Workshop on understanding and making use of data outputs from the IUCN PanAfrica FW Biodiversity Assessment

Workshop content

- Reminder why we need information on FW species
- Types of data collated
- Understanding the Red List Categories and Criteria
- Navigating the IUCN Red List Website
- Conducting a species search on the IUCN Red List
- Downloading results of a Red List species search
- Downloading species distributions as shape files
- Understanding how species distribution maps are created
- The online Biobrowser - overview
- Some basic spatial analyses
- Application of data to improved PA design
- Key Biodiversity Areas (KBAs)
- Application to EIAs

Species information collated

- For each species we collated:
  - Taxonomy
  - Distribution - digital maps
  - Population
  - Habitat and Ecology
  - Major threats
  - Utilisation by people
  - Red List status
  - Bibliography….

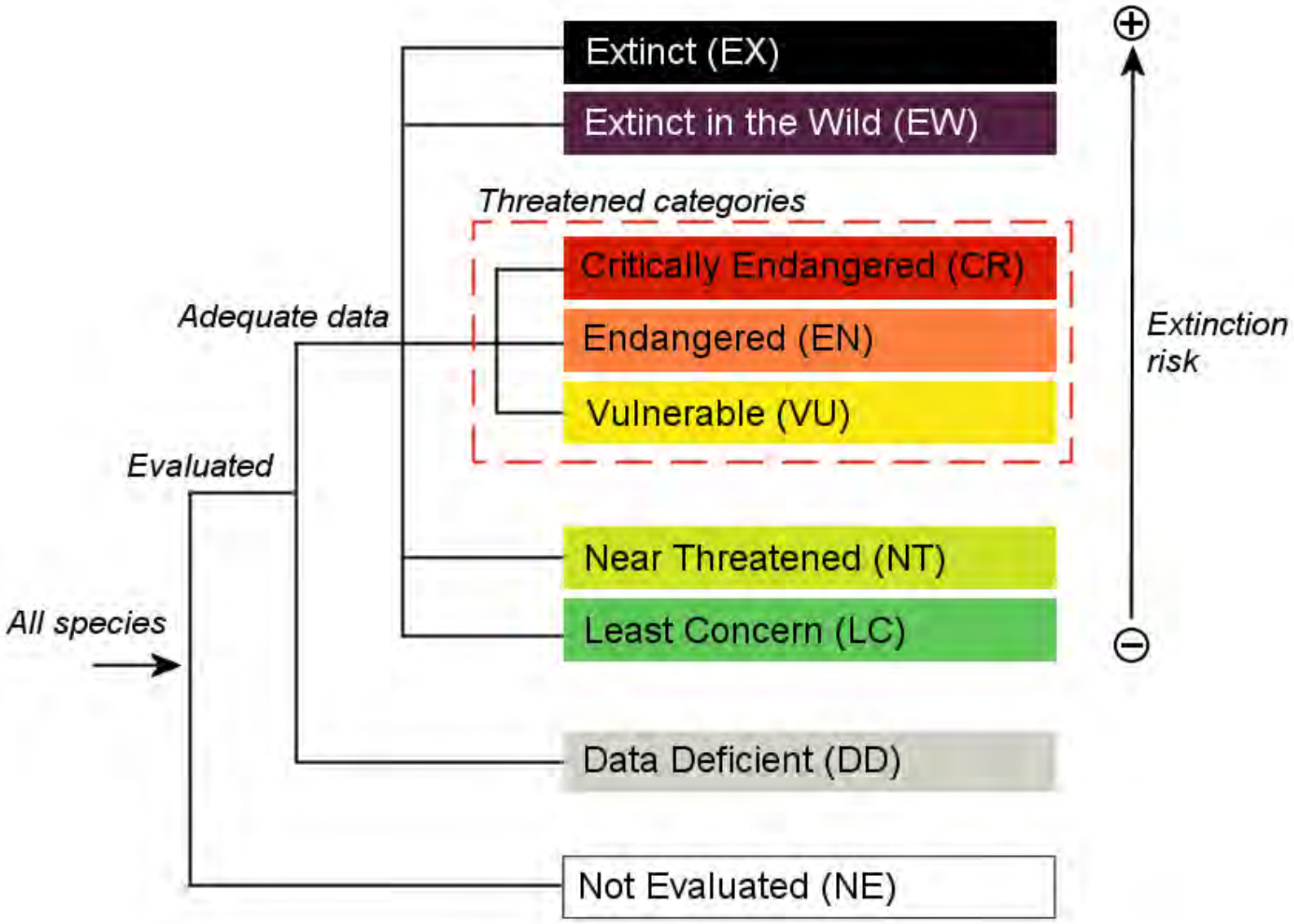
Species Group	# species assessed
Fishes	2831
Molluscs	614
Odonates	709
Crabs	107
Plants	1357
Combined	5618

- Expert reviewed
- Threatened **and** non threatened species recorded

The 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?

Red List Categories of Threat



A taxon is THREATENED when the best available evidence indicates that it meets any of the criteria for either Critically Endangered, Endangered or Vulnerable.

Critically Endangered (CR)

Considered to be facing an extremely high risk of extinction in the wild

Endangered (EN)

Considered to be facing a very high risk of extinction in the wild.

Vulnerable (VU)

Considered to be facing a high risk of extinction in the wild

?

Which category?

Use quantitative criteria (or thresholds) to distinguish between these threatened categories

A taxon that has been evaluated against the criteria but and does not qualify for a Threatened category and is not Extinct or Extinct in the Wild is either:

Near Threatened (NT)

When it is close to qualifying for a threatened category, or is likely to qualify in the near future.

Least Concern (LC)

When it does not qualify for a threatened category or Near Threatened. Widespread and abundant taxa are included in this category.

Data Deficient (DD)

When there is inadequate information to make a direct, or indirect, assessment of its risk of extinction based on its distribution and/or population status. (Taxonomic, lack of information, unknown distribution). It does NOT mean it is not threatened

Red List Categories for Threatened species

Critically Endangered (CR)

CR taxa are considered to be facing an extremely high risk of extinction in the wild

Pangasianodon gigas

Endangered (EN)

EN taxa are considered to be facing a very high risk of extinction in the wild

Austroglanis barnardi

Photo: © SAIAB/Roger Bills

Vulnerable (VU)

VU taxa are considered to be facing a high risk of extinction in the wild

Oreochromis andersonii

Photo: © SAIAB/Denis Tweddle

Nature of the Criteria

CRITERIA

A — Population reduction

B — Restricted geographic range

C — Small population size & decline

D — Very small or restricted population

E — Quantitative analysis

Quantitative thresholds

THREATENED CATEGORIES

- Critically Endangered (CR)
- Endangered (EN)
- Vulnerable (VU)

See 1 page summary sheet for full criteria thresholds:

Use any of the Criteria A–E	Critically Endangered	Endangered	Vulnerable
A. Population reduction	Declines measured over the longer of 10 years or 3 generations		
A1	≥ 90%	≥ 70%	≥ 50%
A2, A3 & A4	≥ 80%	≥ 50%	≥ 30%

A1. Population reduction observed, estimated, inferred, or suspected in the past where the causes of the reduction are clearly reversible **AND** understood **AND** have ceased, based on and specifying any of the following:

(a) direct observation

(b) an index of abundance appropriate to the taxon

(c) a decline in area of occupancy (AOO), extent of occurrence (EOO) and/or habitat quality

(d) actual or potential levels of exploitation

(e) effects of introduced taxa, hybridization, pathogens, pollutants, competitors or parasites.

A2. Population reduction observed, estimated, inferred, or suspected in the past where the causes of reduction may not have ceased **OR** may not be understood **OR** may not be reversible, based on (a) to (e) under A1.

A3. Population reduction projected or suspected to be met in the future (up to a maximum of 100 years) based on (b) to (e) under A1.

A4. An observed, estimated, inferred, projected or suspected population reduction (up to a maximum of 100 years) where the time period must include both the past and the future, and where the causes of reduction may not have ceased **OR** may not be understood **OR** may not be reversible, based on (a) to (e) under A1.

B. Geographic range in the form of either B1 (extent of occurrence) AND/OR B2 (area of occupancy)			
B1. Extent of occurrence (EOO)	< 100 km²	< 5,000 km²	< 20,000 km²
B2. Area of occupancy (AOO)	< 10 km²	< 500 km²	< 2,000 km²
AND at least 2 of the following:			
(a) Severely fragmented, **OR** Number of locations	= 1	< 5	< 10
(b) Continuing decline in any of: (i) extent of occurrence; (ii) area of occupancy; (iii) area, extent and/or quality of habitat; (iv) number of locations or subpopulations; (v) number of mature individuals.			
(c) Extreme fluctuations in any of: (i) extent of occurrence; (ii) area of occupancy; (iii) number of locations or subpopulations; (iv) number of mature individuals.			

C. Small population size and decline			
Number of mature individuals	< 250	< 2,500	< 10,000
AND either C1 or C2:			
C1. An estimated continuing decline of at least:	25% in 3 years or 1 generation	20% in 5 years or 2 generations	10% in 10 years or 3 generations
(up to a max. of 100 years in future)			
C2. A continuing decline **AND** (a) and/or (b):			
(ai) Number of mature individuals in each subpopulation:	< 50	< 250	< 1,000
OR	**OR**		
(aii) % individuals in one subpopulation =	90–100%	95–100%	100%
(b) Extreme fluctuations in the number of mature individuals.			

D. Very small or restricted population			
Either:			
Number of mature individuals	< 50	< 250	**D1.** < 1,000
			AND / OR
	Restricted area of occupancy		**D2.** Typically: AOO < 20 km² or number of locations <5

E. Quantitative Analysis			
Indicating the probability of extinction in the wild to be:	> 50% in 10 years or 3 generations (100 years max.)	> 20% in 20 years or 5 generations (100 years max.)	> 10% in 100 years

Criteria A - Population Reduction:

Sub-criteria	CR	EN	VU
A1 Past decline (& ceased)	> 90 %	> 70 %	> 50 %
A2 Past decline (& NOT ceased)	> 80 %	> 50 %	> 30 %
A3 Future decline			
A4 Past & future			

Time frame:
3 generations or 10 years which ever is longer! (max 100 years)

Decline based on any of:

(a) Direct observation (*not for sub-criterion A3 – future reduction*)

(b) An index of abundance appropriate to the taxon.

(c) A decline in:

- area of occupancy;
- extent of occurrence; and/or
- quality of habitat.

(d) Actual or potential levels of exploitation.

(e) The effects of:

- introduced taxa
- hybridization
- pathogens
- pollutants
- competitors
- parasites

www.iucnredlist.org

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- Amphibians
- Mammals
- Europe
- Mediterranean
- Freshwater

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HELP SAVE SPECIES NOW!

LEAST CONCERN	NEAR THREATENED	VULNERABLE	ENDANGERED	CRITICALLY ENDANGERED	EXTINCT IN THE WILD	EXTINCT
LC	NT	VU	EN	CR	EW	EX

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ARABIAN ORYX
Oryx leucoryx

© D Mallon/Antelope Specialist Group

Amazing Species

Freshwater

on the IUCN Red List

- Assessment Process
- Pan-Africa
- Central Africa
- Eastern Africa
- Northern Africa
- Northeastern Africa
- Southern Africa
- Western Africa
- Description of Data
- Citation and Photos

Freshwater

The Freshwater Biodiversity Unit of the IUCN's Species Programme aims to put in place a factual basis for efforts to conserve and manage freshwater biodiversity.

An estimated 126,000 described species rely on freshwater habitats, including species of fishes, molluscs, reptiles, insects, plants, and mammals. With the inclusion of undescribed species, this number could rise to over one million. [illegible]ss in relation to area of [illegible]mely high in many freshwater groups. Freshwater fishes comprise almost [illegible]5% of all fishes and freshwater molluscs about 25% of all molluscs. An estimated 15,000 fish (including brackishwater species), 4,300 amphibians, 5,600 Odonata (dragonflies and damselflies), and 5,000 mollusc species depend on freshwater habitats. Other major groups dependent upon freshwater include reptiles, insects, plants, and mammals.

The importance of freshwater species, ecosystems and services to human livelihoods and wellbeing is increasingly being recognised, and the FBU works in a number of areas to provide the information to support decisions for the protection of wetland species and livelihoods.

To conserve and manage freshwater biodiversity, the FBU works in conjunction with the SSC's Specialist Groups (including the IUCN/SSC/WI Freshwater Fish Specialist Group, the Dragonfly Specialist Group and the Mollusc Specialist Group), the Species Information Service, the Global Amphibian Assessment Programme, regional scientists, experts in freshwater biodiversity and policy makers. We have a key partnership with Conservation International's Science & Knowledge division, with which we are working to undertake regional and global freshwater assessments.

For further information on any of our projects, please visit our website.

IUCN Red List Status

Continental Africa supports a significant proportion of the world's freshwater species, with fishes particularly well represented.

Estimated numbers of extant inland water-dependent species by major taxonomic group

Taxon	Number of described species	Number of species in Africa	% of global total found in Africa
Fishes	~15,000	2831	19%
Molluscs	~ 5,000	594	12%
Odonates	5,680	709	12%
Crabs	c.1,300	117	9%

Of the 4,526 species endemic to Continental Africa, one fifth are threatened with extinction. The study found that 21% of all freshwater taxa are globally threatened, including 22% of fishes, 28% of molluscs, 23% of crabs, 25% of aquatic plants and 9% of dragonflies and damselflies. These results are the latest released during the International Year of Biodiversity, highlighting the perilous state of our natural environment.

Summary of the IUCN Red List Category classifications at the *global* scale by taxonomic groupings

Taxon	Total	EX	EW	CR	EN	VU	NT	LC	DD
Fishes	2788	0.1%	0%	4%	5%	13%	3%	57%	19%
Molluscs	538	3%	0%	9%	12%	7%	6%	34%	30%
Odonates	625	0%	0%	2%	2%	5%	3%	72%	15%
Crabs	117	0%	0%	2%	9%	12%	2%	55%	20%
Aquatic plants	471	0%	0.2%	6%	5%	13%	8%	49%	18%

IUCN Red List Categories: EX - Extinct, EW - Extinct in the Wild, CR - Critically Endangered, EN - Endangered, VU

Romulea multisulcata © Nick Helme

Geographic Patterns

Centres of species richness

Species distribution maps for fishes, molluscs, odonates and crabs were overlaid to identify those river basins holding the highest richness of species for each taxonomic group.

Oreochromis karongae © Prof. George F. Turner

Aphyosemion thysi

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

Taxonomy [top]

Kingdom	Phylum	Class	Order	Family
ANIMALIA	CHORDATA	ACTINOPTERYGII	CYPRINODONTIFORMES	NOTHOBRANCHIIDAE

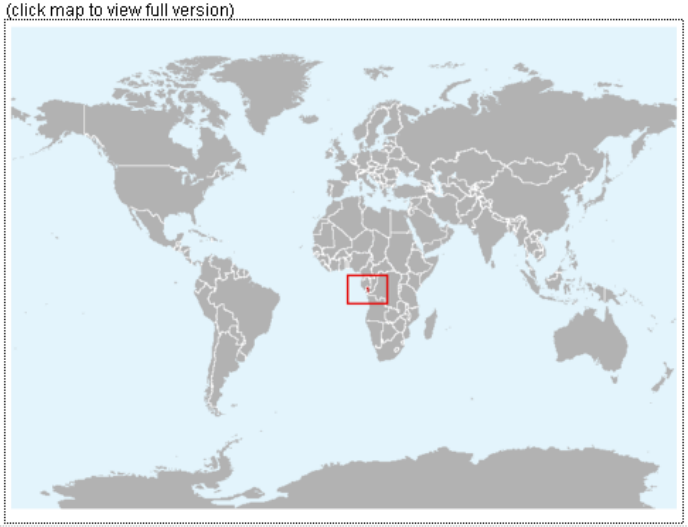
Scientific Name:	*Aphyosemion thysi*
Species Authority:	Radda & Huber, 1978
Taxonomic Notes:	Subgenus (*Mesoaphyosemion*).

Assessment Information [top]

Red List Category & Criteria:	Vulnerable B1ab(iii)+2ab(iii) ver 3.1
Year Assessed:	2009.0
Assessor/s	Moelants, T.
Evaluator/s:	Brummett, R., Mbe Tawe, A.N., Dening Touokong, C., Reid, G.M., Snoeks, J. Staissny, M., Moelants, T., Mamonekene, V., Ndodet, B., Ifuta, S.N.B., Chilala, A., Monsembula, R., Ibala Zamba, A., Opoye Itoua, O., Pouomogne, V., Darwall, W. & Smith, K.
Contributor/s:	

Justification:
Aphyosemion (Mesoaphyosemion) thysi is known from fewer than 10 localities in the Mossendjo - Komono area, in the Louesse - Niari River system, southwestern Congo-Brazzaville. The species is threatened by deforestation caused by timber exploitation. Both the EOO and AOO qualify for the Vulnerable status.

