

CONSERVED / PROTECTED AREAS AND THEIR PLANT COMMUNITIES

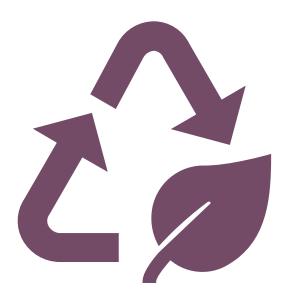
What Are Conserved / Protected Areas?

Protected areas are geographically defined spaces recognized and managed through legal or other effective means to achieve long-term conservation of nature.

These areas can include national parks, wildlife reserves, marine sanctuaries, and biosphere reserves.



Key Objectives





Biodiversity Conservation: Protect habitats and species from extinction



Ecosystem Services: Maintain clean air, water, and climate regulation



Cultural Preservation: Safeguard indigenous traditions and historical landmarks



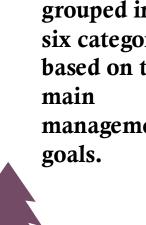
Scientific Research: Provide natural laboratories for ecological and environmental studies



Sustainable Tourism: Promote eco-friendly travel and recreation

IUCN PROTECTED AREA MANAGEMENT CATEGORIES

Protected areas are grouped into six categories, based on their main management goals.



Category Ia: Strict Nature Reserve: Protected for biodiversity and wilderness.

Category Ib: Wilderness Area: Large, unmodified areas preserving natural conditions.

Category II: National Park: Protects large-scale ecological processes and provides recreational opportunities.

Category III: Natural Monument or Feature: Protects specific natural monuments or features.

Category IV: Habitat/Species Management Area: Protects a particular habitat or species.

Category V: Protected Landscape/Seascape: Protects the interaction of people and nature.

Category VI: Protected Area with Sustainable Use of Natural Resources: Conserves ecosystems and their associated ecosystem services and natural resources.



IUCN Classification: The International Union for Conservation of Nature (IUCN) categorizes protected areas into six types based on management objectives.

UN SDGs: Protected areas contribute to Sustainable Development Goals, especially SDG 14 (Life Below Water) and SDG 15 (Life on Land).

PROTECTED AREAS IN SAUDI ARABIA

Saudi Arabia's protected areas are designated zones aimed at;

- conserving biodiversity,
- safeguarding endangered species,
- and maintaining ecological balance across its diverse landscapes.

Saudi Arabia has numerous protected areas, including deserts, mountains, and coastal regions, managed by the **National Center for Wildlife (NCW)** and other authorities.

Notable examples include the Farasan Islands Marine Sanctuary, Raydah Natural Reserve, and the extensive Imam Turki bin Abdullah Royal Reserve, which aim to conserve biodiversity and protect ecosystems for endangered species.



PURPOSE AND IMPORTANCE

Biodiversity
Conservation:
Protects rare and endemic species
such as the Arabian oryx, Nubian ibex, and desert flora

Habitat
Preservation:
Maintains fragile
ecosystems
including sand
dunes, wadis,
mangroves, and
montane forests

Scientific Research: Supports ecological studies and wildlife monitoring Eco-Tourism and
Education:
Promotes
sustainable tourism
and environmental
awareness

PROTECTED AREA STATISTICS

01

Total Number: Over 79 protected areas 02

Coverage: More than 18% of Saudi Arabia's land area

03

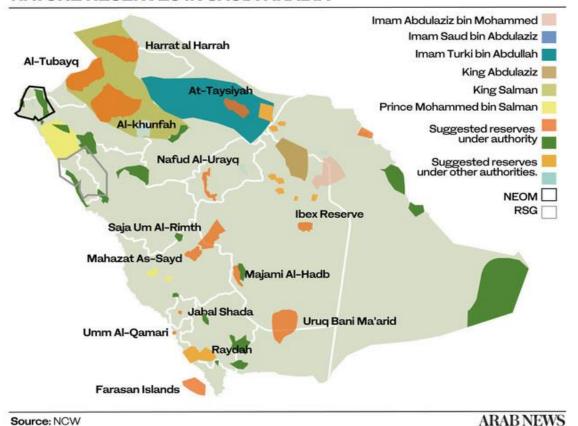
Goal: Expand to 30% coverage by 2030 under Vision 2030

