
Emirates Nature
WWF
المشرق
mashreq
NOTICE NATURE
PROJECT PROGRESS
#Climb2Change
Rise every day

NOTICE NATURE PROJECT - GOAL AND OBJECTIVES:

GOAL

The Notice Nature Project aims to bring the community up close and personal with UAE's biodiversity, contribute to real scientific data and enable creation, monitoring and restoration of habitats for our critical species.

OBJECTIVES

1. Collect data and assess the status of key species and ecosystems.
2. Engage, educate & empower the Mashreq and wider community.
3. Contribute to scientific knowledge on the UAE's biodiversity.
4. Contribute towards policy development and the creation of new protected areas.
5. Deep dive into key flagship species to determine their status and identify challenges

CITIZEN SCIENCE RESULTS: 2026 SO FAR

7,756 Wildlife observations have been added to the Notice Nature project in iNaturalist since January 2026

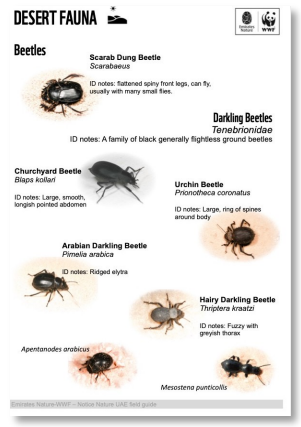
Over 90% of observations were taken independently

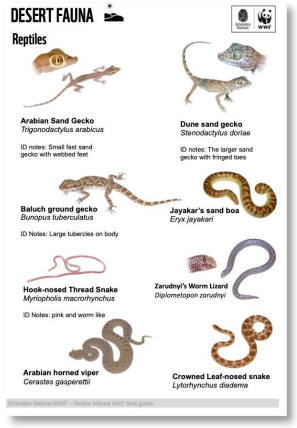
12 Events under Notice Nature Project, **679** hours for nature, **263** participants

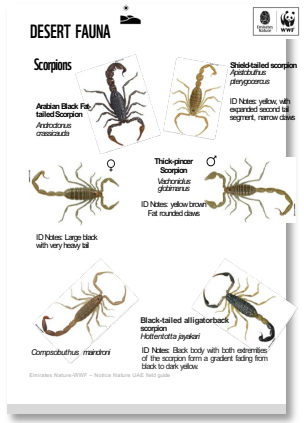
92.5% Average satisfaction score

1763 Camera trap classifications

7,756 OBSERVATIONS	1,102 SPECIES	583 IDENTIFIERS	181 OBSERVERS







CITIZEN SCIENCE RESULTS: 2026 SO FAR

40,227 Wildlife observations have been added to the Notice Nature project in iNaturalist

23,385 research grade observations

80 Events under Notice Nature Project, **5,176** hours for nature, **2,424** participants

19,943 Camera Trap Classifications

489 Observers

OVER 2,400 SPECIES RECORDED AND COUNTING

CITY NATURE CHALLENGE 2026: DUBAI

2,346	505	251	173
OBSERVATIONS	SPECIES	IDENTIFIERS	OBSERVERS

24 – 27 APRIL 2026 · DUBAI, UAE

Emirates Nature-WWF joined the 2026 City Nature Challenge - a global four-day bioblitz - in collaboration with **Terra at Expo City Dubai**, mobilising our Notice Nature community to document the wild species of Dubai across desert, coastal and urban habitats.

Beyond our own events, members of our community continued contributing throughout the four-day window - every observation added to Dubai's totals above.

CITY NATURE CHALLENGE 2026: DUBAI

399	63	74	32
OBSERVATIONS	SPECIES	IDENTIFIERS	OBSERVERS

25 APRIL 2026 · AL QUDRA DESERT · EVENING FIELD WALK

Our community gathered after sunset in the Al Qudra desert for a citizen-science walk - learning the iNaturalist app and documenting nocturnal species hidden from the daytime eye. UV torches revealed scorpions glowing on the sand; participants logged geckos, beetles, moths and more.

Every observation made that night also fed into Dubai's overall City Nature Challenge totals - and many participants continued contributing independently across the remaining three days of the challenge.

OUR SHARE OF DUBAI'S CNC 2026 TOTAL

- **17%** of observations · **12%** of species
- **19%** of observers generated in a single 4.5-hour evening event

FIRST RECORD IN 10 YEARS

THE ARABIAN WILDCAT HAS BEEN REDISCOVERED IN WADI WURAYAH

A rare nocturnal predator triggered one of the park's motion-sensing camera traps, its first confirmed sighting in a decade. With sandy-coloured fur built for rugged mountain terrain, the wildcat is a natural predator that helps keep the ecosystem in balance.

Within the UAE, the Arabian Wildcat is listed as an Endangered and is species of national conservation concern. Its potential trajectory with habitat loss, genetic introgression, and very limited survey coverage warrants a precautionary approach.

Arabian Wildcat (*Felis lybica*) from a Camera trap in Wadi Wurayah

FIRST EVER EDNA SURVEY FOR BIODIVERSITY MONITORING AT WADI WURAYAH NATIONAL PARK

15 sampling sites surveyed

80 taxa detected overall

38 samples (29 water + 9 air)

5–36 taxa richness per site

IMPORTANCE OF EDNA

eDNA surveys let conservationists detect a wide range of species including elusive, rare, or nocturnal animals quickly and non-invasively from simple water or air samples, making biodiversity monitoring far more sensitive and cost-effective than traditional field methods.

