From raw data to Red List:

The Red List assessment process

WHAT IS A RED LIST ASSESSMENT?

IUCN Red List assessment: an estimate of extinction risk

What is the likelihood of a species becoming extinct in the near future, given current knowledge about **population trends**, **range**, and recent, current or projected **threats**?

It is not a list of species that are priorities for conservation action

Giraffe

Giraffa camelopardalis

ABSTRACT

Giraffe *Giraffa camelopardalis* has most recently been assessed for *The IUCN Red List of Threatened Species* in 2016. *Giraffa camelopardalis* is listed as Vulnerable under criteria A2acd.

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THE RED LIST ASSESSMENT

Muller, Z., Bercovitch, F., Brand, R., Brown, D., Brown, M., Bolger, D., Carter, K., Deacon, F., Doherty, J.B., Fennessy, J., Fenness...

NOT EVALUATED NE | DATA DEFICIENT DD | LEAST CONCERN LC | NEAR THREATENED NT | VULNERABLE VU | ENDANGERED EN | CRITICALLY ENDANGERED CR | EXTINCT IN THE WILD EW | EXTINCT EX

LAST ASSESSED
09 July 2016

SCOPE OF ASSESSMENT
Global

Assessment in detail

POPULATION TREND
Decreasing

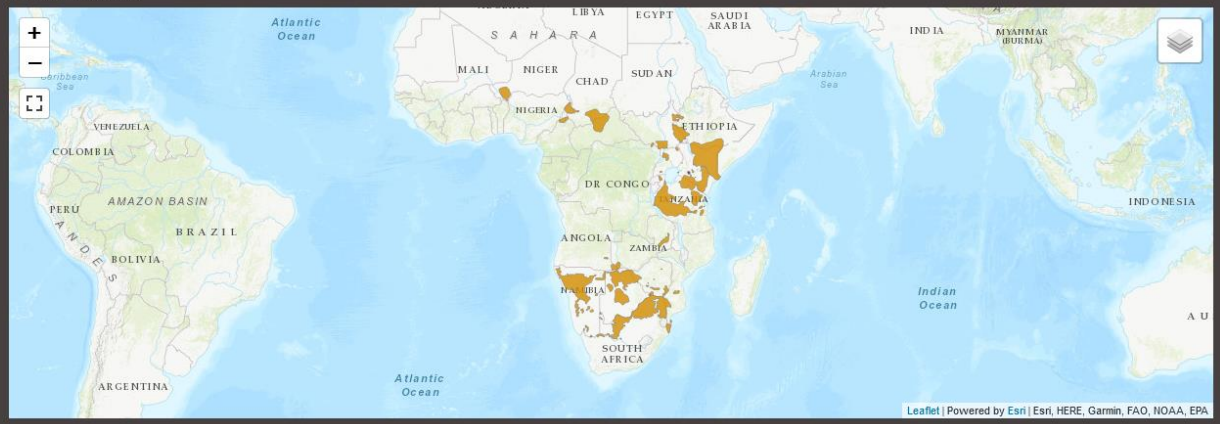
NUMBER OF MATURE INDIVIDUALS
68,293

Population in detail

HABITAT AND ECOLOGY
Forest, Savanna, Shrubland

Habitat and ecology in detail

GEOGRAPHIC RANGE



EXTANT (RESIDENT)
EXTANT & INTRODUCED (RESIDENT)

IUCN (International Union for Conservation of Nature) 2018. Giraffa camelopardalis. The IUCN Red List of Threatened Species. Version 2021-3

Geographic range in detail

Giraffe

Giraffa camelopardalis

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Muller, Z., Bercovitch, F., Brand, R., Br

NOT EVALUATED NE | DATA DEFICIENT DD | LEAST CONCERN LC

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EXTANT & INTRODUCED (RESIDENT)

feedback

Giraffe

Giraffa camelopardalis

Taxonomic Notes .

The IUCN SSC Giraffe and Okapi Specialist Group (GOSG) currently recognizes a single species, *Giraffa camelopardalis*. Nine subspecies of Giraffes are currently recognized (Dagg 2014), although some authorities dispute this taxonomic classification (e.g., Groves and Grubb 2011). Several subpopulations of Giraffe, resident in northern Botswana, northwest Zimbabwe, northeastern Namibia and southwestern Zambia, are potentially either *G. c. angolensis*, or *G. c. giraffa* but the continued accumulation of information indicates that a future reassessment might be in order. Until an extensive reassessment of the taxonomic status of giraffes is completed, therefore, it is premature to alter the taxonomic *status quo*. This assessment is based upon an interim consensus that a single species of giraffes is resident on the African continent.

Justification

Giraffe (*Giraffa camelopardalis*) is assessed as Vulnerable under criterion A2 due to an observed, past (and ongoing) population decline of 36-40% over three generations (30 years, 1985-2015). The factors causing this decline (levels of exploitation and decline in area of occupancy and habitat quality) have not ceased and may not be reversible throughout the species' range. The best available estimates indicate a total population in 1985 of 151,702-163,452 Giraffes (106,191-114,416 mature individuals), and in 2015 a total population of 97,562 Giraffes (68,293 mature individuals). Historically the species has been overlooked in terms of research and conservation, but in the past five years, considerable progress has been made in compiling and producing a species-wide assessment of population size and distribution by the members of the IUCN SSC Giraffe and Okapi Specialist Group. Some Giraffe populations are stable or increasing, while others are declining, and each population is subject to pressure by threats specific to their local country or region. The populations of Giraffes are scattered and fragmented with different

