in population size and distribution. Research priorities include improved estimates of population size and trends, detailed studies of life history and movements, assessment of threat severity, and the development and implementation of a targeted national species recovery plan.

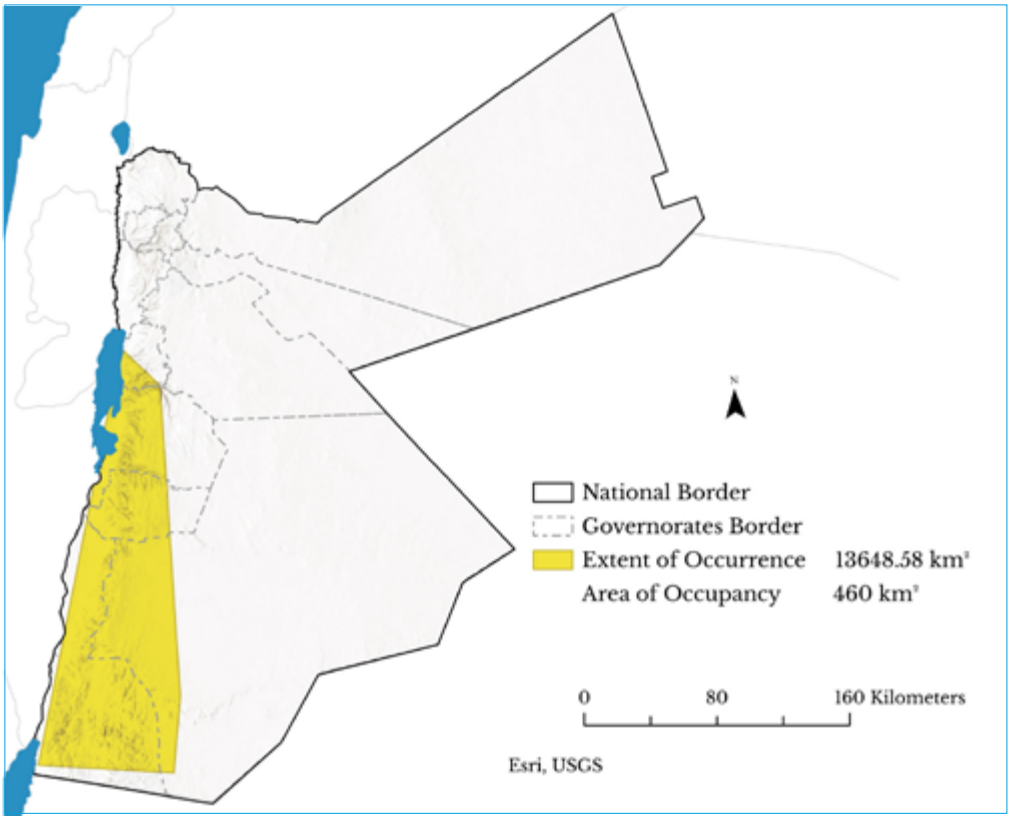
Hooded Wheatear

Order: Passeriformes
Family: Muscicapidae
Scientific Name: *Oenanthe monacha* (Temminck, 1825)
Arabic Name:
أبلق مقلنس
National Red List Status: NT
Population Trend: Stable
Status in Jordan: Resident

- **Justification:** The species has a relatively wide national Extent of Occurrence and Area of Occupancy, with an estimated population size probably exceeding 500 mature individuals. It is thinly distributed, mainly along the Dead Sea and southern Rift margins, with localized populations in the Hizmah Basin and Aqaba Mountains. The relatively small population appears to be currently stable, and trend data are insufficient to meet threatened thresholds. Habitat loss and degradation, however, are anticipated from large-scale mining and energy developments. Its relatively low abundance and vulnerability to habitat loss place it close to qualifying for a threatened category.

- **Distribution:** This species has a wide distribution extending from eastern Egypt and the Sinai Peninsula through western Jordan and across the Arabian Peninsula to southwestern Pakistan. **In Jordan**, it is a resident species that occurs mainly along the Dead Sea and southern Rift margins, as well as in the Rum Desert and the Aqaba Mountains, where it inhabits arid, rocky habitats.

- **Habitats and Ecology:** The Hooded Wheatear inhabits arid and semi-arid environments, primarily in arid, rocky inland areas. It inhabits desolate desert wadis, ravines, and rocky slopes, where it forages mainly on arthropods captured in short aerial sallies or gleaned from the ground, often in relatively flat open areas. Breeding takes place from March to mid-June, with nests typically placed in rock crevices and cavities that provide shelter and protection (Khoury *et al.*, 2008).



- **Conservation Status:** It is protected under Jordan's Agricultural Law and Environmental Protection Law. Several pairs breed in the protected areas of Mujib, Dana, and Rum.

- **Major Threats:** Habitat loss and degradation resulting from tourism development, mining, road construction, and related infrastructure are potential threats. Recreational activities (e.g., in Wadi Rum) and off-road driving are causing disturbance and degradation of the foraging habitat (Khoury *et al.*, 2008).

- **Recommended Conservation and Research:** Priority actions include protecting and managing arid rocky habitats to limit degradation and disturbance, alongside regular monitoring to detect changes in population size and distribution. Further research is needed to improve knowledge of population size and trends, life history and ecology, key threats, and the effectiveness of potential conservation actions.

White-crowned Wheatear

Order: Passeriformes
Family: Muscicapidae
Scientific Name: *Oenanthe leucopyga* (C.L.Brehm, 1855)
Arabic Name:
أبلق ابيض قنة
National Red List Status: LC
Population Trend: stable, possibly increasing
Status in Jordan: Resident

- **Justification:** This species is widespread and locally common in Jordan, with an estimated national population of ≥2,000 mature individuals. It has a large Extent of Occurrence and Area of Occupancy. The species has shown a recent range expansion, particularly across the basalt desert of northeastern Jordan over the past 3–4 decades. There is no evidence of rapid population decline, severe fragmentation, extreme fluctuations, or immediate threats that would meet thresholds for a threatened or Near Threatened category.

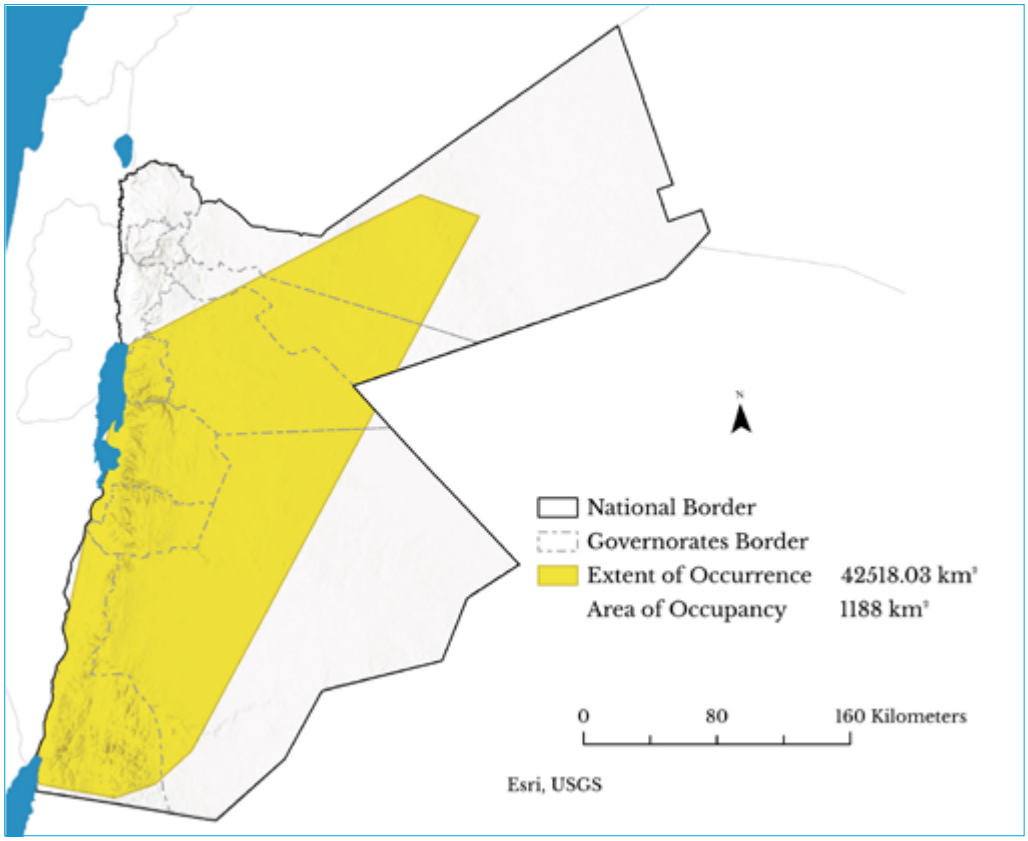
- **Distribution:** The White-crowned Wheatear occurs widely across rocky deserts of North Africa, the Middle East, and parts of the Arabian Peninsula, with three subspecies occupying distinct geographic ranges. **In Jordan**, it is a resident species inhabiting rocky areas along the Dead Sea and southern Rift margins, the Hizmah Basin, the Aqaba Mountains, and the basalt desert of northeastern Jordan.

- **Habitats and Ecology:** The species inhabits inland rocky areas and hot desert habitats, occurring in rocky deserts, wadis, and slopes. It feeds on a wide range of invertebrates and small vertebrates, and occasionally on fruit, and breeds in rock crevices, with nests built from grass and other materials. The White-crowned Black Wheatear has expanded across the basalt desert since the 1990s and is resident in Jordan, with some seasonal dispersal to non-breeding areas in early spring.

- **Conservation Status:** The species is recorded in several protected areas, including Mujib, Dana, and Rum. It is protected under the general provisions of the Environmental Law (2017) and the Agricultural Law (2015), which provide a legal framework for protecting habitats and species in Jordan.

- **Major Threats:** Habitat modification and disturbance resulting from mining and quarrying activities, including associated road construction and increased traffic, leading to local habitat loss and degradation in rocky desert areas.

- **Recommended Conservation and Research:** Key actions include maintaining and protecting desert habitats from degradation and overgrazing, and monitoring populations at key sites to detect temporal changes. Research should update exact distribution.



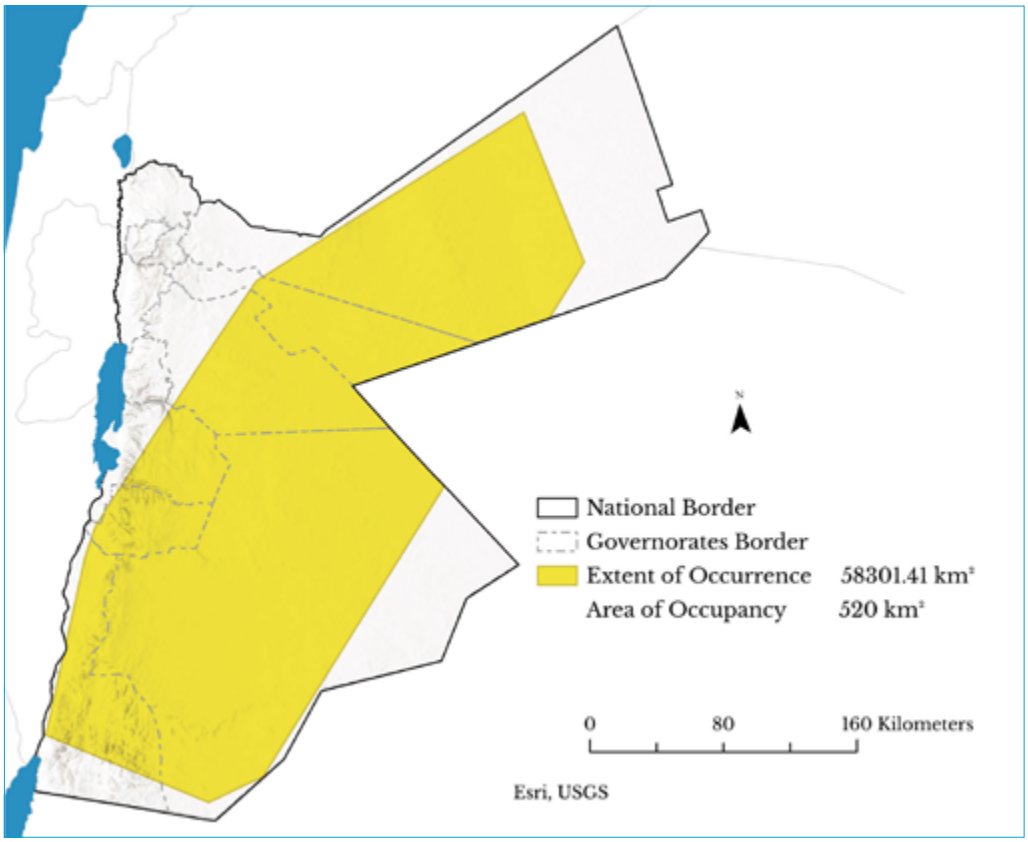
Desert Wheatear

Order: Passeriformes
Family: Muscicapidae
Scientific Name: *Oenanthe deserti* (Temminck, 1825)
Arabic Name:
أبلق صحراوي
National Red List Status: LC
Population Trend: Stable
Status in Jordan: Resident

- **Justification:** This species is widespread and not uncommon in Jordan, occurring across the Central and Eastern Desert and Wadi Araba. It has a very large Extent of Occurrence and a moderately large Area of Occupancy, which is likely underestimated because part of the extensive suitable habitat remains unsurveyed. The population trend is considered stable, with no evidence of decline or major threats at the national level. Threats are emerging locally in Wadi Araba, where agricultural development is gradually encroaching on the sandy desert habitat. Given its wide distribution, large population size, and habitat availability, the species does not currently meet the criteria for a threatened category.

- **Distribution:** The Desert Wheatear is widely distributed across North Africa, the Levant, large parts of Asia, and the Indian subcontinent, with several subspecies occupying distinct regions. **In Jordan**, it is a resident species that is widely but thinly distributed across the interior desert and Wadi Araba. Additional records from the Jordan Valley and Aqaba mainly involve passage migrants or winter visitors.

- **Habitats and Ecology:** The species inhabits hot desert habitats, occurring mainly in flat, open hamada and sandy-gravel deserts, often observed along dry wadi beds. It feeds primarily on invertebrates and breeds from March to June, nesting in sheltered sites such as holes in banks or under stones (Al-Shamlih *et al.*, 2005; Khoury *et al.*, 2006).



• **Conservation Status:** The species is protected under the general provisions of the Environmental Law (2017) and the Agricultural Law (2015), which provide a legal framework for the protection of habitats and species in Jordan. The species occurs in the Shaumari, Azraq, and Burqu' Nature Reserves.

• **Major Threats:** Habitat degradation and loss are driven by intensive livestock grazing, quarrying, and intensive farming in desert areas (Khoury & Al-Shamlih, 2006; Khoury *et al.*, 2007).

• **Recommended Conservation and Research:** Priority actions include maintaining and protecting desert habitats from degradation, overgrazing, and off-road vehicle disturbance. Research is needed to improve knowledge of population size, distribution, trends, and the nature and severity of threats.



Desert Wheatear (Oenanthe deserti); photo: © Fares Khoury

Red-rumped Wheatear

Order: Passeriformes
Family: Muscicapidae
Scientific Name: *Oenanthe moesta* (Lichtenstein, 1823)
Arabic Name:
أبلق أحمر العجز
National Red List Status: EN B2ab(iii); C2a(i)
Population Trend: Decreasing
Status in Jordan: Resident

• **Justification:** The species has a restricted national distribution, occurring at less than 5 locations, with a limited Area of Occupancy and a continuing decline in habitat extent and quality. The national population is small (≤200 pairs), with each subpopulation containing fewer than 250 mature individuals, and declines are inferred from reductions in range and available breeding sites over the past two decades. There is no evidence that immigration from populations outside Jordan provides demographic support. These factors meet the thresholds for Endangered under criteria B2ab(iii) and C2a(i).

• **Distribution:** This species has a disjunctive distribution in North Africa, Jordan, and possibly Syria and central Arabia. It is also a rare visitor to southern Palestine during winter. **In Jordan**, it is a resident of open, arid steppe habitats from areas east of Swaqa south to the Sharah highlands and Al-Humaima, with occasional records of dispersing individuals near the breeding range. It has apparently disappeared from other areas where it has bred until the 1990s.

• **Habitats and Ecology:** The species inhabits temperate arid steppe and grassland, often dominated by *Anabasis* sp., in hilly and plateau landscapes, where it forages for insects using perch-and-pounce methods. In Jordan, it is restricted to the Irano-Turanian–Saharo-Arabian ecotone at medium to high elevations, usually above 700 m a.s.l. Breeding occurs from February to June, with nests placed in rodent burrows (Khoury *et al.*, 2025).

• **Conservation Status:** The species is protected under the general provisions of the Agricultural Law (2015) and the Environmental Law (2017) in Jordan. It is also listed in Appendix II of the Convention on the Conservation of Migratory Species of Wild Animals

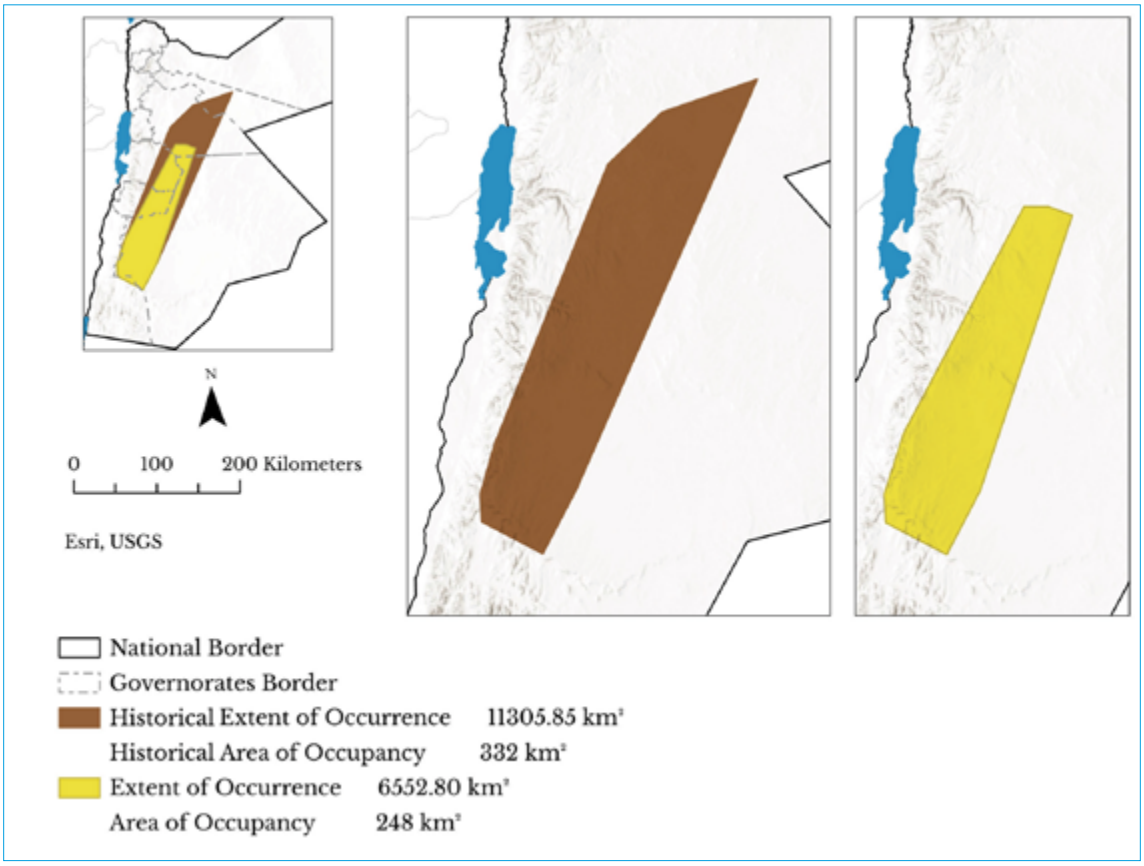
(CMS/Bonn Convention), thereby supporting international cooperation in its conservation.

- **Major Threats:** Habitat loss and degradation are driven primarily by intensive livestock grazing, particularly nomadic grazing, frequent tilling, and energy production activities, including renewable energy developments. The increasing frequency of drought associated with climate change further degrades steppe habitats and reduces food availability (Khoury *et al.*, 2025).

- **Recommended Conservation and Research:** Priority actions include protecting arid steppe habitats and maintaining low-intensity grazing regimes, and including regionally threatened species in the site screening phases and EIAs for large projects. Further research is needed to study interactions with other species, clarify exact breeding distribution and trends, site-specific threats, population viability analysis, and to develop a targeted species action plan.



Red-rumped Wheatear (Oenanthe moesta); photo: © Fares Khoury



Blackstart

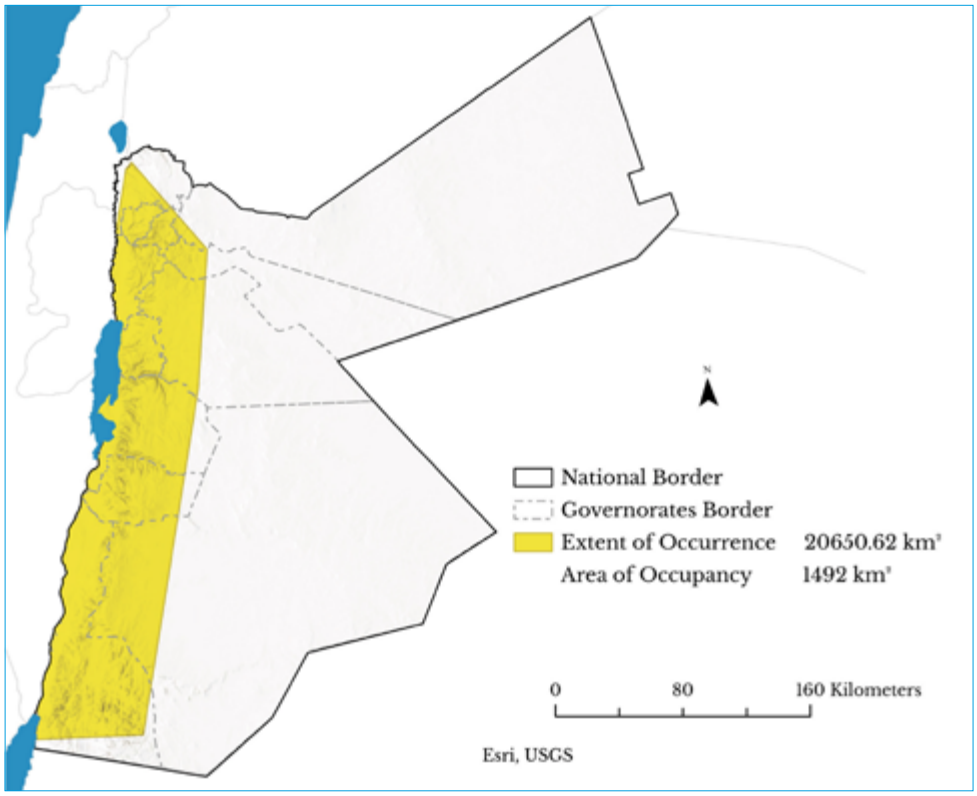
Order: Passeriformes
Family: Muscicapidae
Scientific Name: *Oenanthe melanura* (Temminck, 1824)
Arabic Name:
أبلق اسود الذنب
National Red List Status: LC
Population Trend: Stable
Status in Jordan: Resident

- **Justification:** This species has a large national population (≥2,500 mature individuals) and an extensive distribution in western Jordan. The species remains very common within its breeding range, with recent indications of eastward range expansion along some valleys. Although agricultural expansion may cause localized habitat impacts, there is no evidence of population decline at the national scale, and no thresholds for a threatened category are currently approached.

- **Distribution:** The Blackstart is widely distributed across North Africa, the Middle East, and the Arabian Peninsula, with several subspecies occupying distinct regions. **In Jordan**, it is a common resident along the Rift margin, in the southern Rift Valley, in the Aqaba Mountains, and in parts of the Rum Desert.

- **Habitats and Ecology:** The Blackstart occupies a wide range of rocky, arid habitats with scattered shrubs, including dry savanna, subtropical and tropical dry shrubland, rocky inland areas, and seasonal watercourses. It is typically associated with rocky slopes, wadis, and escarpments, where it forages for invertebrates on the ground and among rocks.

- **Conservation Status:** The species is protected under the general provisions of the Agricultural Law No. 13 (2015) and the Environmental Law No. 6 (2017). It occurs within the Mujib and Dana Reserves. It is also found locally along the margins of the Rum Protected Area, thereby providing additional habitat protection in parts of its range.



- **Major Threats:** Localized habitat loss has been observed due to the expansion of agricultural activities.

- **Recommended Conservation and Research:** Priority actions include rangeland management taking into consideration bird diversity.

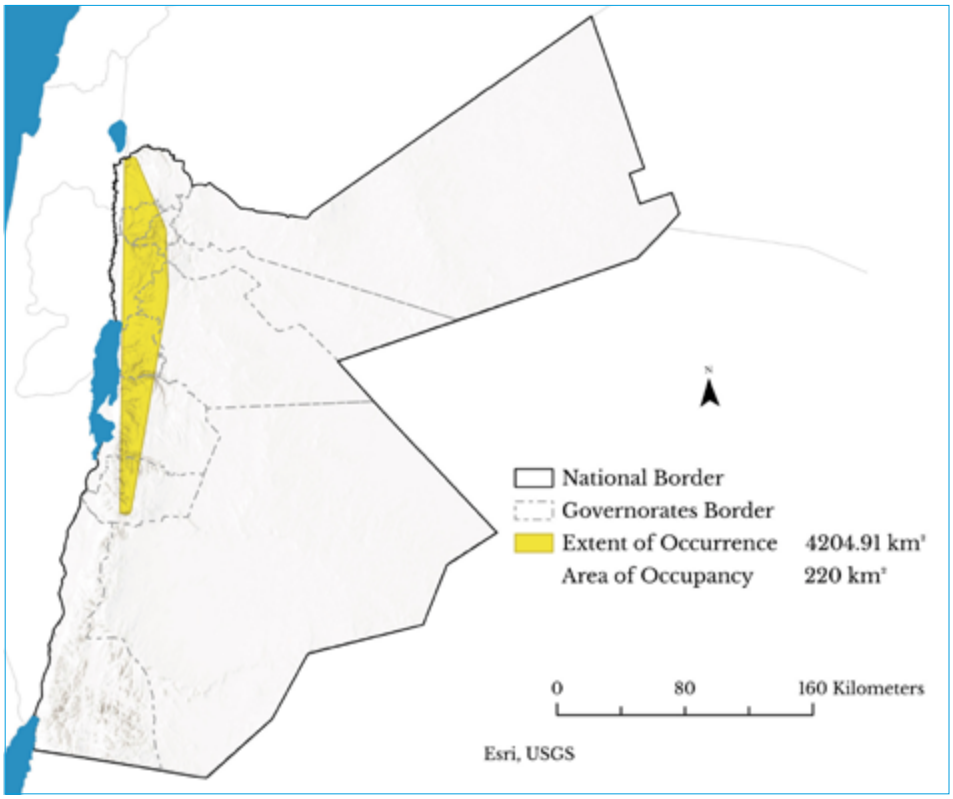
Spotted Flycatcher

Order: Passeriformes
Family: Muscicapidae
Scientific Name: *Muscicapa striata* (Pallas, 1764)
Arabic Name:
صائد ذباب أرقط
National Red List Status: NT
Population Trend: Unknown
Status in Jordan: Summer visitor, passage migrant

- **Justification:** The species has a moderately restricted breeding range in Jordan. It is a thinly distributed summer visitor, primarily in open woodlands, woodland edges, orchards, and mature olive groves. Habitat quality is declining due to logging of mature trees, and a continuing population decline is suspected. Its restricted range and relatively small population size place it close to qualifying for a threatened category, supporting a Near Threatened assessment at the national level.