Sampling sites & taxa richness

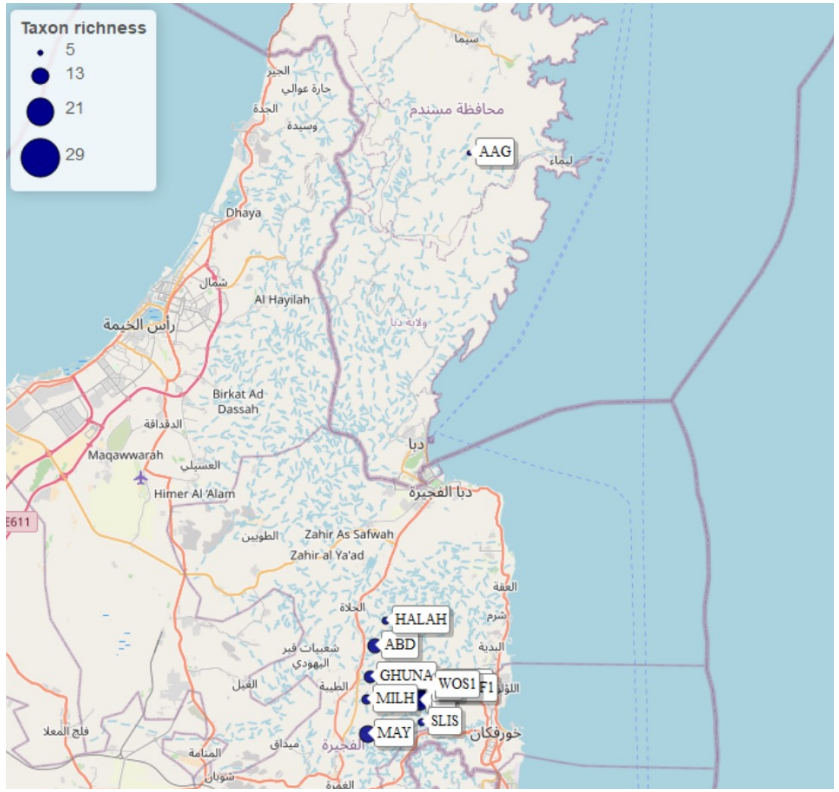
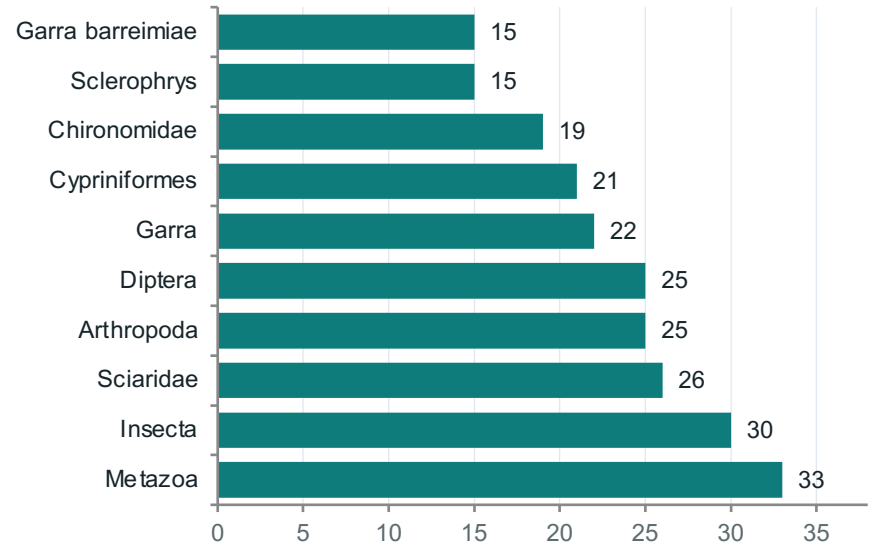


Fig. 1 — Marker size ∝ species richness across the 15 sites (Hajar Mtns, Fujairah).

Most-detected taxa (no. of detections)



VERTEBRATE & INVERTEBRATE GROUPS DETECTED

Invertebrate	Bird	Mammal	Amphibian	Fish
50	12	9	5	4

Key species: Oman garra (*Garra barreimiae*) · Arabian toad (*Sclerophrys arabica*) · Kuhl's pipistrelle bat · Grey heron · Sinai hooktail dragonfly. **21%** of taxa resolved to species level.

TWO DRAFT PUBLICATIONS BASED ON FIELD RESEARCH FROM AN ARID MOUNTAIN REFUGE

225 km²	32	7,736	
OBSERVATIONS	SPECIES	IDENTIFIERS	*Native carnivores: Arabian Caracal · Blanford's Fox · African Wildcat · Arabian Red Fox*

STUDY 1

Mapping a Carnivore Guild

Camera-trap occupancy modelling of where native carnivores persist.

75% of sites used

Model-corrected occupancy ψ ≈ 0.76 across the park.

Elevation drives it down
Occupancy falls ~0.94 in low wadis (100 m) → ~0.46 on high ridges (600 m).

Distance from towns drives it up
Occupancy climbs ~0.42 at accessible sites → ~0.97 in the remote interior.

Core richest, buffer weakest
Occupancy in Core ≈ 0.95, tourist ≈ 0.91, buffer drops to ≈ 0.54 (disturbance).

STUDY 2

Fish in the Diet of a Desert Viper

First wild records of Echis omanensis eating fish (Oman garra) in drying wadi pools.

9 fish-eating viper species

Verified from primary sources (of 14 reported).

Only one true piscivore
Cottonmouth (Agkistrodon piscivorus) — fish 49% of diet; elsewhere fish are rare.

Opportunism, not preference
Echis are generalist ambush predators tracking locally abundant prey.

Seasonal 'fish traps'
As summer wadis dry, garra concentrate in shrinking pools — easy prey.