Geographic Range [top]

Range Description:	A Lower Guinea endemic, found in the Mossendjo - Komono area, in the Louesse - Niari River system, southwestern Congo.
Countries:	**Native:** Congo
Range Map:	(click map to view full version) 

Population [top]

Population:	No information available.
Population Trend:	? Unknown

Habitat and Ecology [top]

Habitat and Ecology:	*Aphyosemion thysi* is found in brooks and small streams in the hilly rainforest (Wildekamp *et al.* 1986). It is a benthopelagic, non-migratory species. *Aphyosemion (Mesoaphyosemion) thysi* is not a seasonal killifish. This species is difficult to maintain in aquarium (Huber 1996).
Systems:	Freshwater

Threats [top]

Major Threat(s):	The species is threatened by deforestation caused by timber exploitation.

Conservation Actions [top]

Conservation Actions:	None known.

Citation: Moelants, T. 2009.0. *Aphyosemion thysi*. In: IUCN 2010. IUCN Red List of Threatened Species. Version 2010.4. <www.iucnredlist.org>. Downloaded on **28 October 2010**.

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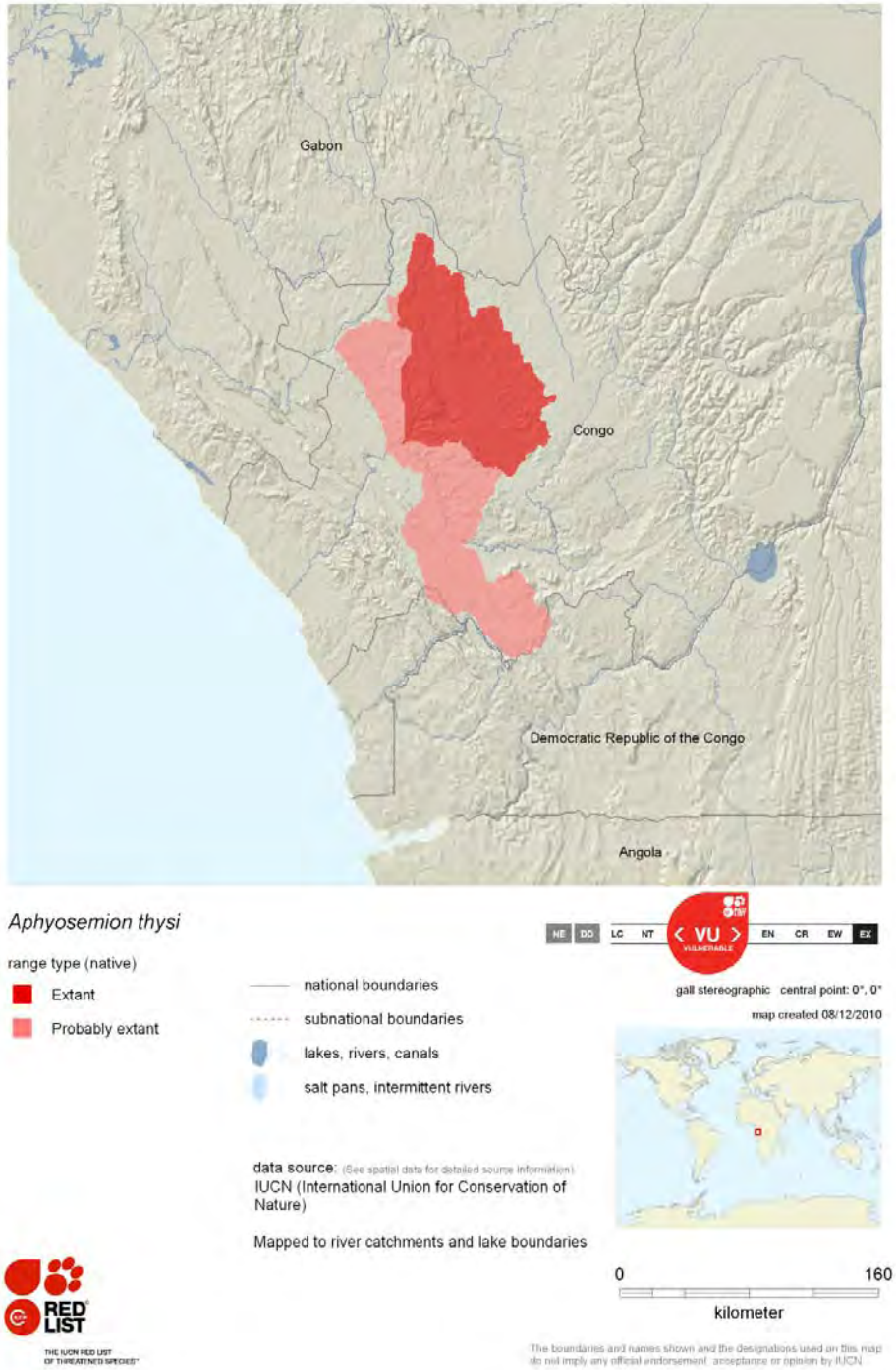
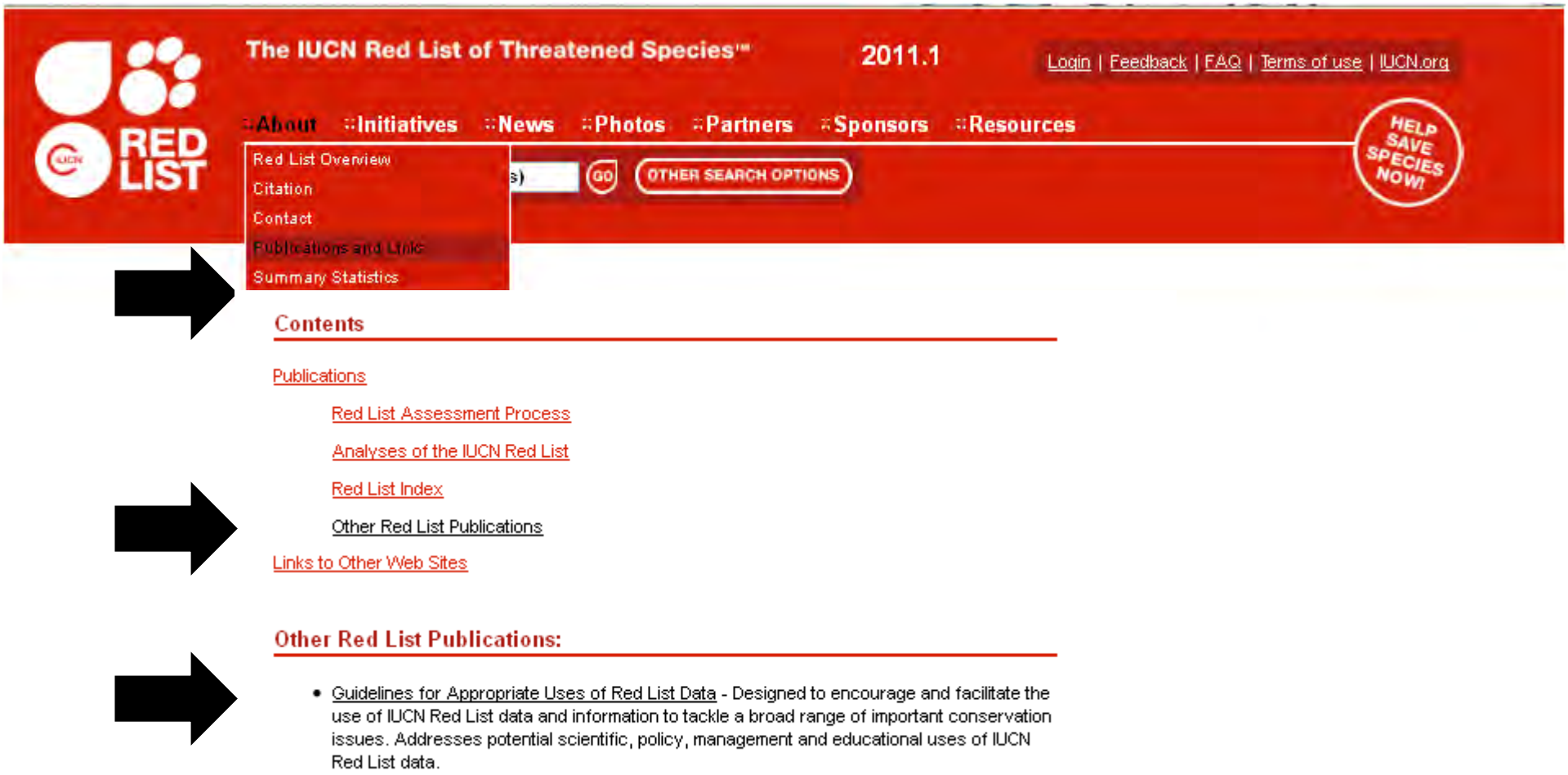


Use of Red List data

Download document ‘Guidelines for appropriate use of Red List data’



Key Facts, e.g.:

- Not just threatened species on the Red List
- Not all species are assessed
- The Red List assessment is a measure of extinction risk only
- The Red List is not, on its own, a system for setting conservation priorities

Appropriate use of the Red List, e.g.:

- Informing development of national threatened species lists, action plans etc.
- Guiding site level evaluation, the Red List is a key input for an EIA.
- Determining extinction rates across globally and comprehensively assessed species categories

Inappropriate use of the Red List, e.g.:

- Automatically linking a legislative response (e.g. banning trade) to the inclusion of a species in a particular Red List category
- Relying solely on the global Red List status for local planning (e.g., Developing a harvest plan for a local plant population based solely on the global Red List status)
- Assuming that the IUCN Red List provides a comprehensive picture of all the species that are threatened.

How to search the Red List website

Go to - www.iucnredlist.org

Two search options:

1. Simple species name search
2. Detailed search

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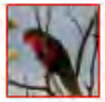

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SPINY-FLANKED CHAMELEON
Trioceros laterispinis

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tor putitora GO OTHER SEARCH OPTIONS

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Tor putitora (Putitor Mahseer)
Status: Endangered A4acde ver 3.1
Pop. trend: decreasing

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Hypselobarbus mussullah (Hump Backed Mahseer)
Status: Endangered B2ab(iii,v) ver 3.1
Pop. trend: decreasing

Puntius chelynoides (Dark mahseer)
Status: Vulnerable B2ab(i,ii,iii,iv,v) ver 3.1
Pop. trend: decreasing

Tor ater
Status: Vulnerable D2 ver 3.1
Pop. trend: unknown

Tor barakae
Status: Data Deficient ver 3.1
Pop. trend: unknown

Tor khudree (Black Mahseer)
Status: Endangered A2acde ver 3.1
Pop. trend: decreasing

Tor kulkarnii (Dwarf mahseer)
Status: Endangered B1ab(iii)+2ab(iii) ver 3.1
Pop. trend: unknown

Tor malabaricus (Malabar Mahseer)
Status: Endangered A2acde+3cde+4acde ver 3.1
Pop. trend: decreasing

Tor progeneius (Jungha Mahseer)
Status: Near Threatened ver 3.1
Pop. trend: unknown

Tor putitora (Putitor Mahseer)
Status: Endangered A4acde ver 3.1
Pop. trend: decreasing

Tor tor (mahseer)
Status: Near Threatened ver 3.1
Pop. trend: decreasing

Tor yunnanensis
Status: Endangered A1ac, B1+2e ver 2.3
(needs updating)

Hypselobarbus mussullah (Hump Backed Mahseer)
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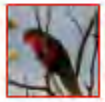

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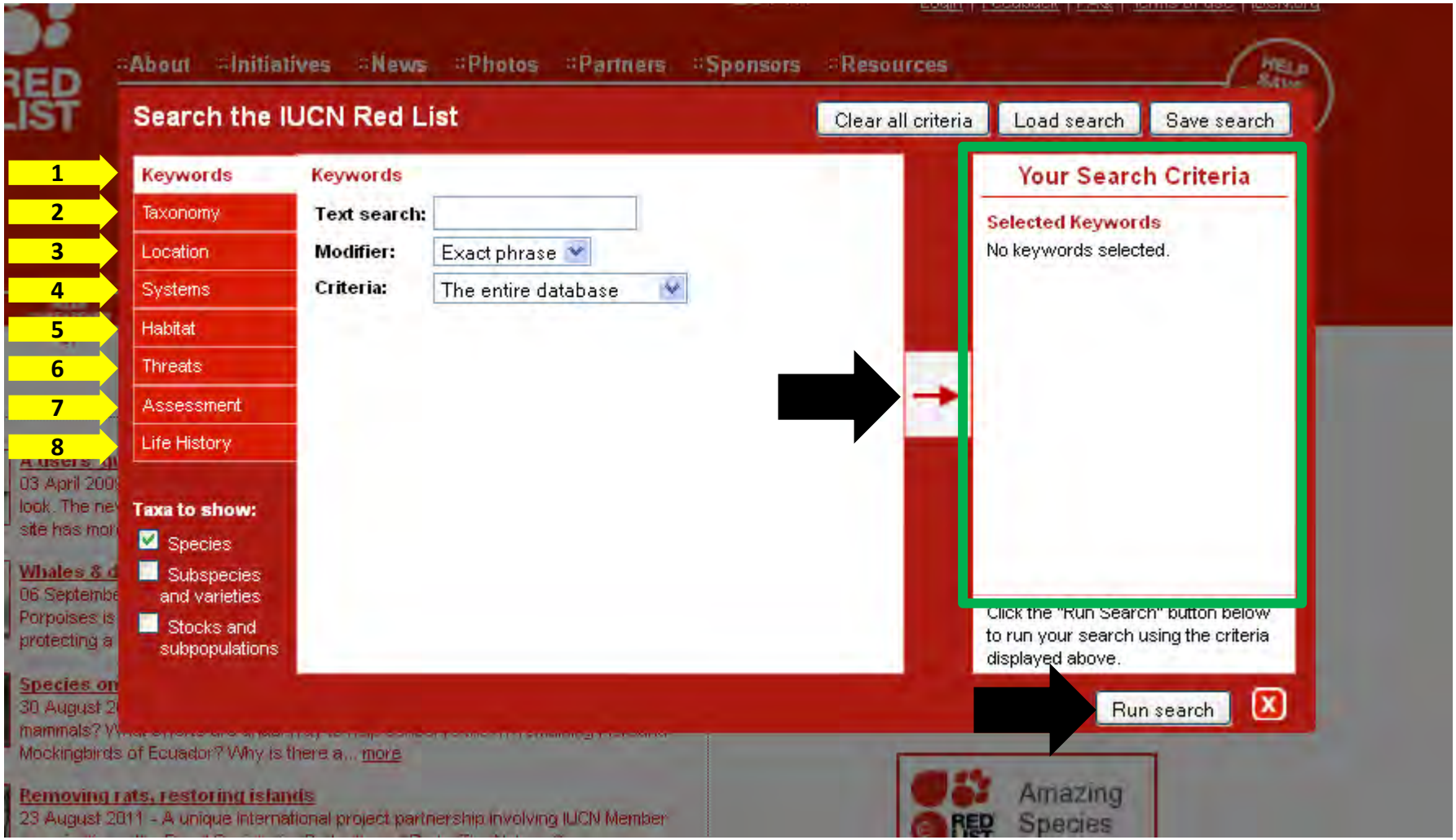
IUCN SSC Species Survival Commission



Keywords
Taxonomy
Location
Systems
Habitat
Threats
Assessment
Life History

Taxa to show:

- [x] Species
- [ ] Subspecies and varieties
- [ ] Stocks and subpopulations

Taxonomy

- ANIMALIA
- FUNGI
- PLANTAE
- PROTISTA

- ANIMALIA
  - ANNELIDA
  - ARTHROPODA
  - CHORDATA
    - ACTINOPTERYGII
      - ACIPENSERIFORMES
      - ALBULIFORMES
      - ANGUILLIFORMES
        - ANGUILLIDAE
          - Anguilla
            - anguilla
            - bengalensis
            - bicolor
            - marmorata
            - mossambica
            - nebulosa

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Taxonomy

- [x] ANIMALIA
  - ANNELIDA
  - ARTHROPODA
  - CHORDATA
    - [x] ACTINOPTERYGII
    - AMPHIBIA
    - AVES
    - CEPHALASPIDOMORPHI
    - CHONDRICHTHYES
    - MAMMALIA
    - MYXINI
    - REPTILIA
    - SARCOPTERYGII
  - CNIDARIA
  - ECHINODERMATA
  - MOLLUSCA

Your Search Criteria

Selected Taxonomy
ACTINOPTERYGII

Click the "Run Search" button below to run your search using the criteria displayed above.