- **Distribution:** The Spotted Flycatcher is widely distributed across Europe, parts of Asia, and North Africa, with subspecies differing in breeding ranges and all wintering in sub-Saharan Africa. **In Jordan**, it is a common passage migrant recorded throughout the country during migration, and a summer visitor breeding in the Northern Highlands and along the Rift margins from the Yarmouk Valley south to Dana, as well as along the Jordan River and some of its tributaries in the Jordan Valley.

- **Habitats and Ecology:** In Jordan, the species inhabits Mediterranean-type shrubby vegetation and arable land within the Mediterranean biogeographical zone. It occurs in open woodlands, dense scrub, and



orchards with mature trees; it feeds on flying insects and other invertebrates and breeds in spring and summer, nesting in trees or on ledges. The species is migratory.

- **Conservation Status:** The species is protected under the general provisions of Jordan's Agriculture Law (2015) and Environmental Protection Law (2017) and occurs within protected areas. It is listed under Appendix II of the Convention on the Conservation of Migratory Species of Wild Animals (CMS) and is covered by AEWA as a migratory species. The species breeds in the Dibeen, Ajloun, and Yarmouk Nature Reserves; hence, a partial protection of the national breeding population exists.

- **Major Threats:** Habitat loss and degradation resulting from urban, commercial, and industrial development, agro-industrial agriculture, and logging and wood harvesting, including subsistence-scale cutting of mature trees, leading to the reduction of suitable breeding and nesting habitats.

- **Recommended Conservation and Research:** Priority actions include maintaining and restoring woodland habitats, strengthening monitoring of population trends, and mitigating threats from habitat loss, pesticide use, and illegal hunting. Research should focus on population and habitat trends.

Great Tit

Order: Passeriformes
Family: Paridae
Scientific Name: *Parus major* (Linnaeus, 1758)
Arabic Name:
قرقف كبير
National Red List Status: LC
Population Trend: Stable
Status in Jordan: Resident

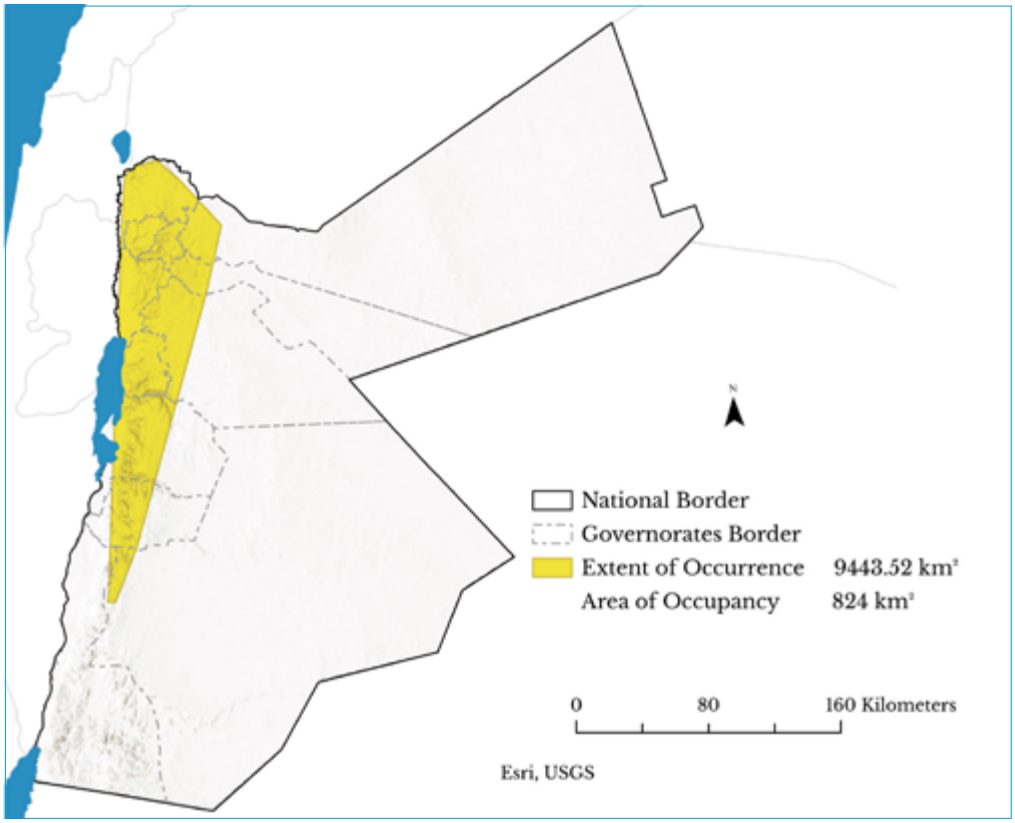
- **Justification:** This species is common in western and northern Jordan, with a large Extent of Occurrence, large Area of Occupancy, and an estimated population exceeding 2,000 mature individuals. The overall population trend is stable, with local expansion linked to agricultural development in some areas. Although an isolated and genetically distinct population occurs in southwestern Jordan (Tafila–Dana–Petra) and shows a localized decline at its southern edge, this does not currently result in a significant national-level decline or meet thresholds for a threatened category.

- **Distribution:** The Great Tit is widely distributed across Eurasia and North Africa, being absent only from far northern Scandinavia. **In Jordan**, it is common in northwestern regions from the Yarmouk south to the Madaba area, occupying the Northern Highlands, Northern Steppes, northern Rift margins, and the northern Jordan Valley, with an isolated high-elevation population in the southern Rift margins at Tafila, Dana, in addition to Al-Hisha and Petra, where it is now rare and declining.

- **Habitats and Ecology:** The species inhabits temperate forests, Mediterranean-type shrubby vegetation, arable land, and urban areas, occurring in open deciduous and mixed forests, woodland edges, and cultivated landscapes with trees and shrubs. It feeds on insects, spiders, seeds, and fruit; breeds from late January to September in tree cavities; and occurs mainly within the Mediterranean bioclimatic zone in Jordan, with recent expansion into the Sudanian and Irano-Turanian zones following agricultural development.

- **Conservation Status:** The species is listed under Appendix II of the Convention on the Conservation of Migratory Species of Wild Animals (CMS) and is covered by AEWA as a migratory species. The Great Tit occurs in Yarmouk, Ajlun, Dibbeen, and Dana Reserves.

- **Major Threats:** The species is affected by habitat loss and degradation caused by deforestation linked to urban expansion, logging, and wood harvesting, including subsistence-scale tree cutting, which



reduces the extent of suitable woodland habitat. Occasional illegal capture and trade are indicated by the species being recorded at the Friday Animal Market in Amman (Eid *et al.*, 2010). The isolated and genetically distinct southern population in Jordan (Khoury *et al.*, 2007) is threatened by logging and habitat degradation.

- **Recommended Conservation and Research:** Priority actions include conserving and managing Mediterranean-type woodland habitats. Research should focus on population size, distribution, and trends, as well as on assessing threats. The southern population of Jordan is isolated and genetically distinct, and further research is required to determine its status as a possible subspecies, which may eventually warrant separate assessment.

Eurasian Blue Tit

Order: Passeriformes
Family: Paridae
Scientific Name: *Cyanistes caeruleus* (Linnaeus, 1758)
Arabic Name:
قرقف ازرق
National Red List Status: VU B1ab(iii)+B2ab(iii)
Population Trend: Probably Decreasing
Status in Jordan: Resident

- **Justification:** The species has a highly restricted range in Jordan, occurring at ≤2 locations, and is inferred to be declining in extent and quality of native woodland habitat. It is confined to dense woodlands, primarily in Dibeen and the Ajloun Mountains. It is highly sensitive to habitat fragmentation from logging, olive grove and orchard expansion, urbanization, and road development. A suspected ~30% reduction in woodland cover supports an expected decline in population, meeting the threshold for Vulnerable under criterion A4c. Although the population likely exceeds 1,000 mature individuals, it is isolated, with no evidence of immigration or dispersal within the region, which limits the rescue effect.

• **Distribution:** The Eurasian Blue Tit is largely confined to the Western Palearctic, breeding from the British Isles and the Mediterranean north to Scandinavia and northwestern Russia, and east to the Urals and western Kazakhstan, with its southern range extending through the Caucasus, northern Iran, Iraq, Türkiye, and scattered sites in the Levant, including Jordan. **In Jordan**, it is resident in the Northern Highlands and adjacent Rift margins between 600–1,100 m a.s.l., occurring from Birqish south to Dibbeen, with a single breeding record from the highlands of Jilead. The Blue Tit population of Jordan is genetically distinct (Khoury *et al.*, 2007).

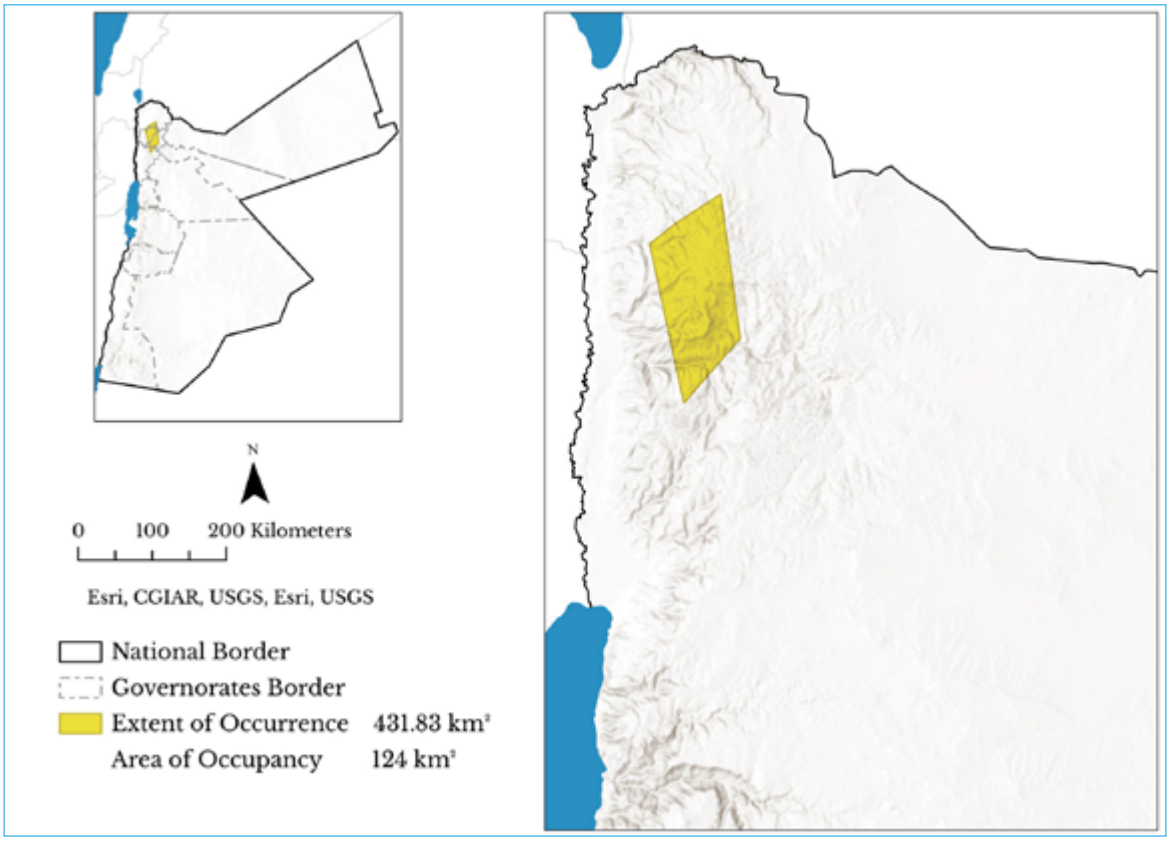
• **Habitats and Ecology:** The Eurasian Blue Tit inhabits temperate forests and Mediterranean-type shrubby vegetation, occurring widely in mixed forests across Eurasia. In Jordan, it is confined to dense oak and oak–pine woodlands in the north. The isolated Jordanian population is genetically distinctive and related to West Asian populations; it requires trees with nest cavities for nesting, feeds mainly on insects and spiders, and breeds from April to late June.

• **Conservation Status:** The species is protected under the general provisions of Jordan's Agricultural Law No. 13 of 2015 and the Environmental Protection Law No. 6 of 2017, with breeding pairs recorded in protected areas, notably the Ajloun and Dibeen Nature Reserves.



Blue Tit (Cyanistes caeruleus); photo: © Raed Al-Btosh

• **Major Threats:** Loss and fragmentation of dense woodland habitats driven by housing and tourism development, small-holder farming, road construction, and logging and wood harvesting, resulting in reduced habitat extent and connectivity.



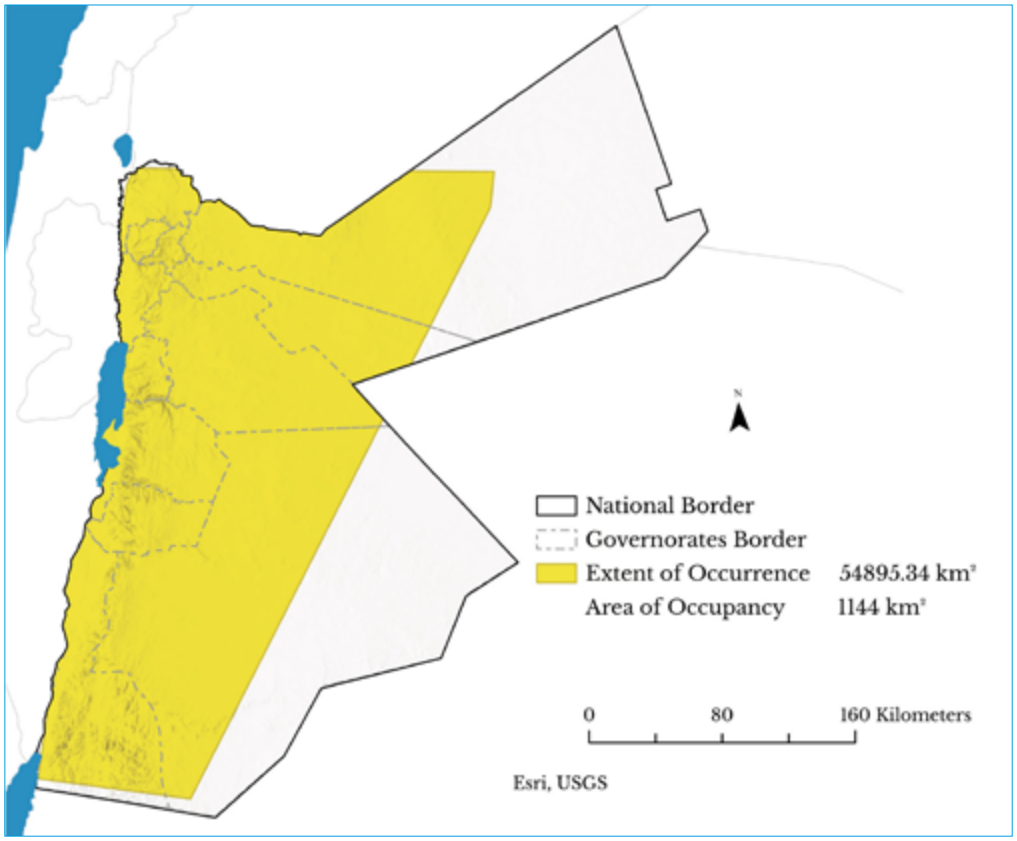
- **Recommended Conservation and Research:** Priority actions include implementing a comprehensive action plan to conserve and manage remaining woodland habitats and monitor populations to detect changes in abundance and distribution. Research should focus on population size, distribution, and past trends; threats; conservation actions; and the development of species-specific and area-based management plans.

Great Grey Shrike

Order: Passeriformes
Family: Laniidae
Scientific Name: *Lanius excubitor* (Linnaeus, 1758)
Arabic Name:
صرد رمادي كبير
National Red List Status: LC
Population Trend: Stable
Status in Jordan: Resident

- **Justification:** This species is widespread in Jordan, with a very large Extent of Occurrence, large Area of Occupancy, and an estimated population of ≥1,000 mature individuals. The population trend is probably stable, and although local habitat loss due to urbanization and agricultural expansion occurs, these threats currently affect only a small proportion of the national population.

- **Distribution:** The Great Grey Shrike has a wide distribution across Eurasia and parts of Africa, with several subspecies occupying distinct regions, including the Arabian Peninsula. **In Jordan**, it is widely distributed in open habitats with scattered shrubs, occurring throughout the Rift Valley and its margins, the Northern Highlands and steppes, and the central and eastern parts of the country.



• **Habitats and Ecology:** The species inhabits dry savanna and temperate to subtropical shrublands, as well as arable land, occurring in open areas with scattered trees and shrubs. It feeds on large insects and small vertebrates, breeds in spring with nests built high in trees, and occurs across multiple bioclimatic zones in Jordan from –400 to 900 m a.s.l., avoiding barren deserts, rugged terrain, and elevations above 1,000 m.

• **Conservation Status:** The species is listed under Appendix II of the Convention on the Conservation of Migratory Species of Wild Animals (CMS) and is covered by AEWA as a migratory species.

• **Major Threats:** Local habitat loss and degradation caused by urban expansion, agro-industrial agriculture, and overgrazing, leading to fragmentation of open shrub and savanna habitats (Khoury *et al.*, 2007).



Great Grey Shrike (Lanius excubitor); photo: © Fares Khoury

• **Recommended Conservation and Research:** Priority actions include protecting and managing open habitats with scattered shrubs and trees, monitoring populations and key breeding areas, and mitigating threats from habitat loss, overgrazing, and persecution. Research should focus on breeding ecology, migration patterns, habitat use, and clarifying taxonomy and subspecies distribution.

Woodchat Shrike

Order: Passeriformes
Family: Laniidae
Scientific Name: *Lanius senator* (Linnaeus, 1758)
Arabic Name:
صرد أحمر القنة
National Red List Status: LC
Population Trend: Stable
Status in Jordan: Summer visitor, passage migrant



Woodchat Shrike (Lanius senator); photo: ©Waseem Al-Hayek

• **Justification:** The breeding range of this species in Jordan is relatively wide, with a large Extent of Occurrence, a large Area of Occupancy, and an estimated breeding population that probably exceeds 1,000 mature individuals. The population trend is probably stable, and although a slight decline is suspected due to habitat loss from urbanization, these impacts are localized and insufficient to meet the thresholds for a threatened category.

• **Distribution:** The Woodchat Shrike has a wide distribution across Europe, North Africa, and parts of the Middle East and Asia, with several subspecies occupying different regions. **In Jordan**, it is a passage migrant recorded across the country and a widespread summer visitor in the highlands and Rift

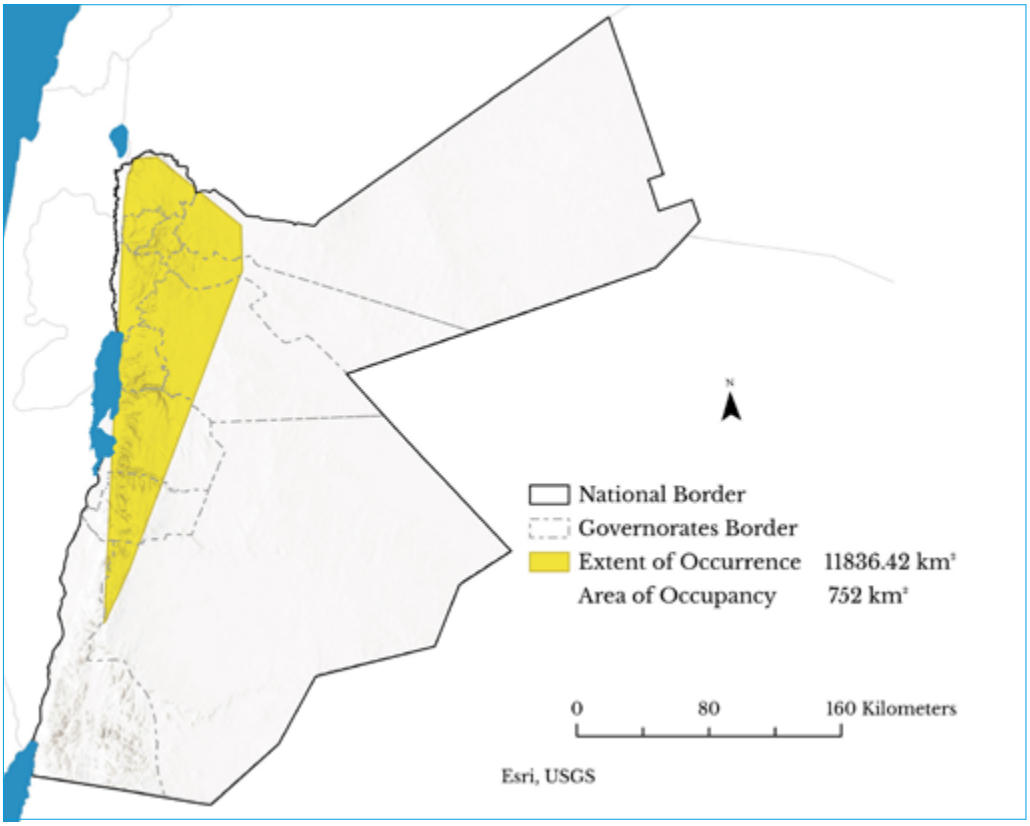
margins from the Yarmouk Valley south to Rajif, with sporadic records in the Jordan Valley and northern steppes.

- **Habitats and Ecology:** The species breeds in temperate and subtropical dry shrublands, Mediterranean-type shrubby vegetation, and occasionally in olive groves and orchards. It requires semi-open habitats with bushes and scattered trees, where it feeds primarily on large insects. It breeds in spring and summer, builds compact nests in trees or shrubs, and occurs mainly in the Mediterranean bioclimatic zone, with limited expansion into the Irano-Turanian and Sudanian zones (Khoury 1998a, c).

- **Conservation Status:** The species is protected under Jordan's Environmental Protection Law (2017) and the Agriculture Law No. 13 of 2015.

- **Major Threats:** Habitat loss and degradation are driven by urban expansion, intensive agriculture, livestock grazing, road development, and logging and wood harvesting, with additional impacts from agricultural pollution, particularly herbicides and pesticides, which reduce habitat quality and prey availability.

- **Recommended Conservation and Research:** Priority actions include reducing pesticide impacts and protecting shrubland habitats.



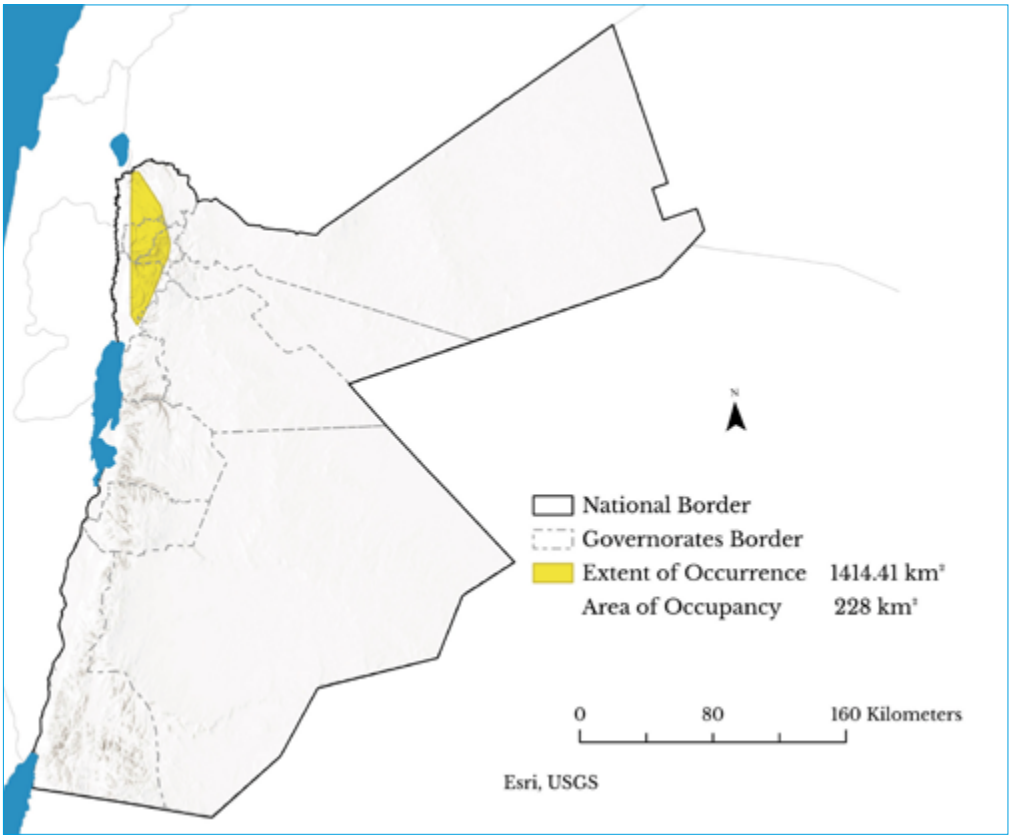
Masked Shrike

Order: Passeriformes
Family: Laniidae
Scientific Name: *Lanius nubicus* (Lichtenstein, 1823)
Arabic Name:
صرد مقنع
National Red List Status: VU B1ab(iii)+B2ab(iii)
Population Trend: Decreasing
Status in Jordan: Summer visitor, passage migrant

- **Justification:** The species has a restricted breeding range in Jordan, occurring at an estimated 5 locations, and a relatively small Area of Occupancy. There is a continuing inferred decline in the extent and quality of suitable habitat due to urbanization and modern agricultural practices. The breeding population is confined to the Northern Highlands and the Rift Margins, with no confirmed breeding elsewhere in Jordan. The species breeds in neighboring Levantine countries, potentially providing a rescue effect if some degraded habitats recover to support future breeding. Nonetheless, the national population is currently small, meeting the thresholds for Vulnerable under criteria B1ab(iii) and B2ab(iii).