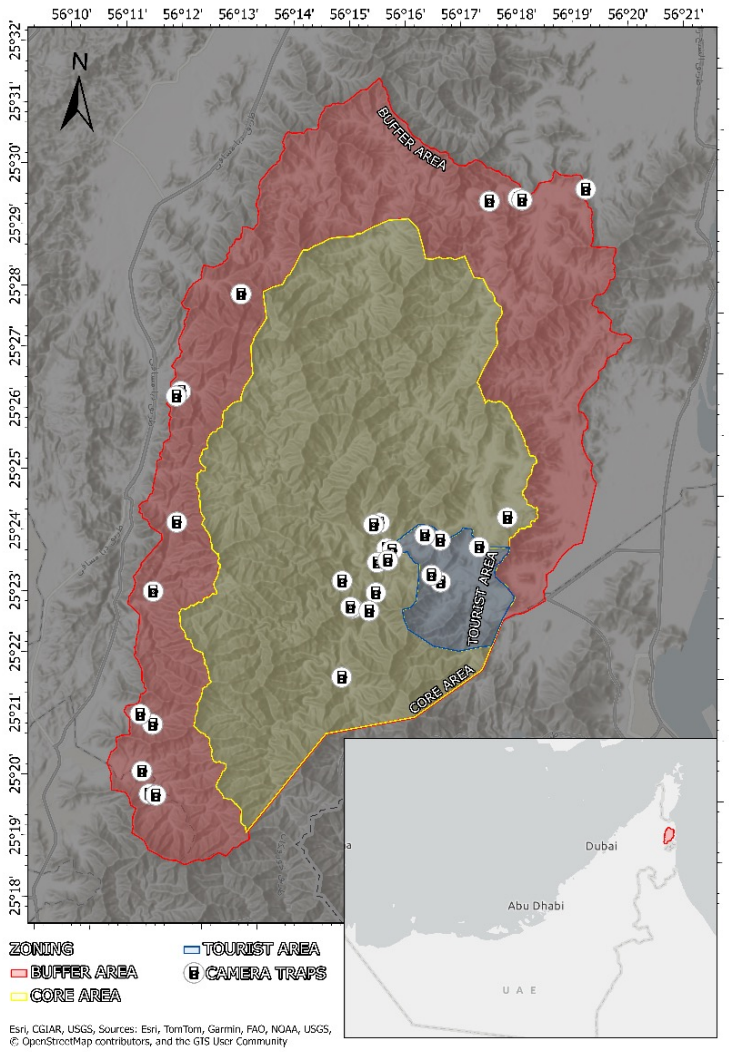
MAPPING A CARNIVORE GUILD IN AN ARID MOUNTAIN REFUGE

Camera-trap occupancy modelling reveals where the UAE's native carnivores persist and why it matters for managing the country's most ecologically significant protected mountain.

225 km²	32	7,736
Ramsar & UNESCO MAB Reserve	Camera-trap stations	Trap-nights, 12 months

Focused on 4 main native carnivore species:

- *Arabian Caracal,*
- *Blanford's Fox,*
- *African Wildcat,*
- *Arabian Red Fox*



WHAT THE CAMERAS REVEALED

Carnivores concentrate in low-elevation wadis, away from urban edges

75% of sites used

Model-corrected occupancy of 0.76 closely matched the naïve estimate and detection was high enough that few occupied sites were missed.

Elevation drives it down

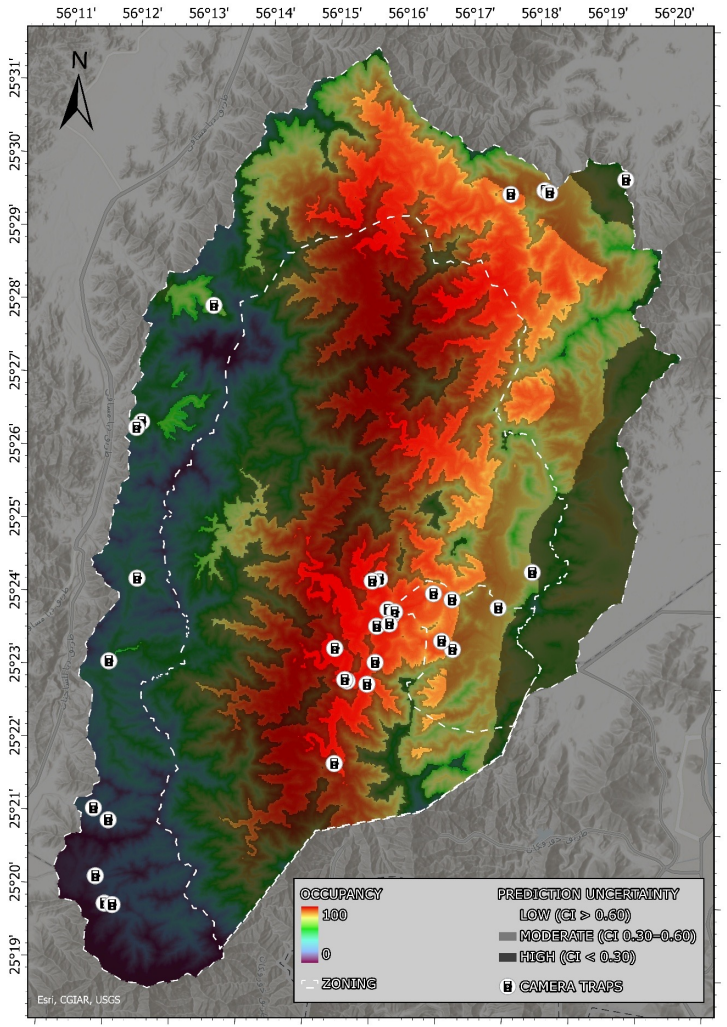
Predicted occupancy falls from ~0.94 in low wadis (~100 m) to ~0.46 on high ridges (~600 m) due to more productivity, water availability and cover concentrate at the bottom.