Giraffe

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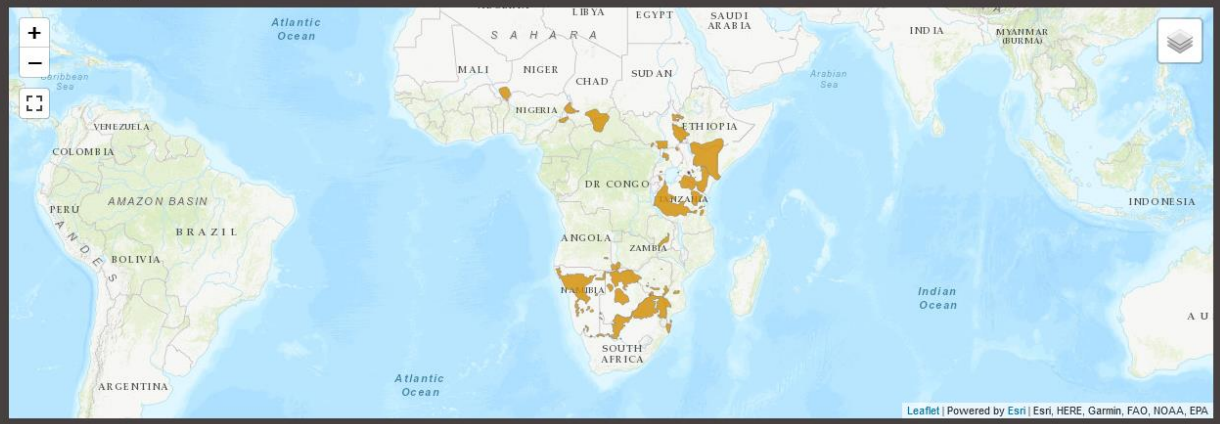
Habitat and ecology in detail

GEOGRAPHIC RANGE



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EXTANT & INTRODUCED (RESIDENT)

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Geographic range in detail

Taxonomy

KINGDOM
Animalia

PHYLUM
Chordata

CLASS
Mammalia

ORDER
Cetartiodactyla

FAMILY
Giraffidae

GENUS
Giraffa

Taxonomy in detail

SCIENTIFIC NAME
Giraffa camelopardalis

AUTHORITY
(Linnaeus, 1758)

SYNONYMS
Cervus camelopardalis Linnaeus, 1758

COMMON NAMES
English
Giraffe
French
Girafe
Spanish; Castilian
Jirafa
Afrikaans
Kameelperd
German
Giraffe
Swahili
Twiga

INFRA-SPECIFIC TAXA ASSESSED
Giraffa camelopardalis ssp. angolensis
Giraffa camelopardalis ssp. antiquorum
Giraffa camelopardalis ssp. camelopardalis
Giraffa camelopardalis ssp. peralta
Giraffa camelopardalis ssp. reticulata
Giraffa camelopardalis ssp. rothschildi
Giraffa camelopardalis ssp. thornicrofti
Giraffa camelopardalis ssp. tippelskirchi

TAXONOMIC SOURCES

IDENTIFICATION INFORMATION

TAXONOMIC NOTES
The IUCN SSC Giraffe and Okapi Specialist Group (GOSG) currently recognizes a single species, *Giraffa camelopardalis*. Nine subspecies of Giraffes are currently recognized (Dagg 2014), although some authorities dispute this taxonomic classification (e.g., Groves and Grubb 2011). Several subpopulations of Giraffe, resident in northern Botswana, northwest Zimbabwe, northeastern Namibia and southwestern Zambia, are potentially either *G. c. angolensis*, or *G. c. giraffa* but the continued accumulation of information indicates that a future reassessment might be in order. Until an extensive reassessment of the taxonomic status of giraffes is completed, therefore, it is premature to alter the taxonomic *status quo*. This assessment is based upon an interim consensus that a single species of giraffes is resident on the African continent.

Assessment Information

IUCN RED LIST CATEGORY AND CRITERIA

Vulnerable A2acd

ver 3.1

DATE ASSESSED

09 July 2016

YEAR PUBLISHED

2018

Assessment Information in detail

YEAR LAST SEEN

PREVIOUSLY PUBLISHED RED LIST ASSESSMENTS

2016 — Vulnerable (VU)
2010 — Least Concern (LC)
2008 — Least Concern (LC)
1996 — Lower Risk/conservation dependent (LR/CD)

REGIONAL ASSESSMENTS

ASSESSOR(S)

Muller, Z., Bercovitch, F., Brand, R., Brown, D., Brown, M., Bolger, D., Carter, K., Deacon, F., Doherty, J.B., Fennessy, J., Fennessy, S., Hussein, A.A., Lee, D., Marais, A., Strauss, M., Tutchings, A. & Wube, T.

REVIEWER(S)

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FACILITATOR(S) / COMPILER(S)

JUSTIFICATION

Giraffe (*Giraffa camelopardalis*) is assessed as Vulnerable under criterion A2 due to an observed, past (and ongoing) population decline of 36-40% over three generations (30 years, 1985-2015). The factors causing this decline (levels of exploitation and decline in area of occupancy and habitat quality) have not ceased and may not be reversible throughout the species' range. The best available estimates indicate a total population in 1985 of 151,702-163,452 Giraffes (106,191-114,416 mature individuals), and in 2015 a total population of 97,562 Giraffes (68,293 mature individuals). Historically the species has been overlooked in terms of research and conservation, but in the past five years, considerable progress has been made in compiling and producing a species-wide assessment of population size and distribution by the members of the IUCN SSC Giraffe and Okapi Specialist Group. Some Giraffe populations are stable or increasing, while others are declining, and each population is subject to pressure by threats specific to their local country or region. The populations of Giraffes are scattered and fragmented with different growth trajectories and threats, but the species trend reveals an overall large decline in numbers across their range in Africa.