Masked Shrike (Lanius nubicus); photo: © Waseem Al-Hayek



- **Distribution:** The Masked Shrike breeds from the southern Balkan Peninsula and Asia Minor south to the Levant, and winters in sub-Saharan Africa and southwestern Arabia. **In Jordan**, it is a common passage migrant recorded throughout the country during migration and a summer visitor breeding in the Northern Highlands and adjacent Rift margins, with unconfirmed reports of breeding further south.

- **Habitats and Ecology:** This migratory species inhabits Mediterranean-type shrubby vegetation during the breeding season, occurring in open woodlands with bushes and scattered trees. It feeds mainly on insects, builds its nests in trees or shrubs, and is a summer visitor in the Mediterranean bioclimatic zone.

- **Conservation Status:** The species is protected under Jordan's Agriculture Law (2015) and Environmental Protection Law (2017). It is listed under Appendix II of the Bern Convention as a strictly protected species. It is included in Annex I of the EU Birds Directive, which requires special conservation measures within its European range.

- **Major Threats:** Habitat loss and degradation caused by urbanization, agricultural encroachment, particularly small-holder farming, and subsistence-scale wood cutting, leading to the reduction and fragmentation of suitable open woodland habitats.

- **Recommended Conservation and Research:** Priority actions include maintaining and restoring traditional woodland–shrub mosaics and protecting key breeding sites. Research should focus on population size, distribution, and past trends, as well as on assessing threats.

White-spectacled Bulbul

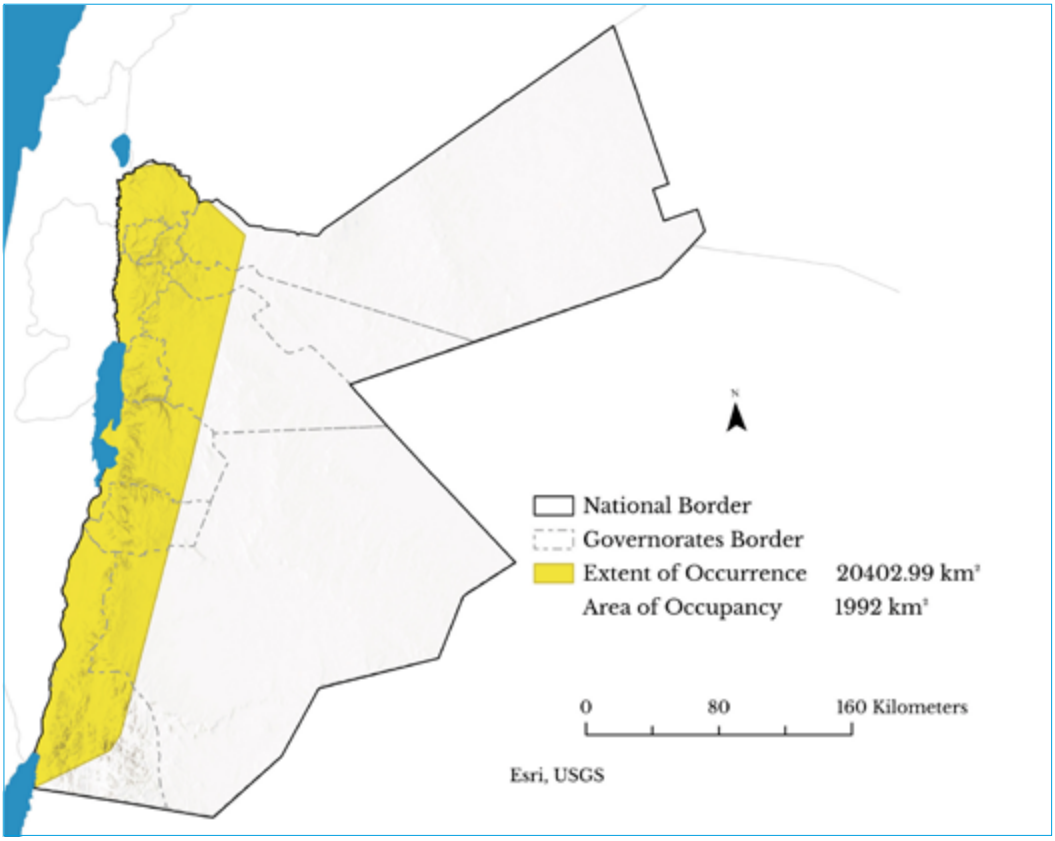
Order: Passeriformes
Family: Pycnonotidae
Scientific Name: *Pycnonotus xanthopygos* (Hemprich & Ehrenberg, 1833)
Arabic Name:
بلبل (كعيت)
National Red List Status: LC
Population Trend: Stable (Locally Increasing in some Localities)
Status in Jordan: Resident

- **Justification:** This species is widespread and locally very common in western Jordan, with a large Extent of Occurrence, large Area of Occupancy, and an estimated population exceeding 5,000 mature individuals. The population trend is stable with local expansion, particularly into arid areas following the development of irrigated olive groves and orchards. Although localized habitat impacts arise from certain forms of urbanization that lack green spaces and from intensive agriculture, these threats are not causing significant national-level declines.

- **Distribution:** The White Spectacled Bulbul occurs across the Eastern Mediterranean, the Sinai Peninsula, and Arabia. **In Jordan**, it is a common resident in western regions, from the Yarmouk south to Aqaba, occurring across all bioclimatic zones, with a preference for Sudanian and temperate Mediterranean bioclimates.

- **Habitats and Ecology:** The species is rather ubiquitous, occupying a wide range of habitats, including trees and shrubs, such as temperate forests, dry savannas, subtropical dry shrublands, Mediterranean-type shrubby vegetation, riverine and shrub-dominated wetlands, oases, as well as arable land, plantations, rural gardens, and urban areas. In Jordan, it occurs in various biogeographic zones and is highly adaptable, inhabiting both natural and human-modified habitats.

- **Conservation Status:** The species occurs in several protected areas and is protected under the general provisions of Jordan's Agriculture Law and Environmental Protection Law (2017). There are no known ex situ breeding or captive conservation programs.



- **Major Threats:** Logging, extreme urbanization, and development of intensive farming and monocultures are the main threats, in addition to pressure from illegal capture and trade, as indicated by the species' presence at the Friday Animal Market (Eid *et al.*, 2010; Khoury & Körner, 2018).

- **Recommended Conservation and Research:** Priority actions include monitoring population trends, particularly in areas affected by urban expansion, and reducing threats from trapping and habitat alteration.

Palestine Sunbird

Order: Passeriformes
Family: Nectariniidae
Scientific Name: *Cinnyris osea* (Bonaparte, 1856)
Arabic Name:
تمير فلسطين
National Red List Status: LC
Population Trend: Stable
Status in Jordan: Resident

- **Justification:** The Palestine Sunbird is widespread in western Jordan and locally very common, with a stable population exceeding 2,000 mature individuals. Its Extent of Occurrence and Area of Occupancy are well above thresholds for threatened categories, and there is no evidence of population decline, severe fragmentation, extreme fluctuations, or a limited number of locations. Although certain forms of urbanization, lacking green spaces and intensive localized agriculture, may affect parts of its habitat, these pressures are not causing a sustained national-level decline.

- **Distribution:** The species has a disjunctive distribution across parts of Africa and the Middle East, including the Levant, Arabia, and Yemen. **In Jordan**, it is a common and widespread resident in western regions, from the Yarmuk Valley to the

southern Rift margins and Wadi Rum, occurring in the Northern Highlands, steppes, and Rift margins within the Mediterranean and Sudanian bioclimatic zones. Local seasonal movements to lower areas occur in winter.

- **Habitats and Ecology:** This species occupies diverse habitats, including forests, shrublands, arable land, gardens, and urban areas. It inhabits open woodlands, savannas, and riverine bush, feeding on nectar, fruit, insects, and spiders. Breeding occurs from April to May, with both parents caring for the young.

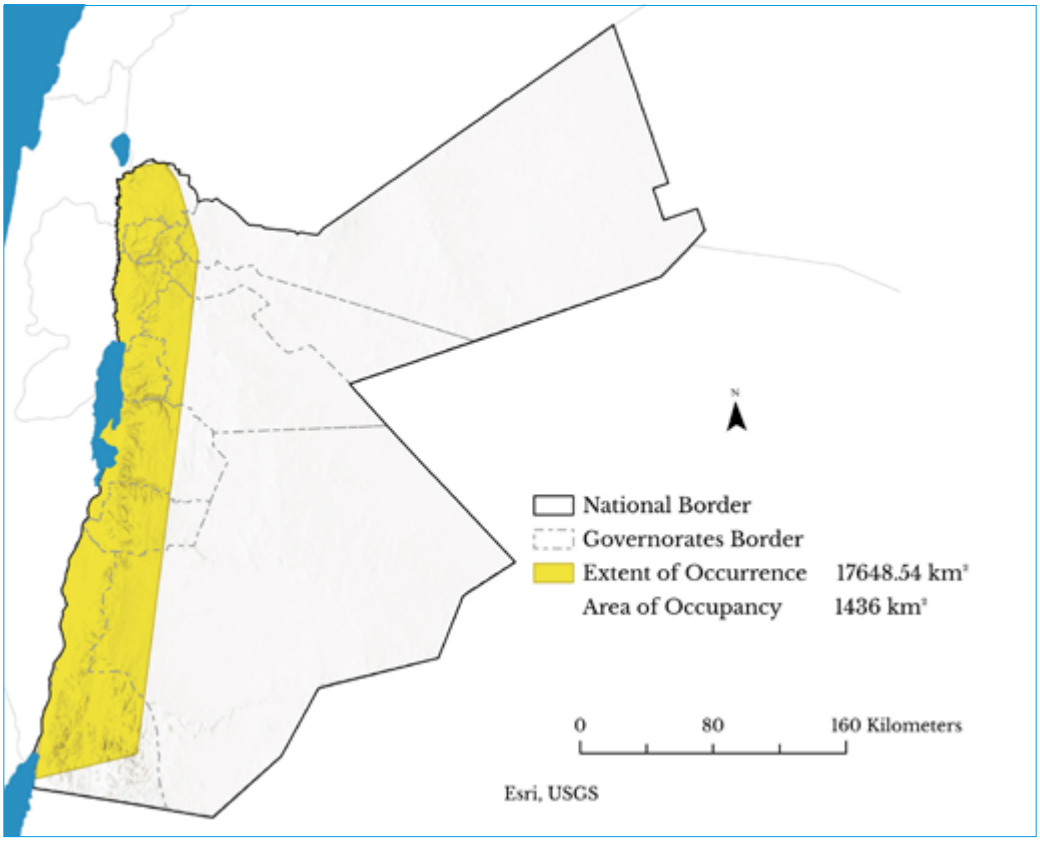
- **Conservation Status:** Globally, this species is listed as Least Concern. The species is covered by AEWA as a migratory species. Nationally, the species is only protected under the general provisions of the Environmental Protection Law of 2017. The species occurs in several protected areas in western Jordan.

- **Major Threats:** The Palestine Sunbird is threatened by habitat loss driven by rapid urbanization, intensive agriculture, and associated land-use change. Additional pressure from illegal capture and trade is indicated by records at the Friday Animal Market (Eid *et al.*, 2010).



Palestine Sunbird (Cinnyris osea); photo: © Eheb Eid.

- **Recommended Conservation and Research:** Conservation priorities should focus on woodland protection and encouraging the planting of native flowering plants in urban environments.



Arabian Babbler

Order: Passeriformes
Family: Leiothrichidae
Scientific Name: *Argya squamiceps* (Cretzschmar, 1827)
Arabic Name:
بلنصي عربي
National Red List Status: NT
Population Trend: Stable (Locally Declining in some Localities)
Status in Jordan: Resident

• **Justification:** The species has a restricted breeding range in Jordan and is generally uncommon, being locally frequent only in parts of Wadi Araba and adjacent wadis. The national population is estimated at around 1,000 mature individuals, with local declines and extirpations (e.g., Sweimah) linked to habitat loss and degradation from urban and agricultural expansion, including severe impacts on *Tamarix* sp. and *Acacia* stands. Currently available information may be limited due to under-surveyed areas, leading to an underestimate of the AAO. Nevertheless, a population reduction of 10–30% over the past ~30 years is suspected due to severe habitat degradation in parts of its range. While thresholds for a threatened category are not met, the restricted distribution, specific habitat requirements, and ongoing localized pressures place the species close to qualifying for that status.

• **Distribution:** The species occurs across southwestern Jordan and extends into Sinai, southern Palestine, and parts of Saudi Arabia, Yemen, Oman, and the United Arab Emirates. **In Jordan**, the subspecies *A. s. squamiceps* is resident in the Jordan Rift Valley, from Al-Karamah south to Aqaba and along the wadis of the Dead Sea and the southern Rift margins. It also occurs sporadically in the Hizmah Basin.

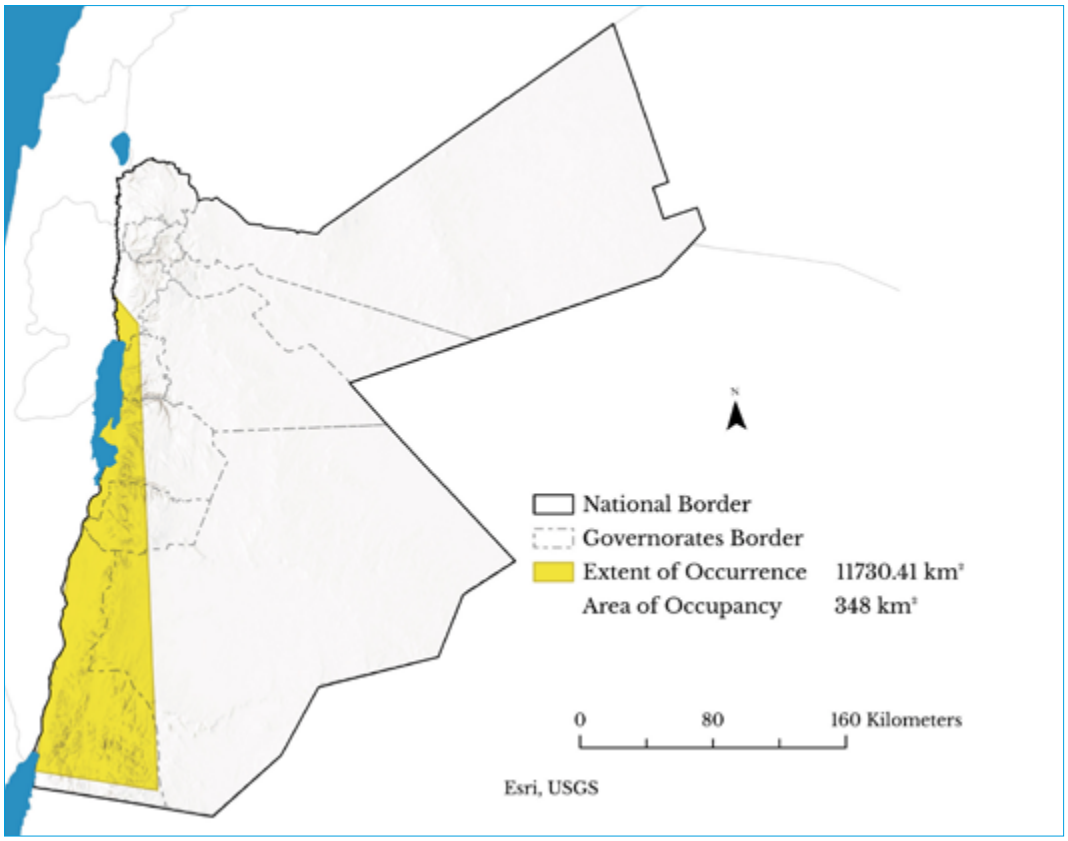
• **Habitats and Ecology:** In Jordan, it inhabits dry savanna, subtropical dry shrubland, salt marshes, and seasonal or permanent streams with shrubs and other dense vegetation, mainly within the Sudanian penetration and Saharo-Arabian zones. A non-migratory species, it prefers low-lying arid and semi-arid areas with dense shrubs, often near water. It feeds on invertebrates, small vertebrates, and plant material, and lives in cooperative family groups that breed one or more broods annually in shrub- or tree-built cup nests.



Arabian Babbler (Argya squamiceps); photo: © Fares Khoury

• **Conservation Status:** Globally, this species is assessed as Least Concern. A small part of its range lies within protected areas, including Fifa, Mujib, and Dana Nature Reserves. Nationally, it is protected under Environment Law No. 6/2017 and included in Appendix III of the wildlife protection regulations under the Agricultural Law No. 13/2015.

• **Major Threats:** Major threats include degradation of vegetation cover from overgrazing, invasive species (notably *Prosopis juliflora*), and habitat loss from agriculture, mining, infrastructure development, tourism, and road construction (Khoury *et al.*, 2007; Khoury & Körner, 2018).



• **Recommended Conservation and Research:** Conservation should prioritize protecting arid and semi-arid scrublands from degradation and overgrazing, monitoring population and breeding trends, and developing a species action plan in light of the expansion of mining and industrial activities in southwestern Jordan.

Eurasian Jay

Order: Passeriformes
Family: Corvidae
Scientific Name: *Garrulus glandarius* (Linnaeus, 1758)
Arabic Name:
قيق أوراسي
National Red List Status: LC
Population Trend: Stable
Status in Jordan: Resident

• **Justification:** The Eurasian Jay is widespread in north-western Jordan and locally very common, with an estimated national population exceeding 3,000 mature individuals. Its Extent of Occurrence and Area of Occupancy are well above thresholds for threatened categories, and there is currently no evidence of population decline, severe fragmentation, extreme fluctuations, or significant threats at the national scale.

• **Distribution:** The species is widespread across the Western Palearctic, ranging from most of Europe and parts of North Africa east of Tunisia through the Middle East and Central Asia to East Asia. **In Jordan**, it is a widespread resident in northwestern regions, including the Northern Highlands, Rift margins, and parts of the Jordan Valley, with recent expansion into the northern steppes following agricultural development.

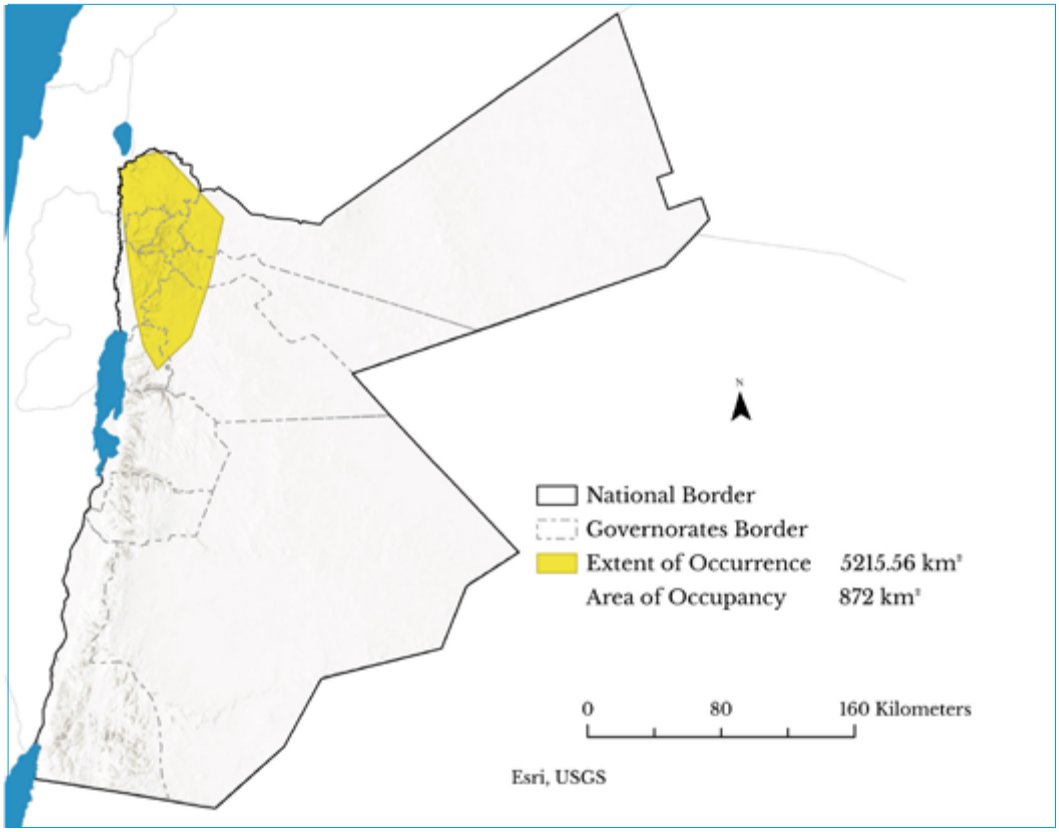
• **Habitats and Ecology:** This species occupies temperate forests, Mediterranean shrublands, arable land, plantations, and urban areas, mainly within the Mediterranean bioclimatic zone. It inhabits

woodlands, particularly oak forests, as well as orchards, gardens, and parks. The species feeds on invertebrates, seeds, and berries, and occasionally on the eggs and nestlings of other birds, and breeds in well-built tree nests.

- **Conservation Status:** Protected under the Agricultural Law No. 13/2005 and Environmental Protection Law No. 6/2017, and covered by the non-binding AEMLAP for migratory landbirds.

- **Major Threats:** The species is locally affected by habitat loss associated with urban development, intensive agriculture, and logging, although the availability of suitable agricultural habitats may partially mitigate these impacts. Reports of persecution in agricultural areas, and the Jay is considered a pest by some farmers. An individual was documented as killed based on evidence from a Facebook post (Eid & Handal, 2018).

- **Recommended Conservation and Research:** Actions should focus on protecting woodland habitats. Research is needed on its ecological relationships in its native, rural and urban habitats.



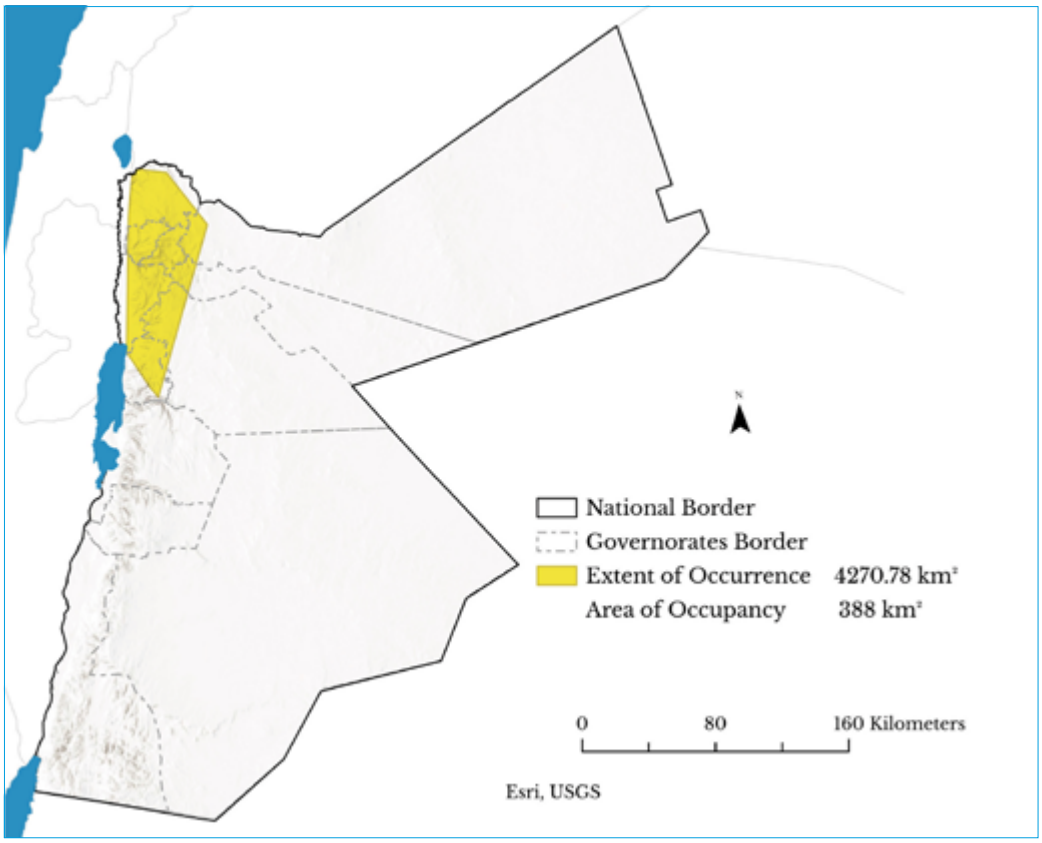
Eurasian Jackdaw

Order: Passeriformes
Family: Corvidae
Scientific Name: *Coloeus monedula* (Linnaeus, 1758)
Arabic Name:
غراب زرعي
National Red List Status: LC
Population Trend: Stable
Status in Jordan: Resident, winter visitor

- **Justification:** The Western Jackdaw breeds in multiple colonies across northern and central Jordan, from the Yarmouk Valley south to Wadi Wala and Haydan, and is regularly recorded in large numbers at breeding, feeding, and drinking sites. The national population is estimated at ≥1,000 mature individuals with a stable trend, while its Extent of Occurrence and Area of Occupancy do not indicate severe restriction at the national scale. There is no evidence of population decline, severe fragmentation, extreme fluctuations, or significant ongoing threats affecting the species nationally.



Eurasian Jackdaw (Coloeus monedula); photo: © Ammar Al-Omari



- **Distribution:** The species is widely distributed across Eurasia and parts of North Africa. **In Jordan**, it is a resident and winter visitor in northwestern regions, breeding colonially on cliffs and old quarries in the Northern Highlands and the Northern and Dead Sea Rift margins, from Yarmouk south to Wadi Ma'een and Wadi Heydan/Shgeig. Large flocks occur in the Jordan Valley and northern steppes, especially during feeding and drinking.

- **Habitats and Ecology:** In Jordan, it inhabits rocky inland areas and arable land, primarily within the Mediterranean biogeographical zone. It occupies open landscapes with scattered trees, including farmland and gardens. The species is omnivorous, feeding mainly on invertebrates during the breeding season, and nests semi-colonially in cavities in cliffs, wadis, and old quarries. Although largely resident, numbers increase in winter due to northern visitors.

- **Conservation Status:** Protected under the Agricultural Law (2015) and Environmental Law (2017). In parts of its EU range, it is listed on Annex II of the EU Birds Directive.

- **Major Threats:** Primary threats include habitat modification and loss resulting from urban development, leading to the loss of feeding habitats and recreational activities at nesting sites.

- **Recommended Conservation and Research:** A multi-species plan aimed at protecting breeding populations of various colonial, cliff-nesting bird species, is required. Research priorities include monitoring population and habitat trends and producing accurate population estimates.