Distance from towns drives it up

Occupancy climbs from ~0.42 at the most accessible sites to ~0.97 in the remote interior, consistent with human avoidance so remote sites are proved to be richer.

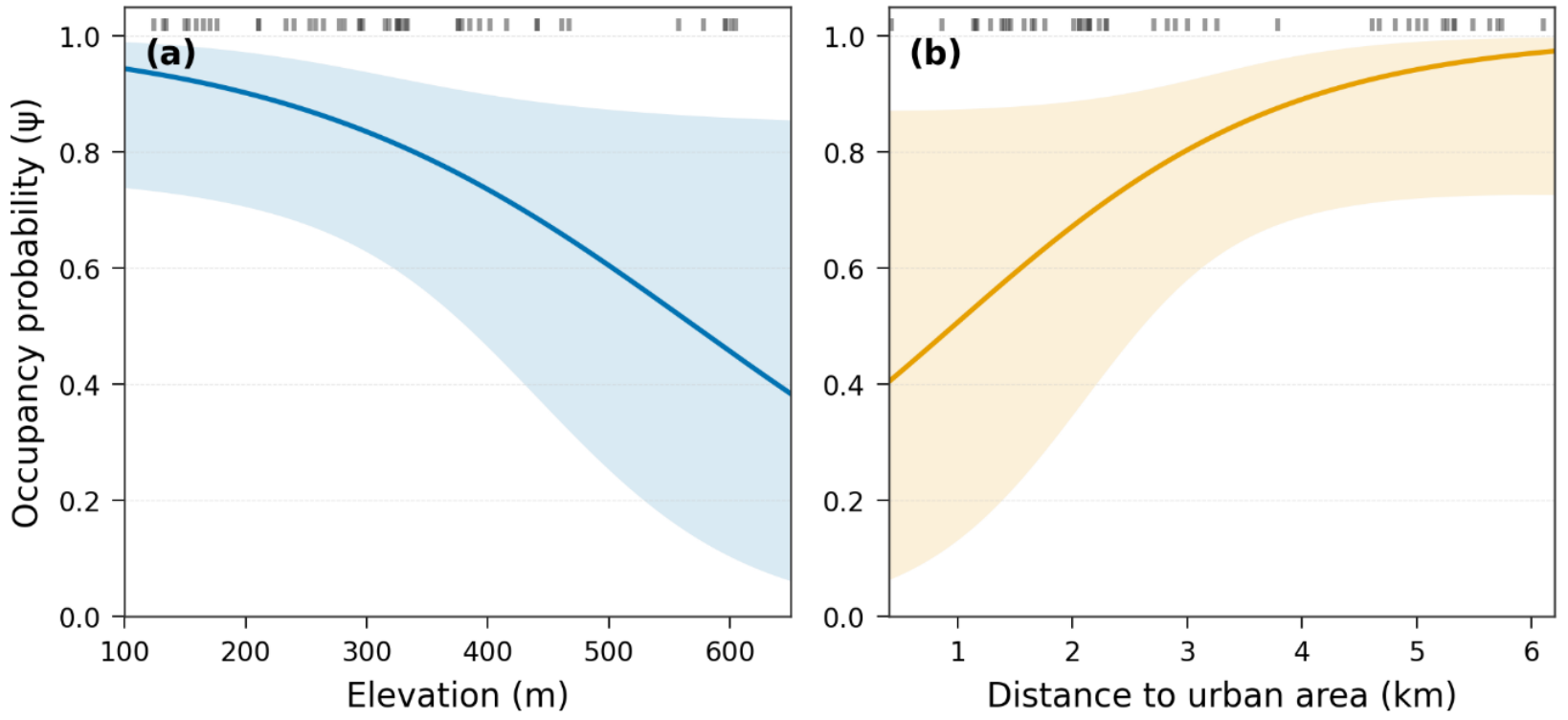
Core zone richest, buffer weakest

Core zone occupancy ≈ 0.95 (highest) and tourist zone occupancy ≈ 0.91, but the occupancy in buffer zone drops to ≈ 0.54 (as it has disturbances including farms and settlements).



Predicted occupancy (ψ) across the park - warmer = higher

THE TWO LEVERS AND WHAT TO DO WITH THEM



Occupancy (ψ) vs (a) elevation and (b) distance to urban area, with 95% confidence bands.

Recommendations For Management

Prioritize low wadis

Focus enforcement and restoration on low-elevation, interior habitat where carnivores concentrate and occupancy is higher.

Protect the urban fringe

The buffer zone near settlements is the weak point with low occupancy due to target encroachment, overgrazing and disturbance there.

Survey wider, not longer

With ~55% per-visit detection, 2–3 visits per station suffice; spend effort on spatial coverage, not repeats.

Feed the management plan

Outputs inform the WWNP plan revision, refined zoning, enforcement and actions keeping in view the occupancy of different sites within the national park.

Bottom line: Camera-trap occupancy modelling provides a robust, spatially explicit and evidence-based framework for prioritising conservation interventions within Wadi Wurayah National Park and offers a transferable approach for safeguarding mountain carnivore populations across the wider UAE.