Keywords
Taxonomy
Location
Systems
Habitat
Threats
Assessment
Life History

Taxa to show:
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- [ ] Stocks and subpopulations

Location

- [ ] Land Regions
- [ ] FAO Marine Areas

- [x] Native
- [ ] Introduced
- [ ] Vagrant
- [ ] Uncertain

- [ ] Land Regions
  - [ ] Antarctic
  - [ ] Caribbean Islands
  - [ ] East Asia
    - [ ] China
    - [ ] Hong Kong
    - [ ] Japan
      - [ ] Hokkaido
      - [ ] Honshu
      - [ ] Kazan-retto
      - [ ] Kyushu
      - [ ] Marcus I.
      - [ ] Nansei-shoto
      - [ ] Ogasawara-shoto
      - [ ] Shikoku

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- [x] Land Regions
  - [ ] Antarctic
  - [ ] Caribbean Islands
  - [x] East Asia
  - [ ] Europe
  - [ ] Mesoamerica
  - [ ] North Africa
  - [ ] North America
  - [ ] North Asia
  - [ ] Oceania
  - [ ] South America
  - [ ] South & Southeast Asia
  - [ ] Sub-Saharan Africa
  - [ ] West & Central Asia
- [ ] FAO Marine Areas

- [x] Native
- [ ] Introduced
- [ ] Vagrant
- [ ] Uncertain

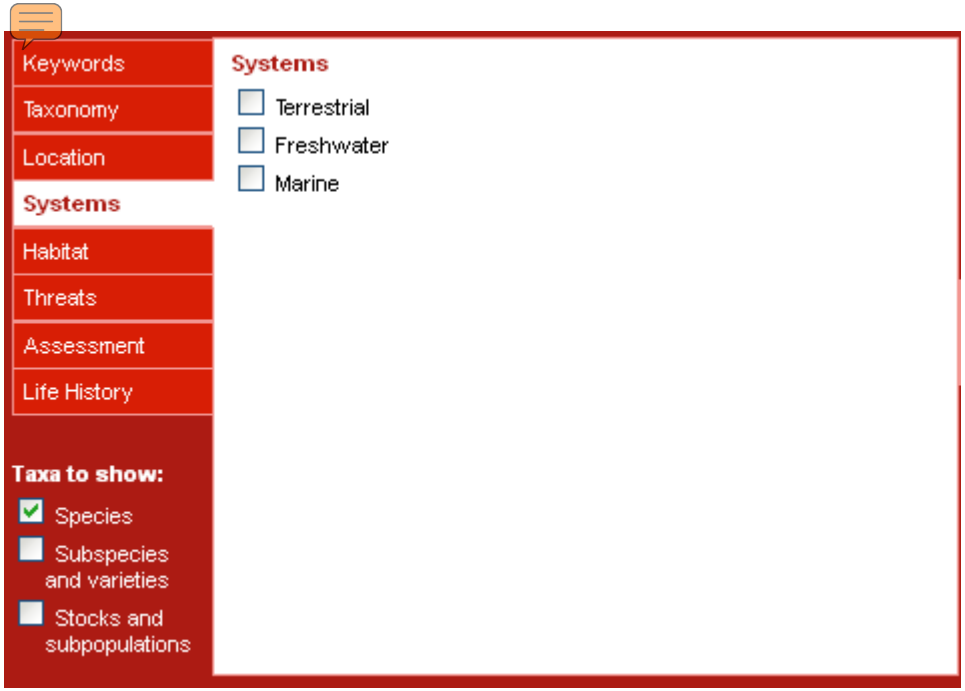
Your Search Criteria

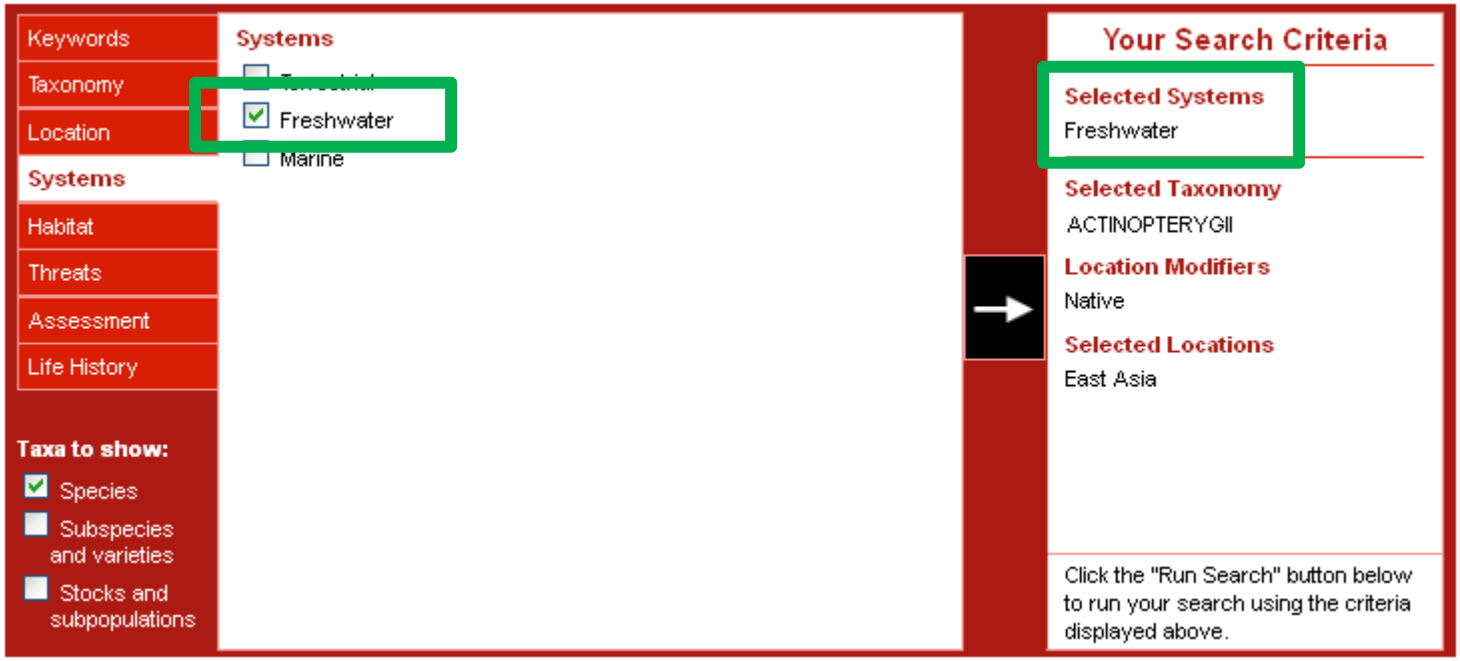
Location Modifiers
Native

Selected Locations
East Asia

Selected Taxonomy
ACTINOPTERYGII

Click the "Run Search" button below to run your search using the criteria displayed above.


Keywords
Taxonomy
Location
Systems
Habitat
Threats
Assessment
Life History
Taxa to show:
Species
Subspecies and varieties
Stocks and subpopulations
Systems
Terrestrial
Freshwater
Marine


Keywords
Taxonomy
Location
Systems
Habitat
Threats
Assessment
Life History
Taxa to show:
Species
Subspecies and varieties
Stocks and subpopulations
Systems
Freshwater
Marine
Your Search Criteria
Selected Systems
Freshwater
Selected Taxonomy
ACTINOPTERYGII
Location Modifiers
Native
Selected Locations
East Asia
Click the "Run Search" button below to run your search using the criteria displayed above.

Keywords
Taxonomy
Location
Systems
Habitat
Threats
Assessment
Life History

Taxa to show:

- [x] Species
- [ ] Subspecies and varieties
- [ ] Stocks and subpopulations

Habitats

- 1 Forest
- 2 Savanna
- 3 Shrubland
- 4 Grassland
- 5 Wetlands (inland)
- 6 Rocky areas (eg. inland cliffs, mountain peaks)
- 7 Caves and Subterranean Habitats (non-aquatic)
- 8 Desert
- 9 Marine Neritic
- 10 Marine Oceanic
- 11 Marine Deep Benthic
- 12 Marine Intertidal
- 13 Marine Coastal/Supratidal
- 14 Artificial/Terrestrial
- 15 Artificial/Aquatic & Marine
- 16 Introduced vegetation

- 4 Grassland
- 5 Wetlands (inland)
  - 5.1 Permanent Rivers/Streams/Creeks (include:
  - 5.2 Seasonal/Intermittent/Irregular Rivers/Stre.
  - 5.3 Shrub Dominated Wetlands
  - 5.4 Bogs, Marshes, Swamps, Fens, Peatlands
  - 5.5 Permanent Freshwater Lakes (over 8ha)
  - 5.6 Seasonal/Intermittent Freshwater Lakes (ov
  - 5.7 Permanent Freshwater Marshes/Pools (unde
  - 5.8 Seasonal/Intermittent Freshwater Marshes/F
  - 5.9 Freshwater Springs and Oases
  - 5.10 Tundra Wetlands (incl. pools and temporar
  - 5.11 Alpine Wetlands (includes temporary water
  - 5.12 Geothermal Wetlands
  - 5.13 Permanent Inland Deltas

Keywords
Taxonomy
Location
Systems
Habitat
Threats
Assessment
Life History

Taxa to show:

- [x] Species
- [ ] Subspecies and varieties
- [ ] Stocks and subpopulations

Habitats

- 4 Grassland
- 5 Wetlands (inland)
  - [x] 5.1 Permanent Rivers/Streams/Creeks (include:
  - 5.3 Shrub Dominated Wetlands
  - [x] 5.5 Permanent Freshwater Lakes (over 8ha
  - 5.6 Seasonal/Intermittent Freshwater Lakes (ov
  - [x] 5.7 Permanent Freshwater Marshes/Pools (unde
  - 5.9 Freshwater Springs and Oases
  - 5.10 Tundra Wetlands (incl. pools and temporar
  - 5.11 Alpine Wetlands (includes temporary water
  - 5.12 Geothermal Wetlands
  - 5.13 Permanent Inland Deltas

Your Search Criteria

Selected Habitats

5.1 Wetlands (inland) - Permanent Rivers/Streams /Creeks (includes waterfalls)
5.5 Wetlands (inland) - Permanent Freshwater Lakes (over 8ha)
5.7 Wetlands (inland) - Permanent Freshwater Marshes/Pools (under 8ha)

Selected Taxonomy

ACTINOPTERYGII

Location Modifiers

Native

Click the "Run Search" button below to run your search using the criteria displayed above.

Keywords
Taxonomy
Location
Systems
Habitat
Threats
Assessment
Life History

Taxa to show:
- [x] Species
- [ ] Subspecies and varieties
- [ ] Stocks and subpopulations

Threats

- 1 Residential & commercial development
- 2 Agriculture & aquaculture
- 3 Energy production & mining
- 4 Transportation & service corridors
- 5 Biological resource use
- 6 Human intrusions & disturbance
- 7 Natural system modifications
- 8 Invasive & other problematic species & genes
- 9 Pollution
- 10 Geological events
- 11 Climate change & severe weather
- 12 Other options

- 3 Energy production & mining
- 4 Transportation & service corridors
- 5 Biological resource use
- 6 Human intrusions & disturbance
- 7 Natural system modifications
- 8 Invasive & other problematic species & genes
- 9 Pollution
  - 9.1 Domestic & urban waste water
  - 9.2 Industrial & military effluents
  - 9.3 Agricultural & forestry effluents
    - 9.3.1 Nutrient loads
    - 9.3.2 Soil erosion, sedimentation
    - 9.3.3 Herbicides and pesticides
    - 9.3.4 Type Unknown/Unrecorded
  - 9.4 Garbage & solid waste
  - 9.5 Air-borne pollutants

Keywords
Taxonomy
Location
Systems
Habitat
Threats
Assessment
Life History

Taxa to show:
- [x] Species
- [ ] Subspecies and varieties
- [ ] Stocks and subpopulations

Threats

- 4 Transportation & service corridors
- [x] 5 Biological resource use
  - 5.1 Hunting & trapping terrestrial animals
  - 5.2 Gathering terrestrial plants
  - 5.3 Logging & wood harvesting
  - [x] 5.4.1 Intentional use: (subsistence/small sca
  - [x] 5.4.2 Intentional use: (large scale)
  - 5.4.4 Unintentional effects: (large scale)
  - 5.4.5 Persecution/control
  - 5.4.6 Motivation Unknown/Unrecorded
- 6 Human intrusions & disturbance
- 7 Natural system modifications
- 8 Invasive & other problematic species & genes

Your Search Criteria

Selected Threats
5.4.1 Intentional use: (subsistence/small scale)
5.4.2 Intentional use: (large scale)

Selected Taxonomy
ACTINOPTERYGII

Location Modifiers
Native

Selected Locations
East Asia

Selected Systems
Freshwater

Click the "Run Search" button below to run your search using the criteria displayed above.

- Keywords
- Taxonomy
- Location
- Systems
- Habitat
- Threats
- **Assessment**
- Life History

Taxa to show:

- [x] Species
- [ ] Subspecies and varieties
- [ ] Stocks and subpopulations

Categories

- [x] EX – Extinct
- [x] EW – Extinct In The Wild
- [x] CR – Critically Endangered
- [x] EN – Endangered
- [x] VU – Vulnerable
- [x] LR/cd – Lower Risk: Conservation Dependent
- [x] NT or LR/nt – Near Threatened
- [x] DD – Data Deficient
- [x] LC or LR/lc – Least Concern

Annotations

- [ ] Under petition
- [ ] Needs updating (older than 10 years)

Assessment Years

- [x] 1996 (animals only)
- [x] 1998 (plants only)
- [x] 2000
- [x] 2002
- [x] 2003
- [x] 2004
- [x] 2006
- [x] 2007
- [x] 2008
- [x] 2009
- [x] 2010
- [x] 2011

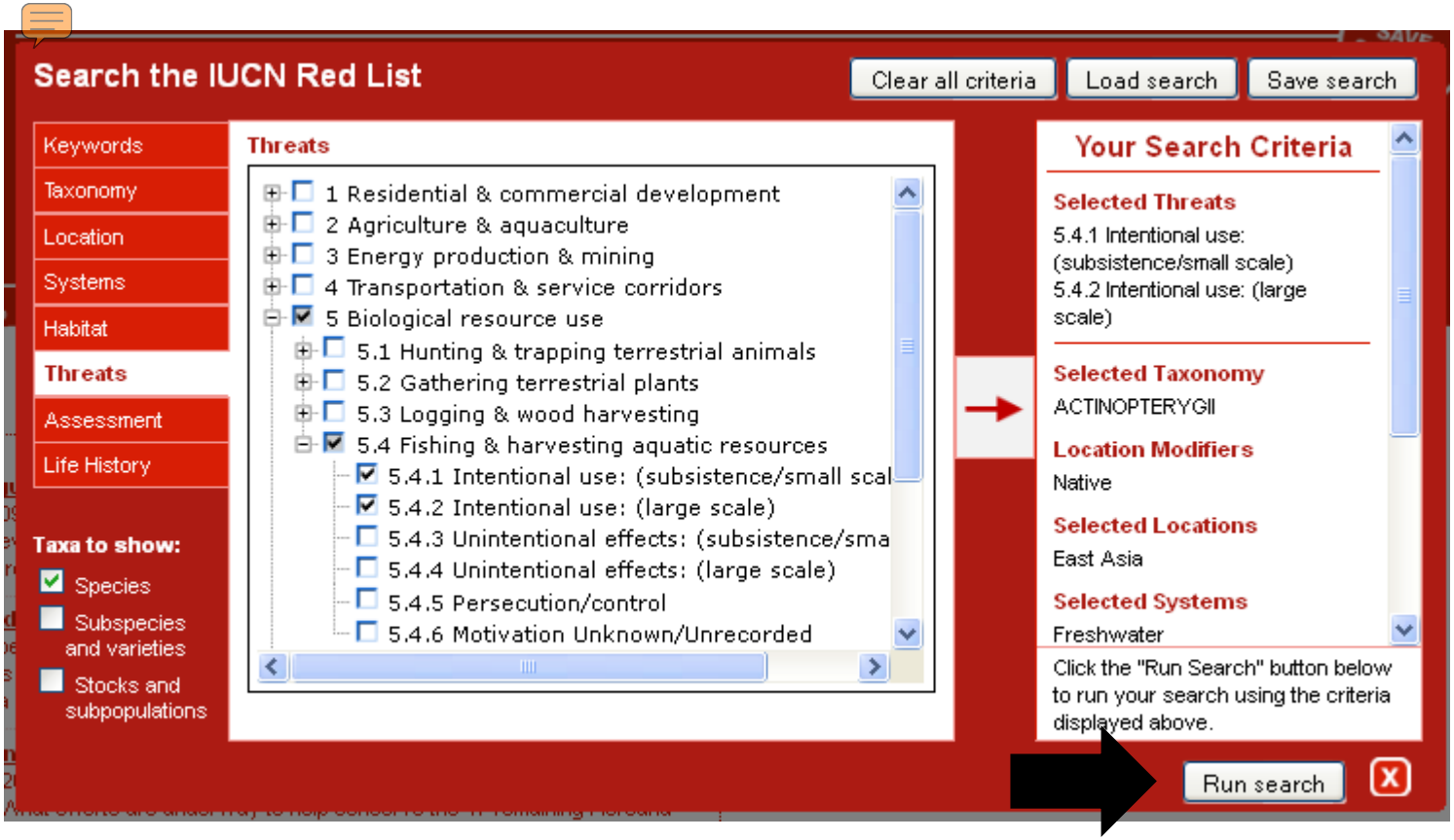
- Keywords
- Taxonomy
- Location
- Systems
- Habitat
- Threats
- Assessment
- **Life History**

Taxa to show:

- [x] Species
- [ ] Subspecies and varieties
- [ ] Stocks and subpopulations

History

- [ ] Plant Growth Forms
  - [ ] Annual
  - [ ] Cycad
  - [ ] Epiphyte
  - [ ] Fern
  - [ ] Forb or Herb
  - [ ] Fungus
  - [ ] Geophyte
  - [ ] Graminoid
  - [ ] Hydrophyte
  - [ ] Lichen
  - [ ] Lithophyte
  - [ ] Moss
  - [ ] Parasite
  - [ ] Shrub - large
  - [ ] Shrub - size unknown


Search the IUCN Red List
Clear all criteria
Load search
Save search
Keywords
Taxonomy
Location
Systems
Habitat
Threats
Assessment
Life History
Taxa to show:
Species
Subspecies and varieties
Stocks and subpopulations
Threats
1 Residential & commercial development
2 Agriculture & aquaculture
3 Energy production & mining
4 Transportation & service corridors
5 Biological resource use
5.1 Hunting & trapping terrestrial animals
5.2 Gathering terrestrial plants
5.3 Logging & wood harvesting
5.4 Fishing & harvesting aquatic resources
5.4.1 Intentional use: (subsistence/small scal
5.4.2 Intentional use: (large scale)
5.4.3 Unintentional effects: (subsistence/sma
5.4.4 Unintentional effects: (large scale)
5.4.5 Persecution/control
5.4.6 Motivation Unknown/Unrecorded
Your Search Criteria
Selected Threats
5.4.1 Intentional use: (subsistence/small scale)
5.4.2 Intentional use: (large scale)
Selected Taxonomy
ACTINOPTERYGII
Location Modifiers
Native
Selected Locations
East Asia
Selected Systems
Freshwater
Click the "Run Search" button below to run your search using the criteria displayed above.
Run search

IUCN SSC Species Survival Commission

Your Search Criteria

Selected Taxonomy
ACTINOPTERYGII

Location Modifiers
Native

Selected Locations
East Asia

Selected Systems
Freshwater

Selected Habitats
5.1 Wetlands (inland) - Permanent Rivers/Streams /Creeks (includes waterfalls)
5.5 Wetlands (inland) - Permanent Freshwater Lakes (over 8ha)
5.7 Wetlands (inland) - Permanent Freshwater Marshes/Pools (under 8ha)

Selected Threats
5.4.1 Intentional use: (subsistence/small scale)
5.4.2 Intentional use: (large scale)

Click the "Run Search" button below to run your search using the criteria displayed above.