Hooded Crow

Order: Passeriformes
Family: Corvidae
Scientific Name: *Corvus cornix* (Linnaeus, 1758)
Arabic Name:
زاغ الجيف
National Red List Status: LC
Population Trend: Stable
Status in Jordan: Resident

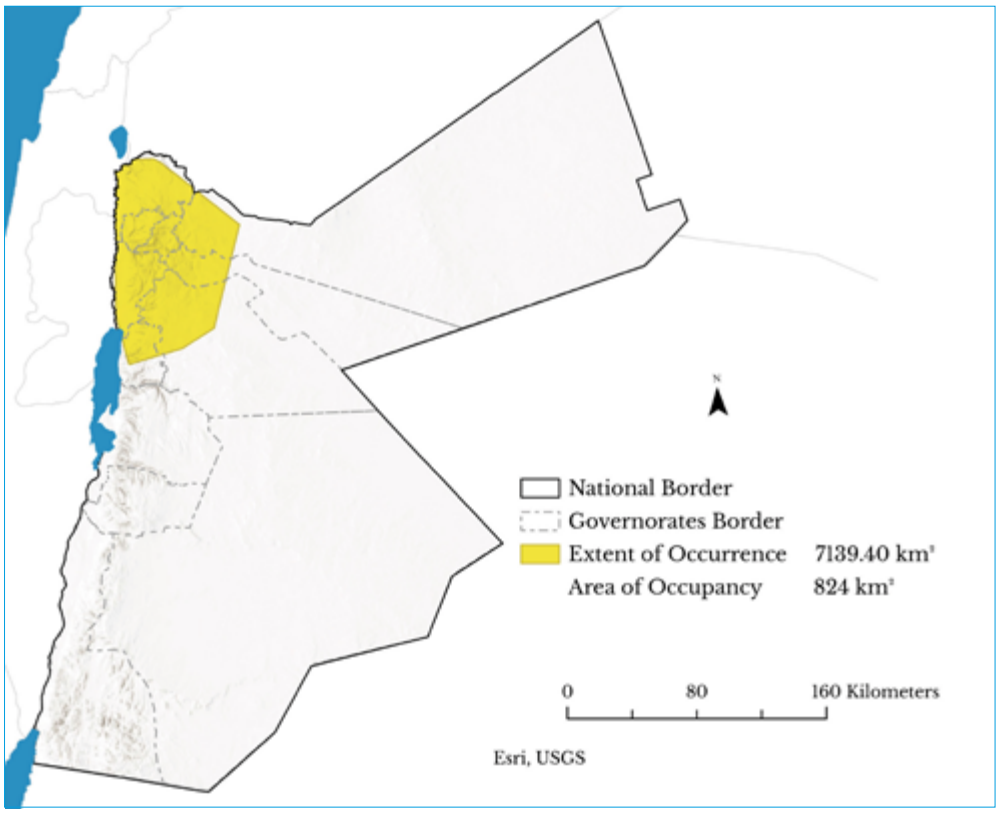
- **Justification:** The Hooded Crow is widespread and common in Jordan, with an estimated national population probably exceeding 2,000 mature individuals. Its Extent of Occurrence and Area of Occupancy are well above thresholds for threatened categories, and there is no evidence of population decline, severe fragmentation, extreme fluctuations, or significant threats at the national level.

- **Distribution:** The Hooded Crow ranges across much of Europe, east to Central Asia, the Middle East, and North Africa. **In Jordan**, the species is found across the northwest, including the Jordan Valley and its margins, the northern highlands, and the Northern Steppes. A few wander south in winter, e.g., one spent a winter at Aqaba.

- **Habitats and Ecology:** This species utilizes a variety of open habitats with scattered trees, including farmland, parks, and urban areas. It is found mainly in the Mediterranean bioclimatic zones, but also occurs in the Irano-Turanian and Sudanian penetration zones. Its diet consists of small animals, carrion, and some plant material, while breeding involves large stick nests in trees or similar structures.

- **Conservation Status:** The Hooded Crow is assessed as Least Concern internationally. Nationally, the species is only protected under the general provisions of the Environmental Protection Law of 2017. Internationally, it is afforded protection under Appendix III of the Bern Convention (Europe).

- **Major Threats:** Key threats include habitat loss from residential and commercial development and impacts from logging and wood harvesting.



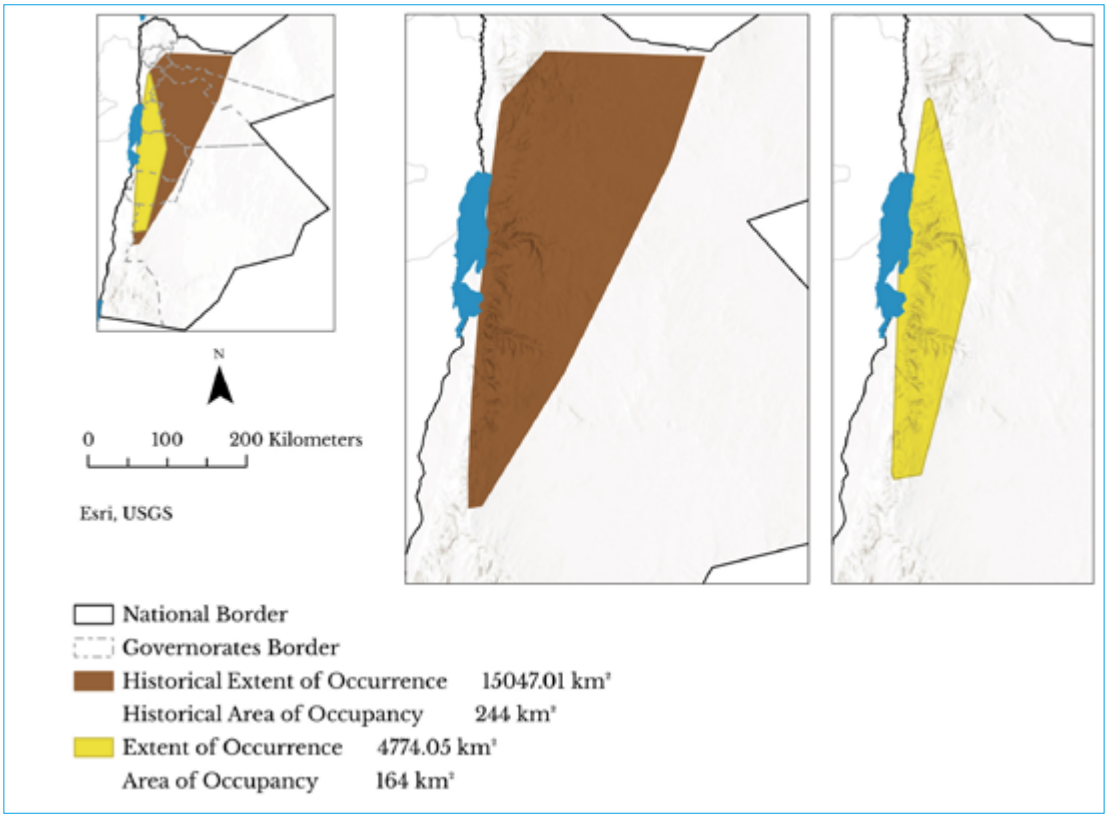
• **Recommended Conservation and Research:** The protection of various woodland habitats is recommended. Research on corvids should include interspecific interactions.

Raven

Order: Passeriformes
Family: Corvidae
Scientific Name: *Corvus corax* (Linnaeus, 1758)
Arabic Name:
غراب شمالي
National Red List Status: EN A2c
Population Trend: Unknown
Status in Jordan: Resident

• **Justification:** The Common Raven has undergone a marked long-term decline in Jordan, with an estimated ~60% reduction in Extent of Occurrence over the past ~50 years, reflecting contraction from formerly widespread northern areas to a few breeding sites largely confined to the Dead Sea and Southern Rift margins. The national population is small, estimated at ≤250 mature individuals, with a restricted Area of Occupancy and Extent of Occurrence. Although the species occurs in neighboring countries, it is not regionally common, suggesting a limited rescue effect. This combination of substantial historical decline, small population size, and restricted current distribution meets the thresholds under criterion A2c.

• **Distribution:** One of the most widely distributed birds globally, occurring across much of the Holarctic region, from Greenland and northern Europe through Asia, North Africa, and North America to Central America. **In Jordan**, the species breeds in remote areas along the Rift margins, being most frequent in the Dead Sea and the Southern Rift Margins. It often forages in the Southern Highlands and steppe. It has declined sharply in northern Jordan and is now very rare along the Northern Rift Margins and in other northern regions.



- **Habitats and Ecology:** This species occupies temperate forests, Mediterranean shrublands, steppe, and inland rocky areas, mainly within the Mediterranean biogeographical zone. A highly adaptable species, it uses cliffs, trees, and human-made structures for nesting and feeds on a wide range of invertebrates, vertebrates, carrion, and plant material. Although tolerant of human presence, it generally avoids heavily urbanized areas and is now largely confined to higher Rift margins, foraging in adjacent highlands and steppes.

- **Conservation Status:** Protected under the Agricultural Law No. 13 of 2015 and the Environmental Protection Law No. 6 of 2017.

- **Major Threats:** Major threats include habitat loss and modification due to urban development, mining, infrastructure, and energy projects, as well as pollution, particularly from pesticides and veterinary drugs such as diclofenac (Khoury, 1998; Khoury, 2017).

- **Recommended Conservation and Research:** Priority actions include protection of nesting cliffs used by this and other threatened species, from disturbances and destruction. Research is needed to update distribution and population trends, assess habitat changes, and evaluate the effects of landfills and carrion availability on local populations. Other issues that may affect carrion feeders and warrant investigation include animal poisoning and the use of diclofenac.

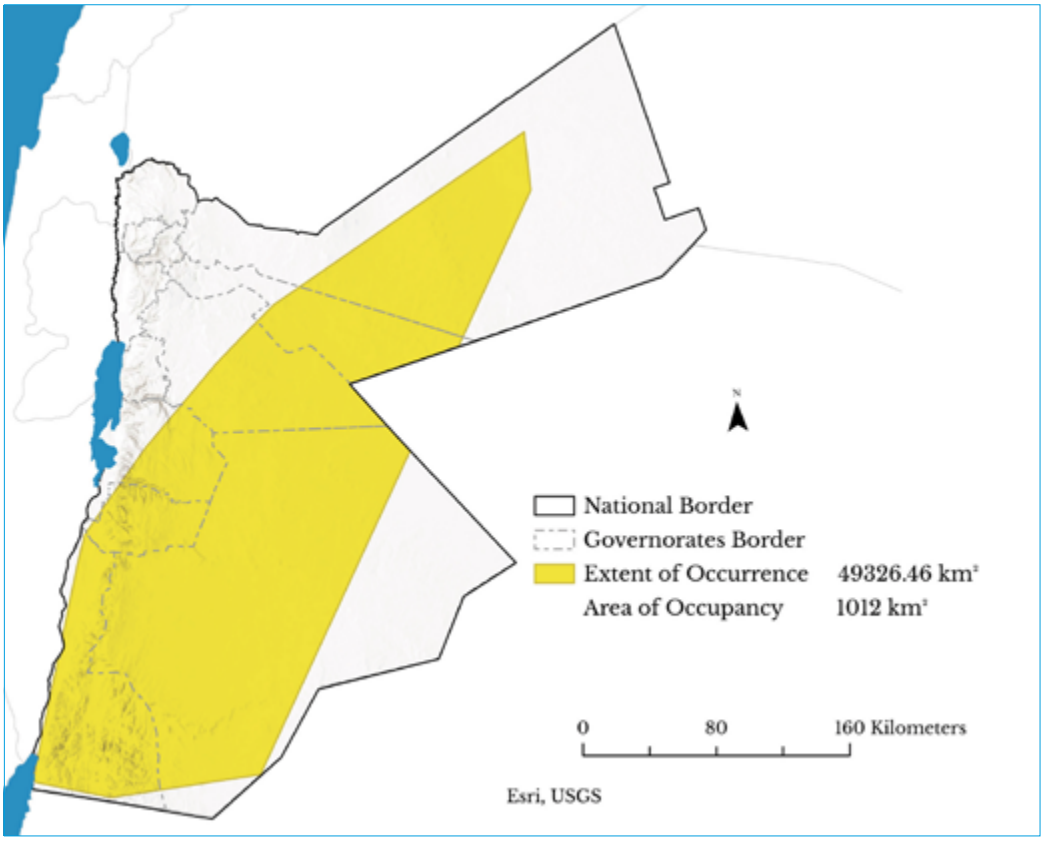
Brown-necked Raven

Order: Passeriformes
Family: Corvidae
Scientific Name: *Corvus ruficollis* (Lesson, 1831)
Arabic Name:
غراب أذرع
National Red List Status: LC
Population Trend: Stable
Status in Jordan: Resident

- **Justification:** The Brown-necked Raven is widespread across the desert regions of Jordan and locally very common, with a stable population estimated at ≥2,000 mature individuals. It has a very large Extent of Occurrence and a moderate Area of Occupancy, both well above thresholds for threatened categories. It shows no evidence of decline, severe fragmentation, or extreme fluctuations. The species appears resilient and adaptable, with indications that it may benefit from agricultural and tourism developments (e.g., in the Rum Desert). As no significant threats are identified at the national level, the species does not meet the criteria for Near Threatened or any threatened category and is assessed as Least Concern.

- **Distribution:** The species occurs across desert regions of Central Asia, North Africa, and the Middle East, from Cape Verde to western Pakistan. **In Jordan**, it is widespread in the central and eastern deserts and Wadi Araba, and is very common in the Rum Desert.

- **Habitats and Ecology:** This species inhabits temperate shrublands, rocky inland areas, and hot desert habitats. It occupies semi-desert and desert plains, frequently using desert cultivation and settlements. The species is omnivorous, feeding on invertebrates, vertebrates, carrion, and plant material, and breeds solitarily in nests placed in trees, on cliffs, or on other structures.



- **Conservation Status:** Protected under the Agricultural Law No. 13 (2015) and the Environmental Law No. 6 (2017).

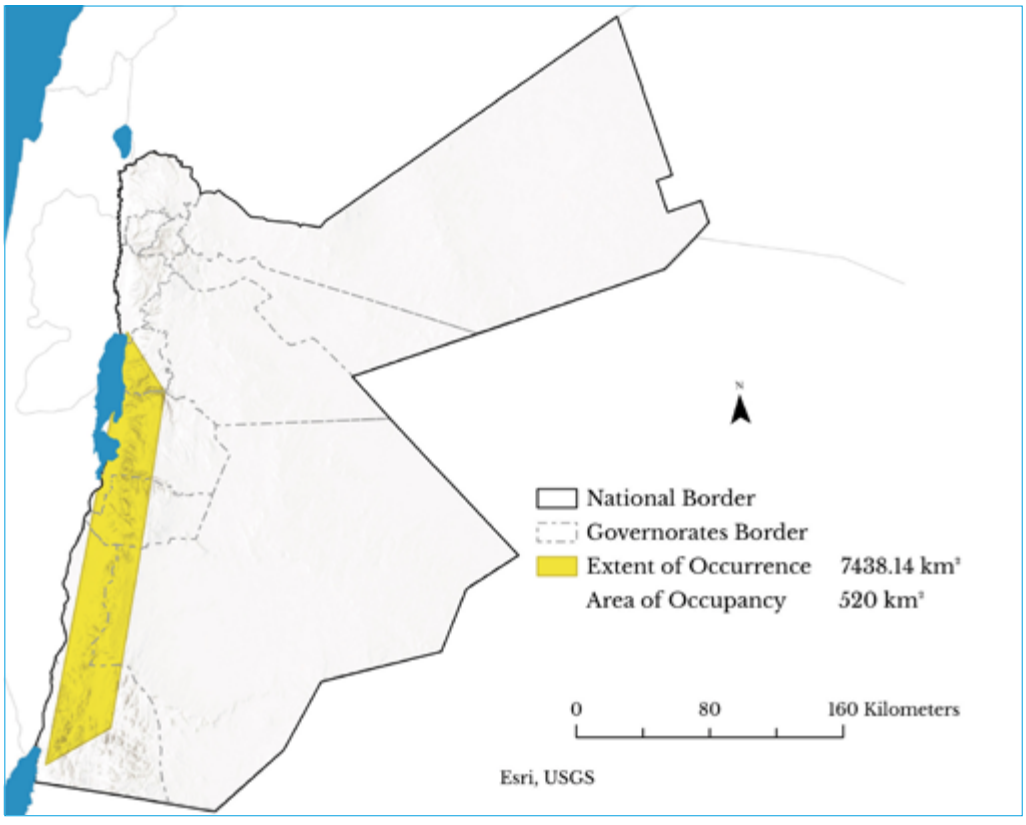
- **Major Threats:** The main threat is habitat loss resulting from urbanization and associated development.

- **Recommended Conservation and Research:** Research is needed to assess population size and exact distribution, and long-term trends.

Fan-tailed Raven

Order: Passeriformes
Family: Corvidae
Scientific Name: *Corvus rhipidurus* (Hartert, 1918)
Arabic Name:
غراب مروحي الذنب
National Red List Status: LC
Population Trend: Unknown (Probably Stable)
Status in Jordan: Resident

- **Justification:** The Fan-tailed Raven is locally common in Jordan despite a relatively restricted distribution, with an estimated national population of over 1000 mature individuals. Its Extent of Occurrence and Area of Occupancy do not approach thresholds for threatened categories, and there is no evidence of population decline, severe fragmentation, extreme fluctuations, or significant ongoing threats at the national scale. Although the population trend is currently unknown, available information indicates a stable presence within its occupied range.



- **Distribution:** The species occurs across sub-Saharan Africa, the southern Middle East, and the Arabian Peninsula. **In Jordan**, it is restricted to the Dead Sea and the southern rift margins, with only rare records from Wadi Rum and the Aqaba Mountains, where the Brown-necked Raven predominates.

- **Habitats and Ecology:** In Jordan, it inhabits inland rocky and arid areas, particularly barren desert cliffs and gorges. It forages omnivorously on grains, berries, insects, and carrion, often near settlements and oases. A non-migratory species, it nests solitarily on cliff faces and breeds from December to June. Occasionally forms flocks of several tens of individuals outside the breeding season.

- **Conservation Status:** Protected under the Agricultural Law No. 13 (2015) and the Environmental Law No. 6 (2017).

- **Major Threats:** The main threat is disturbance and destruction of nesting sites by mining and energy projects and road infrastructure.

- **Recommended Conservation and Research:** Conservation actions should focus on protection of cliffs, which are nesting sites for a variety of bird species. Research is required on population size, distribution, trends, and key threats.

Tristram's Starling

Order: Passeriformes
Family: Sturnidae
Scientific Name: *Onychognathus tristramii* (P.L.Sclater, 1858)
Arabic Name:
الزرزور
National Red List Status: LC
Population Trend: Stable
Status in Jordan: Resident

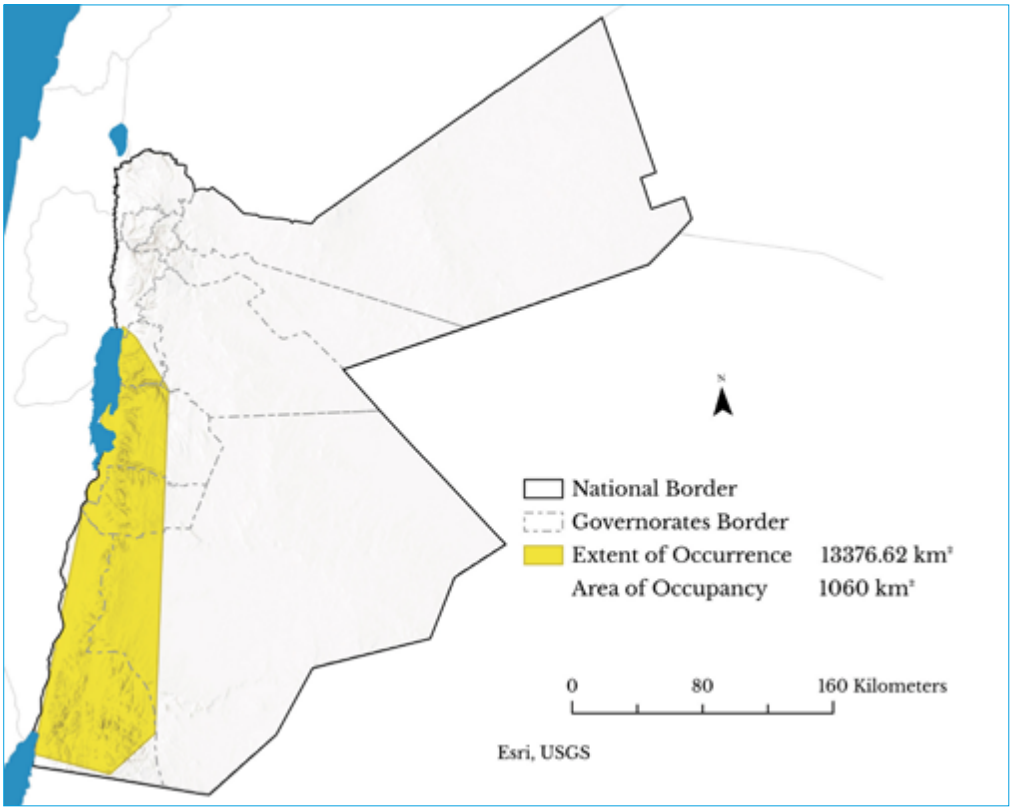
- **Justification:** Tristram's Grackle has a fairly broad national distribution with large EOO and AOO, and a national population exceeding 1,500 mature individuals that is probably stable. There is no evidence of population decline, severe fragmentation, extreme fluctuations, or significant ongoing threats at the national scale.

- **Distribution:** The species occurs in western Jordan and extends into Palestine, Sinai (Egypt), and the Arabian Peninsula, south to Yemen and east to southwestern Oman. **In Jordan**, it is restricted to the Dead Sea and the Southern Rift Margins, the Aqaba Mountains, and the Rum Desert.

- **Habitats and Ecology:** In Jordan, it inhabits rocky inland areas, temperate and Mediterranean shrublands, and rural gardens, primarily along the margins of the Rift Valley. It occupies rocky desert habitats and frequently visits villages, gardens, and tourist areas to feed on fruits, insects, and scavenged food. Breeding occurs from March to June, with nests placed in cliffs or rock crevices.

- **Conservation Status:** Protected under the general articles of the Agricultural Law (2015) and the Environmental Law (2017).

- **Major Threats:** Key threats include habitat modification and loss of nesting sites resulting from mining, quarrying, and road development. One individual was documented as killed based on evidence from a Facebook post (Eid & Handal, 2018).



• **Recommended Conservation and Research:** Conservation should focus on protecting and managing cliff and wadi nesting sites. Research is needed on population size and long-term trends.

House Sparrow

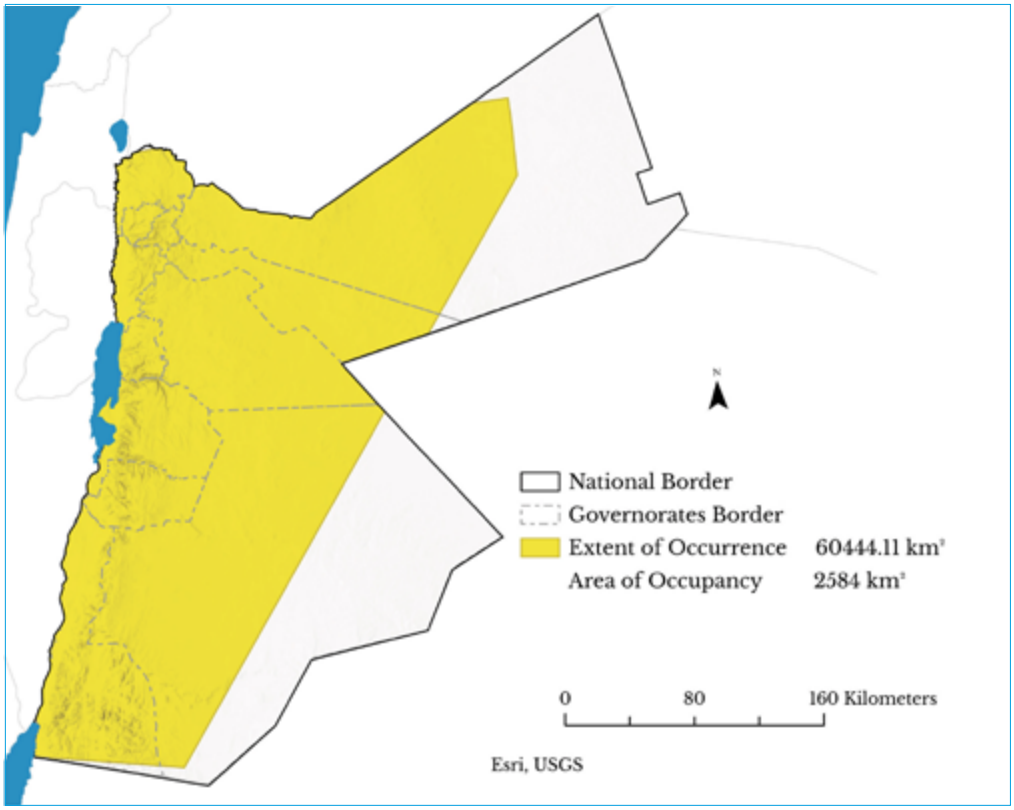
Order: Passeriformes
Family: Passeridae
Scientific Name: *Passer domesticus* (Linnaeus, 1758)
Arabic Name:
عصفور دوري
National Red List Status: LC
Population Trend: Stable (Probably Increasing)
Status in Jordan: Resident

• **Justification:** The species is common and widespread across Jordan, with a stable or increasing population estimated at >10,000 mature individuals. It has a very large Extent of Occurrence and Area of Occupancy, well above thresholds for threatened categories, and there is no evidence of population decline, severe fragmentation, extreme fluctuations, or significant national-level threats.

• **Distribution:** Native across Eurasia and North Africa, the species has been widely introduced elsewhere and is now resident across much of the Americas, sub-Saharan Africa, Australia, and many islands worldwide. **In Jordan**, it is widespread in all areas with human presence and artificial structures, including desert areas where it nests on cliffs near Bedouin and tourist camps.

• **Habitats and Ecology:** This species occupies arable land, pasture, irrigated areas, rural gardens, and urban environments. Closely associated with human settlements, it favors suburban habitats. The diet is dominated by seeds, supplemented by insects, berries, and food scraps. Breeding occurs in loose colonies, with nests placed in cavities and occasionally in trees or shrubs.

• **Conservation Status:** Protected under the Agricultural Law (2015) and the Environmental Law (2017).



- **Major Threats:** The species is very common and closely associated with human presence. It is occasionally displaced by invasive Common Myna *Acridotheres tristis* at nesting sites, but this threat to the Sparrows' populations is not well understood. It was recorded at the Friday Animal Market (Eid *et al.*, 2010)*.

- **Recommended Conservation and Research:** Actions should focus on awareness and training. Research is needed on population size, distribution, and long-term trends, and interactions with the invasive common myna.

