



Ramsar Information Sheet

Published on 23 July 2026

Saudi Arabia

Soudah Waterfall



Designation date	14 May 2026
Site number	2598
Coordinates	18°13'32"N 42°25'19"E
Area	33,00 ha

Color codes

Fields back-shaded in light blue relate to data and information required only for RIS updates.

Note that some fields concerning aspects of Part 3, the Ecological Character Description of the RIS (tinted in purple), are not expected to be completed as part of a standard RIS, but are included for completeness so as to provide the requested consistency between the RIS and the format of a 'full' Ecological Character Description, as adopted in Resolution X.15 (2008). If a Contracting Party does have information available that is relevant to these fields (for example from a national format Ecological Character Description) it may, if it wishes to, include information in these additional fields.

1 - Summary

Summary Soudah Waterfall, a distinctive freshwater wetland ecosystem located in the Asir Mountains in southwestern Saudi is a unique wetland. Forming an integral part of the montane hydrological system. The site supports a variety of habitat types such as escarpment runoffs, permanent spring, deep gorges, perennial pools and riparian habitats. It covers an area of 33 ha and hosts a rich biodiversity, including endemic, rare, and endangered species. Six species are threatened or near-threatened, according to IUCN Red List. Soudah Waterfall hosts species assemblages that are part of the outstanding biodiversity of the Asir Region. The presence of important trees such as <i>Juniperus procera</i> and <i>Vachellia origena</i> play a crucial role in the conservation of various associated species. The site plays an important role as a refuge for a variety of species, which emphasizes its ecological distinctiveness and crucial role in preserving biodiversity, particularly for amphibians and reptiles. Notable inhabitants include the Arabian toad (<i>Sclerophys arabicus</i>), Arabian tree frog (<i>Hyla felixarabica</i>), Arabian semaphore gecko (<i>Pristurus guweirensis</i>), Yemen Rock Agama (<i>Acanthocercus yemenensis</i>), and the Hadramaut Rock Agama (<i>Acanthocercus adramitanus</i>). This diversity highlights the ecological richness of Soudah Waterfall and emphasizes its importance in maintaining a balanced ecosystem. Soudah Waterfall faces several manageable but recurring pressures, most notably the spread of <i>Opuntia</i> on rocky slopes. Although these invasive cacti have been removed in past management, they tend to re-establish after two to three years, requiring periodic control. Visitor littering has also been a concern; to address this, the main access point has been fenced to regulate entry, and accumulated waste has been cleared. The light fencing additionally helps manage grazing pressure. The invertebrate fauna of this wetland is equally remarkable. It includes mollusks, dragonflies such as the Endangered <i>Pseudagrion arabicum</i>, and the Vulnerable <i>Pinheyschna yemenensis</i>, <i>Orthetrum brevistylum</i>, <i>Anax speratus</i>, and <i>Anax imperator</i> as well as mayflies, caddisflies, aquatic flies, and aquatic bugs. These species play a crucial role in the intricate ecological web and underline the importance of the Soudah waterfall for the conservation of diverse and interconnected ecosystems. In addition to its importance for wildlife, the Soudah Waterfall also stands out for its botanical and hydrological importance.
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2 - Data & location

2.1 - Formal data

2.1.1 - Name and address of the compiler of this RIS

Responsible compiler

Institution/agency	Soudah Development
Postal address	9455 – Unit Number 1 AS SUDAH 62532 – 2099 (ABHA – Kingdom of Saudi Arabia)

National Ramsar Administrative Authority

Institution/agency	The National Center for Wildlife
Postal address	P.O.Box: 4508, Riyadh, 12411 Saudi Arabia,

2.1.2 - Period of collection of data and information used to compile the RIS

From year	2021
To year	2024

2.1.3 - Name of the Ramsar Site

Official name (in English, French or Spanish)	Soudah Waterfall
Unofficial name (optional)	Wadi Al-Azizah

2.2 - Site location

2.2.1 - Defining the Site boundaries

b) Digital map/image

<1 file(s) uploaded>

Former maps	0
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Boundaries description

The site is located 7 km W (N 18°13'33.33", E 42° 25'19.26") of Abha, one of the main towns of the Asir Emirate, 650 m NE of Abu Sarrah Castle on the slopes of Soudah peak. The 600m long gorge extends from E to W between N 18°13'31.20", E 42° 25'30.02" and N 18°13'38.84", E 42° 25'13.21". The gorge of Soudah Waterfall is flanked to the north and south by steep, rocky, arid slopes and cliffs that extend roughly 200 m to the north and about 300 m to the south from the gorge floor.

The boundaries of Soudah Waterfall were delineated using a combination of distinct natural or physical features while ensuring that all surrounding private land remains excluded. The northern and southern boundaries follow the upper ridge lines overlooking the waterfall catchment. To the east, the boundary extends downslope until it meets the asphalt road that provides the main access to the site, creating a clear and easily identifiable limit. The western boundary runs along the edge of privately owned farms but is drawn to include the natural spring and main pond that form integral components of the site's hydrological system. These features were selected because they encompass the core hydrological and ecological processes of the waterfall system, while avoiding encroachment on adjacent private properties that are more heavily used for grazing or settlement. The resulting boundary ensures that the key habitats, watercourse, and associated vegetation communities are fully captured within a coherent and manageable conservation unit.

2.2.2 - General location

a) In which large administrative region does the site lie?	Asir region
b) What is the nearest town or population centre?	Abha

2.2.3 - For wetlands on national boundaries only

- a) Does the wetland extend onto the territory of one or more other countries? Yes ☐ No ☒
- b) Is the site adjacent to another designated Ramsar Site on the territory of another Contracting Party? Yes ☐ No ☒

2.2.4 - Area of the Site

Official area, in hectares (ha):	33
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Area, in hectares (ha) as calculated from
GIS boundaries

33.206

2.2.5 - Biogeography

Biogeographic regions

Regionalisation scheme(s)	Biogeographic region
WWF Terrestrial Ecoregions	Southwestern Arabian Montane woodlands

3 - Why is the Site important?

3.1 - Ramsar Criteria and their justification

☒ Criterion 1: Representative, rare or unique natural or near-natural wetland types

Hydrological services provided

Soudah Waterfall provides key hydrological services within the wadi system. The waterfall and associated ponds regulate surface water flow, helping to maintain a balanced discharge throughout the year, in relation with rainfalls. This regulation supports the natural functioning of the wadi by sustaining water availability across different seasons and reducing the risk of sudden runoff events. The continuous flow also contributes to groundwater recharge, enhancing the replenishment of local aquifers and supporting long-term water availability in the surrounding landscape. In addition, the movement of water through the deep gorges and across vegetated channels helps to reduce soil erosion and maintain the structural integrity of the wadi. These hydrological processes preserve the physical character of the site and underpin its role as rare wadi system in the Arabian Peninsula.