TYPES OF PROTECTED AREAS

Category	Description
Wildlife Reserves	Focused on protecting animal species and their habitats
Marine Protected Areas	Safeguard coral reefs, mangroves, and coastal ecosystems
National Parks	Promote conservation and public recreation
Nature Reserves	Preserve rare plant communities and geological features

KEY PROTECTED AREAS

NATURE RESERVES IN SAUDI ARABIA



'Uruq Bani Ma'arid

Jabal Shada al-A'la

Jurf Raydah

Nafud al-'Urayq

Ibex Protected Area

Majami' al-Hadb

Sija and Umm ar-Rimth

Juzur Umm al-Qamari

Imam Saud bin Abdulaziz Royal Reserve

Jubail Marine protected area

Juzur Farasan

URUQ BANI MA'ARID

The protected area is located in Najran and Riyadh Regions

Total Area 12693 km²

IUCN category

VI



- Located in the western part of Ar-Rub' al Khali, the world's largest expanse of windblown sand.
- Features dramatic landscapes where massive dunes meet the 1,000 km long limestone escarpment of Jabal Tuwayq.
- Unique geological intersection creates striking contrasts:
 - ➤ Arabia's largest linear dunes
 - > Inter-dunal corridors
 - ➤ Vegetated eastward-flowing wadis
 - > Rugged Tuwayq Escarpment
- Home to the only free-ranging herds of Arabian oryx in the world, with no human intervention.
- Recognized as a UNESCO Natural World Heritage Site due to its ecological and cultural significance.



Approximately **88 plant species** have been documented within the reserve.

The sand dunes support distinctive endemic plants of Ar-Rub' al-Khali, which are adapted to its extreme aridity, such as Calligonum crinitum sbsp. arabicum, Cornulaca arabica, Tribulus macropterus var. arabicus, and Limeum arabicum.

The escarpment supports *Vachellia tortilis* and species that are rare in hyper-arid regions, such as *Myrrh*, *Moringa peregrina*, and an endemic form of *Ziziphus spina-christi*.

JABAL SHADA AL-A'LA

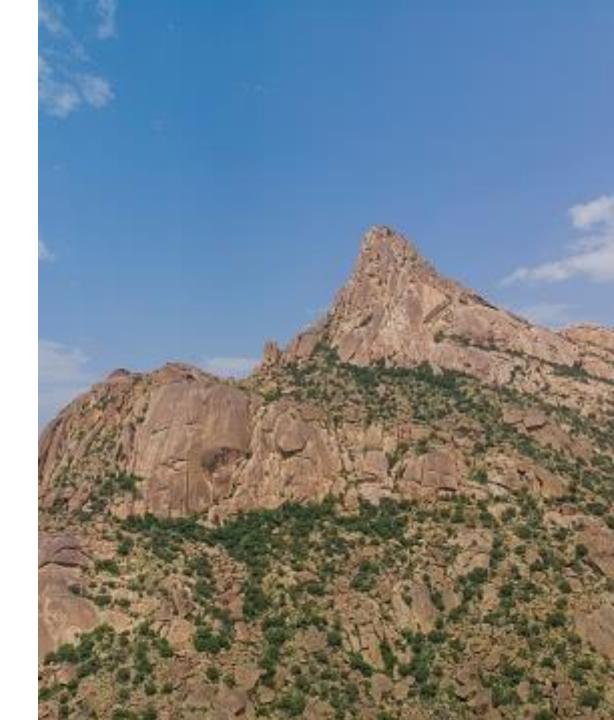
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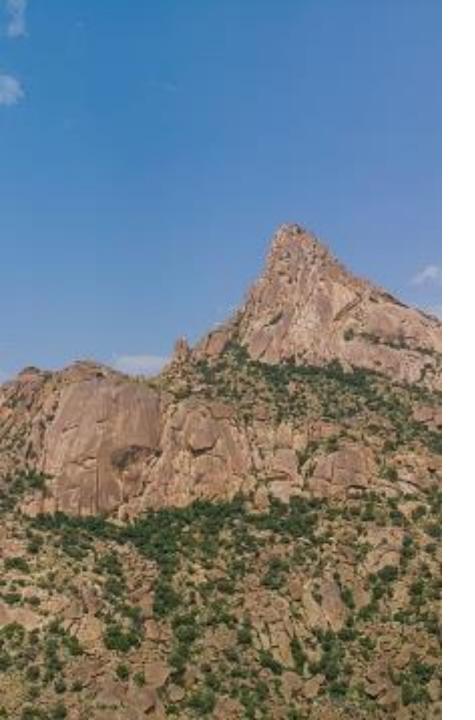
Al-Baha Region