Spanish Sparrow

Order: Passeriformes
Family: Passeridae
Scientific Name: *Passer hispaniolensis* (Temminck, 1820)
Arabic Name:
دوري اسباني
National Red List Status: LC
Population Trend: Stable
Status in Jordan: Resident, winter visitor

- **Justification:** The Spanish Sparrow forms large breeding colonies in the Jordan Valley, Rift margins, and other parts of Jordan, indicating a wide distribution with an EOO of c. 30,000 km^2 and AOO of over 500 km^2. Although national population size and trend are not precisely quantified, there is no evidence of significant decline, severe fragmentation, extreme fluctuations, or major threats at the national scale. Given its broad range, colonial abundance in key areas, and apparent population stability, the species does not currently approach the criteria for any threatened category and is therefore assessed as Least Concern.

- **Distribution:** The species occurs across the Iberian Peninsula, parts of Africa, the Middle East, and Central Asia, with introduced populations on several Atlantic islands. **In Jordan**, it breeds in the Jordan Valley and along the Rift margins from the Yarmuk south to Dana, with small colonies in the southern

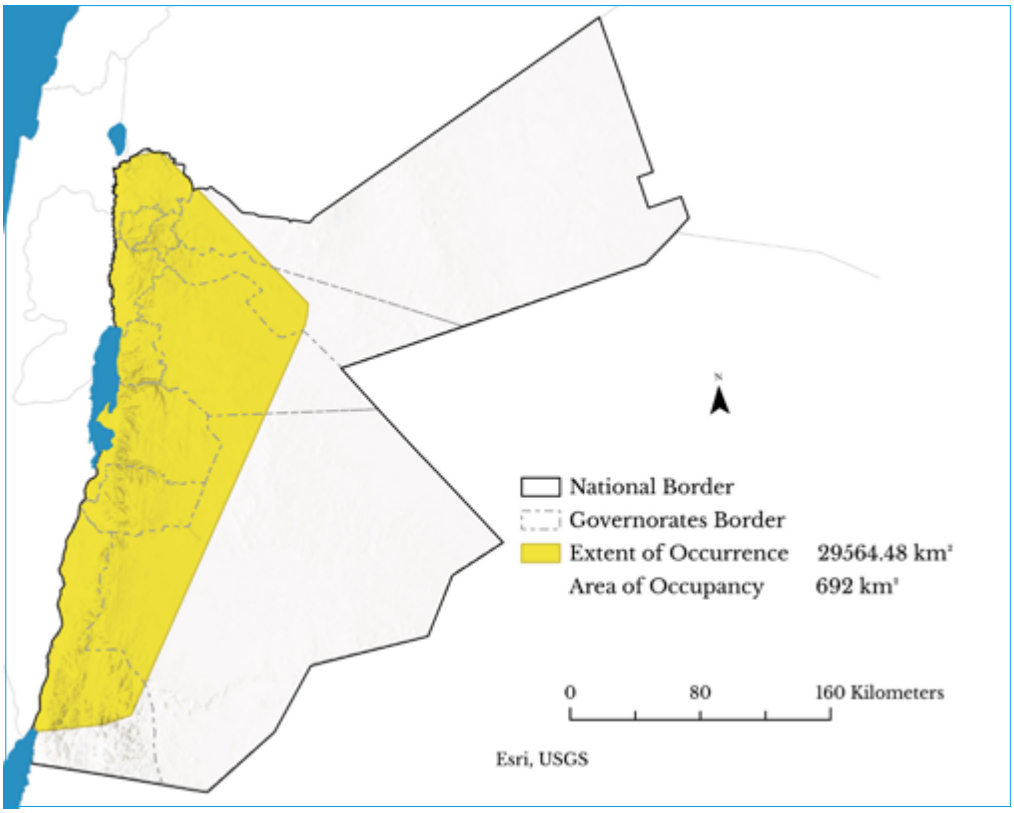
Highlands and in agricultural areas in the desert, such as Disi and Azraq. In winter, numbers increase due to short-distance migrants from the north, and the species becomes more widespread in farmland and open habitats.

- **Habitats and Ecology:** In Jordan, it inhabits cultivated areas near water sources, open shrublands with scattered trees, wetlands, and tree plantations within various biogeographical zones. It feeds primarily on seeds, with insects added during breeding. A colonial breeder, it builds its nests in trees or on pylons, using a range of tree species. It is resident, with local movements and possible winter augmentation from northern populations.

- **Conservation Status:** Protected under the Agricultural Law (2015) and Environmental Law (2017), listed under the Bern Convention, and covered by CMS AEMLAP guidance for migratory landbirds.

- **Major Threats:** Major threats include habitat loss and degradation due to water abstraction, agricultural expansion, camel overgrazing, invasive mesquite shrubs, and tree logging (Khoury & Körner, 2018).

- **Recommended Conservation and Research:** Conservation should focus on maintaining and restoring farmland mosaics with trees and shrubs, and riparian habitats. Research is needed on population size, breeding distribution, and population and habitat trends.

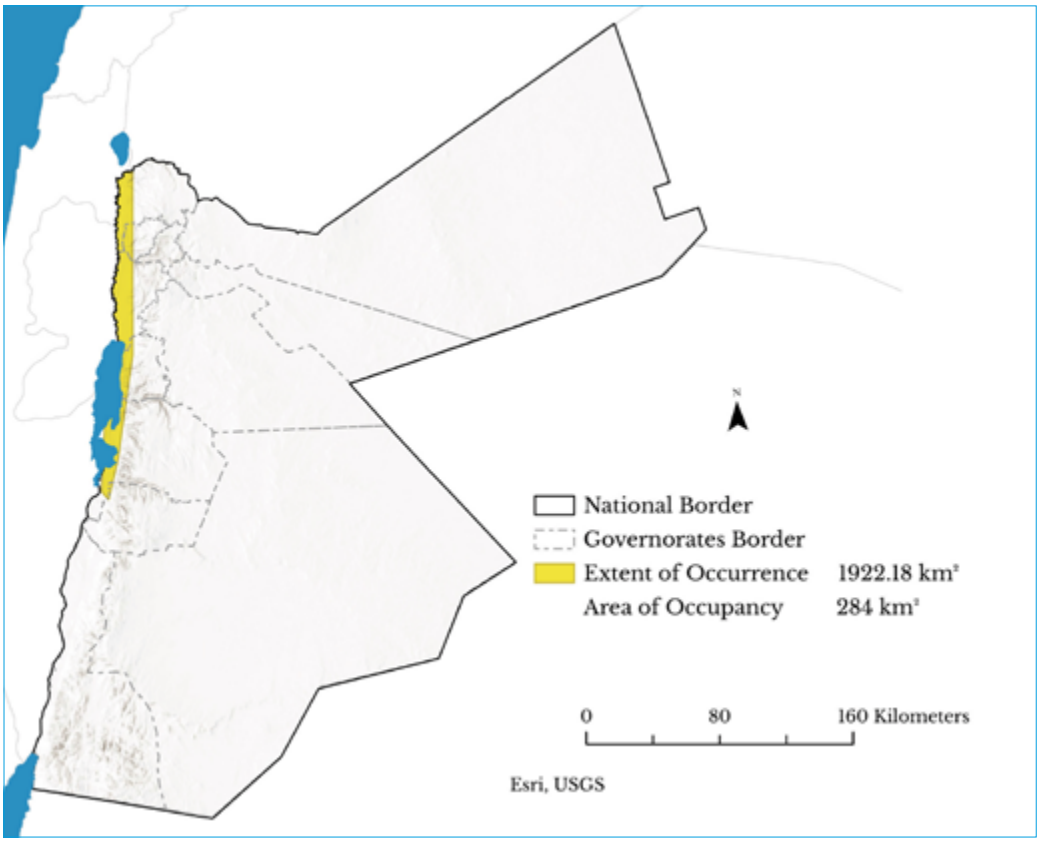


Dead Sea Sparrow

Order: Passeriformes
Family: Passeridae
Scientific Name: *Passer moabiticus* (Tristram, 1864)
Arabic Name:
دوري البحر الميت
National Red List Status: VU° B1ab(iii)+2ab(iii)
Population Trend: Decreasing
Status in Jordan: Resident

- **Justification:** The Dead Sea Sparrow has a highly restricted breeding range in Jordan, occurring along the Northern Rift Valley, south to Fifa, with a small Extent of Occurrence and Area of Occupancy, with no more than five locations. Local habitat loss and degradation, including the disappearance of some colonies and declines linked to human activities, have reduced habitat extent and quality. Despite these pressures, the species is doing well in northern Palestine, where populations are stable. The Dead Sea Sparrow has been shown to successfully use citrus plantations and other agricultural habitats under certain conditions in the Jordan Valley. This ability to breed in modified habitats, combined with potential immigration from neighboring populations, provides a significant regional rescue effect, justifying a downlisting from Endangered to Vulnerable.

- **Distribution:** The species occurs in southern Turkey, Cyprus, Palestine, western Jordan, parts of Syria and Iraq, southwestern Iran, with recent records from Lebanon and Kuwait, and a separate population in eastern Iran and southwestern Afghanistan. **In Jordan**, it is restricted to the Jordan Valley, breeding from the Yarmouk and along the Jordan River south to the southeastern shores of the Dead Sea. Occasional non-breeding records from Aqaba and the mouth of Wadi Mujib suggest local movements.



- **Habitats and Ecology:** In Jordan, it inhabits riverine habitats, shrub-dominated wetlands, canals, and farmland near permanent water, primarily within the Sudanian bioclimatic zone and below sea level. It feeds mainly on small seeds and is often recorded in fallow fields. Breeding occurs from March to July in loose colonies, with large domed nests built mainly in Tamarisk trees. The species is resident, with limited local movements outside the breeding season.

- **Conservation Status:** It is listed in the Agricultural Law 2015 and is protected under the general article of the Environmental Law 2017. The Fifa reserve includes one breeding colony of this species.

- **Major Threats:** Major threats include habitat loss and degradation resulting from over pumping of water resources, overgrazing by camels, invasive mesquite shrubs, pollution, agricultural expansion, road construction, tourism developments, and military activities (Khoury & Körner, 2018, 2019; Khoury, 2018).



Dead Sea Sparrow (Passer moabiticus); photo: © Fares Khoury

- **Recommended Conservation and Research:** A single, or multi-species action plan is urgently required to protect wetlands in the Jordan Valley, including inundated *Tamarix* sp. thickets. Research is needed on population size, distribution, trends, and a population viability analysis.

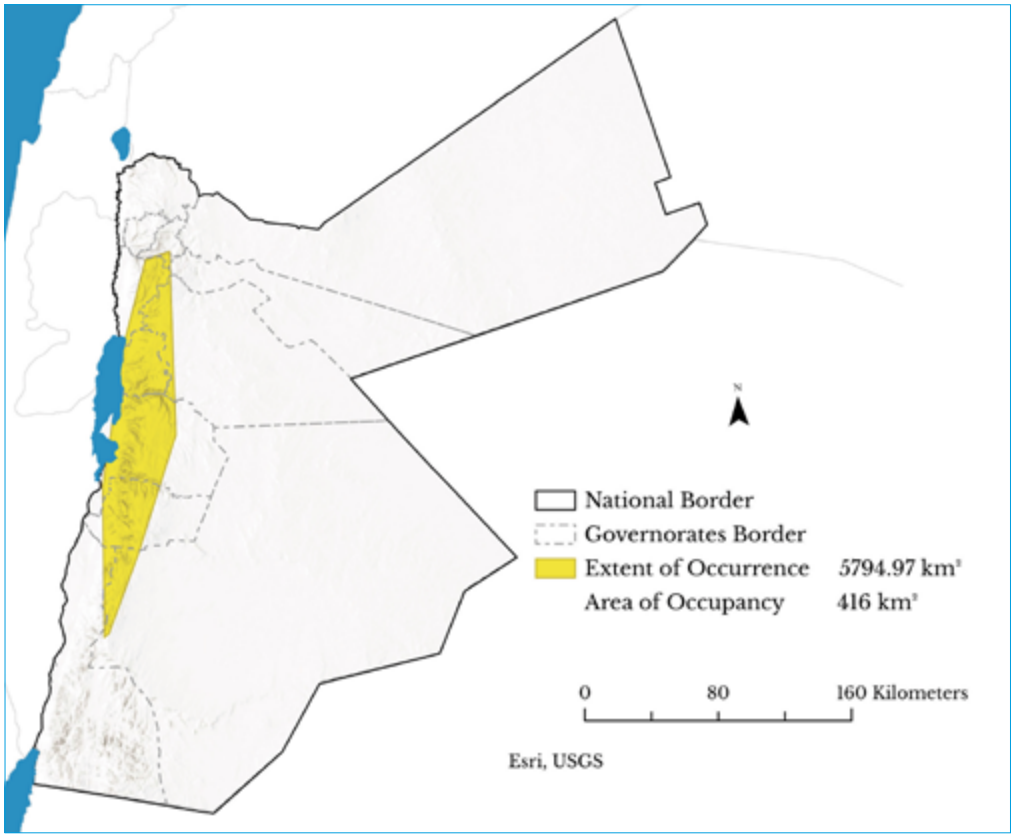
Rock Sparrow

Order: Passeriformes
Family: Passeridae
Scientific Name: *Petronia petronia* (Linnaeus, 1766)
Arabic Name:
عصفور الصخر
National Red List Status: LC
Population Trend: Stable
Status in Jordan: Resident

- **Justification:** The Rock Sparrow is fairly common in parts of western Jordan. Its EOO and AOO do not approach thresholds for threatened categories, and there is no evidence of population decline, severe fragmentation, extreme fluctuations, or significant ongoing threats at the national scale. Although there are data gaps regarding detailed distribution, population size, and trends, it is currently assessed as Least Concern because available information indicates a stable and reasonably widespread national population.

- **Distribution:** The species is widely distributed across Eurasia, from the Canary Islands and southern Europe east to the Caucasus, Iran, and Central Asia. **In Jordan**, it is a locally common resident in the Northern and Southern Highlands and along the Rift margins.

- **Habitats and Ecology:** It inhabits temperate and subtropical shrublands, temperate grasslands, and hot desert habitats. It favors open, largely treeless landscapes such as rocky slopes and steppes. The species feeds mainly on seeds, with insects supplementing the diet during the breeding season (March–August). Nests are placed in rock crevices or buildings, and breeding success is higher in years with greater rainfall.



- **Conservation Status:** It is listed in the Agricultural Law 2015 and is protected under the general article of the Environmental Law 2017. Breeding populations exist in Dana and Mujib Reserves.

- **Major Threats:** Key threats include prolonged drought, overgrazing, and habitat loss associated with renewable energy developments. Occasional illegal capture and trade is indicated by the species being recorded at the Friday Animal Market (Eid *et al.*, 2010)

- **Recommended Conservation and Research:** Conservation should address habitat protection and mitigation of infrastructure impacts. Research is needed on life history, ecology, and responses to drought and habitat change.

Pale Rockfinch

Order: Passeriformes
Family: Passeridae
Scientific Name: *Carpospiza brachydactyla* (Bonaparte, 1850)
Arabic Name:
عصفور الصخر الباهت
National Red List Status: LC
Population Trend: Stable
Status in Jordan: Summer breeder, passage migrant

- **Justification:** The Pale Rock Sparrow has a large Extent of Occurrence and uses very extensive breeding habitats in wet years that are largely undisturbed. Although it is an erratic breeder and may be rare or absent in some years, these fluctuations are naturally driven by interannual rainfall variability rather than anthropogenic pressures, and in favorable years the species becomes widespread and locally very common. There is no evidence of long-term population decline or significant threats at the national level.

- **Distribution:** The species occurs in southeastern Turkey, the Middle East, and east to Iran, with scattered

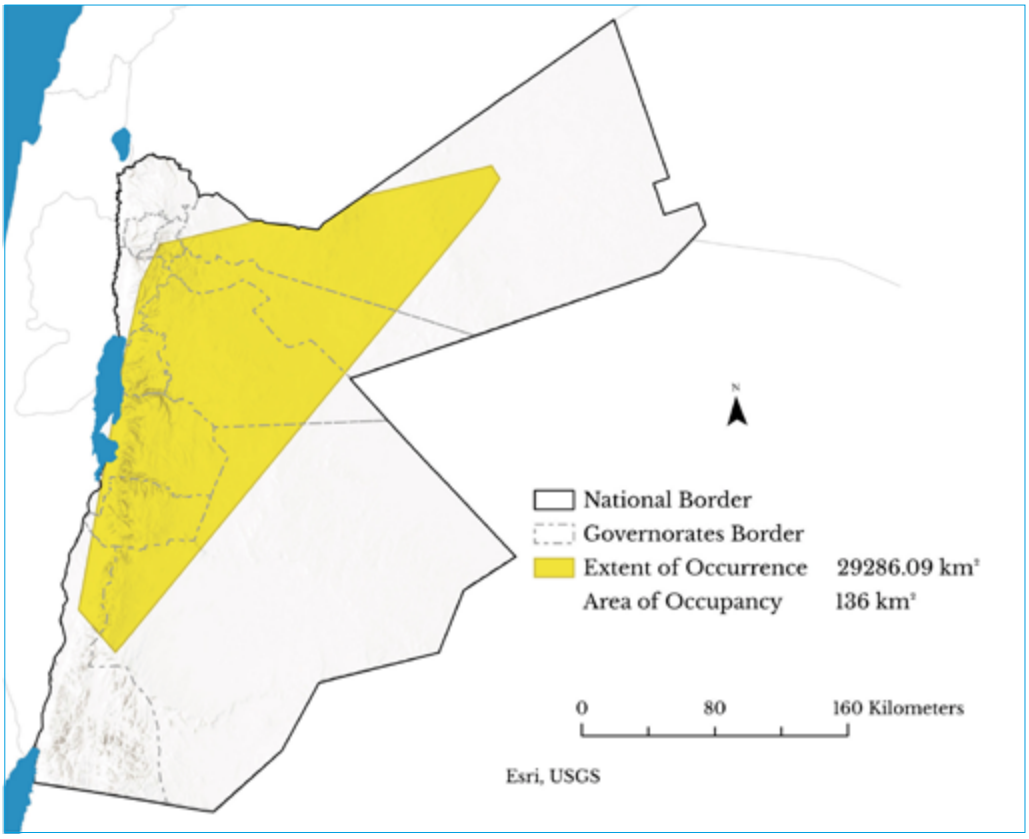
records from the Arabian Peninsula. **In Jordan**, it is a regular passage migrant and possibly an irregular, opportunistic breeder, breeding in large numbers in wetter years. Breeding has been recorded along the Rift Margins, in the Southern Highlands, and in the northeastern desert around Safawi and Ruweished, at various elevations.

- **Habitats and Ecology:** In Jordan, it breeds mainly in the temperate steppe and, in wet years, also in the desert. It favors arid and semi-arid areas with sparse vegetation, rocky terrain, and open cultivated land. The diet consists mainly of seeds and green plant material, supplemented by insects during breeding. Breeding is rain-dependent, and nests are placed in bushes or rock crevices.

- **Conservation Status:** An irregular and fluctuating breeder in Jordan, covered under national agricultural and environmental legislation, the Bern Convention, and the African–Eurasian Migratory Landbirds Action Plan.

- **Major Threats:** Key threats include habitat degradation from overgrazing and agricultural pressures.

- **Recommended Conservation and Research:** Conservation should focus on site protection and management, and on reducing disturbance from quarrying and other developments in the remaining arid steppe habitats.



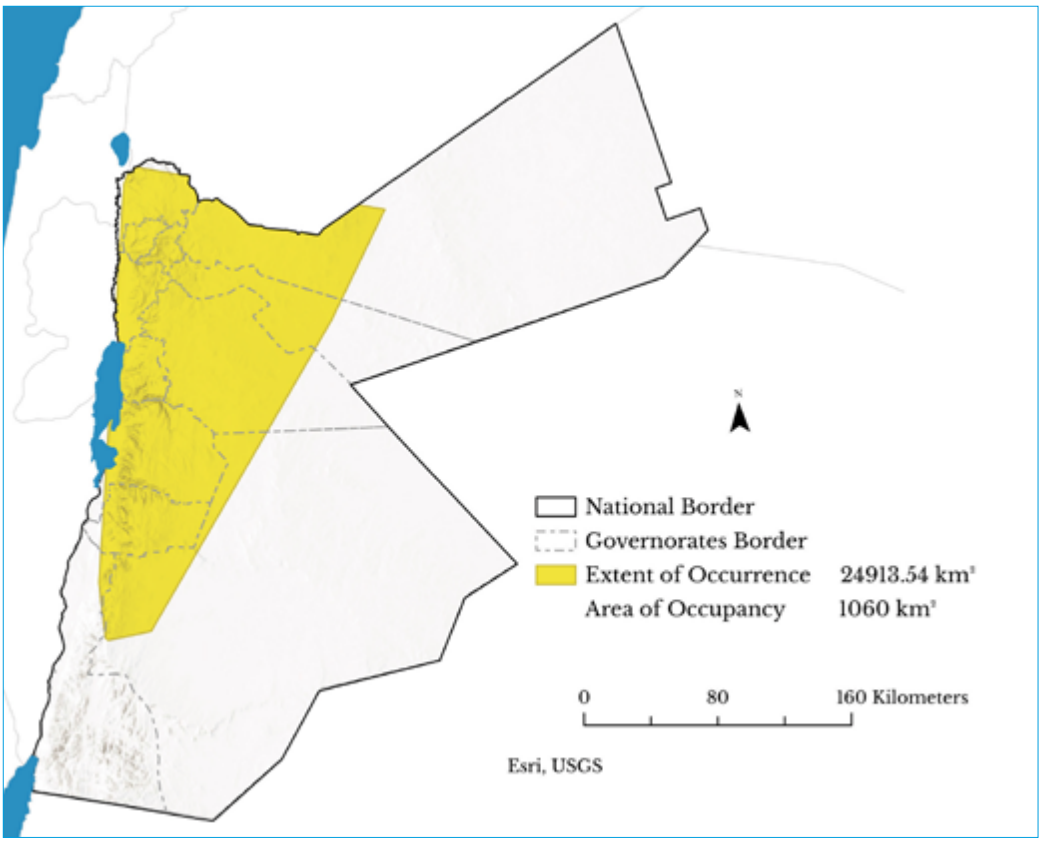
Eurasian Linnet

Order: Passeriformes
Family: Fringillidae
Scientific Name: *Linaria cannabina* (Linnaeus, 1758)
Arabic Name:
تفاحي شائع
National Red List Status: LC
Population Trend: Probably Decreasing
Status in Jordan: Resident and winter visitor

- **Justification:** The Eurasian Linnet is widespread in Jordan with a large EOO and AOO and an estimated population exceeding 1,000 mature individuals. It is locally very common, breeding across the highlands and higher Rift margins, and has expanded into arid areas following the establishment of irrigated olive plantations. Although local declines are suspected in native highland habitats due to urbanization, there is no evidence of a significant national-level decline, severe fragmentation, or extreme fluctuations.

- **Distribution:** The species is widely distributed across Europe, parts of Asia, and northwestern Africa. **In Jordan**, it breeds mainly in the Highlands and higher Rift margins, from the Yarmuk Valley south to Ras En-Naqab, and has expanded into more arid areas following the establishment of irrigated olive plantations. Numbers are apparently augmented by short-distance migrants in winter.

- **Habitats and Ecology:** In Jordan, it inhabits Mediterranean shrub land, temperate steppe, and arable land, favoring open habitats with low shrubs and scattered trees. It feeds mainly on seeds, with some invertebrates taken during breeding. Breeding occurs from mid-April to early August, with nests placed low in dense vegetation. The species primarily breeds in Mediterranean habitats but has recently expanded eastwards into arid areas associated with irrigated agriculture.



- **Conservation Status:** Protected under the general articles of the Agricultural Law No. 13 (2015) and the Environmental Law No. 6 (2017), and covered under AEMLAP for migratory landbirds. Breeds in Dana and Yarmouk Reserves.

- **Major Threats:** Major threats include habitat loss driven by urban and agricultural expansion, and locally, feral dogs that destroy nests (Al-Hmoud, 2007; Khoury *et al.*, 2009). Additional pressure from illegal capture and trade is indicated by the species' presence at the Friday Animal Market in Amman (Eid *et al.*, 2010).

- **Recommended Conservation and Research:** Priority actions include enforcing anti-trapping and illegal-hunting regulations, and protecting Mediterranean-type open woodland and semi-steppe batha vegetation. Research is needed on population size, distribution, trends, and key threats.

European Goldfinch

Order: Passeriformes
Family: Fringillidae
Scientific Name: *Carduelis carduelis* (Linnaeus, 1758)
Arabic Name:
حسون أوراسي
National Red List Status: CR A2d; C2a(i); D1
Population Trend: Decreasing
Status in Jordan: Resident, winter visitor

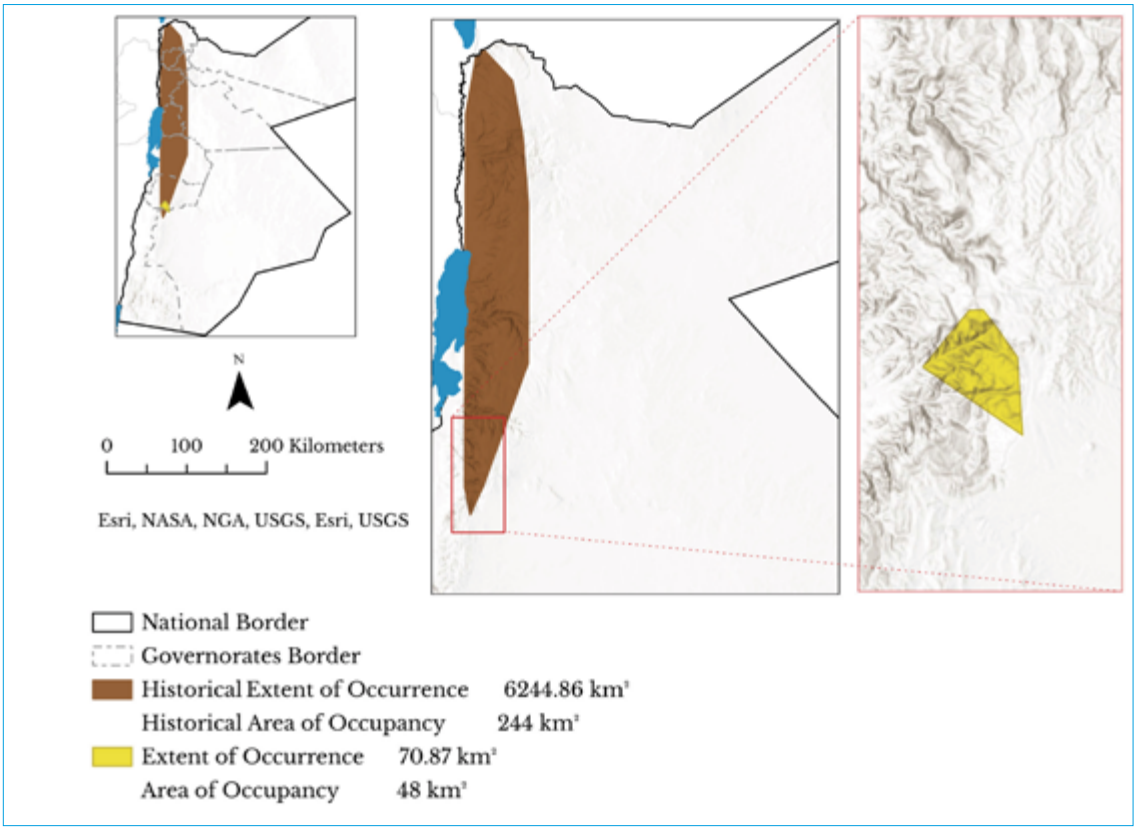
- **Justification:** The Eurasian Goldfinch has experienced a severe national decline, with an estimated ~80% reduction in the breeding population over the past 25–50 years, meeting criterion A2d for Critically Endangered. It has almost disappeared from northern Jordan, where it was formerly common. The current national population is extremely small (approximately 50–100 mature individuals), highly localized, and likely unstable, with very few subpopulations left. The decline is driven by intense trapping, as this species is the most targeted by bird trappers in Jordan. The very small population size and concentration in one or very few subpopulations satisfy criteria C2a(i) and D1. The species is still common in Palestine but is also harvested in neighboring countries, such as Syria. Ongoing trapping in Jordan indicates that immigration is unlikely to provide meaningful demographic support.