Other ecosystem services provided

Soudah Waterfall provides a wide range of ecosystem services that extend beyond its hydrological functions. As a perennial high-elevation wadi within a predominantly arid region, the site offers critical supporting services, particularly through its role as a biodiversity refuge. The continuous water flow and associated microclimatic conditions create habitats (moist, shaded ravines and riparian corridors) for a distinctive assemblage of moisture-dependent and montane species, including threatened birds such as Yemen Thrush (*Turdus menachensis*) and Yemen Warbler (*Curruca buryi*), endemic amphibians such as the Arabian Toad (*Sclerophrys arabica*) and Arabian Tree Frog (*Hyla felixarabica*), the Afrotropical Orange Emperor (*Anax speratus*), and several reptiles of conservation concern including the Hadramaut Rock Agama and Yemen Rock Agama. The surrounding escarpments and juniper–acacia woodlands also support endemic and range-restricted taxa such as Philby's Partridge (*Alectoris philbyi*), Arabian Serin (*Crithagra rothschildi*), Arabian Woodpecker (*Dendrocoptes doriae*), all of which contribute to the ecological distinctiveness of the montane landscape that frames the wetland. The site also supports diverse invertebrate communities, including endemic odonates, mayflies and caddisflies and contributes to the maintenance of ecological processes characteristic of the southwestern Arabian highlands. The site provides cultural ecosystem services, functioning as an important destination for ecotourism, recreation, and nature appreciation. Its scenic landscape and cool high-mountain environment attract visitors for hiking and outdoor activities, while the tranquil setting contributes to mental wellbeing. Soudah Waterfall also serves as a valuable location for scientific research, ecological monitoring, and environmental education, supporting ongoing conservation and restoration initiatives. In addition, the site contributes to regulating ecosystem services beyond hydrology, including local climate moderation and the reduction of soil erosion through the presence of soil-stabilising vegetation. These combined services highlight the ecological, cultural, and societal importance of Soudah Waterfall within the broader highland landscape.

Other reasons

Soudah Waterfall can be considered rare within its biogeographic region because perennial, high-elevation, spring-fed waterfall systems are extremely limited in occurrence across the Arabian Peninsula. Most wadis in the region are ephemeral and lack year-round surface water; in contrast, Soudah Waterfall maintains continuous flow, creating a distinctive wetland type that is uncommon in both distribution and ecological character. This rarity enhances its conservation value and underscores its importance as a unique hydrological and ecological feature of the southwestern Arabian highlands. The site also provides habitat for two threatened endemic odonates, the Endangered *Pseudagrion arabicum* and the Vulnerable *Pinheyschna yemenensis*, whose restricted ranges further emphasize the site's biological significance. Beyond its ecological attributes, Soudah Waterfall is closely linked to the region's cultural heritage. Adjacent to the site are the historic palaces of Abu Sarrah, which reflect more than a millennium of architectural and cultural history. The surrounding landscape also illustrates the integration of traditional knowledge into land management, including indigenous terrace-farming practices that optimise land use and help reduce soil erosion. Together, these natural and cultural features highlight the site's broader significance as both an ecological and heritage asset.

☒ Criterion 2 : Rare species and threatened ecological communities

Optional text box to provide further information

Soudah Waterfall supports a concentration of species that are nationally or internationally recognized as threatened, rare, or of high conservation concern. The permanent freshwater pools, shaded gorges, and humid high-elevation habitats provide essential refugia for several species listed as Vulnerable, Endangered, or otherwise threatened under national assessments or the IUCN Red List. The wetland is a key site for threatened amphibians and reptiles whose persistence depends on perennial water and intact microhabitats. These include the Arabian Toad (*Sclerophrys arabica*), Arabian Tree Frog (*Hyla felixarabica*), and the Arabian Cobra (*Naja arabica*), all of which have restricted distributions, are sensitive to hydrological disturbance and habitat degradation, and listed as Endangered or Vulnerable at the national level. The site also supports rare and threatened aquatic invertebrates, notably the Vulnerable dragonfly *Pinheyschna yemenensis* and the Endangered damselfly *Pseudagrion arabicum*. Both species have narrow ranges within the Arabian Peninsula and rely on clean, permanent freshwater, making Soudah Waterfall an important stronghold for their survival. Several threatened or regionally declining plant species occur within the wetland and its immediate surroundings, including *Aloe rubroviolacea*, *Ceropegia lodarensis*, and *Adiantum capillus-veneris*, all of which are associated with moist, shaded, or cliff-side microhabitats that are increasingly rare in the region. Among birds and mammals, the site provides habitat for species of conservation concern such as the Arabian Woodpecker (*Dendrocoptes dora*), African Olive Pigeon (*Columba arquatrix*), Steppe Eagle (*Aquila nipalensis*), and the endemic Data Deficient Yemeni Mouse (*Ochromyscus yemeni*), each of which is listed as threatened or declining under national or international frameworks. Collectively, these species demonstrate that Soudah Waterfall functions as a critical refuge for threatened fauna and flora whose survival depends on the protection of this unique wetland ecosystem.