Geographic Range

NATIVE

Extant (resident)

Angola; Botswana; Cameroon; Central African Republic; Chad; Congo, The Democratic Republic of the; Ethiopia; Kenya; Mozambique; Namibia; Niger; Somalia; South Africa; South Sudan; Tanzania, United Republic of; Uganda; Zambia; Zimbabwe

Possibly Extinct

Mali

Extinct

Eritrea; Guinea; Mauritania; Nigeria; Senegal

Extant & Introduced

Eswatini; Rwanda

Extinct & Vagrant

Burkina Faso; Malawi

NUMBER OF LOCATIONS

UPPER ELEVATION LIMIT

LOWER ELEVATION LIMIT

Geographic Range in detail

ESTIMATED AREA OF OCCUPANCY (AOO) (KM²)

CONTINUING DECLINE IN AREA OF OCCUPANCY (AOO)

EXTREME FLUCTUATIONS IN AREA OF OCCUPANCY (AOO)

ESTIMATED EXTENT OF OCCURRENCE (EOO) (KM²)

CONTINUING DECLINE IN EXTENT OF OCCURRENCE (EOO)

EXTREME FLUCTUATIONS IN EXTENT OF OCCURRENCE (EOO)

CONTINUING DECLINE IN NUMBER OF LOCATIONS

EXTREME FLUCTUATIONS IN THE NUMBER OF LOCATIONS

RANGE DESCRIPTION

This species is the world's tallest land mammal and remains widespread across southern and eastern Africa, with smaller isolated populations in west and central Africa. Giraffes inhabit eighteen African countries and have been reintroduced to three others (Malawi, Rwanda, and Swaziland). Giraffes from South Africa have been introduced to Senegal. Giraffes appear to have gone extinct in at least seven countries (Burkina Faso, Eritrea, Guinea, Mali, Mauritania, Nigeria and Senegal). Giraffes have adapted to a variety of habitats, ranging from desert landscapes to woodland/savanna environments, but live in non-continuous, fragmented populations across sub-Saharan Africa.

Table 1 in the Supplementary Material summarizes the current conservation status of the nine subspecies. West African Giraffes (*Giraffa c. peralta*) are limited to an isolated population in the south-western corner of Niger and in 2008 this subspecies was categorized as Endangered on The IUCN Red List (Fennessy and Brown 2008). In Central Africa, *G. c. antiquorum* inhabit Cameroon, Central African Republic, Chad, Democratic Republic of Congo and South Sudan. East Africa is home to four subspecies of Giraffes, with three of them living in Kenya. *G. c. camelopardalis* occurs in both South Sudan and Ethiopia, although information regarding the area of occupancy of this population of Giraffes is limited. Giraffes living in north-eastern Kenya, and across the borders in south-eastern Ethiopia and south-western Somalia, are *G. c. reticulata*, those living in Uganda and introduced to central and southwest Kenya are categorized as *G. c. rothschildi* – and in 2010 this subspecies was categorized by the IUCN Red List as Endangered (Fennessy and Brenneman 2010), and those in southern Kenya, along with large tracts of Tanzania, are considered to be *G. c. tippelskirchi*. In Southern Africa, the population living in the Luangwa Valley, Zambia, is *G. c. thornicrofti*. Angola, southern and northern Botswana, Mozambique, northeast Namibia, South Africa, and southwest Zambia are home to *G. c. giraffa*, whilst *G. c. angolensis* occurs in central Botswana and Namibia. Confusion still exists as to whether the giraffes in northern Botswana, north-eastern Namibia, south-western Zambia and north-western Zimbabwe are *G. c. angolensis* or *G. c. giraffa*, and for purposes of establishing the total population counts and trends here are lumped into *G. c. angolensis*.

Population

CURRENT POPULATION TREND

Decreasing

NUMBER OF MATURE INDIVIDUALS

68,293

POPULATION SEVERELY FRAGMENTED

No

CONTINUING DECLINE OF MATURE INDIVIDUALS

Yes

Population in detail

EXTREME FLUCTUATIONS

NO. OF SUBPOPULATIONS

CONTINUING DECLINE IN SUBPOPULATIONS

EXTREME FLUCTUATIONS IN SUBPOPULATIONS

ALL INDIVIDUALS IN ONE SUBPOPULATION

NO. OF INDIVIDUALS IN LARGEST SUBPOPULATION

DESCRIPTION

Historically this species has been overlooked in terms of research and conservation, but in the past five years, considerable progress has been made in compiling and producing a species-wide assessment of population size and distribution by members of the IUCN SSC Giraffe and Okapi Specialist Group (IUCN SSC GOSG).

The generation length calculated by Pacifici *et al.* (2013) is not based upon lifetime data from field work. They report maximum longevity of 37.4 years, despite the consensus among field biologists that Giraffes live for less than 30 years in the wild (Dagg and Foster 1982, Estes 1991, du Toit 2009, Bercovitch and Berry 2010b). They suggest a reproductive lifespan of 32.4 years, which surpasses the interval between average age at first birth in the wild (6.4 years, Bercovitch and Berry 2010b) and the oldest documented age at giving birth in the wild (24 years, Bercovitch and Berry 2010b). Given that no age-specific reproductive rates have been published for Giraffes in the wild, and that the only lifetime data to have been published indicates a maximum breeding lifespan of less than 18 years, the IUCN SSC GOSG consensus is that a generation length of 14.4 years is inaccurate and assumes a more likely generation length of 10 years. Therefore this assessment is based upon the best information available from the last 30 years (1985-2015). However, because the species resides in discrete subpopulations living in different regions of Africa that have not been the subject of a systematic survey from a single date, we have based historic estimates on the best available information for each subspecies that was obtained the closest in time to 1985 (three generations).