FISH IN THE DIET OF OMAN SAW-SCALED VIPER (ECHIS OMANENSIS)

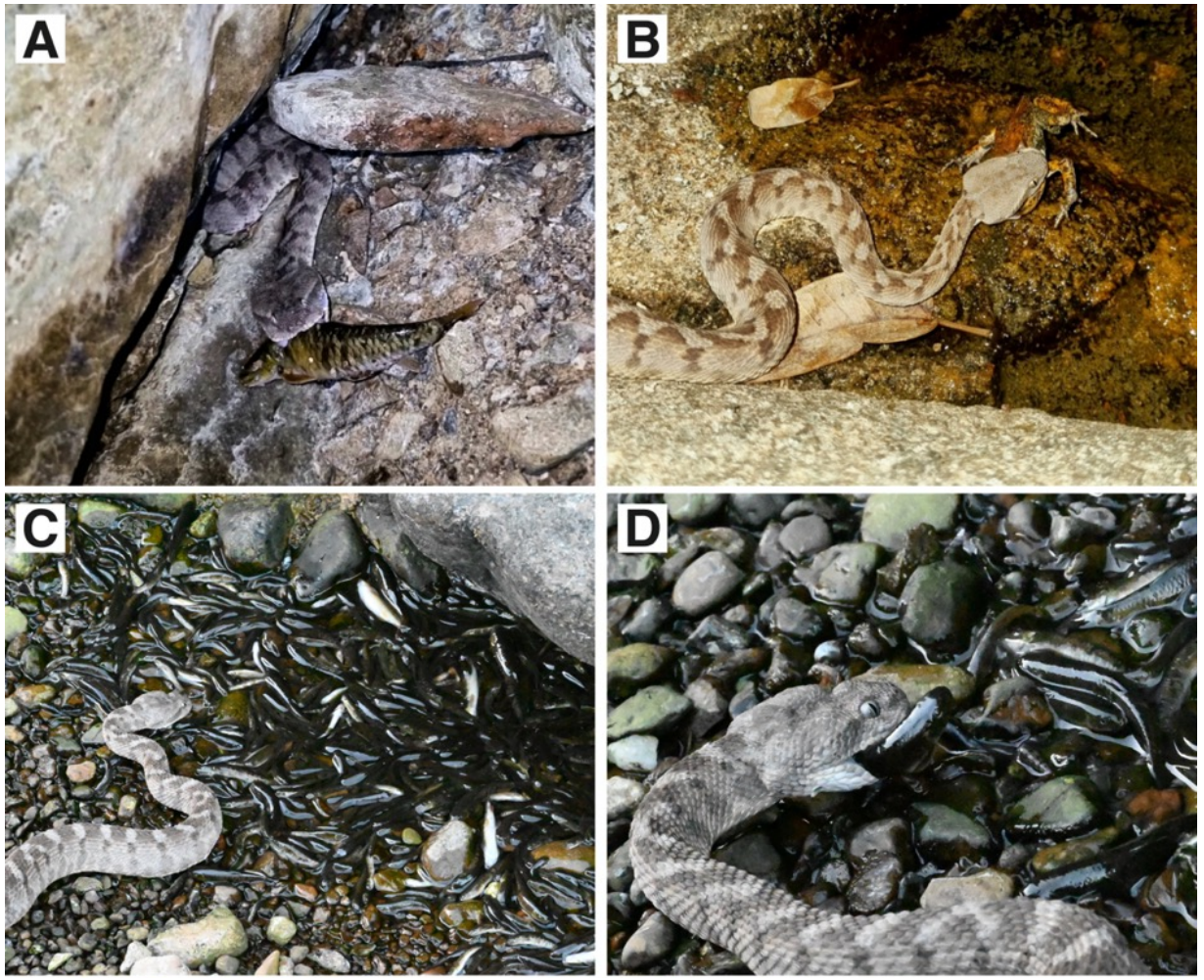
First wild observations of a desert viper feeding on fish and a review of fish-eating vipers worldwide.

9 **fish-eating viper species**
verified from primary sources (of 14 reported)