Total Area

77 km²

IUCN category





Located southwest of **Al-Baha city**, in northwestern al-Makhwah Governorate.

An outlier of the Sarawat Mountains, rising approximately **2,200** meters above sea level.

Dominated by granite highlands carved by **steep ravines**.

Ravines host dense valley forests, rich in biodiversity.

Listed on Saudi Arabia's Tentative List of World Heritage Sites for its natural significance.

Approximately **493 plant species** have been documented within the reserve. A quarter of **Saudi Arabia's** plant species have been recorded in this small-scale protected area, the most notable of which include;

Senegalia asak and Adenium obesum, Breonadia salicina, East African juniper, wild olive, wild jasmine, Nuxia oppositifolia, Dodonaea viscosa, Ziziphus mucronata, and Ziziphus spina-christi.

Vachellia johnwoodii is endemic, dragon trees are endangered, and several Aloe species are endangered and endemic.

Jurf Raydah

The protected area is located in

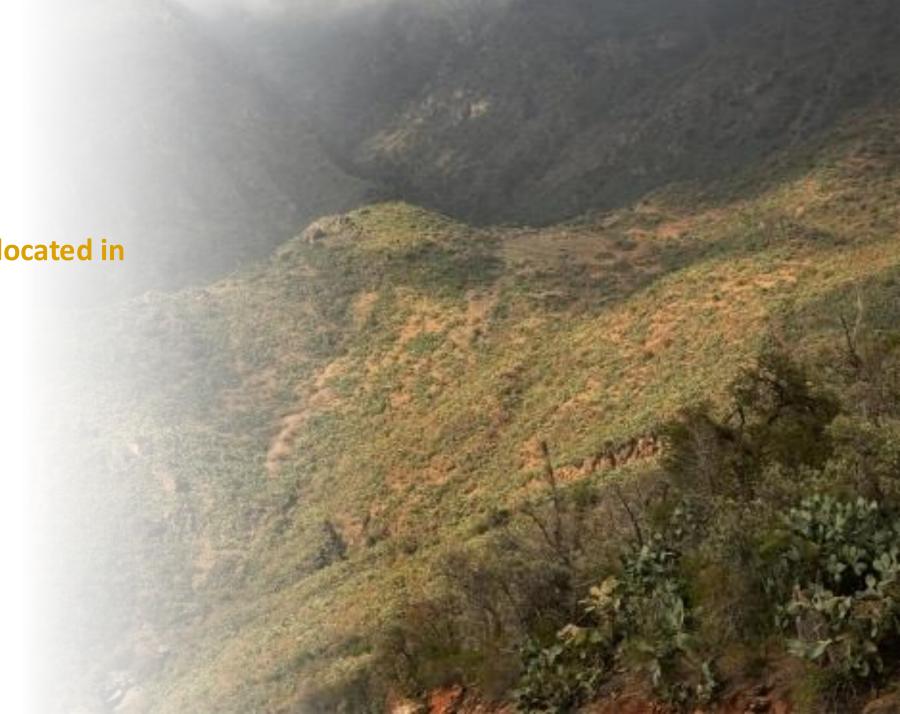
Asir Region

Total Area

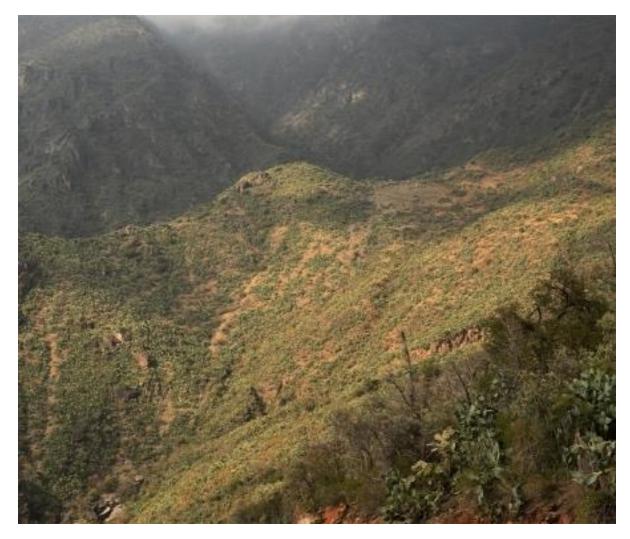
10 km²

IUCN category

IV



- One of the smallest protected areas in Saudi Arabia.
- **Jurf Raydah** occupies the steep slopes of the Sarawat Escarpment, adjacent to the Kingdom's highest summit at over 3,000 meters above sea level.
- Its distinctive topography, together with one of the highest recorded rainfall rates in the Kingdom, heavy fog, and rich organic soils, contribute to the presence of a distinctive cloud forest habitat and a high diversity of flora and fauna.



Approximately **348 plant species** have been documented within the reserve.