Historic and current estimates adopted a variety of methods that included both aerial and ground surveys, as well as photographic capture/re-capture, interviews and best estimates. Therefore, whilst the accuracy and quality of the data are somewhat inconsistent, the population counts contain the most reliable information currently available. The historical and current estimates of population size in all nine recognized subspecies, and the global totals are summarized in Table 1 (see the Supplementary Material). Several populations of Giraffe, resident in northern Botswana, northwest Zimbabwe, northeastern Namibia and southwestern Zambia, are potentially either *Giraffa c. angolensis*, or *G. c. giraffa*. These are provisionally lumped into *G. c. angolensis* for purposes of establishing the total population counts, pending further taxonomic research.

These estimates show in total that numbers were 151,702-163,452 in 1985 and 97,562 in 2015. The IUCN SSC GOSG pan-African database revealed that approximately 70% of individuals within a population could be considered ‘mature’ for status assessment purposes (IUCN SSC GOSG meeting, August 2015). These figures therefore represent approximately 106,191-114,416 mature individuals in 1985 and 68,293 in 2015, representing a decline of 36-40% in the number of mature individuals over the three generations. The factors causing observed population declines (levels of exploitation and decline in area of occupancy) have not ceased and may not be reversible throughout the species’ range. Some Giraffe populations are stable or increasing, while others are declining, and each population is subject to pressure from threats specific to their local country or region, but the species-level trend reveals an overall large decline in numbers across their range in Africa.

Habitat and Ecology

SYSTEM

Terrestrial

HABITAT TYPE

Shrubland, Savanna, Forest

GENERATION LENGTH (YEARS)

10 years

CONTINUING DECLINE IN AREA, EXTENT AND/OR QUALITY OF HABITAT

CONGREGATORY

MOVEMENT PATTERNS

Habitat and Ecology in detail

HABITAT AND ECOLOGY

About one million years ago, multiple ungulate species, including at least three Giraffe species, spread over the African continent along with the emerging savanna/woodland biome (Mitchell and Skinner 2003, Robinson 2011). But between 600,000 and 800,000 years ago, only a single species, *Giraffa camelopardalis*, is found in the fossil record. The adaptive radiation of Giraffes across Africa occurred during a period of environmental instability, climate change, and geological upheavals that produced distinctive lineages living in mostly disconnected areas of Africa (Bock *et al.* 2014, Fennessy *et al.* 2013, Groves and Grubb 2011, Brown *et al.* 2007, Hassanin *et al.* 2007). Continued natural, as well as human-induced, changes in habitat have yielded a suture zone in Eastern Africa, as well as possibly Northern and Southern Africa, that impedes our ability to mark specific boundaries between the various kinds of Giraffes. Hence, Giraffes evolved an ability to adapt to a variety of ecosystems and, as they did so, lineages emerged in different regions where they evolved distinctive characteristics, but whether these traits are significant enough to consider the differences as species or subspecies is unclear at the moment.

Giraffes are most often found in savanna/woodland habitats, but range widely throughout Africa. They are browsers that subsist on a variable diet that includes leaves, stems, flowers, and fruits. They do not need to drink on a daily basis. Across the continent, detailed records of Giraffe feeding ecology have noted that each population has a very diverse diet of up to 93 different species, but that usually a half dozen plant species comprise at least 75% of the diet. *Acacia* is fed on in high proportions wherever Giraffes are found, but during the dry season, the preferred plant species varies by location. *Faidherbia, Boscia, Grewia*, and *Kigelia* have all been identified as the most common plant species in the diet of giraffes in the dry season in different locations. Some populations have seasonal shifts in home ranges.

CLASSIFICATION SCHEME

Habitats		Suitability	Major importance
1. Forest	1.5. Forest - Subtropical/Tropical Dry	Suitable	
2. Savanna	2.1. Savanna - Dry	Suitable	
	2.2. Savanna - Moist	Suitable	
3. Shrubland	3.5. Shrubland - Subtropical/Tropical Dry	Suitable	

Threats

Agriculture & aquaculture

- Annual & perennial non-timber crops
- Livestock farming & ranching

Biological resource use

- Hunting & trapping terrestrial animals

Human intrusions & disturbance

- War, civil unrest & military exercises

Threats in detail

THREATS

Four major threats to Giraffes can be identified, although the severity and presence of these threats varies by region and population: (1) habitat loss (through deforestation, land use conversion, expansion of agricultural activities and human population growth) (2) civil unrest (ethnic violence, rebel militias, paramilitary and military operations), (3) illegal hunting (poaching), and (4) ecological changes (mining activity, habitat conversion to agriculture, climate-induced processes). In Southern Africa, the main perceived threats are habitat loss and conversion of land for human development, and illegal hunting. In West Africa, the main threats are habitat loss due to increasing human populations and human-wildlife conflict. In Eastern and Central Africa the main threats are habitat loss through rapid conversion of land for farming and increasing human populations, drought, illegal hunting for meat and hide, and armed conflict throughout unstable regions.