23 May 2023
Wadi Showka — adult viper ingesting a live garra

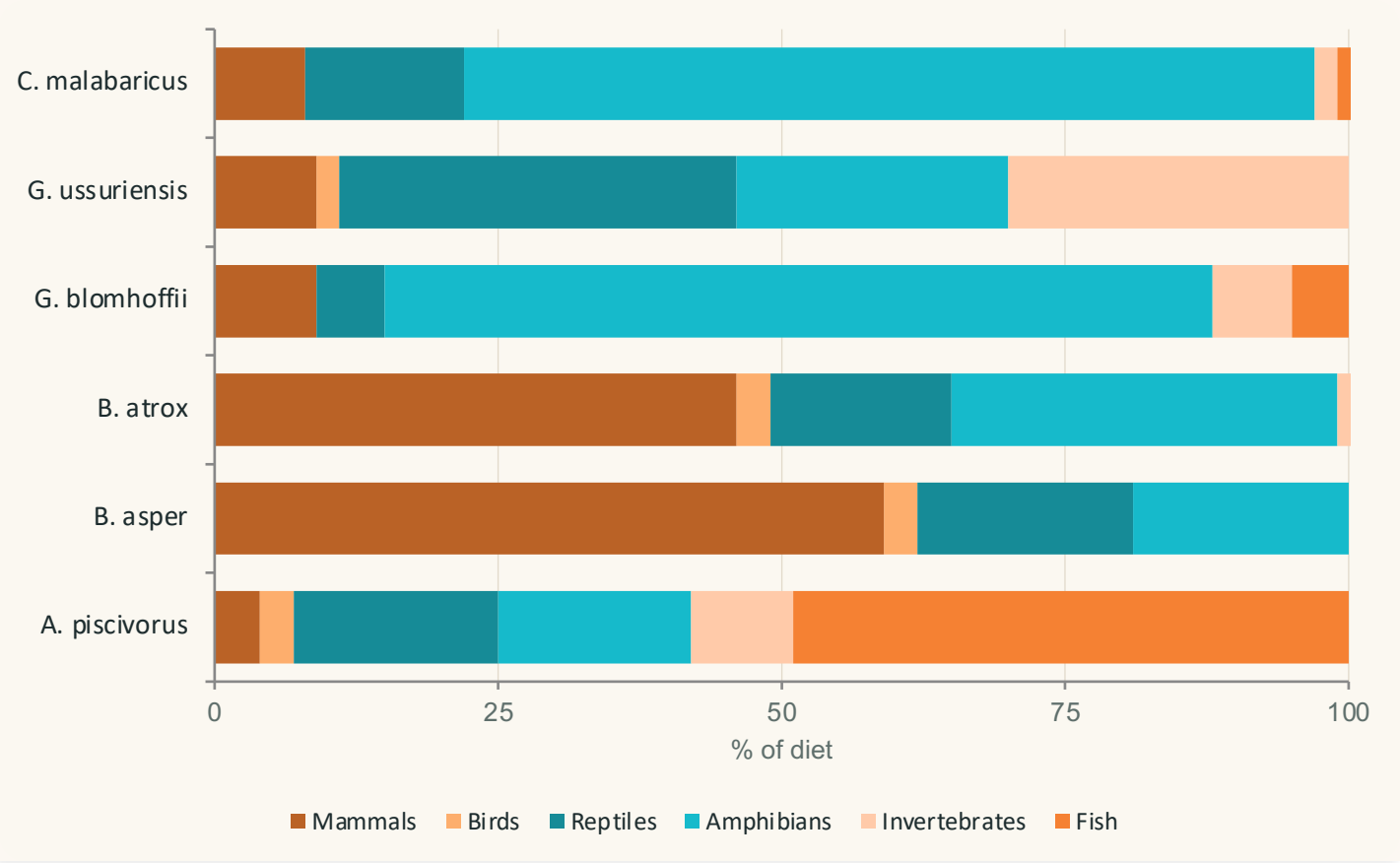
1 Jun 2025
Wadi Wurayah — viper picking fish from a 'fish buffet'

Genus Echis
12 arid-adapted species; coloratus group eats vertebrates



Oman saw-scaled viper *(Echis omanensis)* feeding on Oman garra (*Garra barreimiae*) and an Arabian toad in drying wadi pools in Wadi Showka & Wadi Wurayah, UAE.

HOW OFTEN DO VIPERS REALLY EAT FISH?



Prey-class composition of vipers with quantitative diet data. Fish dominate only in the truly piscivorous cottonmouth; elsewhere fish are rare and easily missed in gut-content surveys.

Only one true piscivore

The cottonmouth viper *(Agkistrodon piscivorus)* is the sole viper where fish make up a major share (49%) of the diet.

Opportunism, not preference

Echis are generalist ambush predators; diet tracks locally abundant, appropriately-sized prey rather than scent or preference.

Seasonal 'fish traps'

As summer wadis dry, garra and tadpoles concentrate in shrinking pools which are easy prey for terrestrial vipers.

Under-detected in guts

Small fish digest fast and are missed in stomach studies. Further observations & citizen science (iNaturalist) are vital in detecting such records.

OUR FOCUS FOR 2026

Two priorities for Wadi Wurayah and the Hajar Mountains landscape

PRIORITY 1 · REVISE

Wadi Wurayah National Park Management Plan

A standards-based gap analysis moving WWNP from its Phase 1 plan toward a forward-looking 2026-2030 Phase 2 plan, strengthening the case for World Heritage inscription.

- **62 actions** across five plan sections close identified gaps.
- **8 frameworks** UNESCO MAB & WHS, Ramsar, IUCN, CMS, SER, policy.
- **WHS pathway** build on 2009 Park & 2018 Biosphere Reserve status.
- **Adaptive mgmt** METT cycles, SMART monitoring, OUV-linked actions.

PRIORITY 2 · DESIGNATE

Ain Al Ghamour–Awhala New Protected Area

Establish a community-centred Living Landscape (IUCN Category VI) with a clear, phased pathway to future UNESCO Biosphere Reserve nomination.

- **Living Landscape** people-centred designation as the first phase.
- **Phased zoning** core, buffer & transition evolve to reduce conflict.
- **Act now** ~19% under human footprint; +5.5%/yr light radiance.
- **Local value** tourism, ecosystem services & livelihood benefits.

Shared outcome — evidence-based, multi-designation management delivering ecological integrity, governance effectiveness and community legitimacy.

WADI WURAYAH NATIONAL PARK MANAGEMENT PLAN REVISION

Gap Analysis for a Comprehensive, Multi-Designated Management Plan for Wadi Wurayah National Park

225 km²	2009	2018	WHS*
Multi-designated management unit	Legally designated National Park	UNESCO Biosphere Reserve	Nomination under way

Purpose of the assessment

A structured cross-walk of the current WWNP management plan against the latest international guidance, standards and best practice. It identifies the key gaps and the remedial actions needed to advance an evidence-based, adaptive, multi-designation plan. Using the 2023 Conservation Plan as a framework, the review moves WWNP from its Phase 1 (2013-2018) plan and the 2025-2030 World Heritage Site focused plan toward a forward-looking 2026-2030 Phase 2 plan that strengthens the likelihood of World Heritage inscription while safeguarding ecological integrity, governance and community legitimacy.

INTENDED OUTCOME

A standards-based management plan fully aligned with UNESCO Biosphere Reserve and World Heritage guidelines, plus local and federal law, delivering long-term ecological integrity, governance effectiveness and community legitimacy.