☒ Criterion 3 : Biological diversity

Justification

Soudah Waterfall supports a distinctive assemblage of Afromontane-Arabian highland biodiversity, representing one of the most biologically rich ecological interfaces in the Asir Region. The site lies within a major floristic transition zone and contains a mosaic of habitats, including permanent pools, riparian corridors, rocky gorges, and high-elevation woodlands, that collectively sustain an exceptional diversity of flora and fauna. This ecological complexity and the presence of regionally characteristic, endemic, and habitat-specialist species demonstrate that the site meets Ramsar Criterion 3. The vegetation reflects the transitional nature of the landscape. High-elevation woodlands dominated by *Juniperus procera* form the structural backbone of the ecosystem and support a wide array of dependent species. Moist and shaded microhabitats along the waterfall and riparian margins host several localized or endemic plants, including *Coleus arabicus*, *Phragmanthera austroarabica*, *Ceropegia lodarensis* and *Hypericum revolutum*, which collectively contribute to the botanical distinctiveness of the site. The faunal community is equally representative of the Arabian highlands. Rocky microhabitats adjacent to the wetland support the endemic Arabian Semaphore Gecko (*Pristurus guweirensis*), while the surrounding escarpments and slopes host the Anderson's Rock Agama (*Acanthocercus adramitanus*) and Yemen Rock Agama (*Acanthocercus yemenensis*), both characteristic of the southwestern Arabian montane zone. The permanent pools and streams also support regionally important Odonata, including *Anax speratus*, a species associated with high-quality freshwater habitats. Bird diversity is a defining feature of the site. The juniper woodlands and riparian vegetation support several Arabian Peninsula specialists and high-elevation endemics, including Philby's Partridge (*Alectoris philbyi*), Arabian Partridge (*Alectoris melanocephala*), Arabian Scops Owl (*Otus pamela*), Arabian Woodpecker (*Dendrocoptes dora*), Yemen Thrush (*Turdus menachensis*), Arabian Serin (*Crithagra rothschildi*), Yemen Linnet (*Linaria yemenensis*), and Yemen Warbler (*Curruca buryi*). These species highlight the site's importance as a refuge for highland avifauna and its role in maintaining regional bird diversity. Mammals and invertebrates further contribute to the site's biological significance. The King Gerbil (*Meriones rex*) and the butterfly *Lasiommata (Pararge) felix* are both characteristic of the southwestern Arabian highlands and rely on the mosaic of woodland, rocky, and riparian habitats present at Soudah. Together, the plant and animal communities of Soudah Waterfall illustrate a functionally interconnected and ecologically representative assemblage of Arabian highland and freshwater ecosystems. The site's combination of endemic, regionally characteristic, and habitat-specialist species demonstrates its outstanding contribution to the biological diversity of the Arabian Peninsula.

☒ Criterion 4 : Support during critical life cycle stage or in adverse conditions

Optional text box to provide further information

Soudah Waterfall fulfils Ramsar Criterion 4 by supporting species that depend on the site during critical stages of their life cycle and that also meet additional criteria of international importance. The wetland provides a rare, permanently flowing freshwater refuge within the semi-arid highlands of southwest Saudi Arabia, offering essential habitat for species that are otherwise highly restricted or threatened. The site supports the breeding and emergence of the Vulnerable and Arabian-endemic dragonfly *Pinheyschna yemenensis*, confirmed through the presence of larvae and exuviae, demonstrating the wetland's role in sustaining key life-cycle stages of a globally threatened species. The perennial pools and shaded stream margins also support populations of the Endangered endemic damselfly *Pseudagrion arabicum*, which relies on the site for larval development and adult reproduction. In addition, the humid gorge environment provides a stable microrefugium for the threatened succulent *Aloe rubroviolacea*, enabling its persistence within an otherwise arid regional landscape. The wetland further supports the Arabian Toad (*Sclerophrys arabica*), a species dependent on permanent freshwater for successful breeding and tadpole development. The species uses the site as one of the few reliable breeding habitats in the highlands, highlighting the importance of Soudah Waterfall as a refuge during critical life-cycle stages and under adverse climatic conditions. Together, these species illustrate the importance of Soudah Waterfall as a climatic and hydrological refuge, enabling the completion of essential life-cycle processes, including reproduction, larval development, and emergence, under conditions that would be unsuitable in the surrounding landscape. Their reliance on the site, combined with their qualification under Criteria 2 and/or 3, confirms the wetland's international importance under Criterion 4.

☒ Criterion 9 : >1% non-avian animal population

Optional text box to provide further information

Pseudagrion arabicum was first described from this site (Waterston,1980). The species is known from only 11 observations from 7 different localities (2 in Yemen, and 5 in Saudi Arabia, Boudot et al. 2021). From the number of localities, the population of Soudah Waterfall would represent 14% of the known population.

3.2 - Plant species whose presence relates to the international importance of the site

Phylum	Scientific name	Criterion 2	Criterion 3	Criterion 4	IUCN Red List	CITES Appendix I	Other status	Justification
Plantae								
TRACHEOPHYTA/ POLYPODIOPSIDA	<i>Adiantum capillus-veneris</i>	☒	☐	☐	LC	☐	Saudi Arabia High Conservation Priority Species. criteria 1, 4 & 7	critically endangered in Saudi Arabia, as related to rare montane wetland
TRACHEOPHYTA/ LILIOPSIDA	<i>Aloe rubroviolacea</i>	☒	☒	☒		☐	Saudi Arabia High Conservation Priority Species. criteria 1, 6 & 7	The site provides essential refuge habitat for the montane endemic Aloe rubroviolacea, which depends on the permanently moist, shaded cliffs of the Soudah Waterfall to survive the prolonged dry season. These humid microrefugia are critical for the species during adverse environmental conditions, thereby meeting the requirements of Criterion 4.
TRACHEOPHYTA/ MAGNOLIOPSIDA	<i>Ceropegia lodarensis</i>	☒	☒	☐		☐	Critically Endangered Endemic under Saudi Arabia High Conservation Priority Species	
TRACHEOPHYTA/ MAGNOLIOPSIDA	<i>Coleus arabicus</i>	☐	☒	☐		☐		Endemic to Saudi Arabia, restricted to the Asir Mountains. High-elevation species strongly associated with moist, shaded habitats
TRACHEOPHYTA/ MAGNOLIOPSIDA	<i>Hypericum revolutum</i>	☐	☒	☐	LC	☐		The site supports populations of Hypericum revolutum , a characteristic Afro Arabian montane shrub restricted in Saudi Arabia to the moist high elevation habitats of the Asir Mountains. Its presence reflects the unique Ethiopian–Arabian floristic affinities of the region and contributes to the distinct biogeographic identity of the Soudah highlands.
TRACHEOPHYTA/ PINOPSIDA	<i>Juniperus procera</i>	☐	☒	☒	LC	☐		A foundation tree for the Asir Cloud Forest
TRACHEOPHYTA/ MAGNOLIOPSIDA	<i>Phragmanthera austroarabica</i>	☐	☒	☐	DD	☐		rarely recorded climbing vines

Juniperus procera (local name Arar) is a foundational species in Saudi Arabia’s southwestern highland forests. Occurring above 1600m, juniper trees are crucial for ecological stability and preventing soil erosion on highland slopes and escarpments, supportive of a host of associated biodiversity, and valued for centuries for both traditional medicine and its durable, fragrant wood.

Despite its ecological importance, juniper forests are experiencing significant decline, with over 80% of trees in some areas showing signs of degradation, requiring urgent protection.