Some of the highest human fertility rates in the world (>4%) occur in countries where Giraffes are present. Natural habitat changes from weather irregularities result in situations generating human movement, sometimes into protected, or semi-protected, areas. Drought conditions have become more common and increase the prospects of bush fires, loss of habitat, and human population movements. Substantial human population migration also characterizes regions and areas with military operations in giraffe habitats. In some countries (e.g., Namibia, South Africa) the hunting of Giraffes is legal, but Giraffe population sizes there are increasing; in other countries (e.g., Tanzania) the poaching of Giraffes is associated with declines in Giraffe population size. Habitat fragmentation and degradation are probably the most widespread and greatest threats to African wildlife, including Giraffes, often arising as a consequence of mineral extraction and/or habitat conversion to agricultural crops.

CLASSIFICATION SCHEME

Threats			Timing	Stresses		Scope
2. Agriculture & aquaculture	2.1. Annual & perennial non-timber crops	2.1.2. Small-holder farming	Ongoing	1. Ecosystem stresses	1.1. Ecosystem conversion	
	2.3. Livestock farming & ranching	2.3.2. Small-holder grazing, ranching or farming	Ongoing	1. Ecosystem stresses	1.1. Ecosystem conversion	
5. Biological resource use	5.1. Hunting & trapping terrestrial animals	5.1.1. Intentional use (species is the target)	Ongoing	2. Species Stresses	2.1. Species mortality	
6. Human intrusions & disturbance	6.2. War, civil unrest & military exercises		Ongoing	1. Ecosystem stresses	1.1. Ecosystem conversion	
					1.2. Ecosystem degradation	
				2. Species Stresses	2.1. Species mortality	
					2.2. Species disturbance	

Use and Trade

Sport hunting/specimen collecting

Local: ✗ National: ✓ International: ✓

Food - human

Local: ✓ National: ✗ International: ✗

Use and Trade in detail

USE AND TRADE

Legal hunting of Giraffes occurs in parts of southern Africa. Illegal hunting for meat takes place in several parts of the range. There is some trade in live specimens between game ranches in southern Africa.

Conservation Actions

In-place research and monitoring

- Action Recovery Plan : Unknown

In-place land/water protection

- Conservation sites identified : Yes, over entire range
- Occurs in at least one protected area : Yes

In-place species management

- Harvest management plan : Yes
- Successfully reintroduced or introduced benignly : Yes

Conservation Actions in detail

CONSERVATION ACTIONS

Given that some Giraffe populations are increasing, some are decreasing, and one seems to be stable, the conservation actions most useful and appropriate for Giraffes will differ as a function of Giraffe population dynamics, ecological stability, national policies, and legislation. Giraffes are subject to various degrees of legal protection in their range states. Large populations occur in national protected areas and on private farms, but many populations also exist in unprotected and communal areas. The main threats to the conservation of Giraffe populations are habitat loss, encroachment and conversion, and poaching.

Conservation measures typically include habitat management and protection through law enforcement and community based conservation initiatives. Successful protection of habitat and cessation of habitat encroachment with the use of fences and border protection can result in large herds building up within an area. The continued growth of these populations however is limited by the ability of that ecosystem to support a particular number of Giraffes due to space, water and forage availability (i.e., limited carrying capacity).

In Niger, conservation projects and targeted community education and awareness programs have facilitated the re-bounding of the Giraffe population from a low of 49 individuals in the absence of official protected areas. However, habitat loss and drought remain as significant threats in this area. Importantly, the government was the first and remains the only range state to have developed a National Giraffe Conservation Strategy, and through this the conservation of the species has increased nearly eightfold in twenty years.

Kenya is finalising a National Giraffe Conservation Strategy which seeks to identify and implement a number of conservation interventions to conserve the three Giraffe subspecies (*Giraffa reticulata, G. rothschildi, G. tippelskirchi*) in the country. Rothschild's Giraffes are accorded full protection under the Kenyan Wildlife (Conservation and Management) Act (Chapter 376) and in the Republic of Uganda Giraffe are protected under the Game (Preservation and Control) Act of 1959 (Chapter 198) and listed under Part A of the First Schedule of the Act as animals that may not be hunted or captured.

Throughout Eastern and Southern Africa, an increasing number of Giraffe translocations have repopulated former habitats with Giraffes, fostering wildlife enterprises including tourism and consumptive use, and maintaining genetic diversity given small, enclosed and fragmented populations.

Although one of the smallest populations in Africa lives in the Luangwa Valley, Zambia, the population has been stable for a number of years, so intervention as a conservation action is probably not warranted. Instead, continued monitoring of the population, combined with efforts to limit and control mineral extraction and land conversion, would be useful.

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Giraffe

Giraffa camelopardalis

ABSTRACT

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Download | Text Overview

AVAILABLE FILES

- Assessment (PDF)
- Amazing Species (PDF)
- Supplementary Information
- Range data - Polygons (SHP)
- Range map (JPG)

THE RED LIST ASSESSMENT

Muller, Z., Bercovitch, F., Brand, R., Brown, D., Brown, M., Bolger, D., Carter, K., Deacon, F., Doherty, J.B., Fennessy, J., Fenness...