- **Distribution:** The species is widely distributed across Europe and Asia, extending south to North Africa and the Near East, with northern populations wintering further south. **In Jordan**, it is now a very rare resident along the Rift margins from the Yarmuk Valley south to Dana. Historically, it was common and bred as far south as Petra, and also occurred as a winter visitor in northern Jordan.

- **Habitats and Ecology:** In Jordan, it inhabits temperate woodlands, Mediterranean shrub lands, and orchards, often near water, using more open habitats when foraging and in winter. It primarily feeds on seeds, buds, and flowers, with insects supplementing its diet during the breeding season. Breeding occurs from spring to early summer, with nests built in trees or shrubs. Despite the continued availability of suitable habitats, the species has declined by up to 90% over the past few decades.

- **Conservation Status:** Protected under the Agricultural Law No. 13/2005 and Environmental Protection Law No. 6/2017, and listed under CITES Appendix III for the Ukrainian population.

- **Major Threats:** The main threats include illegal trapping and the collection of nestlings at breeding sites, as well as habitat pressures from agricultural expansion, grazing, and logging. These impacts are reinforced by illegal trade, as evidenced by the species being recorded at the Friday Animal Market in a 2011 study.



• **Recommended Conservation and Research:** Priority actions include strengthening monitoring and enforcement of legislation, improving regulatory measures, and promoting awareness and livelihood-based incentives. Research is required on population size and trends, harvest and use, and the development of a species recovery plan.

European Greenfinch

Order: Passeriformes
Family: Fringillidae
Scientific Name: *Chloris chloris* (Linnaeus, 1758)
Arabic Name:
خضير أوربي
National Red List Status: LC
Population Trend: Stable
Status in Jordan: Resident and winter visitor

• **Justification:** The breeding population of the European Greenfinch is widely distributed in Jordan with a large Extent of Occurrence and Area of Occupancy, and an estimated national population exceeding 5,000 mature individuals. There is no evidence of population decline, severe fragmentation, extreme fluctuations, or significant ongoing threats at the national level. Given its broad range, large population size, and apparent stability, the species is assessed as Least Concern.

• **Distribution:** The species is widely distributed across Europe, North Africa, and parts of Asia, with introduced populations in Australia, New Zealand, and South America. **In Jordan**, it occurs throughout the northeast and along the central plateaus, extending south to the Rum Desert.

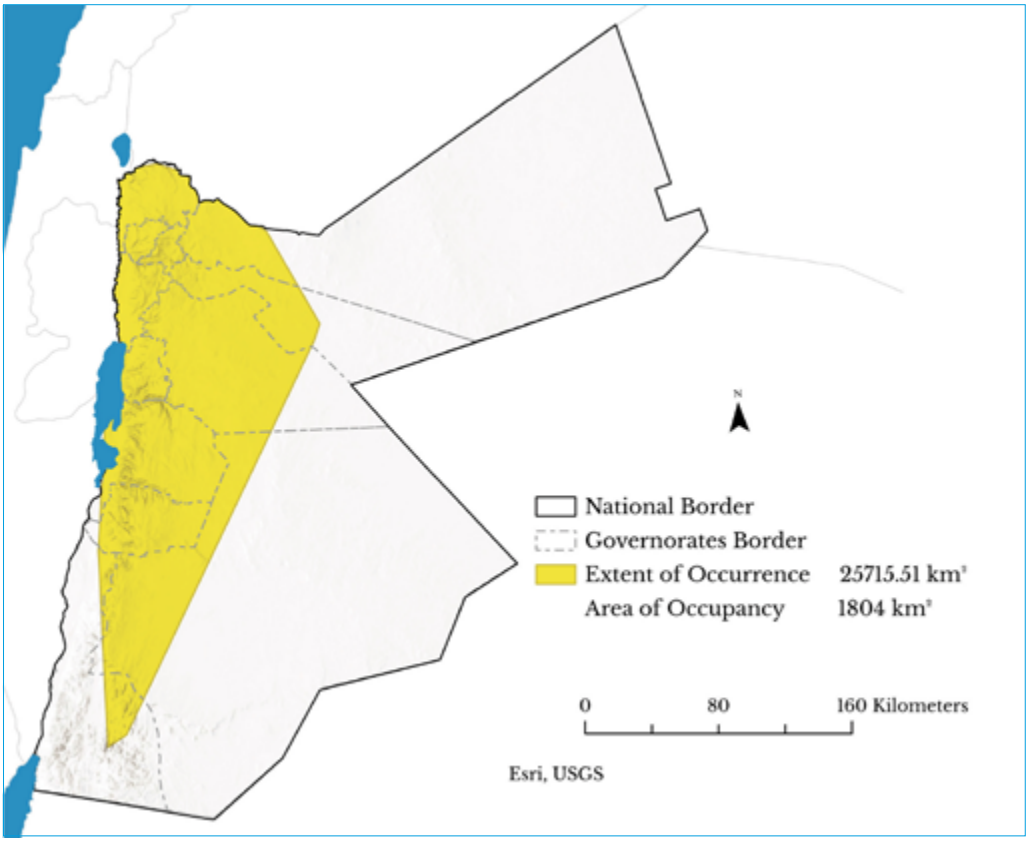
• **Habitats and Ecology:** This species occupies temperate forests, Mediterranean shrub lands, arable land, plantations, rural gardens, and urban areas. It

forages on seeds, buds, flowers, fruits, and arthropods and is common in orchards and groves. The species has expanded into some arid areas following the establishment of irrigated olive plantations. Breeding occurs from mid-March to mid-August, with cup-shaped nests built in trees or bushes.

- **Conservation Status:** Protected under the Agricultural Law (2015) and the Environmental Protection Law (2017).

- **Major Threats:** Major threats include habitat loss resulting from deforestation and urban expansion. Additional pressure from illegal capture and trade is indicated by the species being recorded at the Friday Animal Market (Eid *et al.*, 2010)

- **Recommended Conservation and Research:** Conservation actions should focus on protecting woodlands, the regulation of harvest and trade, and the strengthening of law enforcement. Research is needed on population size, distribution, and long-term trends.



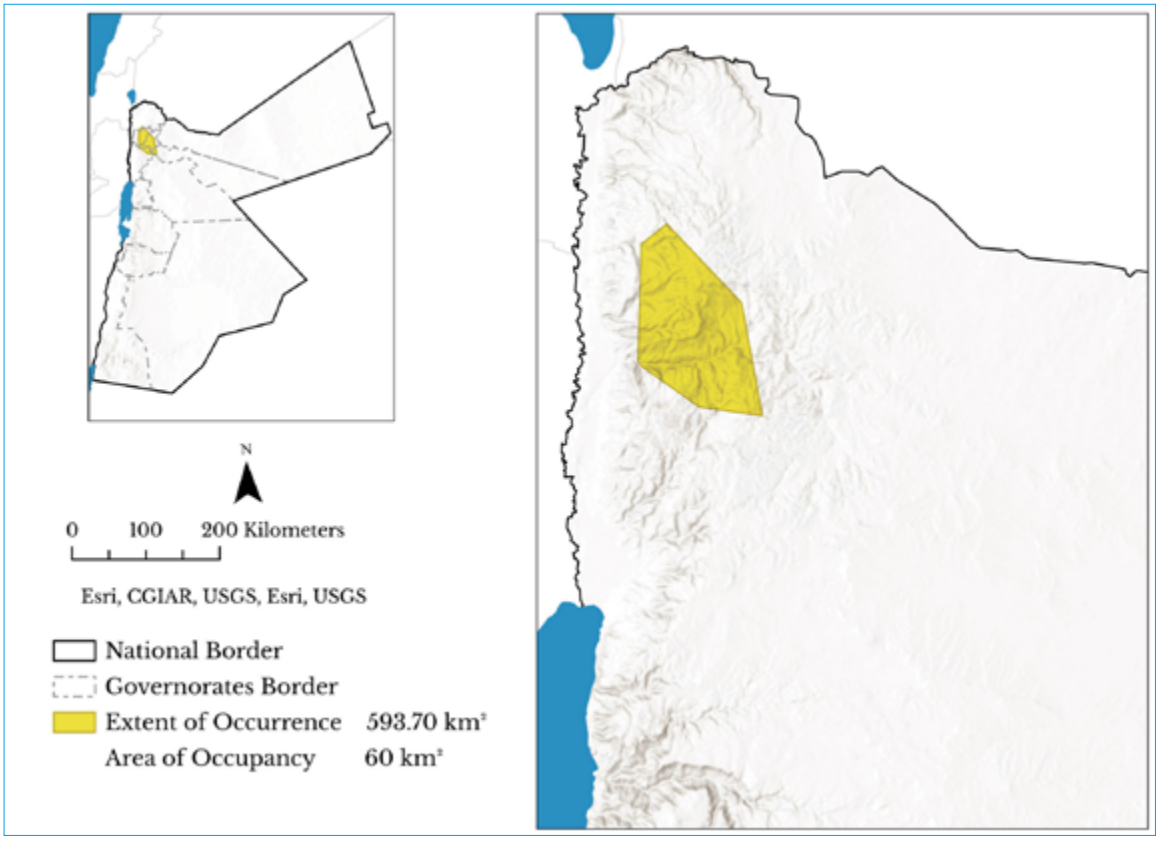
European Serin

Order: Passeriformes
Family: Fringillidae
Scientific Name: *Serinus serinus* (Linnaeus, 1766)
Arabic Name:
نعار أوروبي
National Red List Status: DD
Population Trend: Unknown
Status in Jordan: Resident, winter visitor

- **Justification:** The Serin has a very limited known distribution in Jordan, but its breeding status, population size, and population trend are poorly known. As a recent colonizer, it is difficult to determine from available records whether it maintains a stable breeding population or occurs sporadically during a range expansion. The lack of confirmed breeding data, reliable population estimates, and information on persistence and threats prevents a robust assessment against IUCN criteria; it is therefore assessed as Data Deficient (DD).

- **Distribution:** The species occurs across Europe, parts of Russia and North Africa, the Middle East, and the Canary Islands. **In Jordan**, the Serin has started colonizing as a breeding species since the 1980s. It is currently a resident and winter visitor in the Northern Highlands and Rift margins, from the Yarmouk south to Wadi Hesban, with winter records extending to the Northern Steppes, Dana, and Petra. There is an old breeding record from 1983 at Wadi Mussa/Petra.

- **Habitats and Ecology:** In Jordan, it inhabits temperate forests, Mediterranean shrubland, arable land, and plantations within the Mediterranean biogeographical zone. It feeds on seeds, buds, and insects. Breeding occurs from February to early August, with nests built in trees and shrubs. Birds are often observed in groups and are resident or short-distance migrants.



• **Conservation Status:** Protected under the general articles of the Agricultural Law (2015) and Environmental Law (2017). Listed under the Bern Convention and generally protected by the EU Birds Directive, CITES Appendix III applies only to the Ukrainian population.

• **Major Threats:** The primary threat is habitat loss and modification resulting from urban expansion. An increase in trapping is indicated by records of trapped birds in the Friday Bird markets and on social media platforms.

• **Recommended Conservation and Research:** Priority actions include strengthening enforcement against trapping and increasing public awareness. Research is needed to confirm the current breeding distribution.

Syrian Serin

Order: Passeriformes
Family: Fringillidae
Scientific Name: *Serinus syriacus* (Bonaparte, 1850)
Arabic Name:
نعار سوري
National Red List Status: CR B1ab(iii,v)+2ab(iii,v)
Population Trend: Decreasing
Status in Jordan: Resident, passage migrant, and winter visitor

• **Justification:** The breeding population of Syrian Serin has an extremely restricted breeding range in Jordan, confined to a single location within the Dana area, with a very small Extent of Occurrence and Area of Occupancy (breeding habitat effectively ~12 km^2). The national population is estimated at 900–1,200 mature individuals and has undergone an inferred ~30% decline in population size and AOO over the past three decades. The sole breeding site is subject to ongoing habitat degradation from overgrazing, woodcutting, and increasing drought, with limited management or protection, and further decline is expected. Although the species breeds in Lebanon and Syria, these populations are distant (>300 km), making any rescue effect unlikely to offset national declines. The combination of a single location, a very restricted range, and continuing decline in habitat quality and population size meets the thresholds for Critically Endangered.



Syrian Serin (Serinus syriacus); photo: © Waseem Al-Hayek

• **Distribution:** The species breeds in Lebanon, southern Syria, and southwestern Jordan, dispersing to other parts of these countries and to Palestine in winter, when it occasionally reaches Sinai and northern Saudi Arabia. **In Jordan**, it breeds mainly at Al-Barrah Woodland of the Dana Nature Reserve, with a few pairs possibly breeding in other parts of the Reserve. This small resident population disperses locally in winter between Tafila and Petra, possibly as far south as Petra. Members of the breeding populations in Syria and Lebanon migrate to northwestern Jordan for the winter and have been recorded mainly along the Dead Sea and the Northern Rift Margins, the Jordan Valley, and the Northern Highlands.

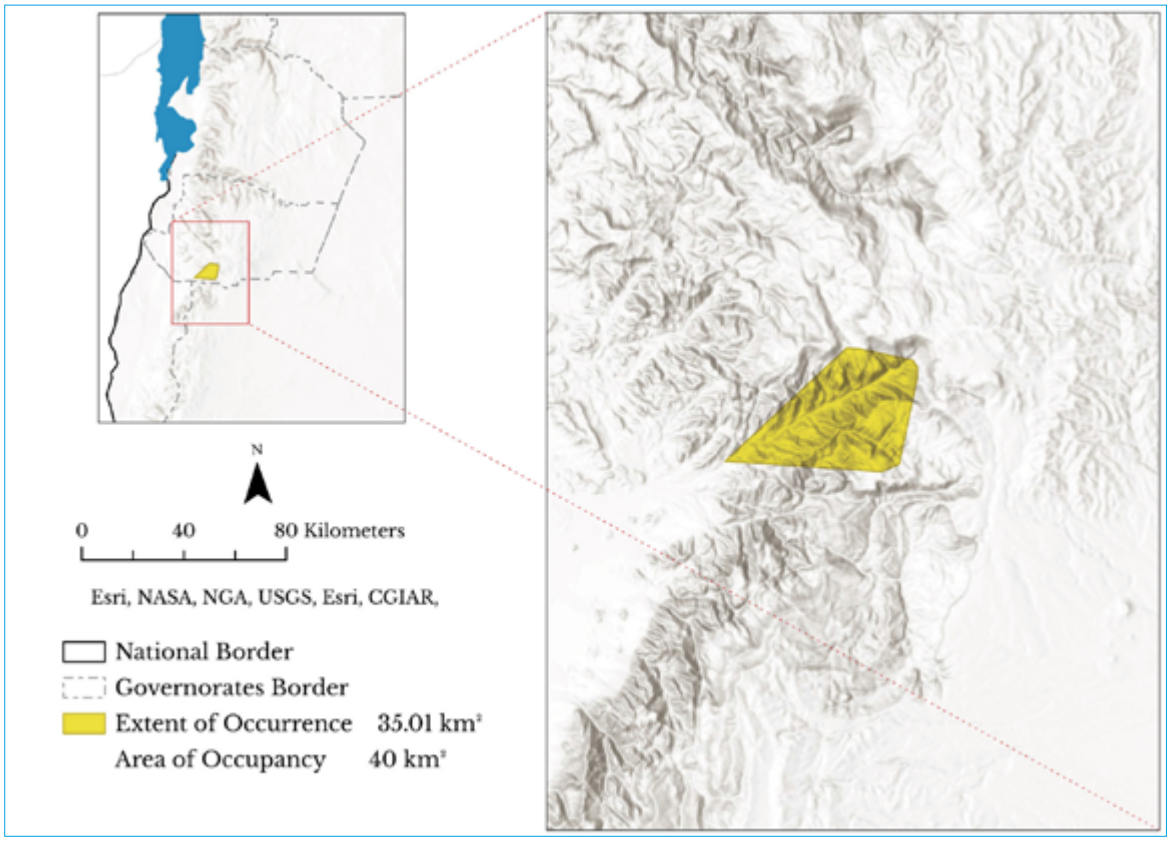
• **Habitats and Ecology:** In Jordan, the breeding population inhabits Mediterranean-type shrubby vegetation with sparse, steppe-like undergrowth on rocky slopes, mainly within the Mediterranean

biogeographical zone, at elevations above 1100 m.a.s.l. It typically breeds near water and feeds on seeds of low vegetation. Outside the breeding season, it forages in open steppe with scattered shrubs and trees. Breeding occurs from mid-March to June, with nests placed in bushes and trees, mainly juniper and evergreen oak (Khoury 1998, 2001, 2003).

- **Conservation Status:** Protected under the Agricultural Law (2015) and Environmental Law (2017). Listed on CMS Appendices I and II, and covered by the CMS AEMLAP policy framework for migratory landbirds.

- **Major Threats:** Major threats include habitat degradation and deforestation resulting from overgrazing, tree logging, recreational disturbance, drought, reduced rainfall affecting food and water availability, agricultural expansion, quarrying, and trapping (Khoury 1998, 2000). Unregulated picnicking and camping are another threat, causing disturbances to the nesting serins. Trapping is affecting both the resident and visiting populations of Syrian Serin in Jordan, according to records of birds trapped and offered for sale at the Friday Animals Markets.

- **Recommended Conservation and Research:** The urgent development and implementation of a species action plan is required, safeguarding and restoring montane juniper–conifer woodlands, controlling overgrazing and wood cutting, regulating recreational activities in the breeding sites, maintaining water points, and preventing quarrying and construction disturbance in and around the Dana Nature Reserve. Continuous monitoring and research is needed on interacting threats, population and habitat trends, in addition to carrying out a population viability analysis.



Sinai Rosefinch

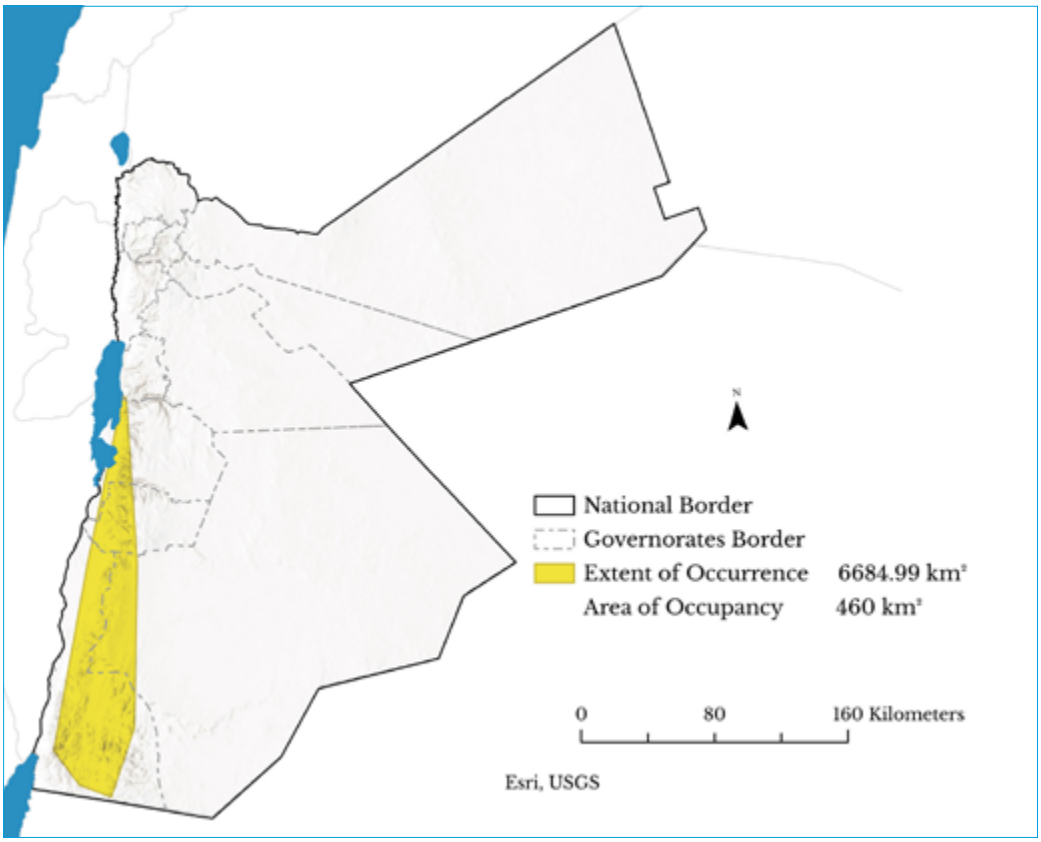
Order: Passeriformes
Family: Fringillidae
Scientific Name: *Carpodacus synoicus* (Temminck, 1825)
Arabic Name:
حسون وردي سينائي
National Red List Status: LC
Population Trend: Stable
Status in Jordan: Resident

- **Justification:** The Sinai Rosefinch is common in Jordan with a stable population trend and a broad national distribution. There is no evidence of population decline, severe fragmentation, extreme fluctuations, or significant ongoing threats at the national level. Although the exact population size is unknown, its frequent and widespread occurrence indicates a stable population, and it is therefore assessed as Least Concern.

- **Distribution:** The Sinai Rosefinch occurs in southern Palestine, northeastern Egypt (Sinai), southwestern Jordan, and extreme northwestern Saudi Arabia. **In Jordan**, it is resident in the Dead Sea and southern Rift margins and the Rum Desert, becoming scarcer toward its northern limit at Wadi Mujib.



Sinai Rosefinch (Carpodacus synoicus); photo: © Fares Khoury



- **Habitats and Ecology:** In Jordan, it inhabits temperate and subtropical dry shrubland, inland rocky areas, and hot desert habitats. It inhabits dry mountainous scrub and rocky desert, feeding primarily on seeds and occasionally on insects. Breeding occurs in rock and cliff crevices, and the species requires nearby water. It occurs mainly in the Saharo-Arabian zone and its transitions, and carries out some post-breeding local movements, such as the upslope movements at Dana during late summer.

- **Conservation Status:** The national bird of Jordan, protected under the Agricultural Law (2015) and Environmental Law (2017), and covered by AEMLAP as a guidance instrument.

- **Major Threats:** Major threats include habitat loss driven by tourism development, mining, and road construction, reduced water availability resulting from abstraction and drought, and disturbance and noise at campsites. Additional pressure from illegal capture and trade is indicated by the species' presence at the Friday Animal Market (Eid *et al.*, 2010).

- **Recommended Conservation and Research:** Conservation should focus on protecting key rocky desert and wadi habitats of this iconic bird species. Research is needed on population and habitat trends.

Trumpeter Finch

Order: Passeriformes
Family: Fringillidae
Scientific Name: *Bucanetes githagineus* (M.H.K. Lichtenstein, 1823)
Arabic Name:
زمير
National Red List Status: LC
Population Trend: Stable
Status in Jordan: Resident

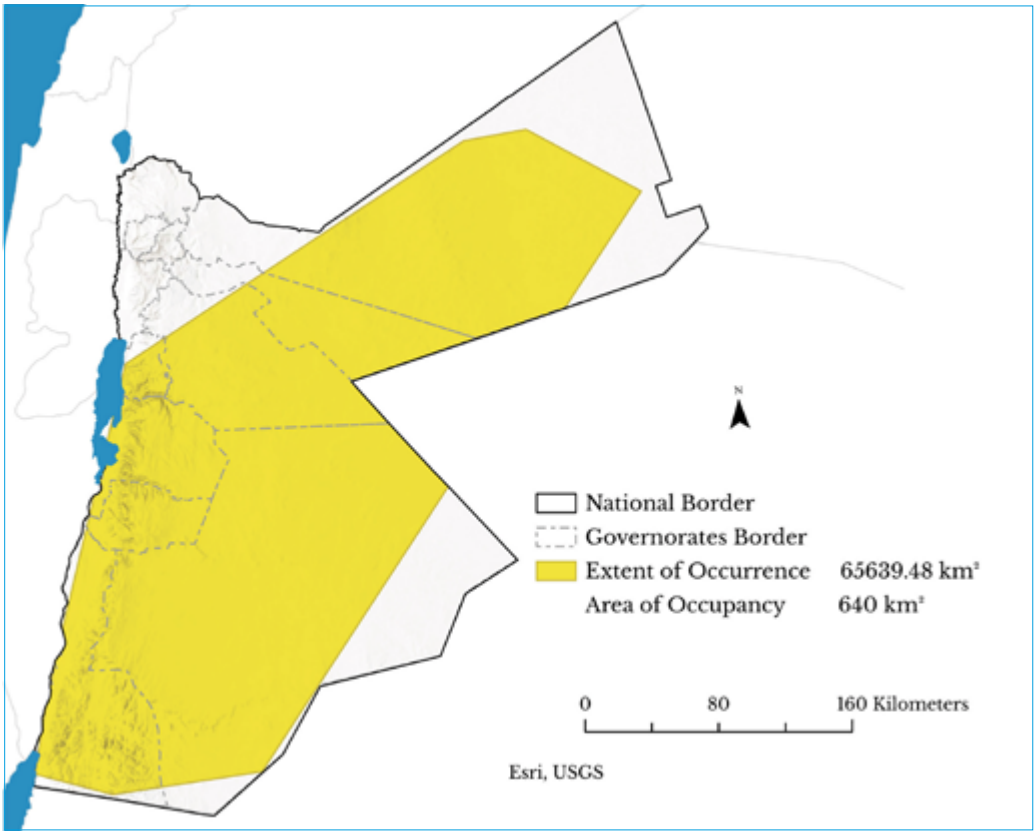
- **Justification:** The Trumpeter Finch is widespread and common across Jordan, with a very large Extent of Occurrence and a moderate Area of Occupancy, and a stable population trend. There is no evidence of population decline, severe fragmentation, extreme fluctuations, or significant ongoing threats at the national level. Despite the lack of a precise population estimate, its broad distribution, abundance, and stability indicate a low risk of extinction.