Run search

Acheilognathus macropterus
Status: Data Deficient ver 3.1
Pop. trend: unknown

Acheilognathus tonkinensis
Status: Data Deficient ver 3.1
Pop. trend: unknown

Acipenser baerii (Siberian Sturgeon)
Status: Endangered A2bcd+4bcd ver 3.1
Pop. trend: decreasing

Acipenser dabryanus (Yangtze Sturgeon)
Status: Critically Endangered A2bcd ver 3.1
Pop. trend: decreasing

Acipenser mikadoi (Sakhalin Sturgeon)
Status: Critically Endangered A2cde ver 3.1
Pop. trend: decreasing

Acipenser ruthenus (Sterlet)
Status: Vulnerable A2cde ver 3.1
Pop. trend: decreasing

Acipenser schrenckii (Amur Sturgeon)
Status: Critically Endangered A2bd ver 3.1
Pop. trend: decreasing

Acipenser sinensis (Chinese Sturgeon)
Status: Critically Endangered A2bcd;B2ab(i,ii,iii,iv,v);C2a(ii) ver 3.1
Pop. trend: decreasing

Anabarilius alburnops (Silvery White Fish)
Status: Endangered B1ab(iii,v)+2ab(iii,v) ver 3.1
Pop. trend: decreasing

Anabarilius andersoni
Status: Critically Endangered B1ab(iii,v) ver 3.1
Pop. trend: decreasing

Anabarilius polylepis (Big White Fish)
Status: Endangered B1ab(ii,iii,v)+2ab(ii,iii,v) ver 3.1
Pop. trend: decreasing

Bagarius yarrelli
Status: Near Threatened ver 3.1
Pop. trend: decreasing

Bangana yunnanensis
Status: Data Deficient ver 3.1
Pop. trend: unknown

Chanodichthys dabryi (Humpback)
Status: Least Concern ver 3.1
Pop. trend: decreasing

Chelidonichthys kumu (Bluefin Gurnard)
Status: Least Concern ver 3.1
Pop. trend: unknown

Cirrhinus molitorella (Mud Carp)
Status: Near Threatened ver 3.1
Pop. trend: decreasing

Cyprinus fuxianensis
Status: Critically Endangered A2bcde ver 3.1
Pop. trend: unknown

Cyprinus micristius (Dianchi Carp)
Status: Critically Endangered B1ab(i,ii,iii,iv)+2ab(i,ii,iii,iv) ver 3.1
Pop. trend: unknown

Cyprinus qionghaiensis
Status: Critically Endangered A2bcde;B1ab(iii,v)+2ab(iii,v) ver 3.1
Pop. trend: decreasing

Glyptosternon maculatum
Status: Least Concern ver 3.1
Pop. trend: unknown

Glyptothorax trilineatus (Three-lined Catfish)
Status: Least Concern ver 3.1
Pop. trend: stable

Gnathopogon tsinanensis
Status: Data Deficient ver 3.1
Pop. trend: unknown

++

How to download results of a species search

- Create an account
- Save your search
- Export your search results

Explore or refine your search below:

- Keywords
- Taxonomy
- Location
- Systems
- Habitats
- Threats
- Assessment
- History

Displaying species assessments 1 - 50 of 53 in total

1 2

Acheilognathus macropterus
Status: Data Deficient ver 3.1
Pop. trend: unknown

Acheilognathus tonkinensis
Status: Data Deficient ver 3.1
Pop. trend: unknown

Acipenser baerii (Siberian Sturgeon)
Status: Endangered A2bcd+4bcd ver 3.1
Pop. trend: decreasing

Acipenser dabryanus (Yangtze Sturgeon)
Status: Critically Endangered A2bcd ver 3.1
Pop. trend: decreasing

Acipenser mikadoi (Sakhalin Sturgeon)
Status: Critically Endangered A2cde ver 3.1
Pop. trend: decreasing

Current search:
Save / Export Search

Search terms
Show taxa:
Species
Search by taxonomy:
ACTINOPTERYGII
Search by location:
East Asia
(Native)
Search by systems:
Freshwater
Match any habitat:
5.1. Wetlands (inland) - Permanent Rivers/Streams/Creeks (includes waterfalls)
5.5. Wetlands (inland) - Permanent Freshwater Lakes (over 8ha)
5.7. Wetlands (inland) - Permanent Freshwater Marshes/Pools (under 8ha)
Match any threat:
5.4.1. Intentional use: (subsistence/small scale)
5.4.2. Intentional use: (large scale)

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Saved searches are permanently stored in your user account. Once a search is saved, you may also export the results for offline use, or provide a link for others to access your saved search.

Add your current search

User Information

You have submitted contact information and can access all user services. To view
information, visit the user information page.

Search Details

Search terms

Show taxa:
- Species

Search by taxonomy:
- ACTINOPTERYGII

Search by location:
- East Asia
- *(Native)*

Search by systems:
- Freshwater

Match any habitat:
- 5.1. Wetlands (inland) - Permanent Rivers/Streams/Creeks (includes waterfalls)
- 5.5. Wetlands (inland) - Permanent Freshwater Lakes (over 8ha)
- 5.7. Wetlands (inland) - Permanent Freshwater Marshes/Pools (under 8ha)

Match any threat:
- 5.4.1. Intentional use: (subsistence/small scale)
- 5.4.2. Intentional use: (large scale)

Saved Searches

Saved searches are permanently stored in your user account. Once a search is saved, you may also export the results for offline use, or provide a link for others to access your saved search.

search:

arches

- East Asian fw fish

Add your current search

User Information

You have submitted contact information and can access all user services. To view or change your information, visit the user information page.

Search Details

Search terms

Show taxa:
- Species

Search by taxonomy:
- ACTINOPTERYGII

Search by location:
- East Asia
- *(Native)*

Search by systems:
- Freshwater

Match any habitat:
- 5.1. Wetlands (inland) - Permanent Rivers/Streams/Creeks (includes waterfalls)
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- 5.7. Wetlands (inland) - Permanent Freshwater Marshes/Pools (under 8ha)

Match any threat:
- 5.4.1. Intentional use: (subsistence/small scale)
- 5.4.2. Intentional use: (large scale)

Delete Search

This search is saved to your saved searches as "East Asian fw fish".

Delete search

Save Search

Enter a name for this search:

Add to saved searches

Load Search

Loading this search will replace your current search. Please save your search if you may wish to return to it later.

Load this search

Permalink

To allow others to view your search results, you may copy and distribute the following link:

http://www.iucnredlist.org/apps/redlist/search/link/4e6f436e-3af6ee0b

Export Results

To download the results of your search, use the button below. Your search results will be exported to common downloadable formats.

Export Results

Saved Searches

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- East Asian fw fish
  - Queued for export

Add your current search

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You requested an export for the following saved search:

* East Asian fw fish

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- East Asian fw fish
  - Exported on 13 September 2011

Add your current search

User Information

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Export Results

Your search results have been exported. Please use the links below to download the export in your preferred format(s).

- Comma-Separated Values (CSV)
- Extensible Markup Language (XML)

Please note that the Red List data may change over time. The exported data is current as of **13 September 2011**. To obtain the latest data, use the button below; your exported data will be replaced with the most current data.

Refresh Exported Data

	A	B	C	D	E	F	G	H	I	
1	Species ID	Kingdom	Phylum	Class	Order	Family	Genus	Species	Authority	Infrasp
2	166130	ANIMALIA	CHORDATA	ACTINOPTERYGII	CYPRINIFORMES	CYPRINIDAE	Acheilognathus	macropterus	(Bleeker, 1871)	
3	166179	ANIMALIA	CHORDATA	ACTINOPTERYGII	CYPRINIFORMES	CYPRINIDAE	Acheilognathus	tonkinensis	(Vaillant, 1892)	
4	244	ANIMALIA	CHORDATA	ACTINOPTERYGII	ACIPENSERIFORMES	ACIPENSERIDAE	Acipenser	baerii	Brandt, 1869	
5	231	ANIMALIA	CHORDATA	ACTINOPTERYGII	ACIPENSERIFORMES	ACIPENSERIDAE	Acipenser	dabryanus	Duméril, 1869	
6	241	ANIMALIA	CHORDATA	ACTINOPTERYGII	ACIPENSERIFORMES	ACIPENSERIDAE	Acipenser	mikadoi	Hilgendorf, 1892	
7	227	ANIMALIA	CHORDATA	ACTINOPTERYGII	ACIPENSERIFORMES	ACIPENSERIDAE	Acipenser	ruthenus	Linnaeus, 1758	
8	228	ANIMALIA	CHORDATA	ACTINOPTERYGII	ACIPENSERIFORMES	ACIPENSERIDAE	Acipenser	schrenckii	Brandt, 1869	
9	236	ANIMALIA	CHORDATA	ACTINOPTERYGII	ACIPENSERIFORMES	ACIPENSERIDAE	Acipenser	sinensis	Gray, 1835	
10	135163	ANIMALIA	CHORDATA	ACTINOPTERYGII	CYPRINIFORMES	CYPRINIDAE	Anabarilius	alburnops	(Regan, 1914)	
11	166177	ANIMALIA	CHORDATA	ACTINOPTERYGII	CYPRINIFORMES	CYPRINIDAE	Anabarilius	andersoni	(Regan, 1904)	
12	1190	ANIMALIA	CHORDATA	ACTINOPTERYGII	CYPRINIFORMES	CYPRINIDAE	Anabarilius	polylepis	(Regan, 1904)	
13	166503	ANIMALIA	CHORDATA	ACTINOPTERYGII	SILURIFORMES	SISORIDAE	Bagarius	yarrelli	(Sykes, 1839)	
14	166045	ANIMALIA	CHORDATA	ACTINOPTERYGII	CYPRINIFORMES	CYPRINIDAE	Bangana	yunnanensis	(Wu, Lin, Chen, Chen & He, 1977)	
15	166109	ANIMALIA	CHORDATA	ACTINOPTERYGII	CYPRINIFORMES	CYPRINIDAE	Chanodichthys	dabryi	Bleeker, 1871	
16	154895	ANIMALIA	CHORDATA	ACTINOPTERYGII	SCORPAENIFORMES	TRIGLIDAE	Chelidonichthys	kumu	(Cuvier, 1829)	
17	166016	ANIMALIA	CHORDATA	ACTINOPTERYGII	CYPRINIFORMES	CYPRINIDAE	Cirrhinus	molitorella	(Valenciennes, 1844)	
18	166157	ANIMALIA	CHORDATA	ACTINOPTERYGII	CYPRINIFORMES	CYPRINIDAE	Cyprinus	fuxianensis	Yang et al., 1977	
19	6178	ANIMALIA	CHORDATA	ACTINOPTERYGII	CYPRINIFORMES	CYPRINIDAE	Cyprinus	micristius	Regan, 1906	
20	169621	ANIMALIA	CHORDATA	ACTINOPTERYGII	CYPRINIFORMES	CYPRINIDAE	Cyprinus	qionghaiensis	Liu, 1981	
21	168574	ANIMALIA	CHORDATA	ACTINOPTERYGII	SILURIFORMES	SISORIDAE	Glyptosternon	maculatum	(Regan, 1905)	
22	166520	ANIMALIA	CHORDATA	ACTINOPTERYGII	SILURIFORMES	SISORIDAE	Glyptothorax	trilineatus	Blyth, 1860	
23	169643	ANIMALIA	CHORDATA	ACTINOPTERYGII	CYPRINIFORMES	CYPRINIDAE	Gnathopogon	tsinanensis	(Mori, 1928)	
24	168511	ANIMALIA	CHORDATA	ACTINOPTERYGII	CYPRINIFORMES	CYPRINIDAE	Gymnocypris	dobula	Günther, 1868	
25	168530	ANIMALIA	CHORDATA	ACTINOPTERYGII	CYPRINIFORMES	CYPRINIDAE	Gymnocypris	scleracanthus	Tsao, Wu, Chen & Zhu, 1992	
26	166102	ANIMALIA	CHORDATA	ACTINOPTERYGII	CYPRINIFORMES	CYPRINIDAE	Hemibarbus	umbrifer	(Lin, 1931)	
27	10268	ANIMALIA	CHORDATA	ACTINOPTERYGII	ACIPENSERIFORMES	ACIPENSERIDAE	Huso	dauricus	(Georgi, 1775)	
28	169591	ANIMALIA	CHORDATA	ACTINOPTERYGII	SILURIFORMES	BAGRIDAE	Leiocassis	longirostris	Günther, 1864	
29	169638	ANIMALIA	CHORDATA	ACTINOPTERYGII	CYPRINIFORMES	COBITIDAE	Leptobotia	tchangi	Fang, 1936	
30	181325	ANIMALIA	CHORDATA	ACTINOPTERYGII	CYPRINIFORMES	CYPRINIDAE	Macrochirichthys	macrochirus	(Valenciennes, 1844)	
31	169653	ANIMALIA	CHORDATA	ACTINOPTERYGII	SALMONIFORMES	SALANGIDAE	Neosalanx	argentea	(Lin, 1932)	
32	181009	ANIMALIA	CHORDATA	ACTINOPTERYGII	PERCIFORMES	ELEOTRIDAE	Oxyeleotris	marmorata	(Bleeker, 1852)	

The results contain the following; taxonomy, authority, synonyms, common names (Eng, Fre, Spa), Red List category, Red List criteria, Red List criteria version, Year assessed, Population trend, Petitioned (yes or no)

How to download species distributions as shape files

Resources

Categories and Criteria
Classification Schemes
Data Organization
Spatial Data Download
Information Sources and Quality
Assessment Process
Red List Training
References
Acknowledgements

Spatial Data Download

The 2010 IUCN Red List of Threatened Species contains assessments for almost 60,0 of which about 28,000 have spatial data. This spatial data collection provided below is the comprehensivley assessed taxonomic groups such as amphibians, mammals, thre reef-building corals, groupers, wrasses, angelfish, butterflyfish, seasnakes, seagrasses and mangroves. Spatial data is also provided for many of the reptile species that have been assessed. Other groups will be added to this collection once they are mapped. It is important to note that some species listed as Data Deficient are not mapped. These data are made freely available to the public to help inform conservation planning and other decision making processes. For more information about the assessment process, please see the IUCN Red List website (http://www.iucnredlist.org/technical-documents/assessment-process).

The data are held in shapefiles, the ESRI native format and contain the known range of each species. Ranges are depicted as polygons. DBF files accompanying each polygon contain taxonomic information, and contain information on distribution status, sources and other details about the maps (see **metadata document**). To limit the size of the shapefiles that are available to download, the higher taxonomy is not included in the data sets, only the genus and species name. The higher taxonomy including the current Red List Category information is available under each section, in excel format (these are the same data you would get if you ran a search on the Red List web site and exported the results as a CSV file), and you are able to join this file with the shapefiles when downloaded.

For ease of distribution and downloading the data is divided by taxonomic groups.

The data is available both in ESRI File Geodatabase format and the ESRI Shapefile format and is held in geographical coordinates. Please note that the files are large, and download times could be quite lengthy.

While this data is made freely available to the public, please note that unfortunately we cannot provide technical support for use of the data in analyses or general GIS support.