POPULATION TREND

Decreasing

NUMBER OF MATURE INDIVIDUALS

68,293

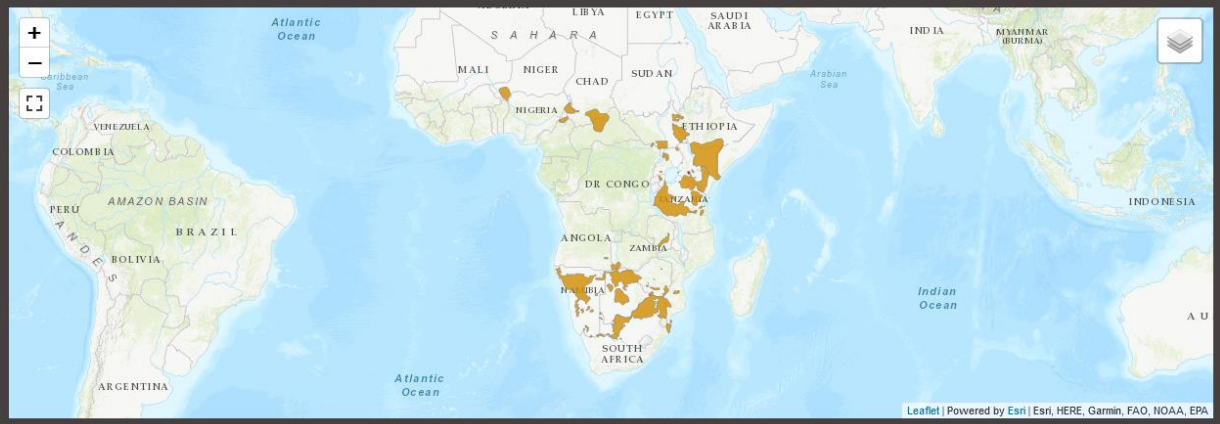
Population in detail

HABITAT AND ECOLOGY

Forest, Savanna, Shrubland

Habitat and ecology in detail

GEOGRAPHIC RANGE



EXTANT (RESIDENT)
EXTANT & INTRODUCED (RESIDENT)

IUCN (International Union for Conservation of Nature) 2018. Giraffa camelopardalis. The IUCN Red List of Threatened Species. Version 2021-3

Geographic range in detail

Components of a Red List assessment

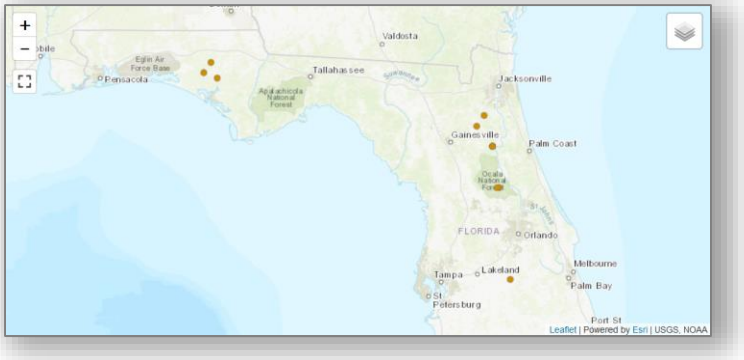
1. Red List category and criteria

- Purple Skimmer *Libellula jesseana*
- **Vulnerable B1ab(iv)**

2. Documentation supporting the category and criteria

- Population size, trend and status; range; threats; conservation measures; etc.

3. Distribution map



What can be assessed?

- **All described taxa:**
  - Species
  - Subspecies
  - Varieties (plants)
  - Subpopulations
  - ~~Microorganisms..???~~

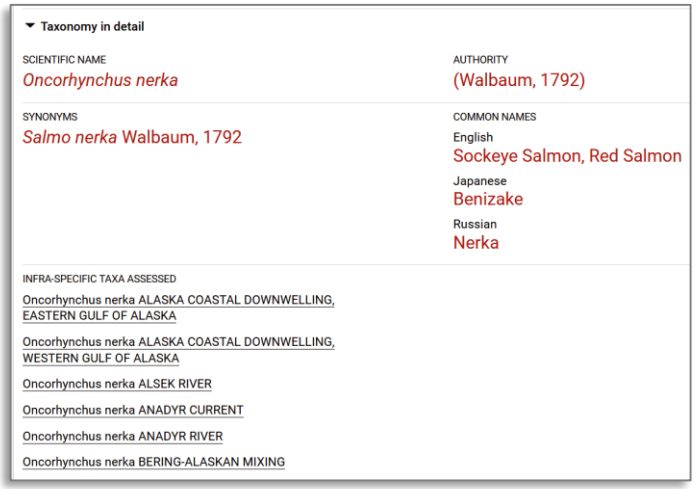
Tiger (*Panthera tigris*)

Sumatran Tiger (*P. t.* sumatrae)

Malayan Tiger (*P. t.* jacksoni)

Amur Tiger (*P. t.* altaica)

- Undescribed taxa, **only if**:
  - Clearly distinct species
  - Voucher references provided
  - Distribution information available
  - Conservation benefit to the assessment



Taxonomy in detail

SCIENTIFIC NAME
Oncorhynchus nerka

AUTHORITY
(Walbaum, 1792)

SYNONYMS
Salmo nerka Walbaum, 1792

COMMON NAMES
English
Sockeye Salmon, Red Salmon
Japanese
Benizake
Russian
Nerka

INFRA-SPECIFIC TAXA ASSESSED
Oncorhynchus nerka ALASKA COASTAL DOWNWELLING, EASTERN GULF OF ALASKA
Oncorhynchus nerka ALASKA COASTAL DOWNWELLING, WESTERN GULF OF ALASKA
Oncorhynchus nerka ALSEK RIVER
Oncorhynchus nerka ANADYR CURRENT
Oncorhynchus nerka ANADYR RIVER
Oncorhynchus nerka BERING-ALASKAN MIXING