Soudah Waterfall has been highlighted as site of particular importance for rare "succulent plants", including Huernia saudiarabica (Ceropegia lodarensis). Aloe rubroviolacea, Aloe vacillans

3.3 - Animal species whose presence relates to the international importance of the site

Phylum	Scientific name	Species qualifies under criterion			Species contributes under criterion				Pop. Size	Period of pop. Est.	% occurrence 1)	IUCN Red List	CITES Appendix I	CMS Appendix I	Other Status	Justification	
		2	4	6	9	3	5	7									8
Others																	
CHORDATA / REPTILIA	<i>Acanthocercus adramitanus</i>	☐	☐	☐	☐	☒	☐	☐	☐				LC	☐	☐		Arabian endemic reflecting biogeographic distinctiveness of Asir highlands

Phylum	Scientific name	Species qualifies under criterion				Species contributes under criterion				Pop. Size	Period of pop. Est.	% occurrence 1)	IUCN Red List	CITES Appendix I	CMS Appendix I	Other Status	Justification
		2	4	6	9	3	5	7	8								
CHORDATA / REPTILIA	<i>Acanthocercus yemensis</i>	☐	☐	☐	☐	☒	☐	☐	☐				LC	☐	☐		southwestern Arabian endemic, reflecting biogeographic distinctiveness of Asir highlands
ARTHROPODA / INSECTA	<i>Anax speratus</i>	☐	☒	☐	☐	☒	☐	☐	☐				LC	☐	☐		confined to high-elevation perennial freshwater systems, biogeographically important species and a representative of the Afro-Arabian montane freshwater fauna.
CHORDATA / AMPHIBIA	<i>Hyla felixarabica</i>	☒	☒	☐	☐	☒	☐	☐	☐				LC	☐	☐	High Conservation Priority Species in Saudi Arabia, under criteria 1 and 3	Range-restricted Arabian endemic
CHORDATA / MAMMALIA	<i>Meriones (Parameriones) rex</i>	☐	☐	☐	☐	☒	☐	☐	☐					☐	☐		Southwestern Arabian highlands endemic
CHORDATA / MAMMALIA	<i>Myomyscus yemeni</i>	☒	☐	☐	☐	☒	☐	☐	☐				DD	☐	☐	High Conservation Priority Species in Saudi Arabia, under criteria 1	Southwest Arabian endemic
CHORDATA / REPTILIA	<i>Naja arabica</i>	☒	☐	☐	☐	☒	☐	☐	☐				LC	☐	☐	High Conservation Priority Species in Saudi Arabia, under criteria 1, 2 and 5	Southwestern Arabian highlands endemic
ARTHROPODA / INSECTA	<i>Pararge felix</i>	☐	☐	☐	☐	☒	☐	☐	☐					☐	☐		Highly range-restricted Arabian endemic
CHORDATA / AMPHIBIA	<i>Pelophylax ridibundus</i>	☐	☐	☐	☐	☒	☐	☐	☐				LC	☐	☐	High Conservation Priority Species in Saudi Arabia, under criteria 1 and 4	populations endangered or vulnerable in Saudi Arabia
ARTHROPODA / INSECTA	<i>Pinheyschna yemenensis</i>	☒	☒	☐	☐	☒	☐	☐	☐				VU	☐	☐		Southwestern Arabian highlands endemic, eggs, larvae, and emergence occurring in the wetlands
CHORDATA / REPTILIA	<i>Pristurus guweirensis</i>	☐	☐	☐	☐	☒	☐	☐	☐				LC	☐	☐	Arabian endemic	regional Arabian species, part of the Afro-Arabian reptiles assemblage
ARTHROPODA / INSECTA	<i>Pseudagrion arabicum</i>	☒	☒	☐	☒	☒	☐	☐	☐	20	2021	14	EN	☐	☐		Southwestern Arabia endemic
CHORDATA / AMPHIBIA	<i>Sclerophrys arabica</i>	☒	☒	☐	☐	☒	☐	☐	☐				LC	☐	☐	High Conservation Priority Species in Saudi Arabia, under criteria 1 and 2	Rnage-restricted Arabian endemic
Birds																	
CHORDATA / AVES	<i>Alectoris melanocephala</i>	☐	☐	☐	☐	☒	☐	☐	☐				LC	☐	☐		Arabian endemic with restricted range
CHORDATA / AVES	<i>Alectoris philbyi</i>	☐	☐	☐	☐	☒	☐	☐	☐				LC	☐	☐		Southwestern Arabian endemic, part of the distinctive Asir-Yemen highland avifauna
CHORDATA / AVES	<i>Aquila nipalensis</i>	☒	☐	☐	☐	☐	☐	☐	☐				EN	☐	☒		stopover during migration, and wintering individuals frequenting the site
CHORDATA / AVES	<i>Bubo milesi</i>	☐	☐	☐	☐	☒	☐	☐	☐				LC	☐	☐		Regional endemic, top nocturnal predator
CHORDATA / AVES	<i>Cinnyris habessinicus hellmayri</i>	☐	☐	☐	☐	☒	☐	☐	☐					☐	☐		Endemic to the Asir-Yemen highlands
CHORDATA / AVES	<i>Columba arquatrix</i>	☒	☐	☐	☐	☐	☐	☐	☐				LC	☐	☐	Endangered under IUCN Red List Regional (Arabian Peninsula)	

Phylum	Scientific name	Species qualifies under criterion				Species contributes under criterion				Pop. Size	Period of pop. Est.	% occurrence 1)	IUCN Red List	CITES Appendix I	CMS Appendix I	Other Status	Justification
		2	4	6	9	3	5	7	8								
CHORDATA / AVES	<i>Crithagra rothschildi</i>	☐	☐	☐	☐	☒	☐	☐	☐				LC	☐	☐		Arabian mountain endemic
CHORDATA / AVES	<i>Curruca buryi</i>	☐	☐	☐	☐	☒	☐	☐	☐				NT	☐	☐		endemic to southwestern Arabian Peninsula
CHORDATA / AVES	<i>Dendrocoptes dora</i>	☒	☐	☐	☐	☐	☐	☐	☐					☐	☐	Vulnerable under IUCN Red List Regional (Arabian Peninsula)	Southwest Arabian endemic
CHORDATA / AVES	<i>Estrilda rufibarba</i>	☐	☐	☐	☐	☒	☐	☐	☐				LC	☐	☐		highly range-restricted Arabian endemic
CHORDATA / AVES	<i>Linaria yemenensis</i>	☐	☐	☐	☐	☒	☐	☐	☐				LC	☐	☐		Highly range-restricted Arabian endemic
CHORDATA / AVES	<i>Otus pamela</i>	☐	☐	☐	☐	☒	☐	☐	☐				LC	☐	☐		Southwestern Arabian highlands endemic
CHORDATA / AVES	<i>Turdus menachensis</i>	☐	☐	☐	☐	☒	☐	☐	☐				NT	☐	☐		Southwestern Arabian highlands endemic