Data Links

Mammals	Birds	Groupers
Amphibians	Angelfish	Wrasses
Corals	Butterflyfish	Mangroves
Reptiles	Parrotfish	Seagrasses

Mammals

The ranges are available as a single data set (file Geodatabase) for all mammals or broken out into smaller data sets as shapefiles. The ranges are broken out by grouping families containing predominantly marine and terrestrial species.

The terrestrial file includes all mammals, excluding species in the families Otariidae, Phocidae and Odobenidae (i.e. all seals, sea lions and walrus), Balaenidae, Balaenopteridae, Delphinidae, Eschrichtidae, Iniidae, Monodontidae, Neobalaenidae, Phocoenidae, Physteridae, Platanistidae, and Ziphiidae (all whales, dolphins and porpoises), and everything in the Order Sirenia (manatees and dugongs). The latter families are included in the Marine shapefile.

All mammals - 2010 (zip file, 365.7 MB)

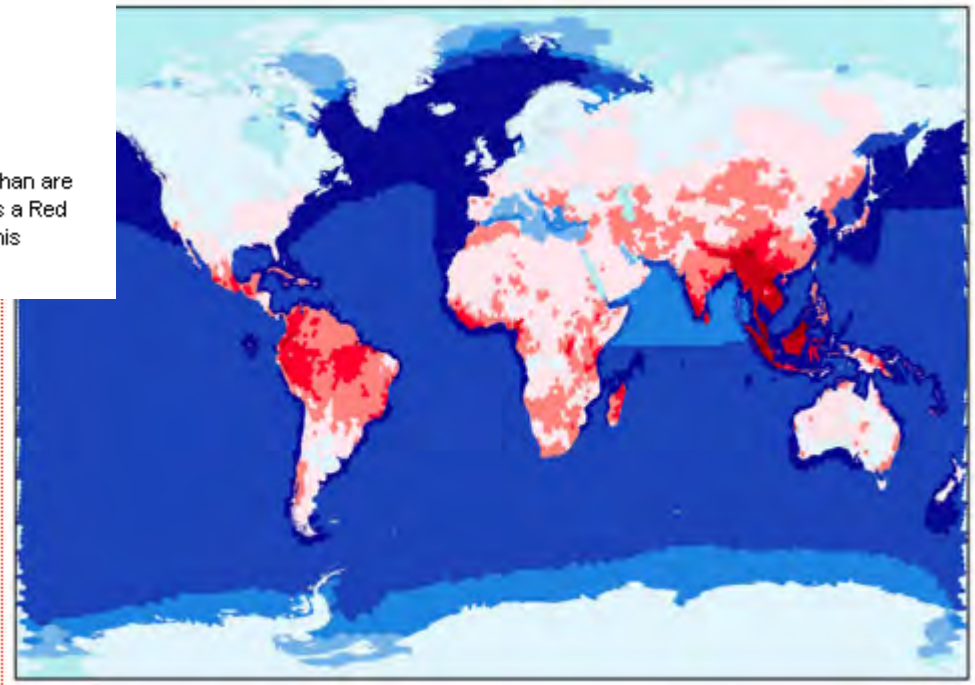
Mammals - terrestrial (zip file, 374 MB)

Mammals - marine (zip file, 356.4 MB)

See **metadata document** for further information.

Mammals - full taxonomy and Red List status (note that there are more species in this list than are mapped and the list does not include subspecies or subpopulations). The list presented as a Red List search result with links to each species fact sheet can also be found by clicking on this permalink: http://www.iucnredlist.org/apps/redlist/search/link/4cc84a88-1fd94435.

d mammal richness (number of species)

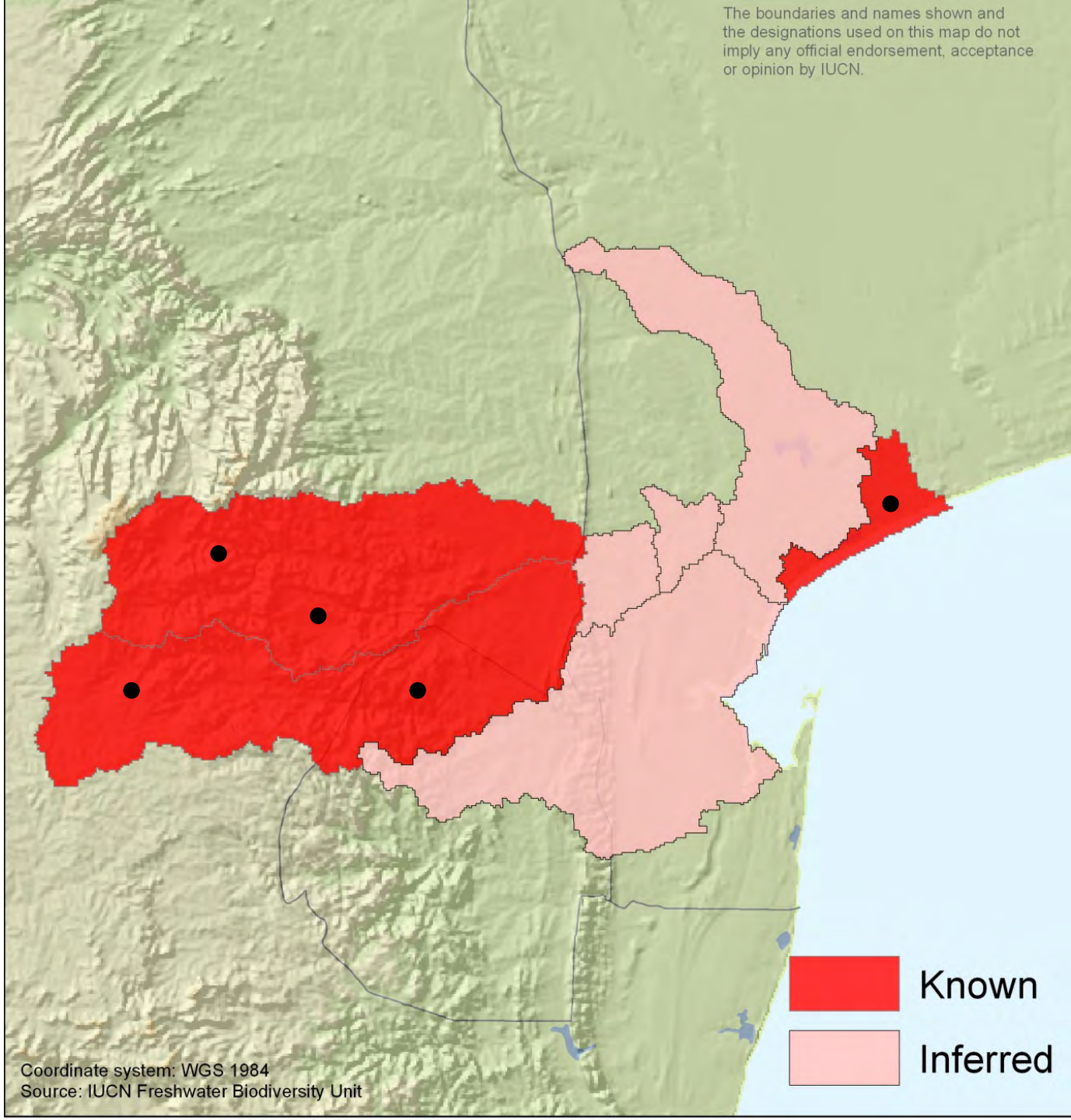


Species Distribution Maps

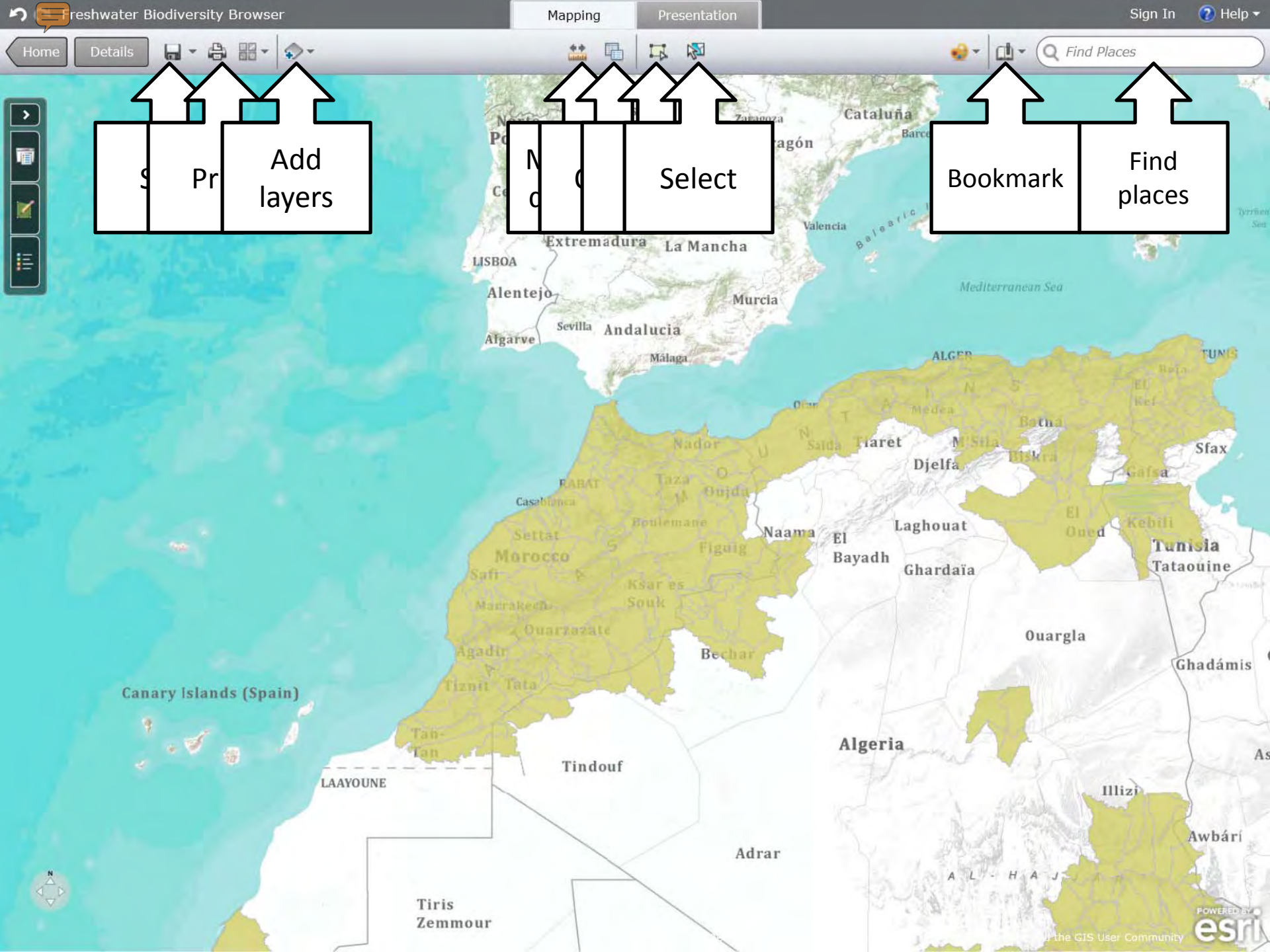
Species are mapped to 7079 sub-catchments

USGS Hydro1K Elevation Derivative Databse
River catchments (level 6)

A combination of Expert knowledge, point data and published data were used to map known and inferred ranges



The BioBrowser


Freshwater Biodiversity Browser
Mapping
Presentation
Sign In
Help
Home
Details
Find Places
Add layers
Select
Bookmark
Find places
Cataluña
Zaragoza
Valencia
Extremadura
La Mancha
LISBOA
Alentejo
Murcia
Sevilla
Andalucia
Algarve
Málaga
Mediterranean Sea
Nador
Taza
Oujda
Tiaret
Djelfa
Sfax
Gafsa
Casablanca
Boulemane
Naama
El Bayadh
Laghouat
Ghardaïa
Kebili
Tunisia
Tataouine
Settat
Morocco
Figuig
Safi
Ksar es Souk
Marrakech
Ouarzazate
Agadir
Bechar
Ouargla
Ghadámis
Tiznit
Tata
Canary Islands (Spain)
Algeria
Tindouf
LAAYOUNE
Illizi
Awbárí
Adrar
Tiris Zemmour
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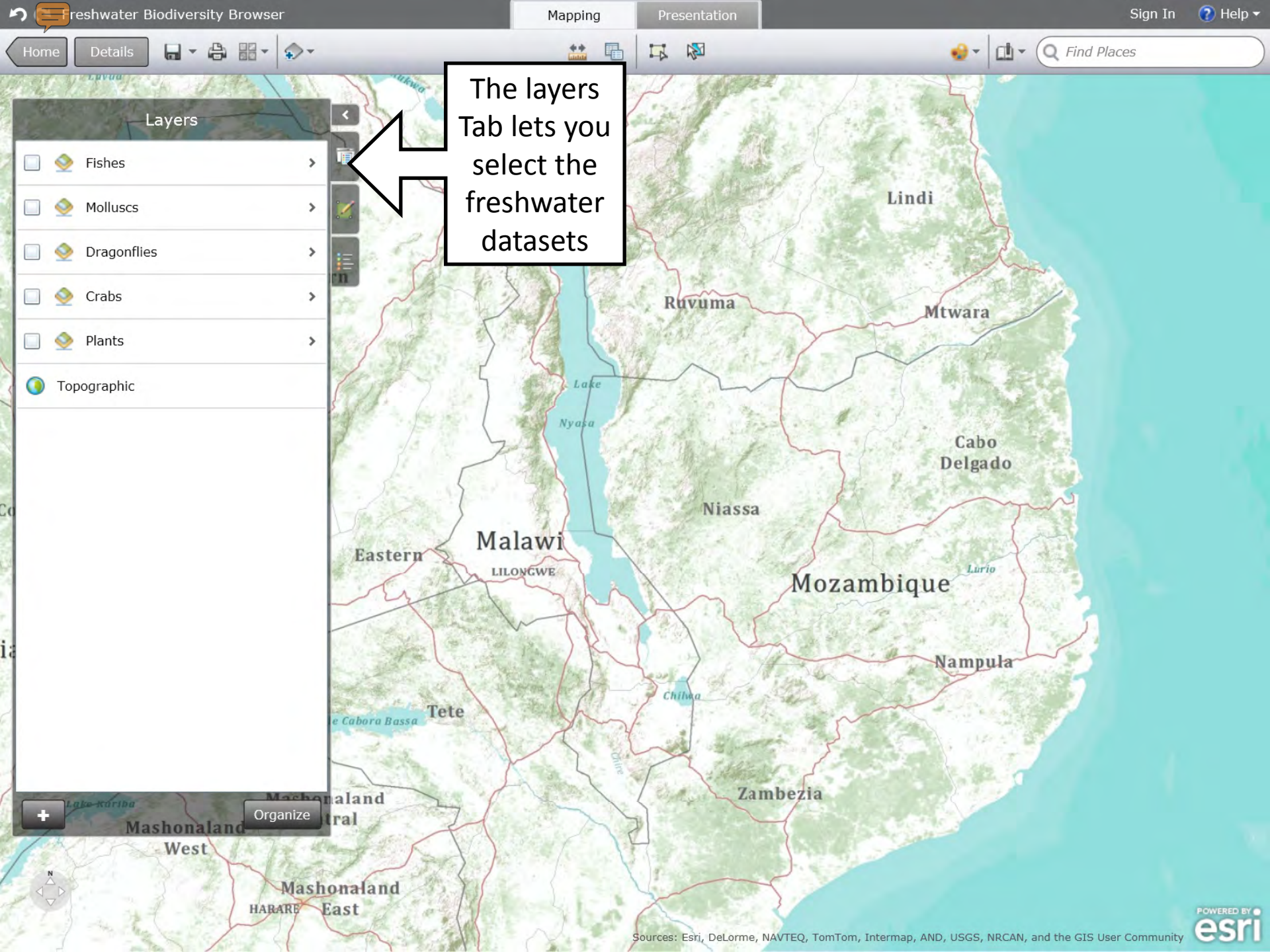
Basemap

- Bing Maps Aerial
- Bing Maps Hybrid
- Bing Maps Road
- Imagery
- Imagery with Labels
- Streets
- Topographic
- USA Topo Maps
- OpenStreetMap
- Terrain
- Terrain with Labels
- Shaded Relief

Sources: Esri, DeLorme, NAVTEQ, TomTom, Intermap, AND, USGS, NRCAN, and the GIS User Community

POWERED BY esri


Freshwater Biodiversity Browser
Mapping
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Sign In
Help
Home
Details
Find Places
Layers
Fishes
Molluscs
Dragonflies
Crabs
Plants
Topographic
Organize
The layers Tab lets you select the freshwater datasets
Lindi
Ruvuma
Mtwara
Lake Nyasa
Cabo Delgado
Niassa
Malawi
Eastern
LILONGWE
Mozambique
Lurio
Nampula
Chilwa
Tete
Lake Cabora Bassa
Zambezia
Mashonaland West
Mashonaland East
HARARE
Sources: Esri, DeLorme, NAVTEQ, TomTom, Intermap, AND, USGS, NRCAN, and the GIS User Community
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Layers