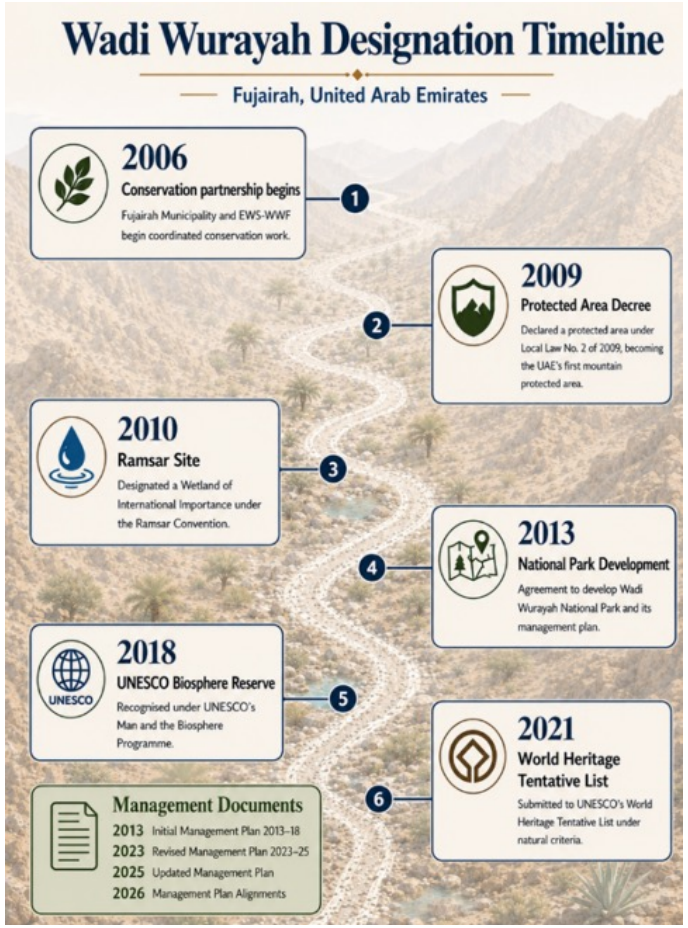


Figure 1 — Designation timeline, 2006-2021

** UNESCO World Heritage Site Designation*

ALIGNMENT TARGETS & THE REVISION ROADMAP

Eight international and national frameworks shape the gaps; 62 actions across five plan sections close them.

1 **UNESCO Biosphere Reserve**
Three-tier core/buffer/transition zoning; integrity safeguards; sustainable livelihoods & ecotourism.

2 **UNESCO World Heritage**
Link actions to OUV via DPSIR; visitor carrying capacity; governance, finance & staffing plan.

3 **Ramsar Convention**
Maintain ecological character; meets 7 of 9 Ramsar criteria; rigorous monitoring & protection.

4 **IUCN PA & Nature-based Solutions**
METTv4 effectiveness cycles; SMART biodiversity monitoring; NbS Global Standard (2025).

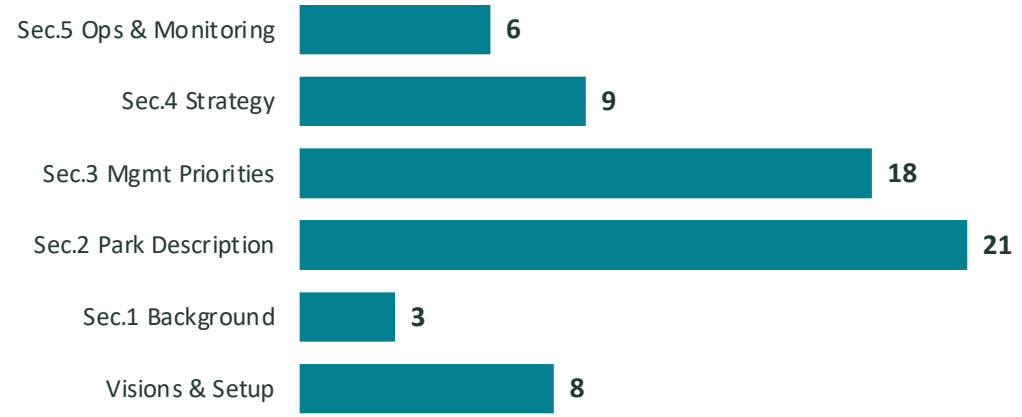
5 **IUCN Red List & Species Planning**
Update local/regional/global status for named species; Arabian Peninsula assessments.

6 **CMS Migratory Species**
East African-Eurasian raptor flyway; explore IIRA / IBA / KBA designation.

7 **SER Ecological Restoration**
Apply International Principles & Standards (2019); Recovery Wheel & Five-star tools.

8 **Federal, Emirate & Global Policy**
UAE NBSAP 2031, CBD Kunming-Montreal GBF, SDGs, Fujairah Master Plan & local laws.

Revision actions by plan section



62 total revision actions

5 plan sections restructured

3 UNESCO designations harmonised

Priority cross-cutting actions

Re-map three-tier zoning · Build OUV (Outstanding Universal Value) threat linkages· Set SMART targets via METT · Add climate adaptation & NbS restoration sections· Confirm IBA/KBA status · Stand up standards-based monitoring & business plan.

A PEOPLE-CENTRED LIVING LANDSCAPE

From local protected-area designation to a future UNESCO Biosphere Reserve in Ain Al Ghamour-Awhala, Fujairah

Why the landscape matters to people

Heritage & cultural identity
Awhala village, farming traditions and regionally important archaeology.

Wellbeing & recreation
Mountain scenery, dark nightscapes, hiking and geothermal springs.