1) Percentage of the total biogeographic population at the site

3.4 - Ecological communities whose presence relates to the international importance of the site

Name of ecological community	Community qualifies under Criterion 2?	Description	Justification
Freshwater community	☒	Freshwater food web that supports endemic and threatened dragonflies, and amphibians	These wetland- associated species represent rich community interaction among wetland – highlands ecosystems, generating a mosaic of habitat types and restricted freshwater associated populations and complex trophic interactions. Permanent pools and
Afromontane Juniper Forest (Upper slopes & Catchment)	☒	Keyspecies (Juniperus procera, Acacia origena, Dodonaea viscosa) contributes to soil stabilization, fog interception, and perennial spring recharge and offer shelters to birds and mammals (Arabian partridge, Yemen thrush, Arabian woodpecker, bats)	Provides the hydrological buffer and nutrient input to the freshwater system.
Freshwater Montane Stream and waterfall community (Core wetland)	☒	Fast flowing stream channels, plunge pool microhabitats, shaded rock crevices with constant humidity host a typical flora (Bryophytes, Adiantum capillus veneris, Typha domingensis Juncus spp.) and invertebrates (Odonata, aquatic beetles)	Refuge for moisture dependent species in an otherwise arid region.
Moist cliff and ravine vegetation	☐	Supported by constant humidity from the waterfall: Ferns, mosses, liverworts , cliff rooted shrub, reptiles and nesting passerines.	Micro refugia for species sensitive to heat and drought.

Optional text box to provide further information

The Arabian Toad (*Sclerophrys arabicus*) and Arabian Tree Frog (*Hyla felixarabica*) depend on the permanent freshwater pools of Soudah Waterfall for breeding and foraging.

The Arabian Semaphore Gecko (*Pristurus guweirensis*), Yemen Rock Agama (*Acanthocercus yemenensis*) and Hadramaut Rock Agama (*Acanthocercus adramitanus*) use deep rocky gorges for breeding and forage for wetland invertebrates.

Orthetrum brevistylum and *Anax imperator* are key elements of the foodchain of the site as both prey and predators and contribute largely to the nutrient cycling.

4 - What is the Site like? (Ecological character description)

4.1 - Ecological character

1. General description:

Soudah Waterfall is situated on the Asir Plateau in Saudi Arabia, with coordinates 18.22541 N and 42.42426 E, at an elevation between 2550 and 2700 meters above sea level. This wetland falls under the Ramsar classification of "flowing freshwater," specifically identified as seasonal/intermittent/irregular rivers.

2. Critical components and processes:

The climate is mainly driven by the unique Southwest monsoon with influence of altitude, orientation, and seasonal variations. Two rainy seasons occur in April/May and July/August. Average annual precipitation ranges from 600 to 800 mm in the Escarpment Mountains. Fog and mist from southwesterly winds contribute to total rainfall. The dynamic climatic conditions result in varying temperature ranges and distinct weather patterns.

The geomorphology is dominated by an escarpment sloping towards the sea and inwardly sloping region turning into a plateau. The geological composition includes Greenstone and Schistose Greenstone rocks. This unique topography creates diverse ecological niches favoring varied vegetation. Forested wadis on the plateau stand out, supporting aquatic plant species.

The region is located at the crossroads of the Paleotropical and Afrotropical plant kingdoms and the fusion of ancient plant populations contributes to remarkable biodiversity influenced by the five distinct phytochories found across the Arabian Peninsula. The rich and diverse fauna and flora characterize the region's ecosystems, making this southwestern Arabian Montane Woodlands ecoregion a Biodiversity Hotspot.

The wetland hosts endemic odonata listed in the IUCN Red List as threatened such as the IUCN-Endangered *Pseudagrion arabicum*, and the IUCN-Vulnerable *Pinheyschna yemenensis*. Other Afrotropical dragonflies include *Anax speratus*, *Orthetrum brevistylum*, and *O. Caffrum*. The site also harbors endemic amphibians such as the Arabian Toad (*Sclerophrys arabicus*), and the Arabian Tree Frog (*Hyla felixarabica*), as well as birds deemed to be of high conservation priority. The recorded bird species include Yemen Trush, Ruppell's Weaver colony nesting on acacia trees, Palestine Sunbird, White-spectacled Bulbul, and Arabian Wheatear, Arabian Partridge, and Arabian Babbler.

The large mayfly swarms actively predated by dragonflies, predatory flies, birds and amphibians suggest substantial biological productivity.

3. Ecosystem Services of Soudah Waterfall include:

3.1 Provisioning Services:

Vital source of drinking water from surrounding wells.

Supports irrigation needs.

Lush vegetation serves as food for livestock.

3.2 Regulating Services:

Contributes to local climate regulation.

Improves air quality and mitigates global warming.

Assists in flood control and water flow regulation.

Acts as a natural filter for sewage and waste decomposition.

3.3 Supporting Services:

Provides habitat for diverse plant and threatened animal species.

Important stopover for wintering and migrating bird species.

Supports pollination processes.

3.4 Cultural Services:

Cultural importance as a source of aesthetic inspiration and cultural education.

Spiritual connection to the natural environment.

Tourism and recreational opportunities including environmental education.

4. Natural variability and change:

Wetland experiences natural variability due to climatic influences and topographical diversity.

Ongoing monitoring is essential to track any shifts in ecological character. Past and current changes may be influenced by climatic variations and human activities.

In summary, Soudah Waterfall is a diverse and vital ecosystem offering various ecological components, dynamic processes, and essential services that contribute to its global significance and cultural importance. Ongoing monitoring is crucial to understand and manage natural variability and address any changes in its ecological character

4.2 - What wetland type(s) are in the site?