- Fishes
- Molluscs
- Dragonflies
- Crabs
- Plants
- Topographic

Organize

Clicking on a catchment provide info on species and links to Red List

Freshwater Fishes of Africa : Alticorpus macrocleithrum

1 of 370

Species	Alticorpus macrocleithrum
Red List Category	LC
Presence	Extant
Origin	Native
Population Trend	Unknown
Threats	Over-exploitation by demersal trawl fishery.
Use and Trade	
Red List Assessment Date	2006-01-31
Assessment URL	http://www.iucnredlist.org/apps
Citation	IUCN (International Union for Conservation of Nature)
Catchment ID	10800300

Zoom To

IUCN SSC Species Survival Commission

Freshwater Biodiversity Browser | Mapping | Presentation | Sign In | Help

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Queries

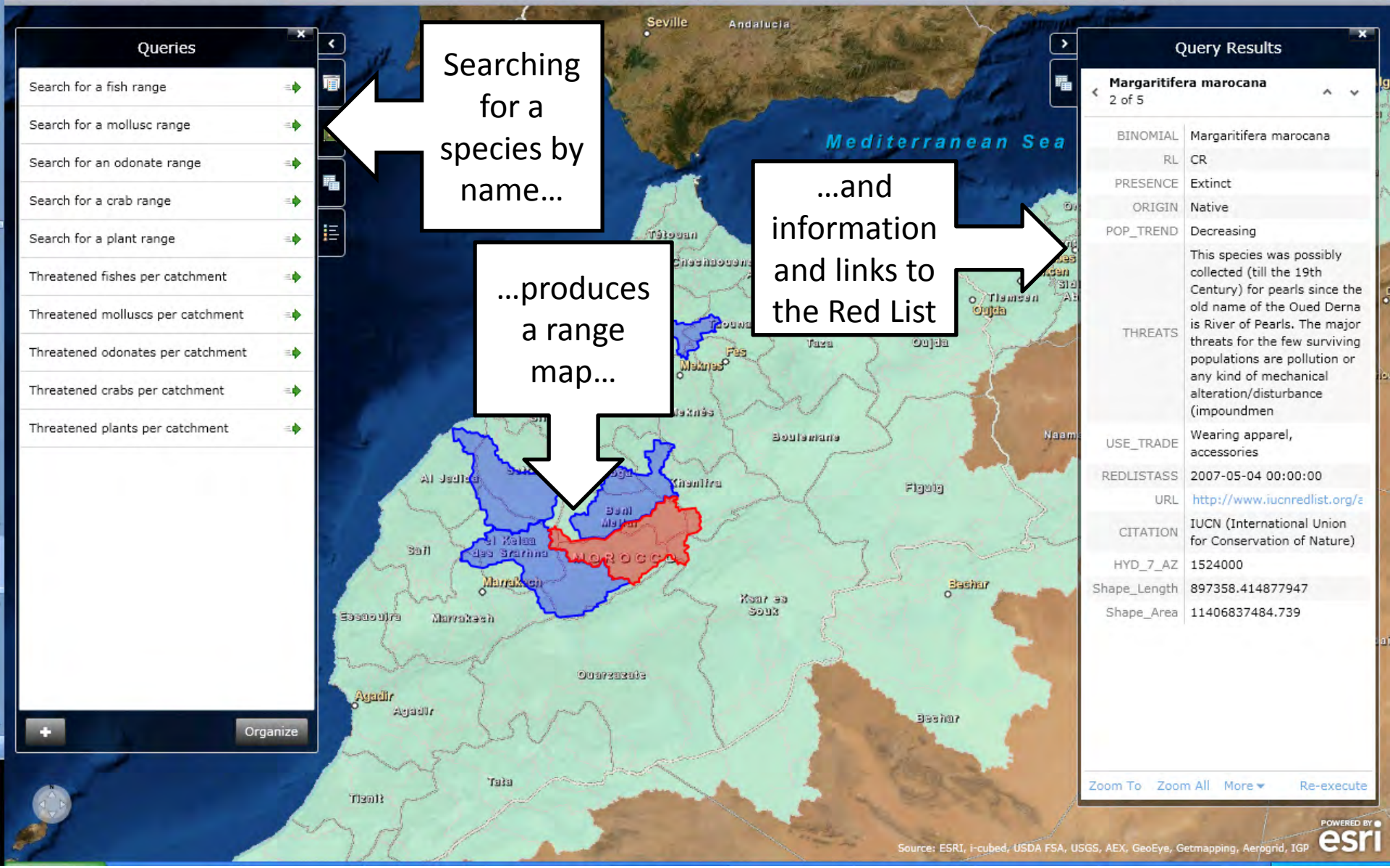
- Search for a fish range
- Search for a mollusc range
- Search for an odonate range
- Search for a crab range
- Search for a plant range
- Threatened fishes per catchment
- Threatened molluscs per catchment
- Threatened odonates per catchment
- Threatened crabs per catchment
- Threatened plants per catchment

Organize

Searching for a species by name…

…produces a range map…

…and information and links to the Red List



Query Results

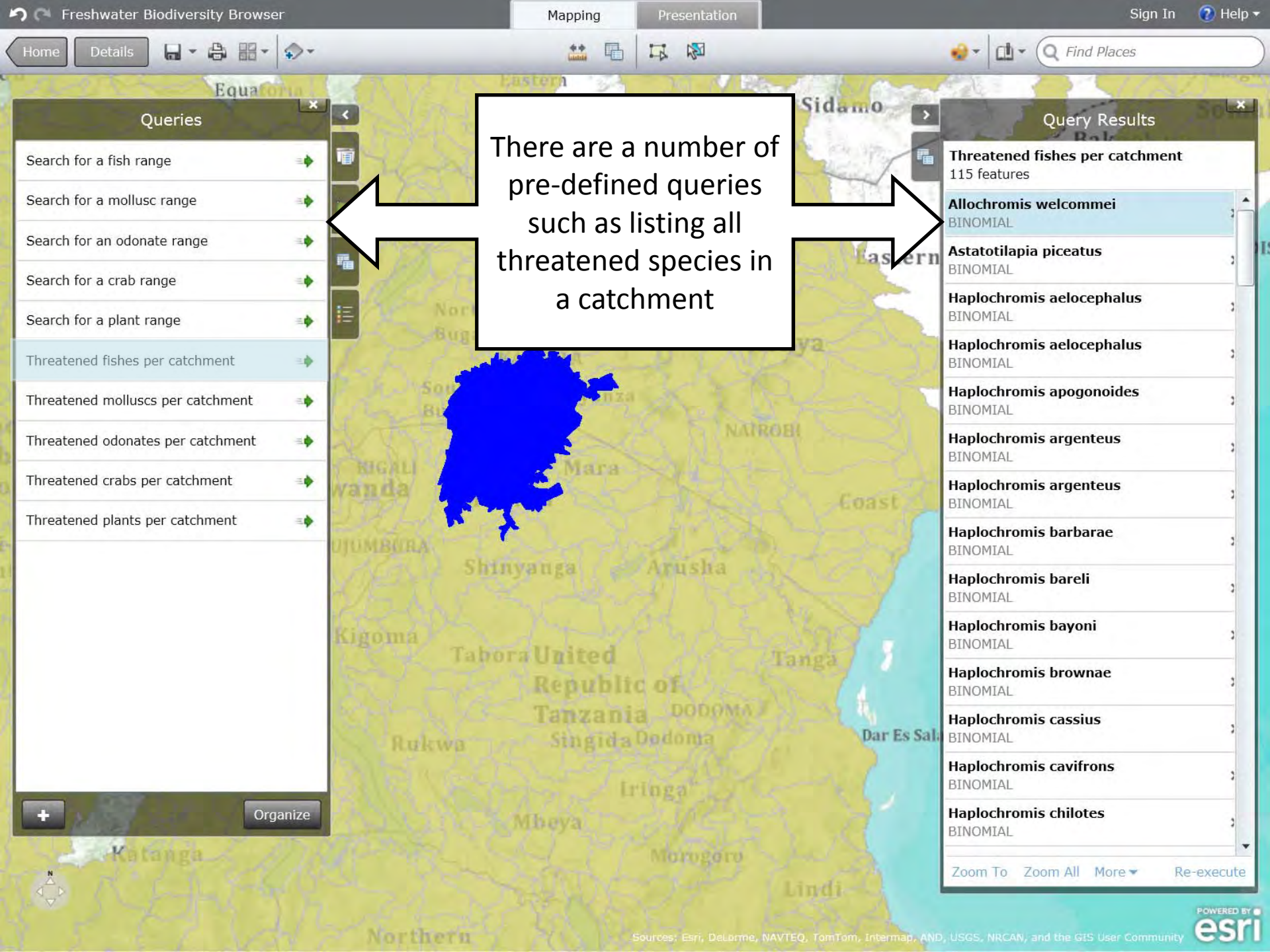
Margaritifera marocana
2 of 5

BINOMIAL	Margaritifera marocana
RL	CR
PRESENCE	Extinct
ORIGIN	Native
POP_TREND	Decreasing
THREATS	This species was possibly collected (till the 19th Century) for pearls since the old name of the Oued Derna is River of Pearls. The major threats for the few surviving populations are pollution or any kind of mechanical alteration/disturbance (impoundmen
USE_TRADE	Wearing apparel, accessories
REDLISTASS	2007-05-04 00:00:00
URL	http://www.iucnredlist.org/a
CITATION	IUCN (International Union for Conservation of Nature)
HYD_7_AZ	1524000
Shape_Length	897358.414877947
Shape_Area	11406837484.739

Zoom To | Zoom All | More | Re-execute

Source: ESRI, i-cubed, USDA FSA, USGS, AEX, GeoEye, Getmapping, Aerogrid, IGP

POWERED BY esri

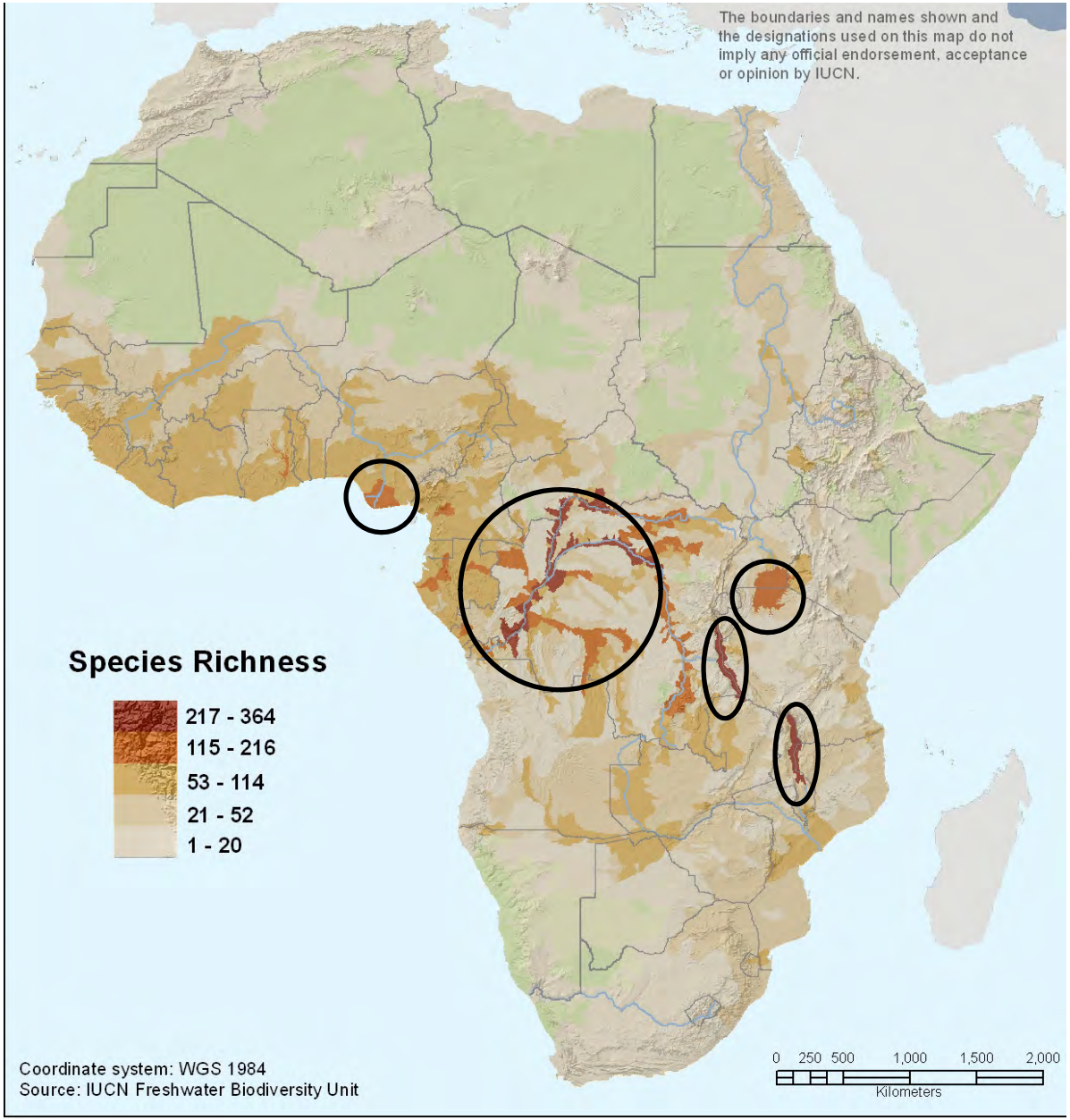

Freshwater Biodiversity Browser
Mapping
Presentation
Sign In
Help
Home
Details
Find Places
Queries
Search for a fish range
Search for a mollusc range
Search for an odonate range
Search for a crab range
Search for a plant range
Threatened fishes per catchment
Threatened molluscs per catchment
Threatened odonates per catchment
Threatened crabs per catchment
Threatened plants per catchment
Organize
There are a number of pre-defined queries such as listing all threatened species in a catchment
Query Results
Threatened fishes per catchment
115 features
Allochromis welcommei
BINOMIAL
Astatotilapia piceatus
BINOMIAL
Haplochromis aelocephalus
BINOMIAL
Haplochromis aelocephalus
BINOMIAL
Haplochromis apogonoides
BINOMIAL
Haplochromis argenteus
BINOMIAL
Haplochromis argenteus
BINOMIAL
Haplochromis barbarae
BINOMIAL
Haplochromis bareli
BINOMIAL
Haplochromis bayoni
BINOMIAL
Haplochromis brownae
BINOMIAL
Haplochromis cassius
BINOMIAL
Haplochromis cavifrons
BINOMIAL
Haplochromis chilotes
BINOMIAL
Zoom To
Zoom All
More
Re-execute
Equatoria
Sidamo
Eastern
NAIROBI
Mara
Coast
Shinyanga
Arusha
Kigoma
Tabora
United Republic of Tanzania
DODOMA
Tanga
Dar Es Sala
Rukwa
Singida
Dodoma
Iringa
Mbeya
Morogoro
Lindi
Katanga
Northern
Sources: Esri, DeLorme, NAVTEQ, TomTom, Intermap, AND, USGS, NRCAN, and the GIS User Community
POWERED BY esri

Some Basic Analysis

Using the shapefiles

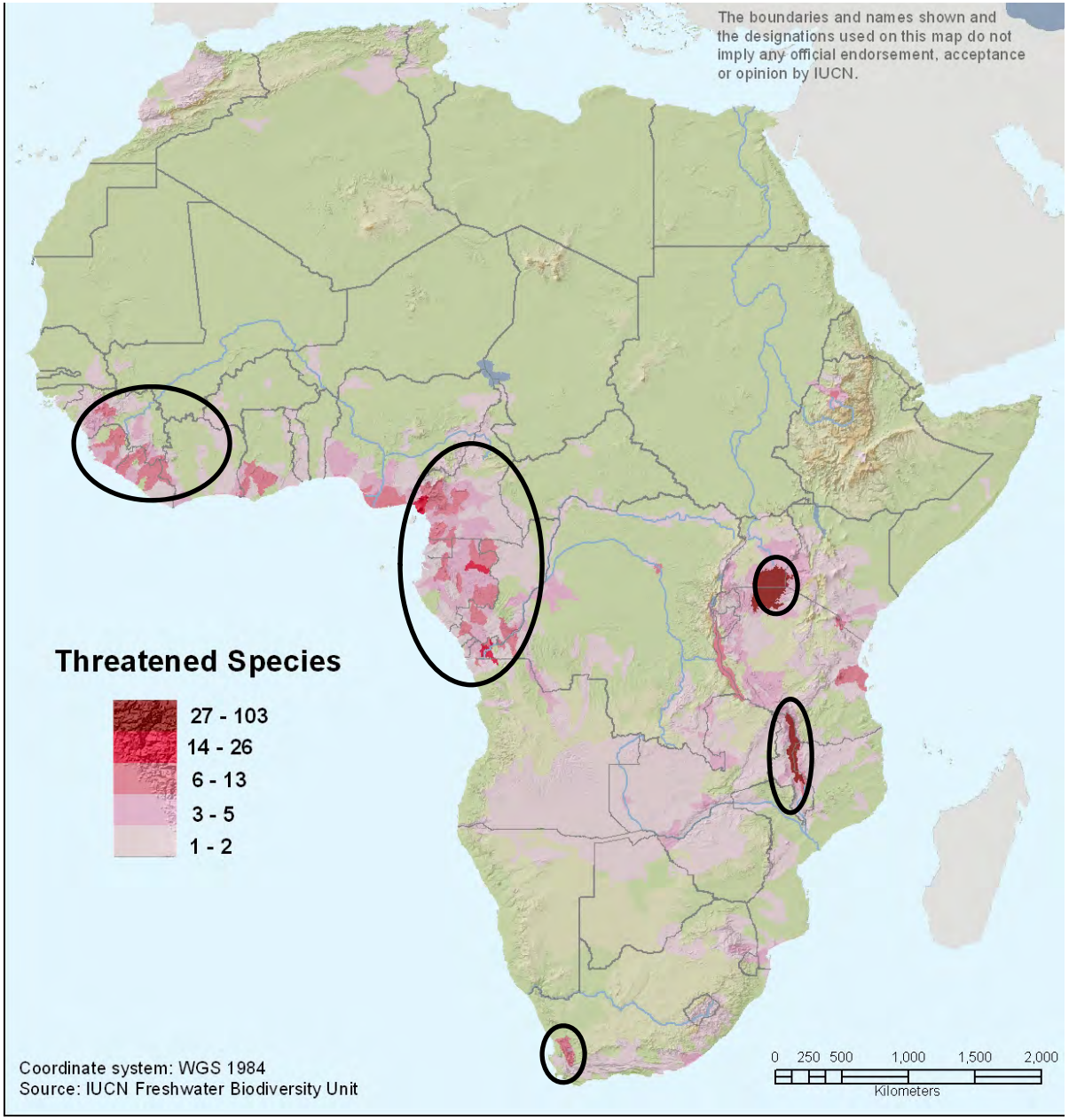
GIS species overlays:

Can identify areas of high species richness…

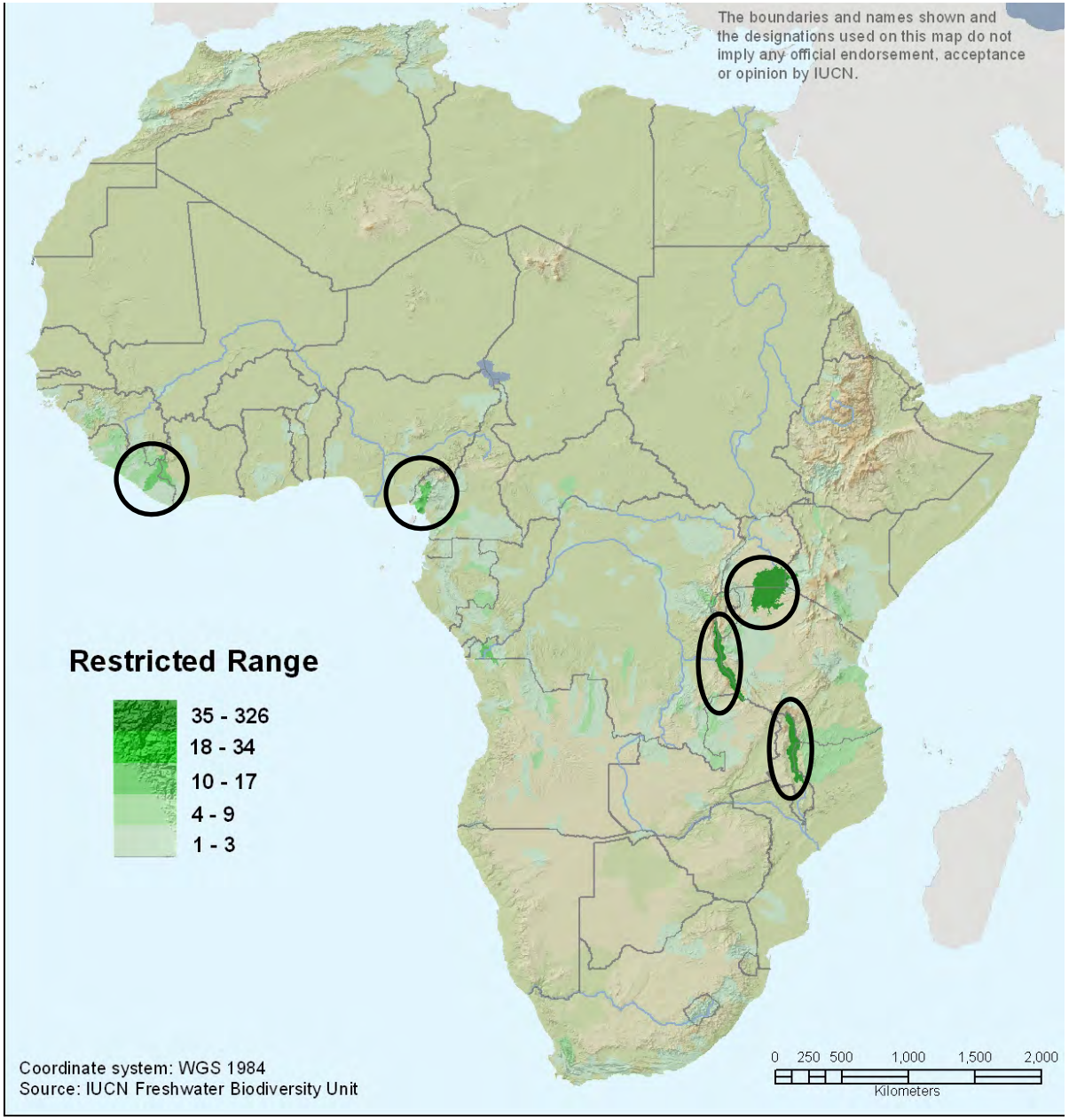


IUCN SSC Species Survival Commission

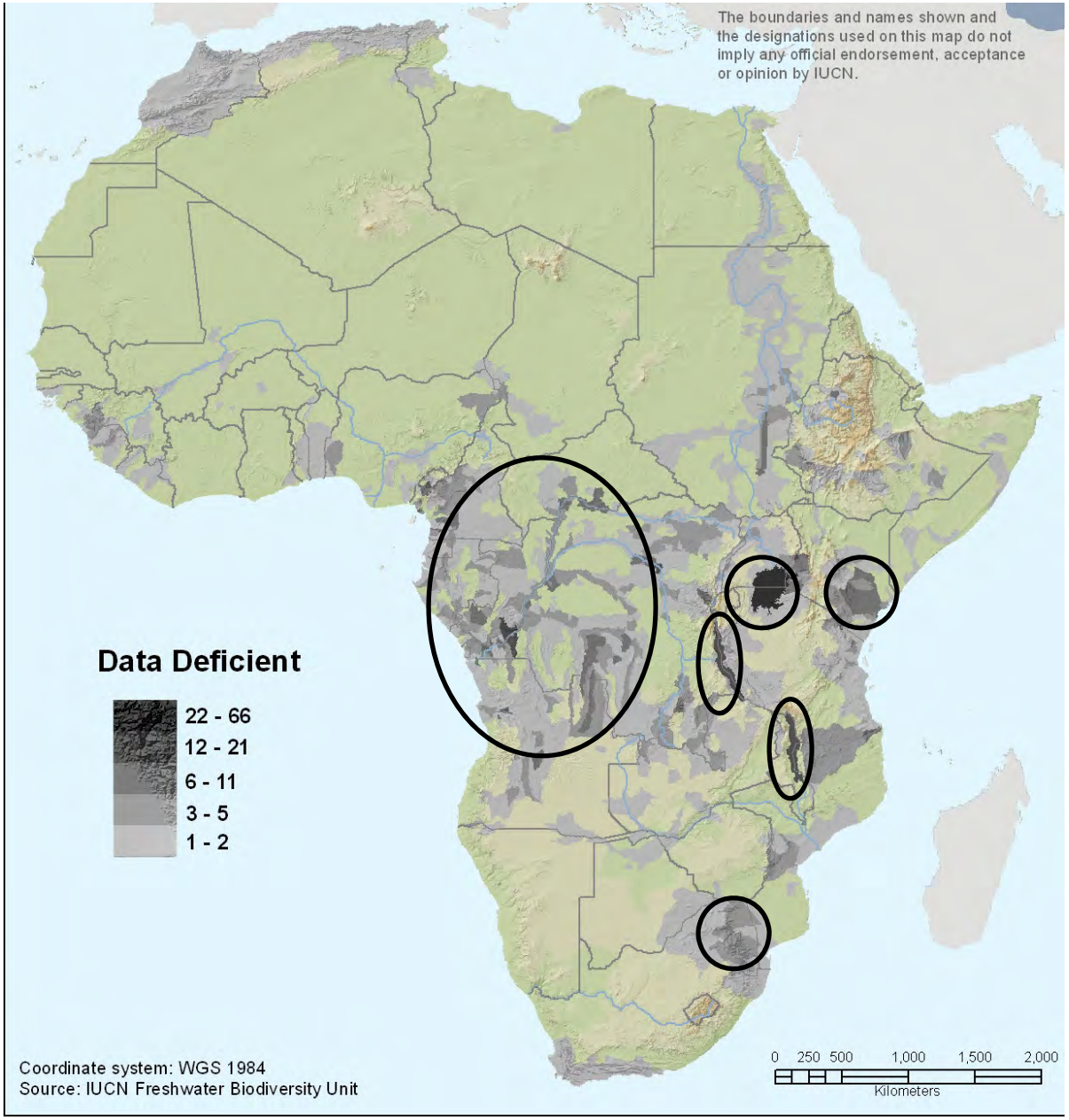
…priorities for conservation based on threatened species…



…priorities based on endemism…

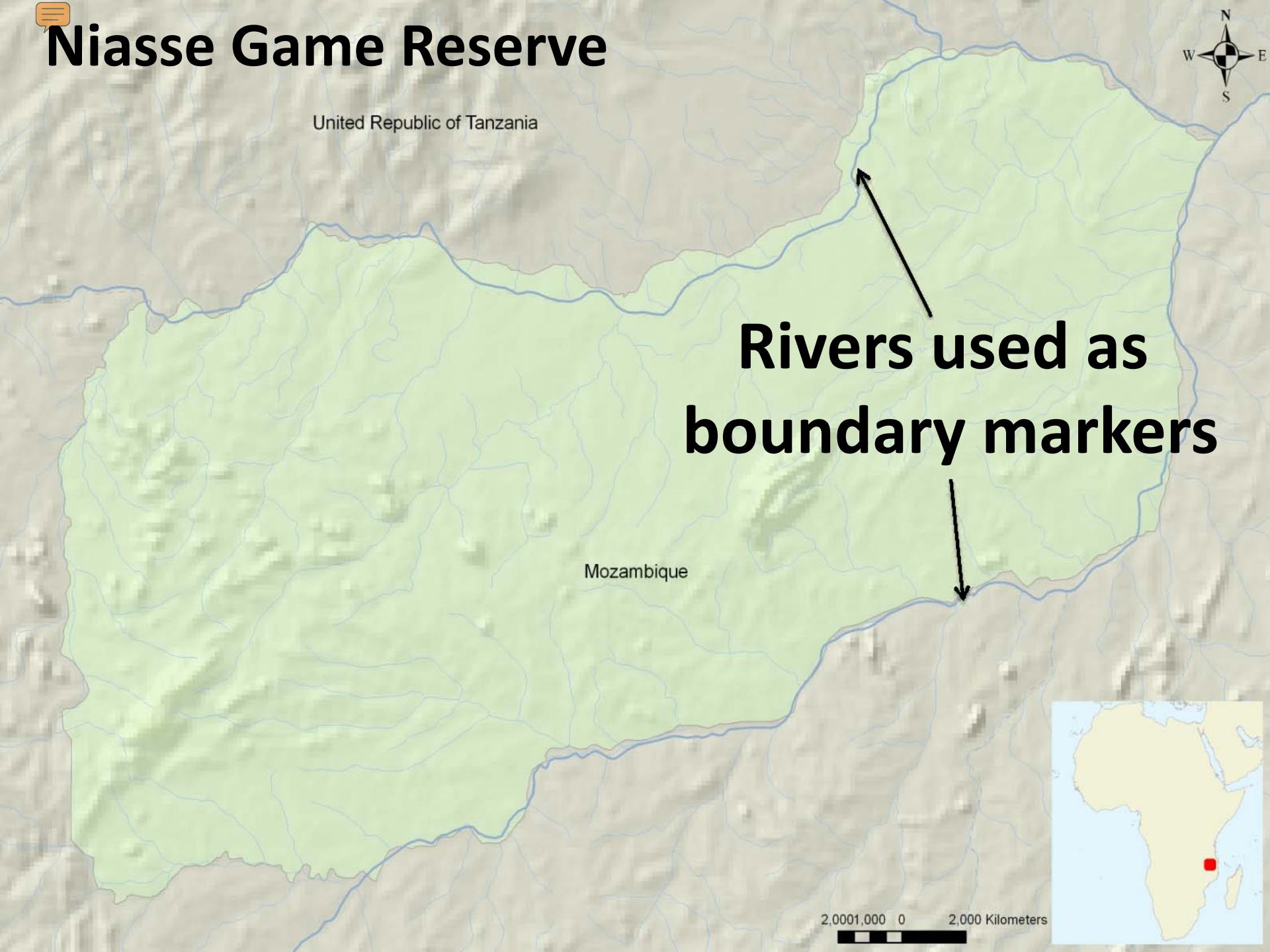


…and areas to invest to increase our knowledge.



Shortfalls in freshwater conservation planning

Niasse Game Reserve



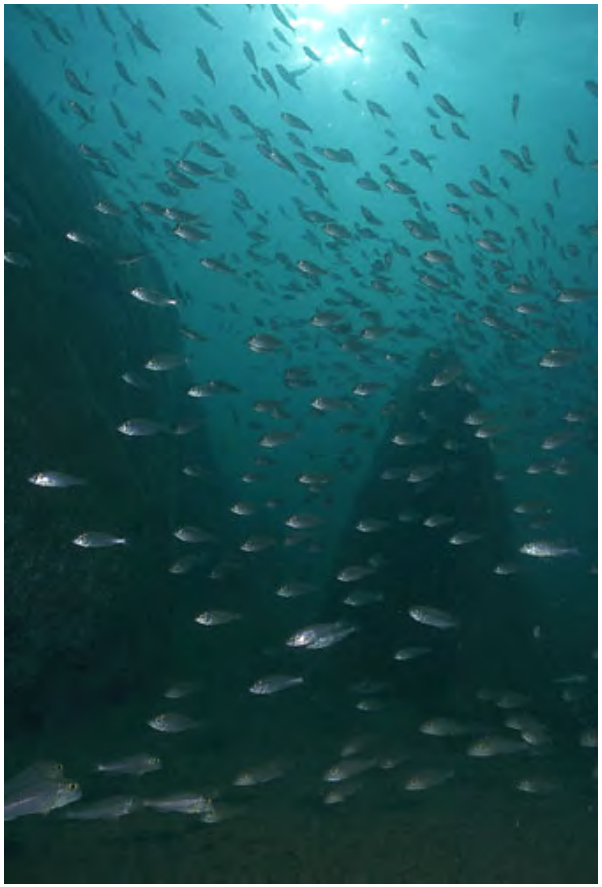
Identifying Key Biodiversity Areas (KBAs) for freshwaters.

What are KBAs?

- Sites of global significance for biodiversity conservation
- Identified using globally standard criteria and thresholds
- Criteria relate to the vulnerability and irreplaceability of sites

What is their purpose?

- Gap analysis of the coverage of protected areas
- Allows strategic expansion for the coverage of species
- Provides a focus for work and funding – i.e. Critical Ecosystem Partnership Fund



Methodology for Freshwater KBAs

- **Step 1**: Define the **geographic boundaries** within which to identify important sites.
- **Step 2**: Define the wider **ecological context** of the designated assessment area.
- **Step 3**: Identify and **map** the distribution of **inland water** habitat types.
- **Step 4**: Assemble an inventory of the **distribution** and **conservation status** of priority aquatic taxa.
- **Step 5**: Apply species based site **selection criteria**.
- **Step 6**: Ensure **full representation** of inland water habitats among those sites selected.
- **Step 7**: Ensure inclusion of **keystone species**.

GOAL: To select **ALL** sub-catchment of importance using standard criteria.