Many plant species have been recorded in the protected area, among them East African juniper, wild olive, African hackberry, Nuxia oppositifolia, Teclea nobilis, Maesa lanceolata, Tarchonanthus camphoratus, Pittosporum viridiflorum sbsp. arabicum, Halleria lucida, Euryops arabicus, and Dodonaea viscosa, as well as several Vachellia species and Ziziphus spina-christi.

Nafud al-'Urayq

The protected area is located in

Al-Qasim and Riyadh Regions

Total Area

2034 km²

IUCN category

VI







Located about 150 km southwest of Al-Qasim.



A strip of sand dunes representing the central nafuds ecosystem.



Historically part of Hima 'Iibil Alsadaqa, protected during the reign of Caliph Omar ibn al-Khattab.



Used for pasturing charity-dedicated camels.



Contains granitic and metamorphic rock outcrops on the eastern edge of the sands.



Rich in cultural and ecological heritage

The predominant plant community in the northern and central parts of the protected area, relatively dense stands of *Haloxylon* persicum are found, while *Haloxylon* salicornicum and scattered Calligonum comosum predominate in the south.

Vachellia tortilis and Lycium shawii grow in drainages with the grass Panicum turgidum, while the grass Stipagrostis plumosa grows in rocky areas and on plains.

Ibex Protected Area

The protected area is located in

Riyadh Regions

Total Area

1842 km²

IUCN category





The Ibex protected area is the wildest part of the Tuwayq Escarpment, south of Al-Hariq and west of Hawtat Bani Tamim, 180 km south of Riyadh.

It is a large, rugged plateau, dissected by canyons and ravines, with a few sandy areas.

The western edge of the escarpment reaches a maximum height of 1,097 m.

Approximately **268 plant species** have been documented within the reserve.