Inland wetlands

Wetland types (code and name)	Local name	Ranking of extent (1: greatest - 4: least)	Area (ha) of wetland type	Justification of Criterion 1
Fresh water > Flowing water >> N: Seasonal/intermittent/irregular rivers/streams/creeks	Soudah waterfall	1	1.42	Rare

Other non-wetland habitat

Other non-wetland habitats within the site	Area (ha) if known
Afromontane Juniper Forest	4.83
Arabian Montane scrubland	26.75

4.3 - Biological components

4.3.1 - Plant species

Other noteworthy plant species

Phylum	Scientific name	Position in range / endemism / other
TRACHEOPHYTA/LILIOPSIDA	<i>Aloe vacillans</i>	near endemic
TRACHEOPHYTA/MAGNOLIOPSIDA	<i>Clematis simensis</i>	Rarely recorded climbing vines, which contributes to the unique biodiversity of the high-elevation riparian corridors
TRACHEOPHYTA/MAGNOLIOPSIDA	<i>Rosa abyssinica</i>	montane Afro-Arabian species - characteristic of high elevation moist habitat
TRACHEOPHYTA/MAGNOLIOPSIDA	<i>Salix mucronata subserrata</i>	rare very large tree
TRACHEOPHYTA/MAGNOLIOPSIDA	<i>Stachys schimperi</i>	Rare
TRACHEOPHYTA/MAGNOLIOPSIDA	<i>Vachellia origena</i>	Afro-Arabian endemic, part of the Juniper-Acacia montane assemblage, contributing to the distinct biodiversity of Asir
TRACHEOPHYTA/MAGNOLIOPSIDA	<i>Zehneria scabra</i>	rarely recorded climbing vines

Invasive alien plant species

Phylum	Scientific name	Impacts
TRACHEOPHYTA/MAGNOLIOPSIDA	<i>Argemone ochroleuca</i>	Actual (minor impacts)
TRACHEOPHYTA/MAGNOLIOPSIDA	<i>Cirsium vulgare</i>	Actual (minor impacts)
TRACHEOPHYTA/MAGNOLIOPSIDA	<i>Opuntia ficus-indica</i>	Actual (major impacts)
TRACHEOPHYTA/MAGNOLIOPSIDA	<i>Tagetes minuta</i>	Actual (minor impacts)

4.3.2 - Animal species

Other noteworthy animal species

Phylum	Scientific name	Pop. size	Period of pop. est.	% occurrence	Position in range /endemism/other
ARTHROPODA/INSECTA	<i>Anax imperator</i>				widespread palearctic dragonfly, top predator, indicative of good functioning of the aquatic ecosystem
CHORDATA/AVES	<i>Calandrella blanfordi eremica</i>				Range restricted species, of arid highlands.
CHORDATA/AVES	<i>Crithagra menachensis</i>				Southwestern Arabian endemic, sometimes recorded in Soudah Waterfall
CHORDATA/AVES	<i>Curruca leucomelaena</i>				Regional specialist, characteristic Afro-Arabian shrubland species
CHORDATA/AVES	<i>Oenanthe bottae</i>				Southwestern Arabian endemic
CHORDATA/AVES	<i>Oenanthe lugentoides</i>				Widespread Arabian Endemic
CHORDATA/AVES	<i>Onychognathus tristramii</i>				regional Arabian-Levantine species, not strict endemic
ARTHROPODA/INSECTA	<i>Orthetrum brevistylum</i>				not endemic, neither range-restricted, but predator indicating functioning freshwater trophic interactions
ARTHROPODA/INSECTA	<i>Orthetrum cafferum</i>				widespread species contributing to Odonata species richness
CHORDATA/AVES	<i>Pycnonotus xanthopygos</i>				characteristic bird of southwestern Arabian highlands
CHORDATA/AVES	<i>Turdoides squamiceps</i>				characteristic Arabian species

4.4 - Physical components

4.4.1 - Climate

Climatic region	Subregion
H: Highland	H: Highland (-)

Monsoon system

4.4.2 - Geomorphic setting

a) Minimum elevation above sea level (in metres)

a) Maximum elevation above sea level (in metres)

Entire river basin ☐

Upper part of river basin ☐

Middle part of river basin ☒

Lower part of river basin ☐

More than one river basin ☐

Not in river basin ☐

Coastal ☐

Please name the river basin or basins. If the site lies in a sub-basin, please also name the larger river basin. For a coastal/marine site, please name the sea or ocean.

Wadi Al Azizah basin

4.4.3 - Soil

Mineral ☒

Organic ☐No available information ☐

Are soil types subject to change as a result of changing hydrological conditions (e.g., increased salinity or acidification)? Yes ☐ No ☒

4.4.4 - Water regime

Water permanence

Presence?	
Usually permanent water present	No change

Source of water that maintains character of the site

Presence?	Predominant water source	
Water inputs from groundwater	☒	No change

Water destination

Presence?	
To downstream catchment	No change

Stability of water regime

Presence?	
Water levels fluctuating (including tidal)	No change

Please add any comments on the water regime and its determinants (if relevant). Use this box to explain sites with complex hydrology.

Usually permanent with important seasonal and interannual variations, depending on rainfalls

4.4.5 - Sediment regime

Significant erosion of sediments occurs on the site ☐Significant accretion or deposition of sediments occurs on the site ☐Significant transportation of sediments occurs on or through the site ☐Sediment regime is highly variable, either seasonally or inter-annually ☐Sediment regime unknown ☒

(ECD) Light - reaching wetland

yes

(ECD) Water temperature

11-21 °C (November-January)

4.4.6 - Water pH

Acid (pH<5.5) ☐Circumneutral (pH: 5.5-7.4) ☐Alkaline (pH>7.4) ☒Unknown ☐

4.4.7 - Water salinity

Fresh (<0.5 g/l) ☒Mixohaline (brackish)/Mixosaline (0.5-30 g/l) ☐Euhaline/Eusaline (30-40 g/l) ☐Hyperhaline/Hypersaline (>40 g/l) ☐Unknown ☐

Please provide further information on salinity (optional):

It is around 0.04%

4.4.8 - Dissolved or suspended nutrients in water

Eutrophic ☐Mesotrophic ☐Oligotrophic ☐Dystrophic ☐Unknown ☒

(ECD) Water conductivity 800 µS/cm

4.4.9 - Features of the surrounding area which may affect the Site

Please describe whether, and if so how, the landscape and ecological characteristics in the area surrounding the Ramsar Site differ from the i) broadly similar ☐ ii) significantly different ☒ site itself:

Surrounding area has greater urbanisation or development ☒

Surrounding area has higher human population density ☒

Surrounding area has more intensive agricultural use ☒

Surrounding area has significantly different land cover or habitat types ☒

Please describe other ways in which the surrounding area is different:

The surrounding area is largely covered by agricultural fields, dispersed human settlements and villages

4.5 - Ecosystem services

4.5.1 - Ecosystem services/benefits

Provisioning Services

Ecosystem service	Examples	Importance/Extent/Significance
Food for humans	Sustenance for humans (e.g., fish, molluscs, grains)	Low
Fresh water	Drinking water for humans and/or livestock	Medium
Fresh water	Water for irrigated agriculture	High
Wetland non-food products	Livestock fodder	Medium
Genetic materials	Medicinal products	Low