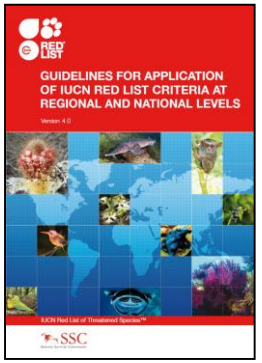
Maui Chaff Flower (*Achyranthes splendens var. splendens)*

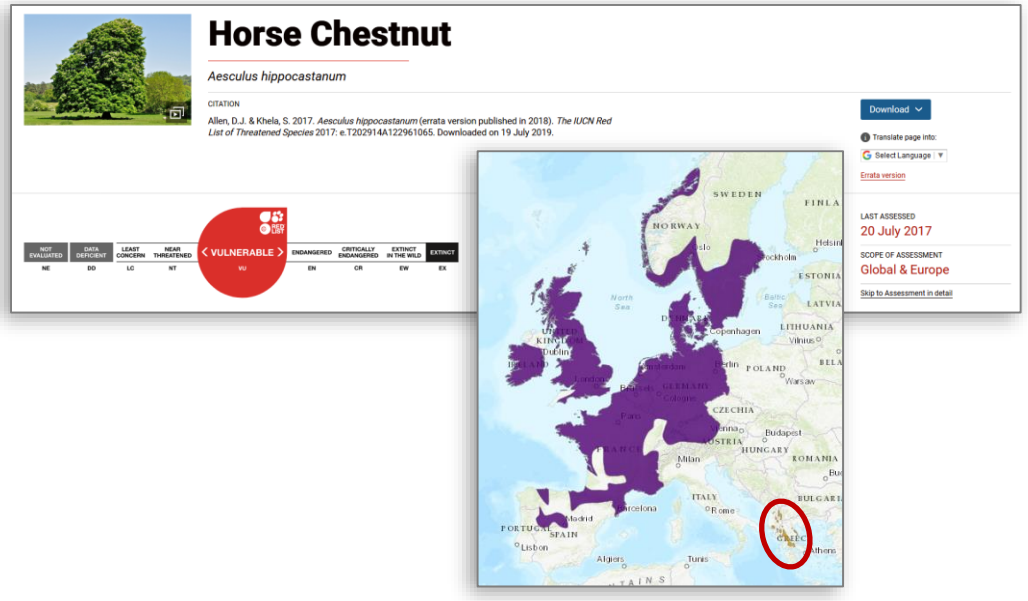
Microorganisms

What can be assessed?

IUCN Red List Categories and Criteria apply to:

- **Global** level assessments
- **Regional and national level** only with the ***Guidelines for Application of IUCN Red List Criteria at Regional Levels***
- **Wild populations** inside their **natural range**, and populations resulting from conservation introductions (also called “benign introductions”)



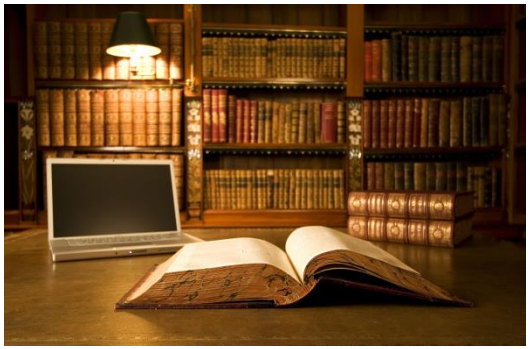


RED LIST ASSESSMENT PROCESS

Who is involved in producing a Red List assessment?

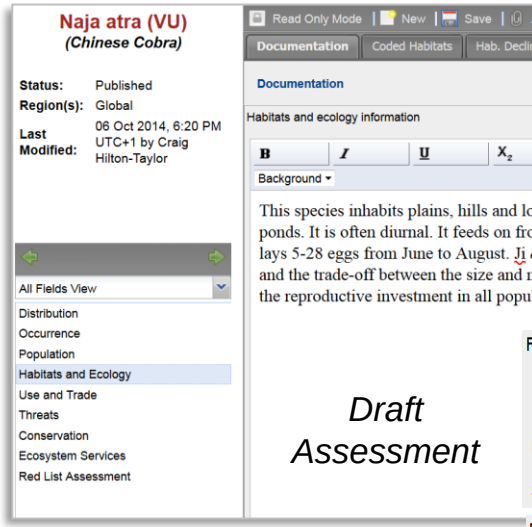
Project Managers	• Coordinate assessment projects; finalize assessments; liaise between assessors/reviewers/IUCN RLU
Assessors	• Provide data; apply the Red List Categories and Criteria considering all relevant data
Contributors (optional)	• Provide data and contribute knowledge to the assessment, but do not apply the Red List C&C
Reviewers	• Review each assessment before publication to ensure data is comprehensive and accurate
IUCN Red List Unit	• Final assessment sign-off; manage Red List database/website; field petitions and enquiries

Assessment Process

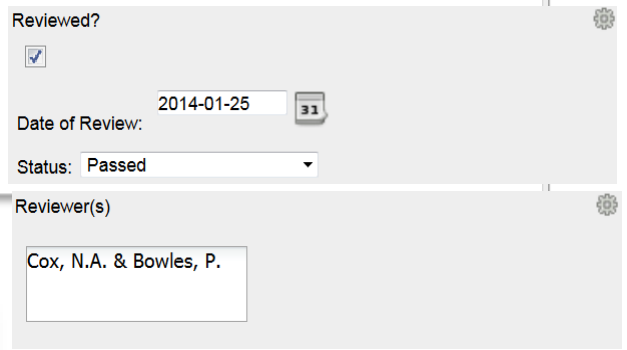


Assessment (workshop or individuals)