- **Distribution:** The species occurs across southern Europe, North Africa, the Middle East, Central Asia, and South Asia, with wintering populations extending into northwestern India. **In Jordan**, it is widespread in the interior desert, the eastern flanks of the Sharrah Highlands, the Dead Sea and Southern Rift Margins, Wadi Araba.

- **Habitats and Ecology:** This species inhabits mainly hot deserts, primarily within the Saharo-Arabian zone. It occupies desert and semi-desert plains, stony areas, and wadis, feeding primarily on grass seeds and other low-growing plants, supplemented by insects. Breeding occurs from February to June, with nests placed in shallow ground scrapes or crevices. Birds regularly visit waterholes, especially in the early morning.

- **Conservation Status:** Protected under the general articles of the Agriculture Law No. 13/2015 and the Environmental Law (2017), and covered by AEMLAP guidance for migratory landbirds.

- **Major Threats:** Threats are poorly documented but may include disturbance, development activities, and nest predation by feral dogs in some areas.



• **Recommended Conservation and Research:** Conservation should focus on protecting and managing rocky desert and wadi habitats and minimizing disturbance. Research is needed through regular population and distribution surveys and habitat condition assessments.

Desert Finch

Order: Passeriformes
Family: Fringillidae
Scientific Name: *Rhodospiza obsoleta* (M.H.K.Lichtenstein, 1823)
Arabic Name:
شرشور صحراوي
National Red List Status: LC
Population Trend: Stable (Probably Increasing)
Status in Jordan: Resident

• **Justification:** The Desert Finch is widespread across Jordan with a large EOO and AOO and a stable or increasing population trend. It is locally common and has expanded its breeding range into arid areas following the establishment of irrigated farms, indicating adaptability and the availability of suitable habitat. There is no evidence supporting high extinction risk at the national level, and it is therefore assessed as Least Concern.

• **Distribution:** The species ranges widely across Eurasia, from southeastern Turkey and the Sinai Peninsula east through Central Asia to northern China and Pakistan. **In Jordan**, it is resident in the Rift Valley south of Aqaba, the Northern Steppes, the Southern Highlands, and locally in the interior and eastern deserts.

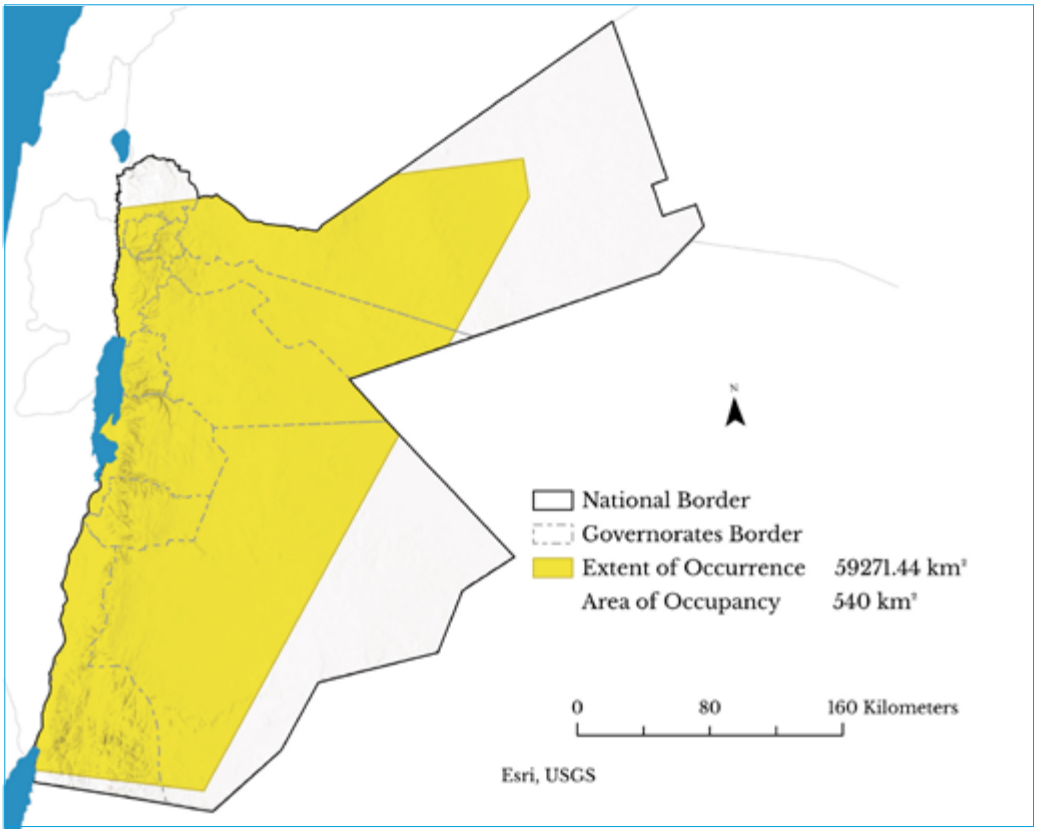
• **Habitats and Ecology:** This species occupies temperate steppe, hot desert, arable land, plantations, rural gardens, and urban areas. It inhabits open arid and semi-arid lowlands with scattered trees or tall shrubs, feeding mainly on seeds, buds, and shoots, supplemented by insects. Breeding occurs from late March to July, with nests built in shrubs or trees. The species requires nearby water and has expanded

into arid areas following agricultural development (Khoury *et al.*, 2009).

- **Conservation Status:** Protected by the Agricultural Law 2015 and the Environmental Law 2017.

- **Major Threats:** In urban and peri-urban areas, nests placed high in trees are vulnerable to aerial nest predators, particularly invasive species such as the Common Myna, and to additional pressures from urban development. Illegal capture and trade are also indicated, as the species was recorded at the Friday Animal Market (Eid *et al.*, 2010)

- **Recommended Conservation and Research:** Research is needed on population size, range expansion, and key threats at nesting sites.



Cretzschmar's Bunting

Order: Passeriformes
Family: Emberizidae
Scientific Name: *Emberiza caesia* (Cretzschmar, 1827)
Arabic Name:
درسة زرقاء
National Red List Status: VU B1ab(iii)+2ab(iii)
Population Trend: Decreasing
Status in Jordan: Summer breeder, passage migrant

- **Justification:** Cretzschmar's Bunting has a restricted breeding range in Jordan, with a small Extent of Occurrence and Area of Occupancy, occurring at around five locations. Although precise population size and trends are unknown, a continuing decline in habitat extent and quality is inferred from breeding habitat degradation. These factors meet the thresholds for Vulnerable under criterion B. While the species breeds elsewhere in the Levant, the limited national range and ongoing habitat pressures mean that any regional rescue effect is insufficient to offset national decline.

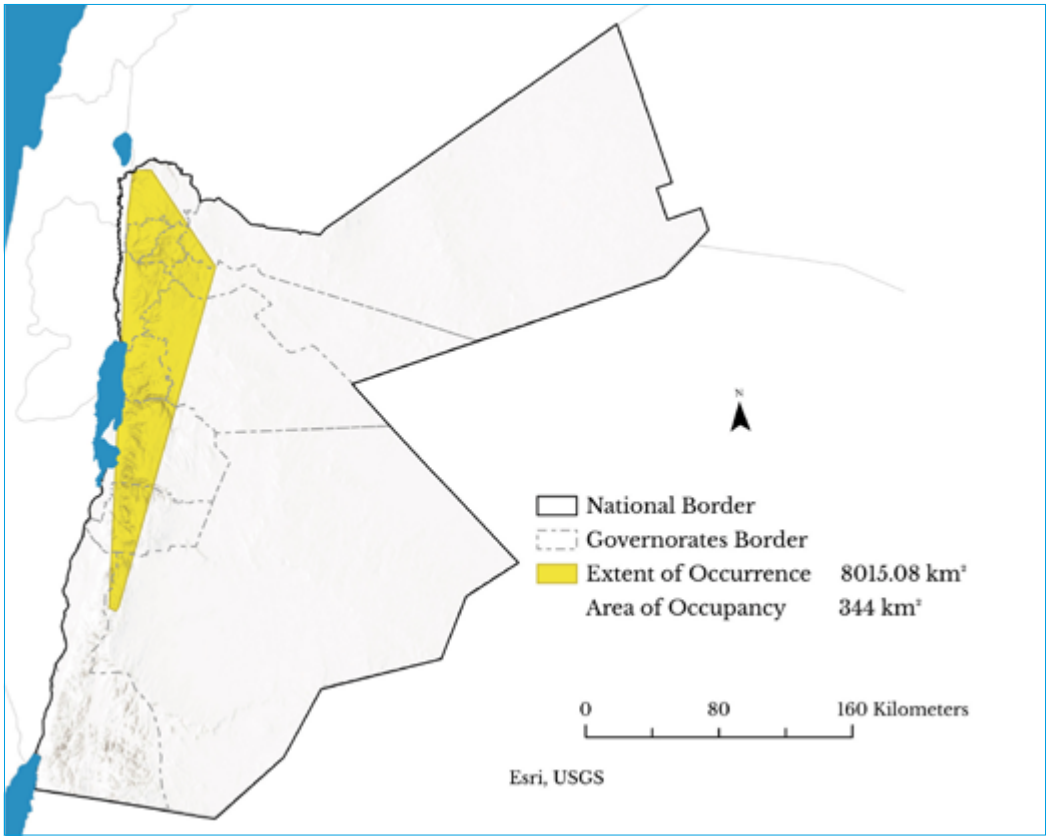
- **Distribution:** The species occurs from southwestern Albania across Greece and parts of Turkey, Cyprus, western Syria, Lebanon, western Jordan, and northern Palestine, and winters in northeastern Africa and Arabia. **In Jordan**, it is a summer breeder in the Northern Highlands and along the Rift Margins, from the Yarmouk Valley south to Dana, and is a fairly common passage migrant, recorded widely.

- **Habitats and Ecology:** In Jordan, it inhabits Mediterranean-type shrubby vegetation, favoring dry, open woodlands and sparse cover on hillsides. It feeds mainly on grass seeds, supplemented by invertebrates. Breeding occurs from spring to early summer, with nests built on the ground, largely within the Mediterranean bioclimatic zone.

- **Conservation Status:** Protected under the Agricultural Law No. 13/2015 and the Environmental Protection Law No. 1/2003. It occurs as a summer visitor and breeder within Yarmouk, Ajloun, and Dana Nature Reserves.

- **Major Threats:** Primary threats include habitat loss from logging, urbanization, agricultural expansion, tourism development, road construction, and degradation caused by overgrazing and increasing drought (Khoury, 1998a).

- **Recommended Conservation and Research:** Actions should prioritize the protection of all types of Mediterranean scrubland and maquis habitats used during the breeding season. Research is needed on population size, distribution, trends, and threats.



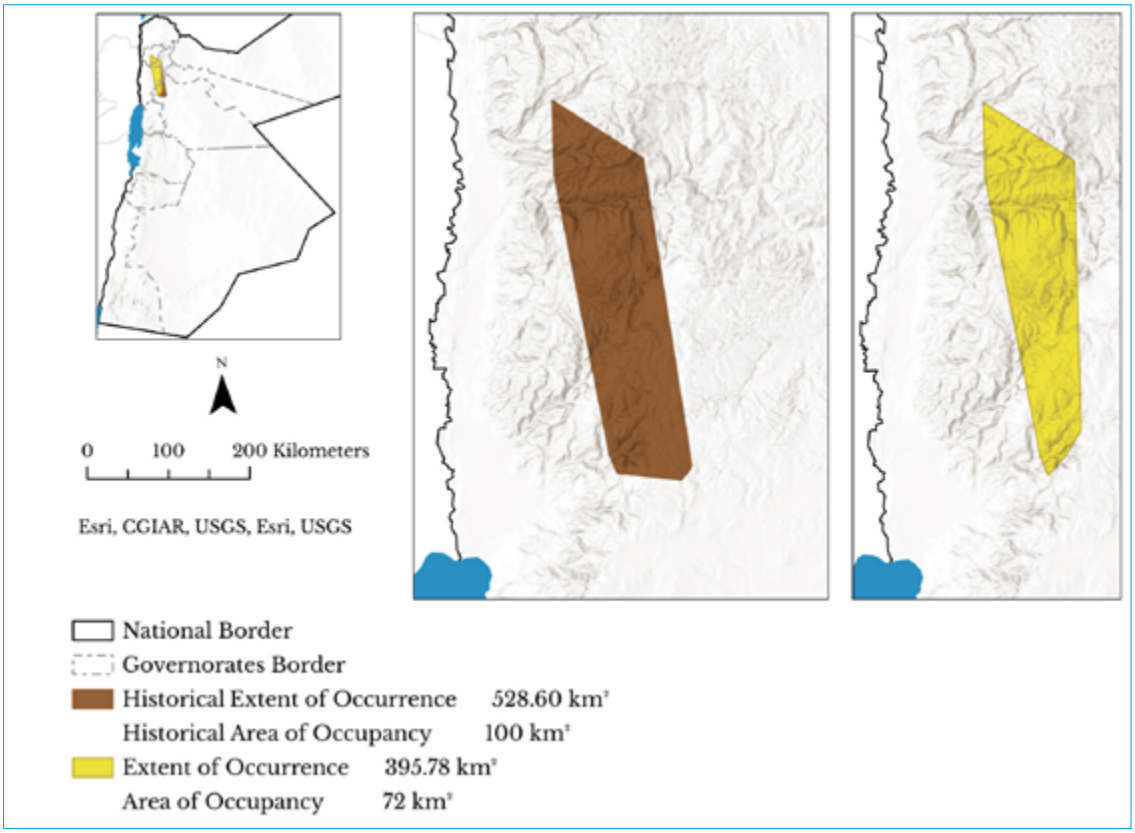
Black-headed Bunting

Order: Passeriformes
Family: Emberizidae
Scientific Name: *Emberiza melanocephala* (Scopoli, 1769)
Arabic Name:
درسة رأساء
National Red List Status: CR C2a(i); D1
Population Trend: Decreasing
Status in Jordan: Summer breeder and passage migrant

- **Justification:** The breeding population of the Black-headed Bunting is currently very small and declining in Jordan, estimated at ≤50 mature individuals, with a highly restricted distribution and severe habitat loss and fragmentation, particularly around Amman due to rapid urbanization. Breeding is now sporadic, with only a single recent record (Mahes), indicating extreme vulnerability. The population size and continuing decline in habitat quality meet the thresholds for Critically Endangered under criteria C2a(i) and D1. Although the species occurs elsewhere in the region, those populations are also at risk, making a meaningful rescue effect unlikely.

- **Distribution:** The species breeds across southeastern Europe and southwestern Asia and winters in western India. **In Jordan**, it is a rare summer visitor and breeder in the Northern Highlands and the highest parts of the Northern Rift margins, with no recent confirmed breeding records, indicating a marked decline and high risk of extinction. It is also a scarce passage migrant recorded sporadically during migration seasons.

- **Habitats and Ecology:** In Jordan, it inhabits Mediterranean-type shrubby vegetation, occurring in open areas with scattered shrubs, olive groves, and edges of farmland. It feeds mainly on invertebrates and seeds. Breeding occurs in late spring, with nests built in shrubs.



- **Conservation Status:** Protected under the general articles of the Agricultural Law No. 13 (2015) and the Environmental Law No. 6 (2017).

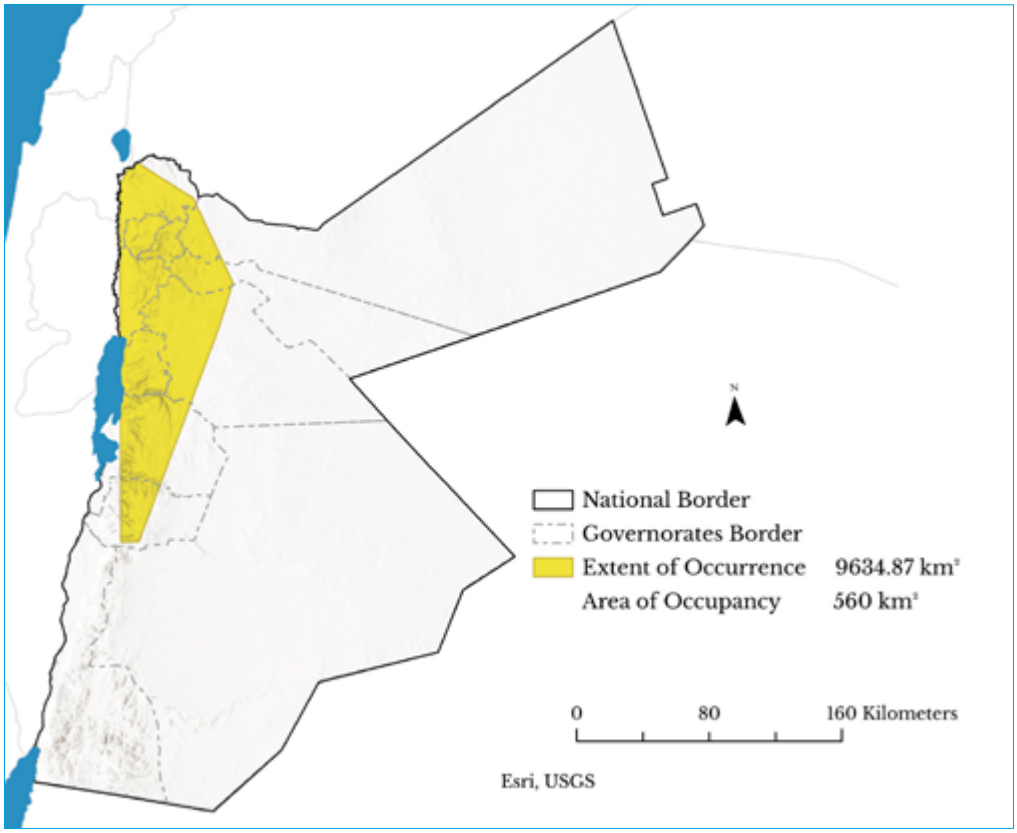
- **Major Threats:** Major threats include habitat loss and degradation resulting from urban expansion, road infrastructure, intensive agriculture, overgrazing, and increasing aridity associated with reduced rainfall.

- **Recommended Conservation and Research:** An action plan to protect and restore breeding habitats of this species is urgently required. Conservation should focus on protecting and managing Mediterranean shrubland, reducing overgrazing and disturbance, and mitigating habitat loss.

Corn Bunting

Order: Passeriformes
Family: Emberizidae
Scientific Name: *Emberiza calandra* (Linnaeus, 1758)
Arabic Name:
درسة القمح
National Red List Status: LC
Population Trend: Stable
Status in Jordan: Resident, winter visitor

- **Justification:** The Corn Bunting is a common breeder in Jordan, widespread across open steppe habitats, Rift Margins, and the Northern–Central Steppes, with a large Extent of Occurrence and AOO. Annual population fluctuations in response to rainfall and drought are considered natural and reversible, and the breeding population recovers quickly when conditions improve. There is no evidence of a sustained population decline, severe fragmentation, or significant ongoing threats at the national level.



- **Distribution:** The species breeds across Europe, parts of Asia, and the Arabian Peninsula, with non-breeding populations in Egypt and eastern Arabia. **In Jordan**, it is a widespread breeder in the Highlands, northern steppes, and the Northern Rift margins, and is very common in wet years. It is also a winter visitor to northern and western Jordan, from the Yarmouk Valley south to Ras en-Naqab, including the Highlands, steppes, and Jordan Valley.

- **Habitats and Ecology:** In Jordan, it inhabits temperate grassland and arable land. It favors open grasslands and agricultural fields, feeding on seeds and invertebrates. Nests are placed on the ground. Breeding occurs primarily in the Mediterranean and Irano-Turanian bioclimatic zones and is reduced during drought years, when it is limited to irrigated areas.

- **Conservation Status:** Wildlife and hunting are regulated under the Agriculture Law No. 13/2015. The species occurs in some protected areas.

- **Major Threats:** The main threats are habitat loss due to urban expansion, small-scale farming and grazing, and reduced breeding success during droughts.

- **Recommended Conservation and Research:** Conservation actions should promote agri-environment measures and strengthen enforcement against illegal hunting and trapping. Research is needed on population size, distribution, trends, and key threats.

Striolated Bunting

Order: Passeriformes
Family: Emberizidae
Scientific Name: *Emberiza striolata* (M.H.K. Lichtenstein, 1823)
Arabic Name:
درسة مخططة
National Red List Status: LC
Population Trend: Stable
Status in Jordan: Resident

- **Justification:** The Striolated Bunting has a large Extent of Occurrence, and a limited Area of occurrence, which is estimated to be around or less than 500 Km^2. Nevertheless, its population appears stable across most of its breeding range in Jordan, as evidenced by consistent records near the Dead Sea, Wadi Dana, Beidha, and elsewhere.

- **Distribution:** The species has a wide distribution across parts of Africa, the Middle East, and Asia, including Palestine, Jordan, the Arabian Peninsula, Iran, Afghanistan, Pakistan, and northeastern Africa. **In Jordan**, it is an uncommon resident of the Dead Sea and the Southern Rift margins, and of the Rum Desert, with additional records from the Aqaba Mountains near Wadi Araba.

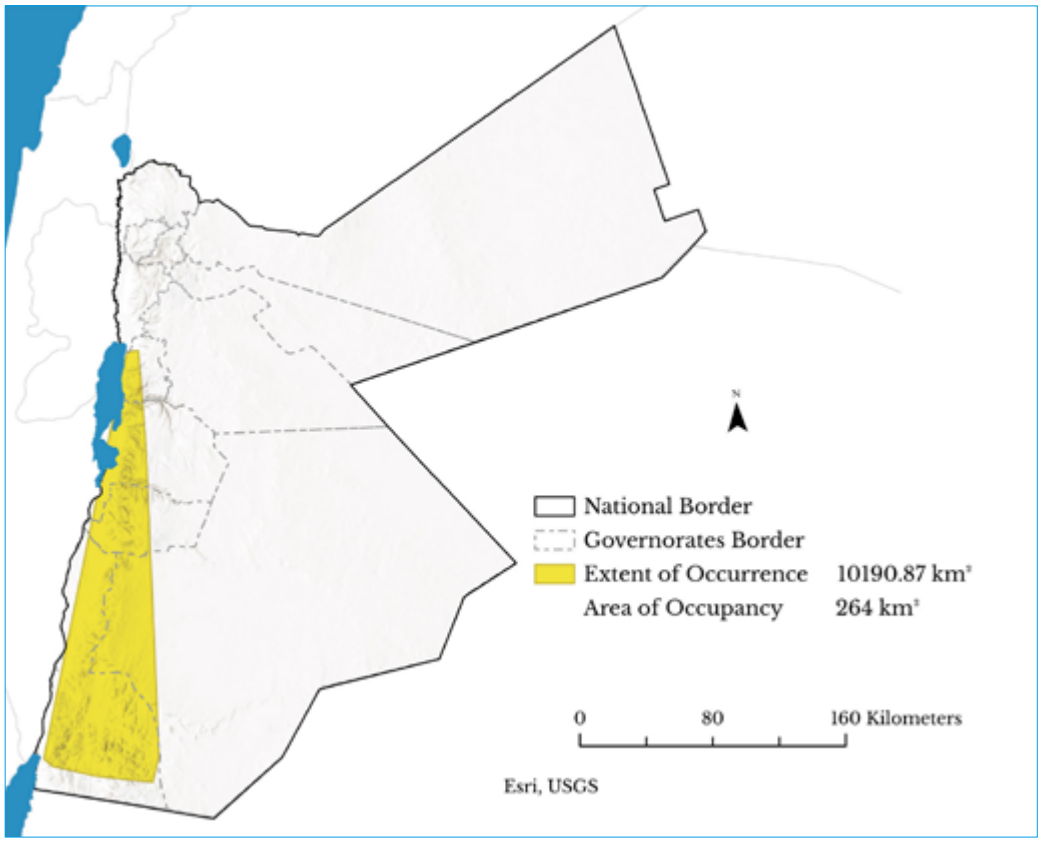
- **Habitats and Ecology:** This species inhabits mainly inland rocky, arid areas with scrub near water sources. The diet consists mainly of seeds, supplemented by insects. Breeding occurs from March to June, with one or more broods depending on rainfall, and nests are placed on the ground or in rock crevices.

- **Conservation Status:** Protected under the general articles of the Agriculture Law No. 13/2015 and the Environmental Law (2017), and covered by CMS AEMLAP as a guidance instrument.

- **Major Threats:** Major threats include habitat loss and degradation from road construction, tourism development, and mining activities, as well as reduced water availability due to abstraction.

- **Recommended Conservation and Research:**

Conservation efforts should focus on protecting and managing rocky desert, wadi, and cliff slopes. Research is needed on population size, trends, habitat condition, and key threats.



3.6 Red List of Breeding Birds in Jordan in Tabular Form

The breeding populations of 168 bird species were assessed in Jordan in accordance with the IUCN Red List Categories and Criteria and the Guidelines for Application at Regional and National Levels. The national assessment identified 13 species (7.7%) as Regionally Extinct (RE). 67 species (39.9% of all assessed species) were classified as threatened, including 21 Critically Endangered (CR) species (12.5%), 19 Endangered (EN) species (11.3%), and 27 Vulnerable (VU) species (16.1%). In addition, 16 species (9.5%) were assessed as Near Threatened (NT), 58 species (34.5%) as Least Concern (LC), and 14 species (8.3%) as Data Deficient (DD). Based on the IUCN Red List statistical approach for incorporating Data Deficient species, the best estimate of threatened breeding species in Jordan is 47.5% of extant species, assuming that Data Deficient taxa are threatened in the same proportion as data-sufficient extant species.