The protected area contains acacias, such as Vachellia tortilis, V. raddiana, and V. flava, as well as Maerua crassifolia and Ziziphus spinachristi, in the major drainages, along with the shrubs Lycium shawii, Convolvulus infantispinosus, Ochradenus baccatus, and Ochradenus arabicus, and the grasses Panicum turgidum, Cenchrus ciliaris, and Stipagrostis plumosa.

Majami' al-Hadb

The protected area is located in

Riyadh and Makkah Regions

Total Area

1181 km²

IUCN category

VI







The protected area is located about 125 kilometers east of the city of Ranyah.



It is characterized by pale granite exfoliation domes, known as hadb in Arabic, as well as dark metamorphosed volcanic hills and sandy desert plains.



The runoff from the smooth, impermeable granite domes supports some of the densest and most diverse plant communities in south-central Arabia.

The plant communities are dominated by the acacias *Vachellia tortilis, V. raddiana, V. flava, V. oerfota*, with *Maerua crassifolia* and shrubs of *Lycium shawii* and *Haloxylon salicornicum* and the grasses *Panicum turgidum, Cenchrus ciliaris, Cymbopogon schoenanthus,* and *Stipagrostis plumosa*.

Species more characteristic of the Sarawat mountains include *Ziziphus spina-christi* and *Moringa peregrina* trees.





Located in the central western region of Saudi Arabia.

Borders the northern and eastern edges of Imam Saud bin Abdulaziz Royal Reserve.

Lies on the Arabian Shield, a geologically ancient formation.

Characterized by a gently undulating sandy plain.

Features low hills and outcrops of granitic and metamorphic rock.

Represents a unique blend of geological and ecological features.



Approximately **89 plant species** have been documented within the reserve.

Haloxylon salicornicum (rimth in Arabic) is predominant over extensive areas with relatively deep sandy soils, hence the name Umm ar-Rimth.

Trees and shrubs of *Capparis decidua* (Forssk.), *Vachellia tortilis, Vachellia flava, Maerua crassifolia,* and *Lycium shawii* are widespread, along with the rare herb Ajuga arabica and the grasses *Lasiurus scindicus, Panicum turgidum, Stipagrostis plumosa,* and *Cymbopogon schoenanthus.*





The protected area is in the southwest of the Kingdom in the Red Sea. It consists of two islands: Umm al-Qamari al-Barraniyah and Umm al-Qamari al-Fawqaniyah.

It was named Umm al-Qamari for the large flocks of African collared doves that it harbors, especially during spring and summer.

The islands are composed of coral limestone with an average height of 3 meters above sea level, and white coastal sand.

A healthy coral reef near Umm al-Qamari al-Barraniyah Island harbors reef fishes and marine invertebrates.



Approximately 12 plant species have been documented within the reserve.

The plant communities are made up of Salvadora persica, three Suaeda species, Atriplex farinosa, Zygophyllum album, Z. simplex, Cleome brachycarpa, and Cyperus conglomeratus.







- Located about 170 km northeast of Taif, between Al-Kharmah, Al-Muwayh, and the center of Dhalm.
- Part of the Makkah Al-Mukarramah region.
- Situated on the Arabian Shield, featuring:
 - Gently undulating sandy plains
 - Basalt hills in the west
 - Granite outcrops in the north
- Fenced reserve, unlike most other protected areas in the Kingdom.
- Serves as a natural laboratory for:
- Reintroducing captive-bred threatened species
- Monitoring the success of reintroduction efforts

Approximately 198 plant species have been documented within the reserve.

The vegetation of the reserve consists of a desert savanna of *Vachellia tortilis* and other *Vachellia species* and *Maerua crassifolia*, with an understory of *Lycium shawii* and other shrubs, the perennial grasses *Panicum turgidum*, *Lasiurus scindicus*, and *Octhochloa compressa*, and the rare herb *Ajuga arabica*.