Regulating Services

Ecosystem service	Examples	Importance/Extent/Significance
Maintenance of hydrological regimes	Groundwater recharge and discharge	Low
Maintenance of hydrological regimes	Storage and delivery of water as part of water supply systems for agriculture and industry	High
Erosion protection	Soil, sediment and nutrient retention	Low
Pollution control and detoxification	Water purification/waste treatment or dilution	Low
Climate regulation	Local climate regulation/buffering of change	Medium
Hazard reduction	Flood control, flood storage	Medium

Cultural Services

Ecosystem service	Examples	Importance/Extent/Significance
Recreation and tourism	Nature observation and nature-based tourism	High
Recreation and tourism	Picnics, outings, touring	Low
Scientific and educational	Long-term monitoring site	Medium

Supporting Services

Ecosystem service	Examples	Importance/Extent/Significance
Biodiversity	Supports a variety of all life forms including plants, animals and microorganisms, the genes they contain, and the ecosystems of which they form a part	High
Pollination	Support for pollinators	High

Other ecosystem service(s) not included above:

N.A.

Within the site: 1000

Outside the site: 100

Have studies or assessments been made of the economic valuation of ecosystem services provided by this Ramsar Site? Yes ☐ No ☒ Unknown ☐

4.5.2 - Social and cultural values

i) the site provides a model of wetland wise use, demonstrating the application of traditional knowledge and methods of management and use that maintain the ecological character of the wetland ☐

- ii) the site has exceptional cultural traditions or records of former civilizations that have influenced the ecological character of the wetland

☐
- iii) the ecological character of the wetland depends on its interaction with local communities or indigenous peoples

☐
- iv) relevant non-material values such as sacred sites are present and their existence is strongly linked with the maintenance of the ecological character of the wetland

☐

<no data available>

4.6 - Ecological processes

(ECD) Animal reproductive productivity	Large swarms of mayflies have been recorded
(ECD) Notable species interactions, including grazing, predation, competition, diseases and pathogens	1) regular grazing by a herd of 100 goats and sheep. 2) Predation by birds, amphibians, reptiles, and predatory invertebrates. 3) Pollination by butterflies and bees. 4) Competition among predators and grazers. 5)Dispersal of seeds by mammals and birds.
(ECD) Notable aspects concerning migration	The geographical positioning of Soudah Waterfall at the crossroads of significant avian flyways amplifies its importance as a crucial hub for migratory birds. Notable aspects concerning migration in Soudah waterfall underscore the wetland's pivotal role i

5 - How is the Site managed? (Conservation and management)

5.1 - Land tenure and responsibilities (Managers)

5.1.1 - Land tenure/ownership

Public ownership

Category	Within the Ramsar Site	In the surrounding area
Public land (unspecified)	☒	☐

Private ownership

Category	Within the Ramsar Site	In the surrounding area
Other types of private/individual owner(s)	☐	☒

Provide further information on the land tenure / ownership regime (optional):

Up to 2023, Soudah waterfall has open access, and was used by the public for recreation, picnic, hiking. The whole area has been fenced, and the main access closed in 2023 by Soudah Development for rewilding. The site is de facto currently managed by Soudah Development.

5.1.2 - Management authority

Please list the local office / offices of any agency or organization responsible for managing the site:

- National Center for Vegetation Cover (NCVC)
- Soudah Development

Provide the name and/or title of the person or people with responsibility for the wetland:

Dr. Jacky Judas (as contact person for Soudah Development)

Postal address:

9455 – Unit Number 1
AS SUDAH 62532 – 2099 (ABHA – Kingdom of Saudi Arabia)

E-mail address:

jjudas@soudah.sa

5.2 - Ecological character threats and responses (Management)

5.2.1 - Factors (actual or likely) adversely affecting the Site's ecological character

Human settlements (non agricultural)

Factors adversely affecting site	Actual threat	Potential threat	Within the site	In the surrounding area
Housing and urban areas	Medium impact	Medium impact	☐	☒

Water regulation

Factors adversely affecting site	Actual threat	Potential threat	Within the site	In the surrounding area
Water abstraction	Medium impact	unknown impact	☒	☒
Water releases	unknown impact	unknown impact	☐	☒

Agriculture and aquaculture

Factors adversely affecting site	Actual threat	Potential threat	Within the site	In the surrounding area
Livestock farming and ranching	Medium impact	unknown impact	☒	☒

Transportation and service corridors

Factors adversely affecting site	Actual threat	Potential threat	Within the site	In the surrounding area
Roads and railroads	Low impact	Low impact	☐	☒

Biological resource use

Factors adversely affecting site	Actual threat	Potential threat	Within the site	In the surrounding area
Hunting and collecting terrestrial animals	unknown impact	unknown impact	☒	☒
Gathering terrestrial plants	unknown impact	unknown impact	☒	☒

Human intrusions and disturbance

Factors adversely affecting site	Actual threat	Potential threat	Within the site	In the surrounding area
Recreational and tourism activities	Medium impact	High impact	☒	☐

Natural system modifications

Factors adversely affecting site	Actual threat	Potential threat	Within the site	In the surrounding area
Dams and water management/use	Medium impact	unknown impact	☐	☒

Invasive and other problematic species and genes

Factors adversely affecting site	Actual threat	Potential threat	Within the site	In the surrounding area
Invasive non-native/ alien species	Medium impact	High impact	☒	☒

Pollution

Factors adversely affecting site	Actual threat	Potential threat	Within the site	In the surrounding area
Household sewage, urban waste water	unknown impact	unknown impact	☐	☒
Agricultural and forestry effluents	unknown impact	unknown impact	☐	☒
Garbage and solid waste	Low impact	Medium impact	☒	☒

Climate change and severe weather

Factors adversely affecting site	Actual threat	Potential threat	Within the site	In the surrounding area
Droughts	Medium impact	High impact	☒	☒
Storms and flooding	unknown impact	unknown impact	☒	☒

Please describe any other threats (optional):

The wetland faces water pollution issues, particularly from plastic debris and possible pesticide contamination. These pollutants pose a threat to water quality, aquatic life, and the ecological balance of the wetland. It remains uncertain whether wastewater is discharged directly into the wadis.

The tourism industry's increased demand for water resources caused by proposed activities such as golf courses and aqua parks, if unregulated, will prove to be an ecological challenge. Increased water use can affect the availability of water for wetland ecosystems and local flora and fauna.