Short-toed Snake Eagle (Circaetus gallicus); photo: © Fares Khoury

English Name	Scientific Name	National Status	National Status (with sub-criteria)	Population Trend (National)	Global Status (www.iucnredlist.org)	Regional Status (Arabian Peninsula) (Symes *et al.*, 2015)
Family Name: Struthionidae						
Syrian Ostrich	*Struthio camelus syriacus*	Regionally Extinct	RE	Extinct	Least Concern	Regionally Extinct
Family Name: Podicipedidae						
Little Grebe	*Tachybaptus ruficollis*	Vulnerable	VU° B2ab(iii); D1	Probably Decreasing	Least Concern	Least Concern
Family Name: Anatidae						
Mallard	*Anas platyrhynchos*	Endangered	EN° B2ab(iii); D1	Decreasing	Least Concern	Not Applicable
Marbled Duck	*Marmaronetta angustirostris*	Regionally Extinct	RE	Extinct	Near Threatened	Near Threatened
Common Shelduck	*Tadorna tadorna*	Regionally Extinct	RE	Extinct	Least Concern	Not Applicable
Family Name: Phasianidae						
Black Francolin	*Francolinus francolinus*	Vulnerable	VU° B2ab(ii,iii,v); D1	Decreasing	Least Concern	Endangered
Chukar	*Alectoris chukar*	Vulnerable	VU° A2cd	Decreasing	Least Concern	Least Concern
Sand Partridge	*Ammoperdix heyi*	Near Threatened	NT	Unknown	Least Concern	Least Concern
Common Quail	*Coturnix coturnix*	Data Deficient	DD	Unknown	Least Concern	Least Concern
Family Name: Phalacrocoracidae						
Pygmy Cormorant	*Microcarbo pygmaeus*	Data Deficient	DD	Unknown	Least Concern	Not Assessed
Family Name: Ardeidae						
Purple Heron	*Ardea purpurea*	Critically Endangered	CR B2ab(ii,iii); D1	Decreasing	Least Concern	Near Threatened
Black-crowned Night Heron	*Nycticorax nycticorax*	Endangered	EN° B2ab(iii); D1	Decreasing	Least Concern	Least Concern
Squacco Heron	*Ardeola ralloides*	Data Deficient	DD	Unknown	Least Concern	Least Concern
Western Cattle-Egret	*Ardea ibis*	Data Deficient	DD	Unknown	Least Concern	Least Concern
Little Bittern	*Botaurus minutus*	Vulnerable	VU° B2ab(iii); D1	Unknown	Least Concern	Least Concern
Family Name: Accipitridae						
Egyptian Vulture	*Neophron percnopterus*	Critically Endangered	CR (PE) D	Decreasing	Endangered	Vulnerable
Lammergeier	*Gypaetus barbatus*	Regionally Extinct	RE	Extinct	Near Threatened	Vulnerable
Lappet-faced Vulture	*Torgos tracheliotos*	Regionally Extinct	RE	Extinct	Endangered	Vulnerable
Eurasian Griffon	*Gyps fulvus*	Critically Endangered	CR(PE) C2a(ii) D1	Decreasing	Least Concern	Endangered
Golden Eagle	*Aquila chrysaetos homeyeri*	Critically Endangered	CR B2ab(i,ii,iii,v); D1	Probably Decreasing	Least Concern	Endangered
Verreaux's Eagle	*Aquila verreauxii*	Regionally Extinct	RE	Extinct	Least Concern	Endangered
Short-toed Snake-Eagle	*Circaetus gallicus*	Vulnerable	VU° D1	Decreasing	Least Concern	Vulnerable
Bonelli's Eagle	*Aquila fasciata*	Critically Endangered	CR D1	Decreasing	Least Concern	Not Assessed
Western Marsh Harrier	*Circus aeruginosus*	Regionally Extinct	RE	Extinct	Least Concern	Near Threatened
Long-legged Buzzard	*Buteo rufinus*	Near Threatened	NT	Decreasing	Vulnerable	Least Concern
Eurasian Sparrowhawk	*Accipiter nisus*	Data Deficient	DD	Unknown	Least Concern	Not Assessed
Black-winged Kite	*Elanus caeruleus*	Least Concern	LC	Increasing	Least Concern	Vulnerable

English Name	Scientific Name	National Status	National Status (with sub-criteria)	Population Trend (National)	Global Status (www.iucnredlist.org)	Regional Status (Arabian Peninsula) (Symes *et al.*, 2015)
Family Name: Falconidae						
Common Kestrel	*Falco tinnunculus*	Least Concern	LC	Stable	Least Concern	Least Concern
Lesser Kestrel	*Falco naumanni*	Endangered	EN B2ab(ii,iii,v)	Decreasing	Least Concern	Near Threatened
Eurasian Hobby	*Falco subbuteo*	Vulnerable	VU° B2ab(iii); D1	Decreasing	Least Concern	Not Applicable
Sooty Falcon	*Falco concolor*	Vulnerable	VU° D1	Unknown	Vulnerable	Endangered
Barbary Falcon	*Falco peregrinus pelegrinoides*	Endangered	EN A2cd, D1	Decreasing	Least Concern	Endangered
Lanner Falcon	*Falco biarmicus*	Critically Endangered	CR C2a(ii) D1	Decreasing	Least Concern	Critically Endangered
Family Name: Rallidae						
Baillon's Crake	*Porzana pusilla*	Regionally Extinct	RE	Extinct	Least Concern	Not Applicable
Common Moorhen	*Gallinula chloropus*	Least Concern	LC	Increasing	Least Concern	Least Concern
Eurasian Coot	*Fulica atra*	Endangered	EN° B2ab(iii); D1	Unknown	Least Concern	Least Concern
Water Rail	*Rallus aquaticus*	Regionally Extinct	RE	Extinct	Least Concern	Near Threatened
Family Name: Otididae						
Asian Houbara	*Chlamydotis macqueenii*	Regionally Extinct	RE	Extinct as a Breeder	Vulnerable	Not Assessed
Family Name: Recurvirostridae						
Pied Avocet	*Recurvirostra avosetta*	Data Deficient	DD	Unknown	Least Concern	Near Threatened
Black-winged Stilt	*Himantopus himantopus*	Near Threatened	NT	Unknown	Least Concern	Least Concern
Family Name: Burhinidae						
Eurasian Stone-curlew	*Burhinus oedicnemus*	Least Concern	LC	Stable	Least Concern	Least Concern
Family Name: Glareolidae						
Cream-coloured Courser	*Cursorius cursor*	Near Threatened	NT	Stable (Locally Declining in some Localities)	Least Concern	Least Concern
Collared Pratincole	*Glareola pratincola*	Critically Endangered	CR D1	Unknown	Least Concern	Least Concern
Family Name: Charadriidae						
Little Ringed Plover	*Charadrius dubius*	Critically Endangered	CR D1	Unknown	Least Concern	Least Concern
Kentish Plover	*Charadrius alexandrinus*	Least Concern	LC	Stable (Locally Declining in some Localities)	Least Concern	Least Concern
Greater Sand-Plover	*Charadrius leschenaultii*	Endangered	EN D1	Stable (Locally Declining in some Localities)	Least Concern	Near Threatened
Spur-winged Lapwing	*Vanellus spinosus*	Least Concern	LC	Stable	Least Concern	Least Concern
Family Name: Laridae						
Little Tern	*Sternula albifrons*	Critically Endangered	CR D1	Unknown	Least Concern	Not Assessed
Gull-billed Tern	*Gelochelidon nilotica*	Data Deficient	DD	Unknown	Least Concern	Not Assessed

English Name	Scientific Name	National Status	National Status (with sub-criteria)	Population Trend (National)	Global Status (www.iucnredlist.org)	Regional Status (Arabian Peninsula) (Symes *et al.*, 2015)
Family Name: Pteroclidae						
Pin-tailed Sandgrouse	*Pterocles alchata*	Data Deficient	DD	Unknown	Least Concern	Least Concern
Spotted Sandgrouse	*Pterocles senegallus*	Endangered	EN A2cd	Decreasing	Least Concern	Least Concern
Crowned Sandgrouse	*Pterocles coronatus*	Critically Endangered	CR B2a C2(i) D1	Decreasing	Least Concern	Least Concern
Lichtenstein's Sandgrouse	*Pterocles lichtensteinii*	Critically Endangered	CR D1	Decreasing	Least Concern	Least Concern
Family Name: Columbidae						
Rock Dove	*Columba livia*	Least Concern	LC	Stable	Least Concern	Least Concern
Common Woodpigeon	*Columba palumbus*	Endangered	EN D1	Decreasing	Least Concern	Least Concern
Namaqua Dove	*Oena capensis*	Least Concern	LC	Stable	Least Concern	Least Concern
Eurasian Collared Dove	*Streptopelia decaocto*	Least Concern	LC	Stable	Least Concern	Least Concern
European Turtle Dove	*Streptopelia turtur*	Endangered	EN A2cd	Decreasing	Vulnerable	Least Concern
Laughing Dove	*Spilopelia senegalensis*	Least Concern	LC	Stable	Least Concern	Not Assessed
Family Name: Cuculidae						
Common Cuckoo	*Cuculus canorus*	Data Deficient	DD	Unknown	Least Concern	Near Threatened
Great Spotted Cuckoo	*Clamator glandarius*	Near Threatened	NT	Probably Stable	Least Concern	Near Threatened
Family Name: Strigidae						
Eurasian (Byzantine) Eagle Owl	*Bubo bubo interpositus*	Endangered	EN B2ab(iii); D1	Unknown	Least Concern	Least Concern
Pharaoh Eagle Owl	*Bubo ascalaphus*	Vulnerable	VU A3c	Stable	Least Concern	Least Concern
Brown Fish Owl	*Ketupa zeylonensis*	Regionally Extinct	RE	Extinct	Least Concern	Critically Endangered
Long-eared Owl	*Asio otus*	Least Concern	LC	Stable	Least Concern	Not Applicable
Tawny Owl	*Strix aluco*	Endangered	EN B1ab(iii)+2ab(iii)	Decreasing	Least Concern	Least Concern
Desert Owl	*Strix hadorami*	Vulnerable	VU B2ab(iii); D1	Decreasing	Least Concern	Not Assessed
Little Owl	*Athene noctua*	Least Concern	LC	Stable	Least Concern	Least Concern
Eurasian Scops Owl	*Otus scops*	Vulnerable	VU B1ab(iii)+2ab(iii)	Decreasing	Least Concern	Least Concern
Pallid Scops Owl	*Otus brucei*	Data Deficient	DD	Unknown	Endangered	Least Concern
Family Name: Tytonidae						
Western Barn Owl	*Tyto alba*	Least Concern	LC	Stable	Least Concern	Least Concern
Family Name: Caprimulgidae						
Egyptian Nightjar	*Caprimulgus aegyptius*	Critically Endangered	CR D1	Unknown	Least Concern	Least Concern
Nubian Nightjar	*Caprimulgus nubicus*	Critically Endangered	CR A3c B1ab(iii)+2ab(iii); D1	Unknown	Least Concern	Least Concern
Family Name: Apodidae						
Common Swift	*Apus apus*	Least Concern	LC	Stable (Probably Increasing)	Least Concern	Least Concern
Alpine Swift	*Tachymarptis melba*	Vulnerable	VU D1	Decreasing	Least Concern	Least Concern
Pallid Swift	*Apus pallidus*	Least Concern	LC	Stable	Least Concern	Least Concern
Little Swift	*Apus affinis*	Vulnerable	VU D1	Unknown	Least Concern	Least Concern

English Name	Scientific Name	National Status	National Status (with sub-criteria)	Population Trend (National)	Global Status (www.iucnredlist.org)	Regional Status (Arabian Peninsula) (Symes *et al.*, 2015)
Family Name: Upudidae						
Eurasian Hoopoe	*Upupa epops*	Least Concern	LC	Stable	Least Concern	Least Concern
Family Name: Meropidae						
European Bee-eater	*Merops apiaster*	Near Threatened	NT	Unknown	Least Concern	Least Concern
Blue-cheeked Bee-eater	*Merops persicus*	Endangered	EN B2ab(iii)	Decreasing	Least Concern	Least Concern
Arabian Green Bee-eater	*Merops cyanophrys*	Least Concern	LC	Stable (Probably Increasing)	Least Concern	Not Assessed
Family Name: Coraciidae						
European Roller	*Coracias garrulus*	Vulnerable	VU° D1	Unknown (Probably Decreasing)	Least Concern	Near Threatened
Family Name: Alcedinidae						
White-throated Kingfisher	*Halcyon smyrnensis*	Least Concern	LC	Stable	Least Concern	Least Concern
Pied Kingfisher	*Ceryle rudis*	Vulnerable	VU A3c	Stable (Locally Declining in some Localities)	Least Concern	Least Concern
Family Name: Picidae						
Syrian Woodpecker	*Dendrocopos syriacus*	Near Threatened	NT	Stable (Locally Declining in some Localities)	Least Concern	Least Concern
Family Name: Alaudidae						
Crested Lark	*Galerida cristata*	Least Concern	LC	Increasing	Least Concern	Least Concern
Woodlark	*Lullula arborea*	Critically Endangered	CR D1	Unknown	Least Concern	Least Concern
Greater Short-toed Lark	*Calandrella brachydactyla*	Vulnerable	VU A3c	Decreasing	Least Concern	Least Concern
Mediterranean Short-toed Lark	*Alaudala rufescens*	Least Concern	LC	Stable	Least Concern	Not Assessed
Desert Lark	*Ammomanes deserti*	Least Concern	LC	Stable	Least Concern	Least Concern
Bar-tailed Lark	*Ammomanes cinctura*	Least Concern	LC	Stable	Least Concern	Least Concern
Arabian Lark	*Eremalauda eremodites*	Data Deficient	DD	Unknown	Least Concern	Not Assessed
Calandra Lark	*Melanocorypha calandra*	Vulnerable	VU° A3c; B2ab(iii)	Unknown	Least Concern	Least Concern
Thick-billed Lark	*Ramphocoris clotbey*	Data Deficient	DD	Unknown	Least Concern	Not Assessed
Temminck's Lark	*Eremophila bilopha*	Least Concern	LC	Stable (Increasing in the Southwest)	Least Concern	Least Concern
Greater Hoopoe-Lark	*Alaemon alaudipes*	Least Concern	LC	Stable	Least Concern	Least Concern
Family Name: Hirundinidae						
Pale Crag-Martin	*Ptyonoprogne obsoleta*	Least Concern	LC	Stable	Least Concern	Not Assessed
Barn Swallow (Levant)	*Hirundo rustica transitiva*	Least Concern	LC	Increasing	Least Concern	Least Concern
European Red-rumped Swallow	*Cecropis rufula*	Least Concern	LC	Stable	Least Concern	Not Assessed
Western House Martin	*Delichon urbicum*	Data Deficient	DD	Unknown	Least Concern	Least Concern
Family Name: Motacillidae						
Tawny Pipit	*Anthus campestris*	Critically Endangered	CR B1ab(i,ii,iii); D1	Decreasing	Least Concern	Least Concern
Long-billed Pipit	*Anthus similis*	Least Concern	LC	Stable (Locally Declining in some Localities)	Least Concern	Least Concern
White Wagtail	*Motacilla alba*	Endangered	EN° D1	Unknown	Least Concern	Not Assessed
Western Yellow Wagtail	*Motacilla flava*	Vulnerable	VU° B2ab(iii)	Decreasing	Least Concern	Not Applicable

English Name	Scientific Name	National Status	National Status (with sub-criteria)	Population Trend (National)	Global Status (www.iucnredlist.org)	Regional Status (Arabian Peninsula) (Symes *et al.*, 2015)
Family Name: Troglodytidae						
Eurasian Wren	*Troglodytes troglodytes*	Vulnerable	VU B1ab(iii)+2ab(iii)	Decreasing	Least Concern	Least Concern
Family Name: Cisticolidae						
Zitting Cisticola	*Cisticola juncidis*	Data Deficient	DD	Unknown	Least Concern	Least Concern
Graceful Prinia	*Prinia gracilis*	Least Concern	LC	Stable	Least Concern	Least Concern
Family Name: Cettiidae						
Streaked Scrub Warbler	*Scotocerca inquieta*	Least Concern	LC	Stable	Least Concern	Least Concern
Cetti's Warbler	*Cettia cetti*	Near Threatened	NT	Unknown	Least Concern	Least Concern
Family Name: Sylviidae						
Common Whitethroat	*Curruca communis*	Vulnerable	VU° A3c	Decreasing	Least Concern	Not Assessed
Lesser Whitethroat	*Curruca curruca*	Near Threatened	NT° B2ab(iii)	Possibly Decreasing	Least Concern	Not Assessed
Eastern Orphean Warbler	*Curruca crassirostris*	Vulnerable	VU° B2ab(iii)	Decreasing	Least Concern	Not Assessed
Arabian Warbler	*Curruca leucomelaena*	Critically Endangered	CR A2ab(iii); C2a(i); D1	Decreasing	Least Concern	Not Assessed
Sardinian Warbler	*Curruca melanocephala*	Least Concern	LC	Stable	Least Concern	Not Assessed
Spectacled Warbler	*Curruca conspicillata*	Near Threatened	NT	Unknown	Least Concern	Not Assessed
Moustached Warbler	*Acrocephalus melanopogon*	Regionally Extinct	RE	Extinct	Least Concern	Near Threatened
Reed Warbler	*Acrocephalus scirpaceus*	Near Threatened	NT	Unknown	Least Concern	Least Concern
Great Reed Warbler	*Acrocephalus arundinaceus*	Regionally Extinct	RE	Extinct	Least Concern	Least Concern
Clamorous Reed Warbler	*Acrocephalus stentoreus*	Vulnerable	VU B1ab(i,ii,iii)+B2ab(i,ii,iii); A2C	Decreasing	Least Concern	Least Concern
Upcher's Warbler	*Hippolais languida*	Endangered	EN B1ab(iii)+B2ab(iii)	Decreasing	Least Concern	Least Concern
Eastern Olivaceous Warbler	*Iduna pallida*	Least Concern	LC	Increasing	Least Concern	Not Assessed
Eastern Bonelli's Warbler	*Phylloscopus orientalis*	Endangered	EN B2ab(iii)	Decreasing	Least Concern	Not Assessed
Family Name: Muscicapidae & Turdidae						
Eurasian Blackbird	*Turdus merula*	Least Concern	LC	Increasing	Least Concern	Least Concern
Blue Rock Thrush	*Monticola solitarius*	Least Concern	LC	Stable	Least Concern	Least Concern
Common Nightingale	*Luscinia megarhynchos*	Endangered	EN B2ab(iii)	Decreasing	Least Concern	Least Concern
Rufous-tailed Scrub Robin	*Cercotrichas galactotes*	Least Concern	LC	Stable	Least Concern	Not Assessed
Isabelline Wheatear	*Oenanthe isabellina*	Least Concern	LC	Stable	Least Concern	Least Concern
Eastern Black-eared Wheatear	*Oenanthe melanoleuca*	Vulnerable	VU B1 a,b (iii)	Decreasing	Least Concern	Not Assessed
Mourning Wheatear	*Oenanthe lugens*	Least Concern	LC	Stable	Least Concern	Least Concern
Basalt Wheatear	*Oenanthe lugens subsp. warriae*	Critically Endangered	CR D1	Decreasing	Least Concern	Not Assessed
Hooded Wheatear	*Oenanthe monacha*	Near Threatened	NT	Stable	Least Concern	Least Concern
White-crowned Wheatear	*Oenanthe leucopyga*	Least Concern	LC	Increasing	Least Concern	Least Concern
Desert Wheatear	*Oenanthe deserti*	Least Concern	LC	Stable	Least Concern	Least Concern
Red-rumped Wheatear	*Oenanthe moesta*	Endangered	EN B2ab(iii); C2a(i)	Decreasing	Least Concern	Endangered
Blackstart	*Oenanthe melanura*	Least Concern	LC	Stable	Least Concern	Not Assessed
Spotted Flycatcher	*Muscicapa striata*	Near Threatened	NT	Unknown	Least Concern	Least Concern

English Name	Scientific Name	National Status	National Status (with sub-criteria)	Population Trend (National)	Global Status (www.iucnredlist.org)	Regional Status (Arabian Peninsula) (Symes *et al.*, 2015)
Family Name: Paridae						
Great Tit	*Parus major*	Least Concern	LC	Stable	Least Concern	Least Concern
Eurasian Blue Tit	*Cyanistes caeruleus*	Vulnerable	VU B1ab(iii)+B2ab(iii)	Probably Decreasing	Least Concern	Not Assessed
Family Name: Laniidae						
Great Grey Shrike	*Lanius excubitor*	Least Concern	LC	Stable	Least Concern	Least Concern
Woodchat Shrike	*Lanius senator*	Least Concern	LC	Stable	Near Threatened	Least Concern
Masked Shrike	*Lanius nubicus*	Vulnerable	VU B1ab(iii)+B2ab(iii)	Decreasing	Least Concern	Least Concern
Family Name: Pycnonotidae						
White-spectacled Bulbul	*Pycnonotus xanthopygos*	Least Concern	LC	Stable (locally increasing)	Least Concern	Least Concern
Family Name: Nectariniidae						
Palestine Sunbird	*Cinnyris osea*	Least Concern	LC	Stable	Least Concern	Not Assessed
Family Name: Leiothrichidae						
Arabian Babbler	*Argya squamiceps*	Near Threatened	NT	Stable (Locally Decreasing)	Least Concern	Not Assessed
Family Name: Corvidae						
Eurasian Jay	*Garrulus glandarius*	Least Concern	LC	Stable	Least Concern	Least Concern
Eurasian Jackdaw	*Coloeus monedula*	Least Concern	LC	Stable	Least Concern	Not Assessed
Hooded Crow	*Corvus cornix*	Least Concern	LC	Stable	Least Concern	Not Assessed
Raven	*Corvus corax*	Endangered	EN A2c	Unknown	Least Concern	Least Concern
Brown-necked Raven	*Corvus ruficollis*	Least Concern	LC	Stable	Least Concern	Least Concern
Fan-tailed Raven	*Corvus rhipidurus*	Least Concern	LC	Unknown (Probably Stable)	Least Concern	Least Concern
Family Name: Sturnidae						
Tristram's Starling	*Onychognathus tristramii*	Least Concern	LC	Stable	Least Concern	Least Concern
Family Name: Passeridae						
House Sparrow	*Passer domesticus*	Least Concern	LC	Stable (Probably Increasing)	Least Concern	Least Concern
Spanish Sparrow	*Passer hispaniolensis*	Least Concern	LC	Stable	Least Concern	Least Concern
Dead Sea Sparrow	*Passer moabiticus*	Vulnerable	VU° B1ab(iii)+2ab(iii)	Decreasing	Least Concern	Least Concern
Rock Sparrow	*Petronia petronia*	Least Concern	LC	Stable	Least Concern	Least Concern
Pale Rockfinch	*Carpospiza brachydactyla*	Least Concern	LC	Stable	Least Concern	Not Assessed
Family Name: Fringillidae						
Eurasian Linnet	*Linaria cannabina*	Least Concern	LC	Probably Decreasing	Least Concern	Not Assessed
European Goldfinch	*Carduelis carduelis*	Critically Endangered	CR A2d; C2a(i); D1	Decreasing	Least Concern	Endangered
European Greenfinch	*Chloris chloris*	Least Concern	LC	Stable	Least Concern	Not Assessed
European Serin	*Serinus serinus*	Data Deficient	DD	Unknown	Least Concern	Least Concern
Syrian Serin	*Serinus syriacus*	Critically Endangered	CR B1ab(iii,v)+2ab(iii,v)	Decreasing	Vulnerable	Endangered
Sinai Rosefinch	*Carpodacus synoicus*	Least Concern	LC	Stable	Least Concern	Least Concern
Trumpeter Finch	*Bucanetes githagineus*	Least Concern	LC	Stable	Least Concern	Least Concern
Desert Finch	*Rhodospiza obsoleta*	Least Concern	LC	Stable (Probably Increasing)	Least Concern	Not Assessed

English Name	Scientific Name	National Status	National Status (with sub-criteria)	Population Trend (National)	Global Status (www.iucnredlist.org)	Regional Status (Arabian Peninsula) (Symes *et al.*, 2015)
Family Name: Emberizidae						
Cretzschmar's Bunting	*Emberiza caesia*	Vulnerable	VU B1ab(iii)+2ab(iii)	Decreasing	Least Concern	Least Concern
Black-headed Bunting	*Emberiza melanocephala*	Critically Endangered	CR C2a(i); D1	Decreasing	Least Concern	Least Concern
Corn Bunting	*Emberiza calandra*	Least Concern	LC	Stable	Least Concern	Not Assessed
Striolated Bunting	*Emberiza striolata*	Least Concern	LC	Stable	Least Concern	Least Concern



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Eastern Desert; photo: © Fares Khoury

Appendix 1:

Regulation Number 43 for the year 2008

Regulation No. 43 of 2008, issued pursuant to Article 57(e) of Agriculture Law No. 44 of 2002, established a tiered classification system for wild animals based on their conservation status, ecological importance, and susceptibility to overexploitation. Under this regulatory framework, species were assigned to three appendices reflecting escalating levels of protection and enforcement. Appendix I includes the rarest species and those facing the highest risk of overhunting, subject to the most stringent penalties, including fines of up to JOD 2,000 and up to four months' imprisonment. Appendix II covers species at moderate risk, with violations punishable by fines of up to JOD 1,000 and imprisonment for up to three months, while Appendix III comprises species considered at lower risk but still requiring regulatory control to prevent future threats, with penalties of fines up to JOD 100 and imprisonment for up to one month



Wadi Araba desert; photo: © Fares Khoury

Appendix 2:

Scope Definition and Treatment of Not Applicable Taxa in the Regional Red List Assessment of Breeding Birds in Jordan

In accordance with the IUCN Guidelines for Application of the Red List Criteria at Regional and National Levels, the present assessment was explicitly confined to **breeding bird populations** in Jordan. Species falling outside this operational scope were not subjected to Red List assessment and were instead classified as Not Applicable (NA).

Taxa assigned to the Not Applicable (NA) category include:

1. Species for which breeding exhibits highly irregular or fluctuating breeding occurrence, or breeding was suspected without strong evidence, were treated as outside the operational scope of the assessment. Future assessments may include one or two of these species if the presence of a regular and stable breeding population is confirmed.

2. Non-native introduced species that do not form part of the indigenous biodiversity, including the Indian Silverbill, which can be considered as "naturalised". These fall outside the defined scope of a regional Red List focused on native biodiversity. Their occurrence is attributable to human-mediated introduction rather than natural ecological processes within the region, and they were consequently not considered in the evaluation of extinction risk.

**Species and populations occurring exclusively as passage migrants or non-breeding visitors in Jordan were not evaluated (NE) in this assessment.*

The following tables illustrate these species excluded as Not Applicable for assessment.

Table A1. Species Classified as Not Applicable (NA) due to irregular or unconfirmed breeding:

Common Name	Scientific Name	Justification
Ferruginous Duck	*Aythya nyroca*	Apparently Irregular with annual fluctuations
Northern Shoveler	*Spatula clypeata*	Occasional breeding
Glossy Ibis	*Plegadis falcinellus*	Strong evidence of breeding is deficient
Little Egret	*Egretta garzetta*	No proof, but with rising evidence of breeding
White-tailed Plover	*Vanellus leucurus*	Occasional breeding
Caspian Tern	*Hydroprogne caspia*	Occasional breeding
Bimaculated Lark	*Melanocorypha bimaculata*	Occasional breeding
Citrine Wagtail	*Motacilla citreola*	Occasional breeding suspected
Savi's Warbler	*Locustella luscinioides*	Strong evidence of breeding is lacking

Table A2. Introduced Species Classified as Not Applicable (NA):

Common Name	Scientific Name
Egyptian Goose	*Alopochen aegyptiaca*
Ring-necked Parakeet	*Psittacula krameri*
Common Myna	*Acridotheres tristis*
Indian House Crow	*Corvus splendens*
Indian Silverbill	*Euodice malabarica*
Red Avadavat	*Amandava amandava*
White-eared Bulbul	*Pycnonotus leucotis*

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