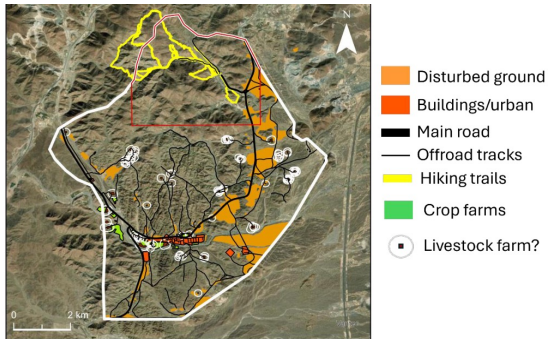
Rural business opportunity
Place branding for local produce, ecotourism, agrotourism and events.

Water & ecosystem stewardship
Wadis, springs and groundwater underpin farms, shade and biodiversity.

> ***People benefit when the landscape's cultural, water and ecological assets are managed as one system.***

Ain Al Ghamour–Awhala Living Landscape

Why act now — growth pressures are visible



Mapped human footprint, 2009 → 2025

19%
of the landscape now under human footprint

+5.5% /yr
rise in night-sky light radiance since 2020

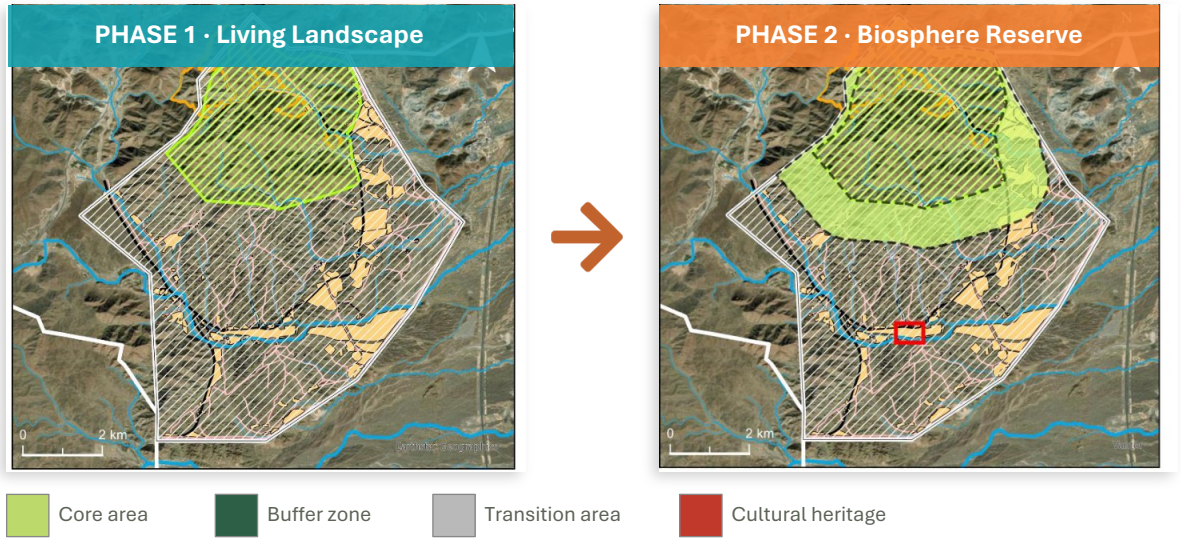
Regional evidence: UNESCO Biosphere Reserves grow local value

- **Al Jabal Al Akhdar, Oman:** Visitors 203k→222k; tourism investment growth
- **Shouf, Lebanon:** Visitors 40k→118k; ~US$19M/yr ecosystem services
- **Dana, Jordan:** US$490k livelihood benefits; ~800 people benefiting

A PRACTICAL, PHASED PATHWAY TO DESIGNATION

Start as a community-centred Living Landscape; adapt zoning for UNESCO Biosphere Reserve when governance and support are ready

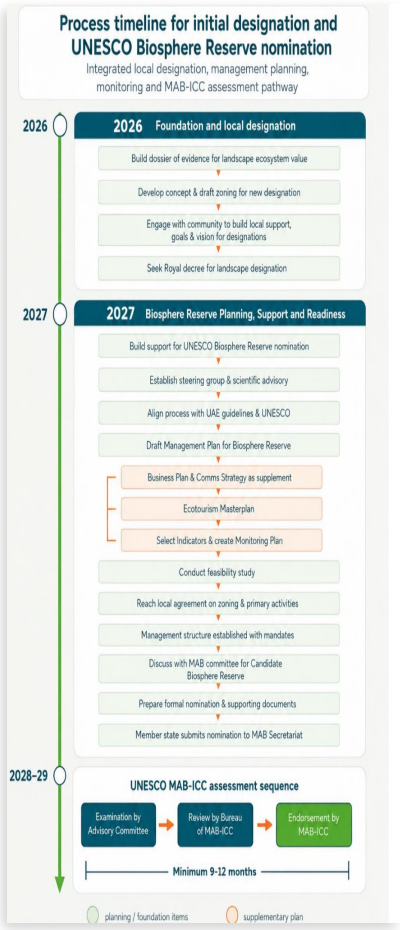
Zoning evolves to reduce conflict



Community is the engine

- Co-design vision, zoning & permitted uses
- Shape tourism plans & visitor codes
- Restore falaj, date palms & native trees
- Monitor biodiversity, water & grazing

Implementation timeline



What protection enables

- Secure core habitats and restore disturbed ground
- Manage grazing, carrying capacity and water use
- Protect springs, hydrology and ecological corridors
- Control invasive species and light pollution

Recommended action

Approve Ain Al Ghamour–Awhala as a community-centred Living Landscape / IUCN Category VI protected area, with a clear pathway to UNESCO Biosphere Reserve nomination.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THANK YOU
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