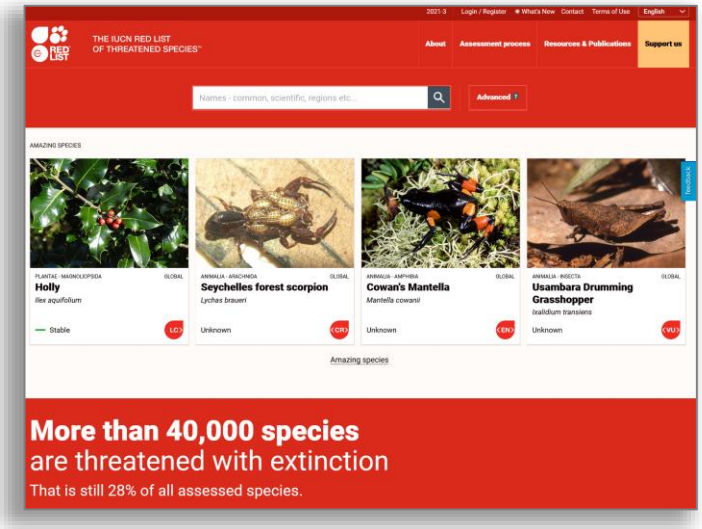
Data compilation



Draft Assessment

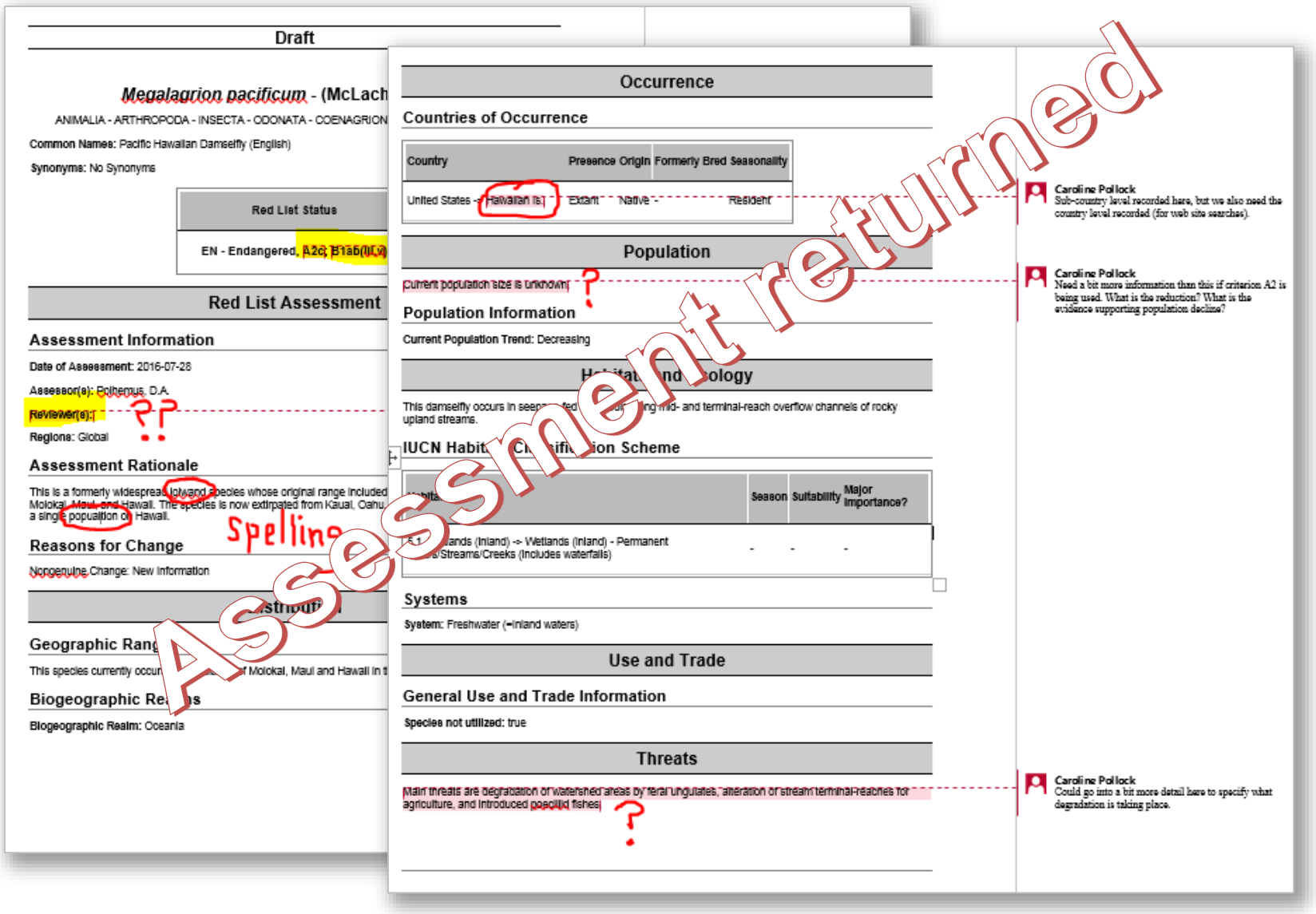


Final Assessment



IUCN Red List Unit

Red List Unit: Final Checks



Essential tools for Red List assessments

www.iucnredlist.org