Jubail Marine protected area

The protected area is located in

Eastern Regions

Total Area

2,400 km²

IUCN category

VI





- Located north of Jubail Industrial City.
- Covers 760 km² of land and 1,650 km² of marine area.
- Terrestrial features include:
 - Bedrock outcrops
 - > Sand sheets and dunes
 - > Sabkhahs and wetlands
- Intertidal zone characterized by:
 - > Sandy beaches, mudflats, rocky shores
 - > Saltmarshes and blue-green algal mats
- Subtidal habitats include:
 - Seagrass beds
 - Macroalgal beds
 - ➤ Whip coral beds
 - ➤ Vital nursery grounds for fish and shrimp, supporting marine biodiversity.

Notable plant species in the Jubail Marine Protected Area include mangroves (currently being planted as part of a large-scale initiative), various acacias, saltwort, broom bush, and aromatic plants like Artemisia herba-alba.

The area also features other shrubs and grasses such as *Lycium shawii*, *Ochradenus baccatus*, and *Panicum turgidum*.





The protected area is located in

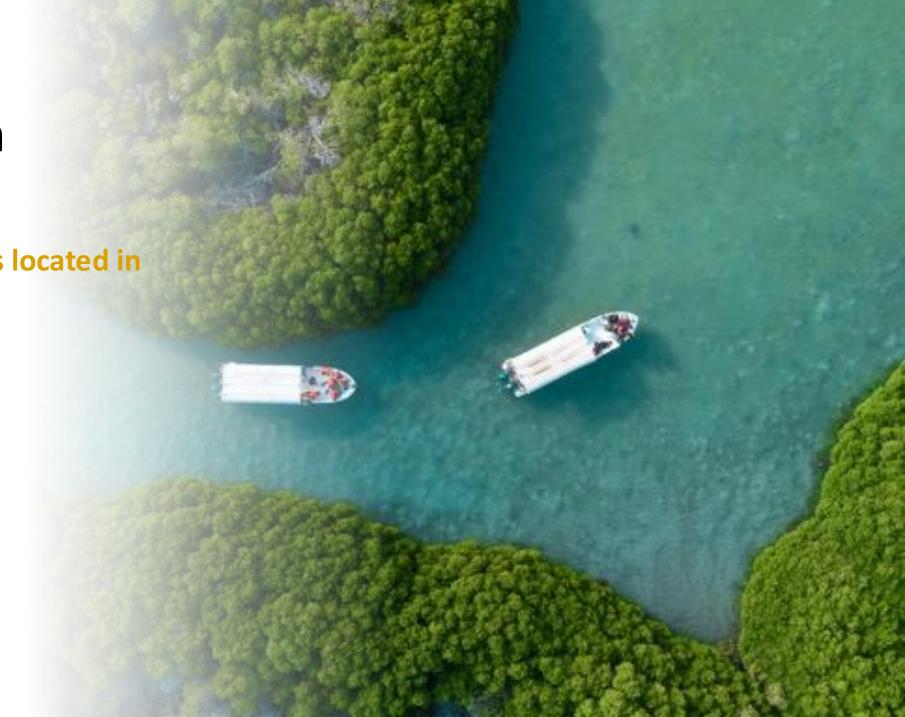
Jazan Regions

Total Area

5,772 km²

IUCN category

VI



Located in the southern Red Sea, about 42 km from Jazan city.

Comprises over **170 islands**; largest inhabited islands are Farasan al-Kabir and As-Saqid.

Hosts the richest combined marine and terrestrial biodiversity in Saudi Arabia.

Designated as Saudi Arabia's first Biosphere Reserve in 2021.

Included in the Kingdom's Tentative List of World Heritage Sites.

Ecologically significant for both marine ecosystems and terrestrial habitats.

Approximately 188 plant species have been documented within the reserve. The vegetation types include dense coastal thickets of the mangroves *Avicennia marina* and *Rhizophora mucronata* and seagrass meadows.

Terrestrial plants include *Vachellia flava*, *Ziziphus spina-christi, Salvadora persica, Commiphora gileadensis*, and *Aloe officinalis*.