Water resources are threatened as upstream irrigation diverts significant flows away from the natural cascade, reducing both water quantity and ecological vitality.

The area may experience significant ecological impacts from human activities. Interactions with the environment, such as water withdrawals for agriculture, the introduction of non-native species, the construction of terraces and road development may affect the vegetation of the region as a whole. Most importantly, these activities damage the subsurface through vehicle movement, altered the natural landscape, and disrupted local ecosystems.

The pristine beauty of Soudah Waterfall is facing an increasing threat in the form of pollution, primarily due to human activity. The downstream area has accumulated plastic bottles and litter, including paper and plastic, left behind by visitors and campers (outside the fenced area). This waste poses a threat to the ecological balance of the waterfall and its surroundings. The presence of plastics can have a detrimental effect on aquatic life and disrupt the wetland's fragile ecosystem. In addition, the impact of camping activities, such as the improper disposal of waste, contributes to the pollution of the area. Nearby agricultural activities can also play a role by introducing pollutants that can enter the water system. To preserve the ecological character of Soudah Waterfall and maintain its status as a haven of biodiversity and natural beauty, it is important to address these pollution issues. Adopting sustainable tourism practices, waste management strategies, and raising awareness of the impact of human activities on the environment are crucial steps to mitigate these threats.

The effects of climate change are evident in the severe dieback of juniper trees, as documented by El-Juhani (2015) and Warrag et al. (2019). This phenomenon exacerbates ecological stress on the wetland. In light of these multiple human-induced impacts, the need for sustainable management and conservation measures is emphasized, as well as the need to maintain the ecological integrity of the wetland

5.2.2 - Legal conservation status

Non-statutory designations

Designation type	Name of area	Online information url	Overlap with Ramsar Site
Other non-statutory designation	Soudah waterfall rewilding area		whole

5.2.3 - IUCN protected areas categories (2008)

- Ia Strict Nature Reserve ☐
- Ib Wilderness Area: protected area managed mainly for wilderness protection ☐
- II National Park: protected area managed mainly for ecosystem protection and recreation ☐
- III Natural Monument: protected area managed mainly for conservation of specific natural features ☐
- IV Habitat/Species Management Area: protected area managed mainly for conservation through management intervention ☒
- V Protected Landscape/Seascape: protected area managed mainly for landscape/seascape conservation and recreation ☐
- VI Managed Resource Protected Area: protected area managed mainly for the sustainable use of natural ecosystems ☐

5.2.4 - Key conservation measures

Legal protection

Measures	Status
Legal protection	Proposed

Human Activities

Measures	Status
Regulation/management of wastes	Partially implemented
Livestock management/exclusion (excluding fisheries)	Partially implemented
Regulation/management of recreational activities	Partially implemented
Research	Partially implemented

Other:

- Closed for rewilding by Soudah Development Board of Director decree
- Cleaning of solid wastes
- Removal of invasive cactus (*Opuntia* sp.)
- Biodiversity inventory and monitoring
- Access control by fencing to minimize disturbance

5.2.5 - Management planning

Is there a site-specific management plan for the site? Yes

Has a management effectiveness assessment been undertaken for the site? Yes ☐ No ☒

If the site is a formal transboundary site as indicated in section Data and location > Site location, are there shared management planning processes with another Contracting Party? Yes ☐ No ☒

Please indicate if a Ramsar centre, other educational or visitor facility, or an educational or visitor programme is associated with the site:

no

5.2.6 - Planning for restoration

Is there a site-specific restoration plan? No, but restoration is needed

Further information

restoration is needed to control the quick regrowth of cactus after intervention (after 2-3 Years)

5.2.7 - Monitoring implemented or proposed

Monitoring	Status
Birds	Implemented
Animal species (please specify)	Implemented

Camera traps have been in function for 3 years to monitor presence of medium to large size mammals. Punctual field surveys have been conducted to build on the species inventory of the site, including plants, Odonata, Butterflies, reptiles, amphibians, bats and small mammals. Water quality (pH, temperature, conductivity) is measured every quarter.

6 - Additional material

6.1 - Additional reports and documents

6.1.1 - Bibliographical references

Boudot, J.-P., Borisov, S., De Knijf, G., van Grunsven, R.H.A., Schröter, A. & Kalkman, V.J. (2021). Atlas of the Dragonflies and Damselflies of West and Central Asia. *Brachytron*, 22 (Supplement): 3–248.

Burriel-Carranza B., Mazuch T., Estarellas M., Talavera A., Riano G., Koppetsch T., Tamar K., Tejero-Cicuendez H., Al Saadi S., Busais S., Kratochvil L., Shobrak M., Šmid J. & S.Carranza. 2023. *Pristurus guweirensis* Haas, 1943 (Gekkota: Sphaerodactylidae): the most abundant and widely distributed species of *Pristurus* previously referred to as *Pristurus* sp. *Zootaxa* 5297 (4):594-599

Waldhauser M., Müller O., Vier straete A. & Schneider T. 2023. *Pinheyschna yemenensis* (Waterston, 1984) new species for Saudi Arabia, with description of larval final instar and exuvia (Odonata: Aeshnidae). *Odonatologica* 52: 79-87

Waterston A.R. 1980. Insects of Saudi Arabia. Odonata. Fauna of Saudi Arabia 2:57-70.

6.1.2 - Additional reports and documents

i. taxonomic lists of plant and animal species occurring in the site (see section 4.3)

<1 file(s) uploaded>

ii. a detailed Ecological Character Description (ECD) (in a national format)

<no file available>

iii. a description of the site in a national or regional wetland inventory

<no file available>

iv. relevant Article 3.2 reports

<no file available>

v. site management plan

<1 file(s) uploaded>

vi. other published literature

<no file available>

6.1.3 - Photograph(s) of the Site

Please provide at least one photograph of the site:



general view of the valley ([Jacky Judas, 31-05-2022](#))



wadi bed in the central part of the site, where linear green vegetation benefits from flowing water and ponds ([Jacky Judas, 31-05-2022](#))



slowly flowing water during dry season. preferred habitat of the Endangered *Pseudagrion arabicum* ([Jacky Judas, 01-11-2021](#))



Permanent pond on the upper part of the site ([Jacky Judas, 22-10-2021](#))



Permanent pond in the upper part of the site ([Jacky Judas, 29-09-2022](#))



dry slopes surrounding the wetland ([Jacky Judas, 31-05-2022](#))

6.1.4 - Designation letter and related data

Designation letter

<1 file(s) uploaded>

Date of Designation