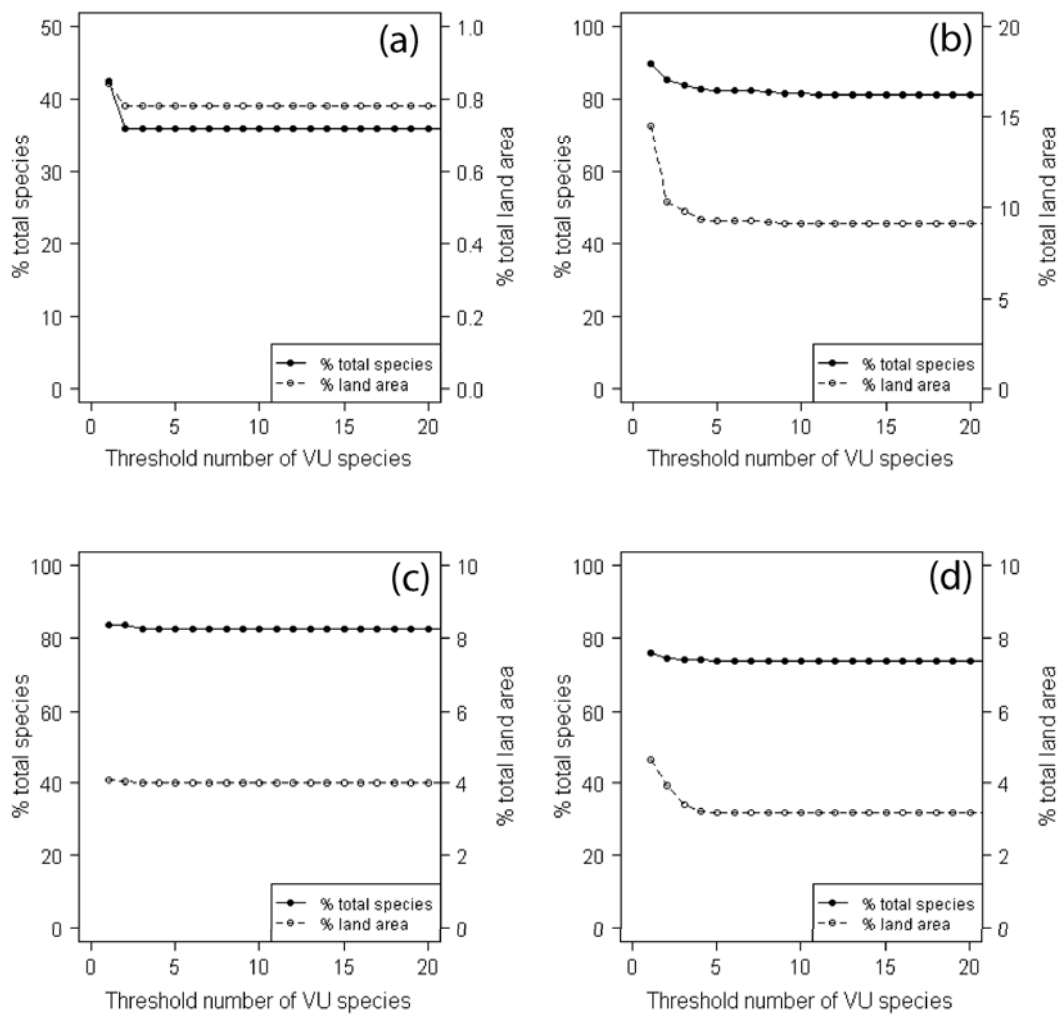
Stage 1 – ID qualifying sub-catchments

- ***Criterion 1.*** *A site is known or thought to hold a significant number of one or more* ***globally threatened species*** *or other species of conservation concern.*
- ***Criterion 2.*** *A site is known or thought to hold non-trivial numbers of one or more species (or infraspecific taxa as appropriate) of* ***restricted range****.*
- ***Criterion 3.*** *A site is known or thought to hold a significant component of the group of species that are* ***confined*** *to an appropriate* ***biogeographic unit*** *or units.*
- ***Criterion 4a.*** *A site is known or thought to be* ***critical*** *for any* ***life history stage*** *of a species.*
- ***Criterion 4b.*** *A site is known or thought to hold more that a* ***threshold number*** *of individuals of a* ***congregatory species****.*

Developing the site selection criteria

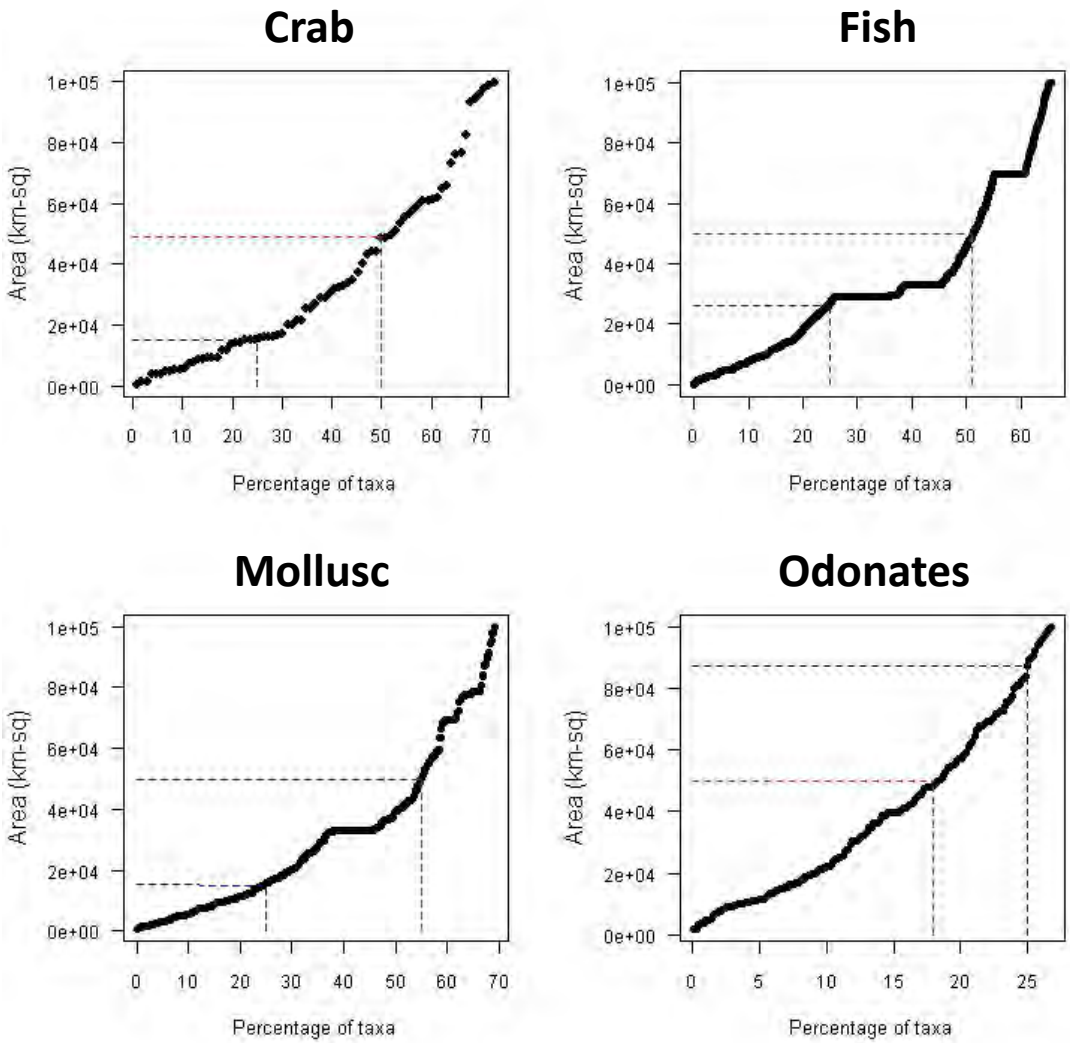
Criterion 1

- *A site is known or thought to hold a significant number of one or more **globally threatened species** or other species of conservation concern.*



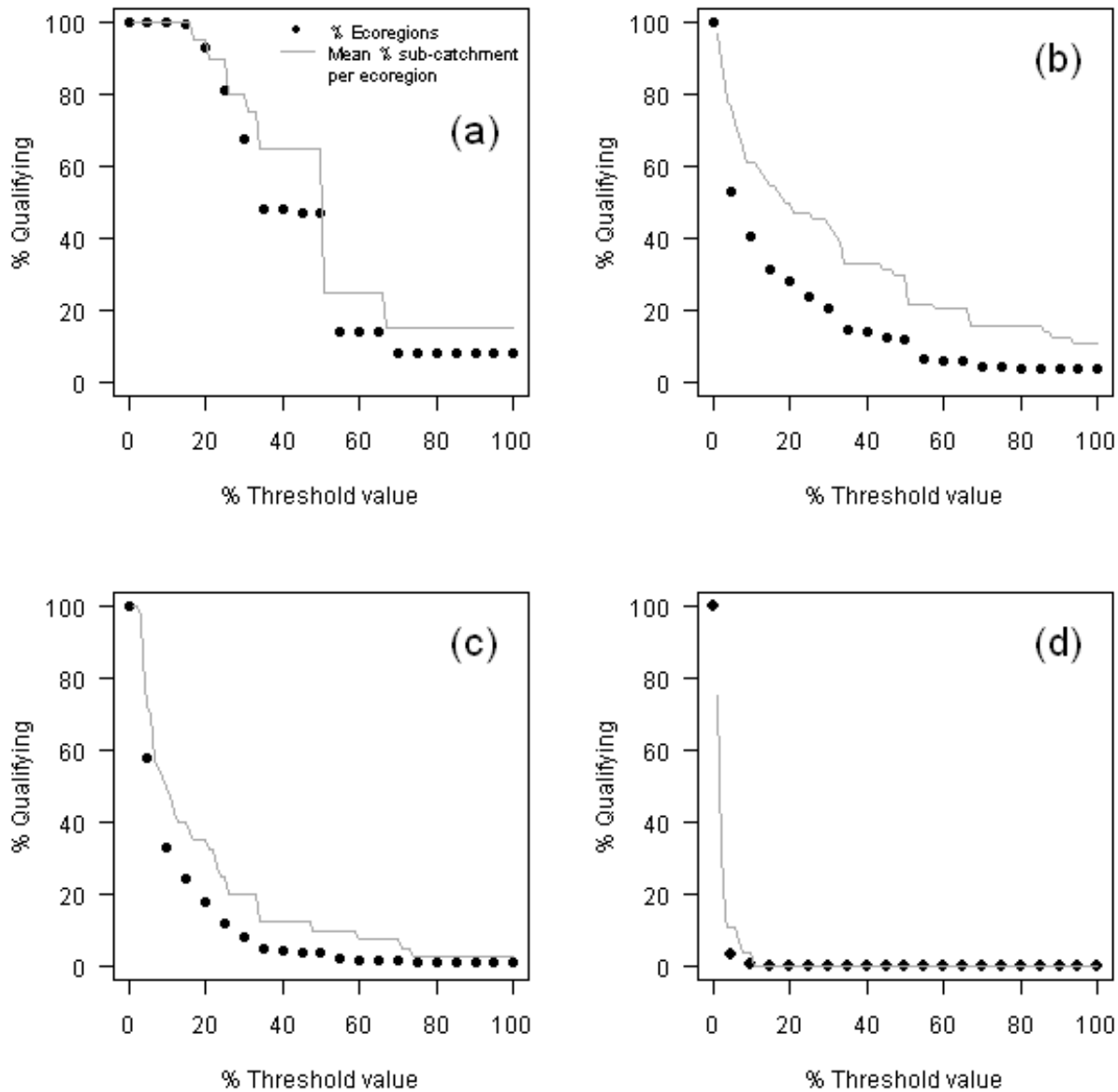
Criterion 2

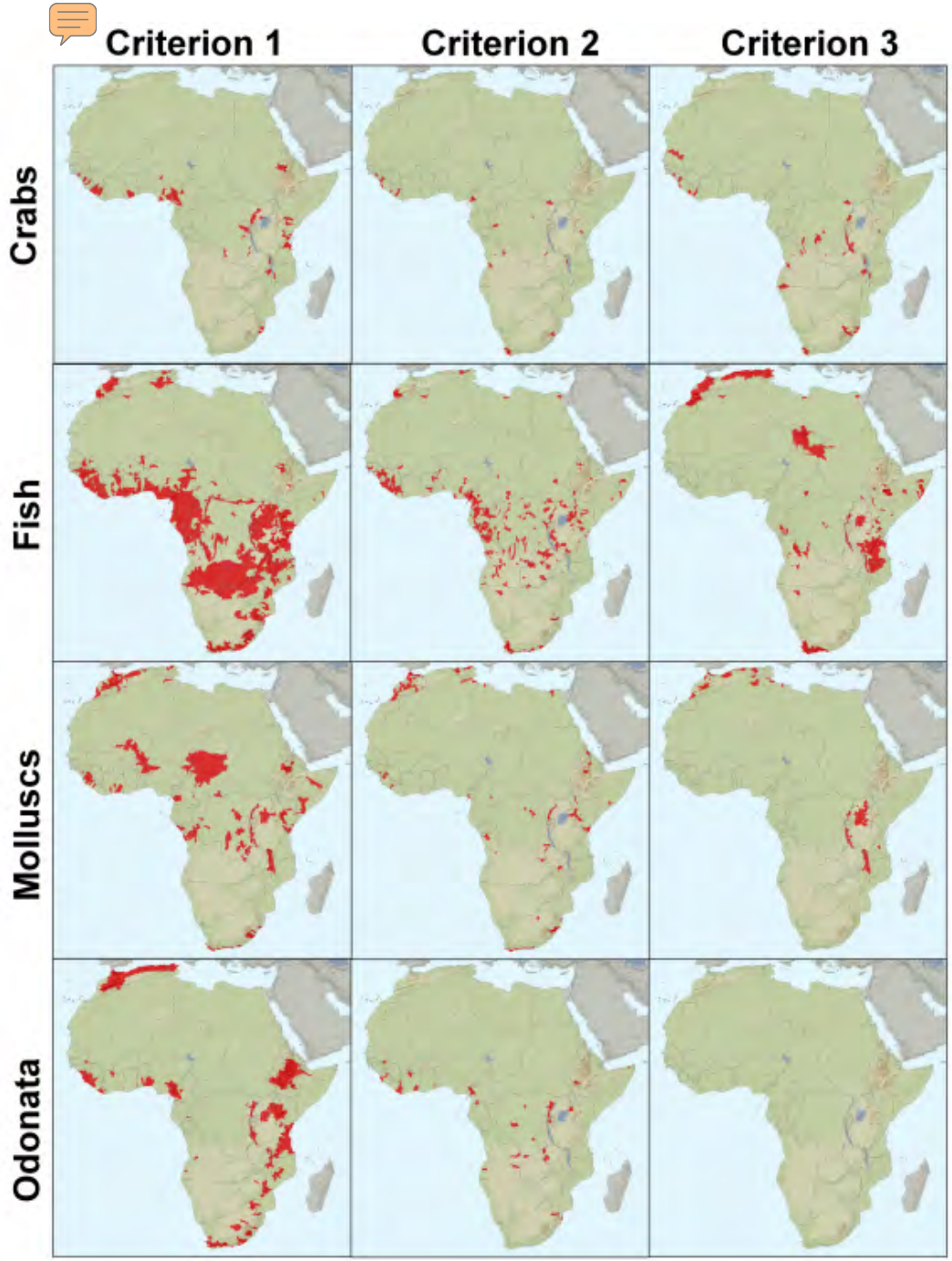
- *A site is known or thought to hold non-trivial numbers of one or more species (or infraspecific taxa as appropriate) of* ***restricted range****.*

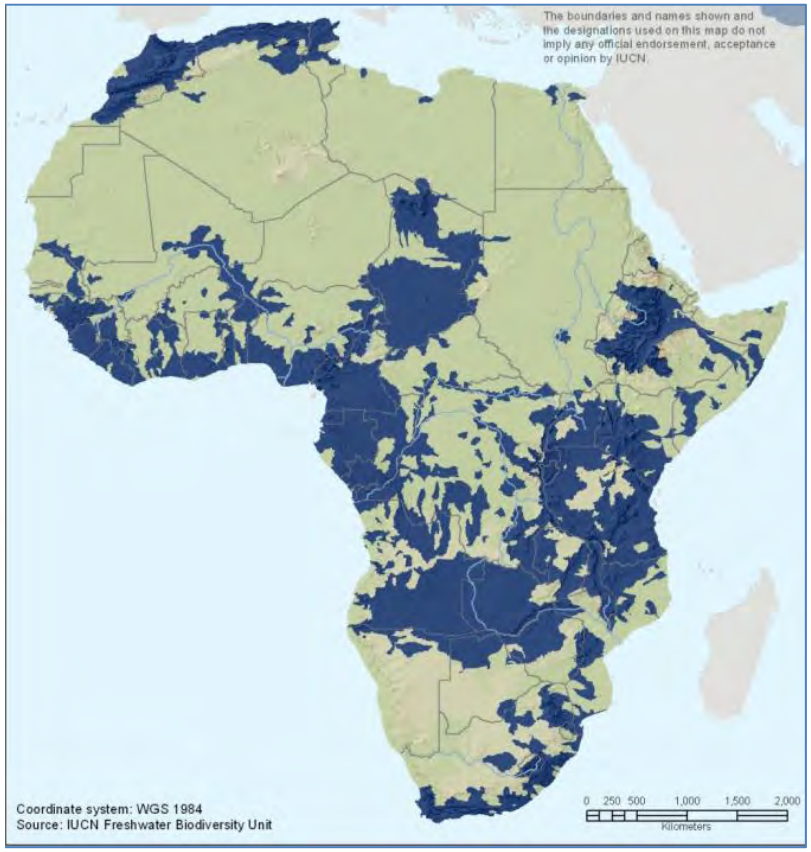


Criterion 3

- *A site is known or thought to hold a significant component of the group of species that are **confined** to an appropriate **biogeographic unit** or units.*

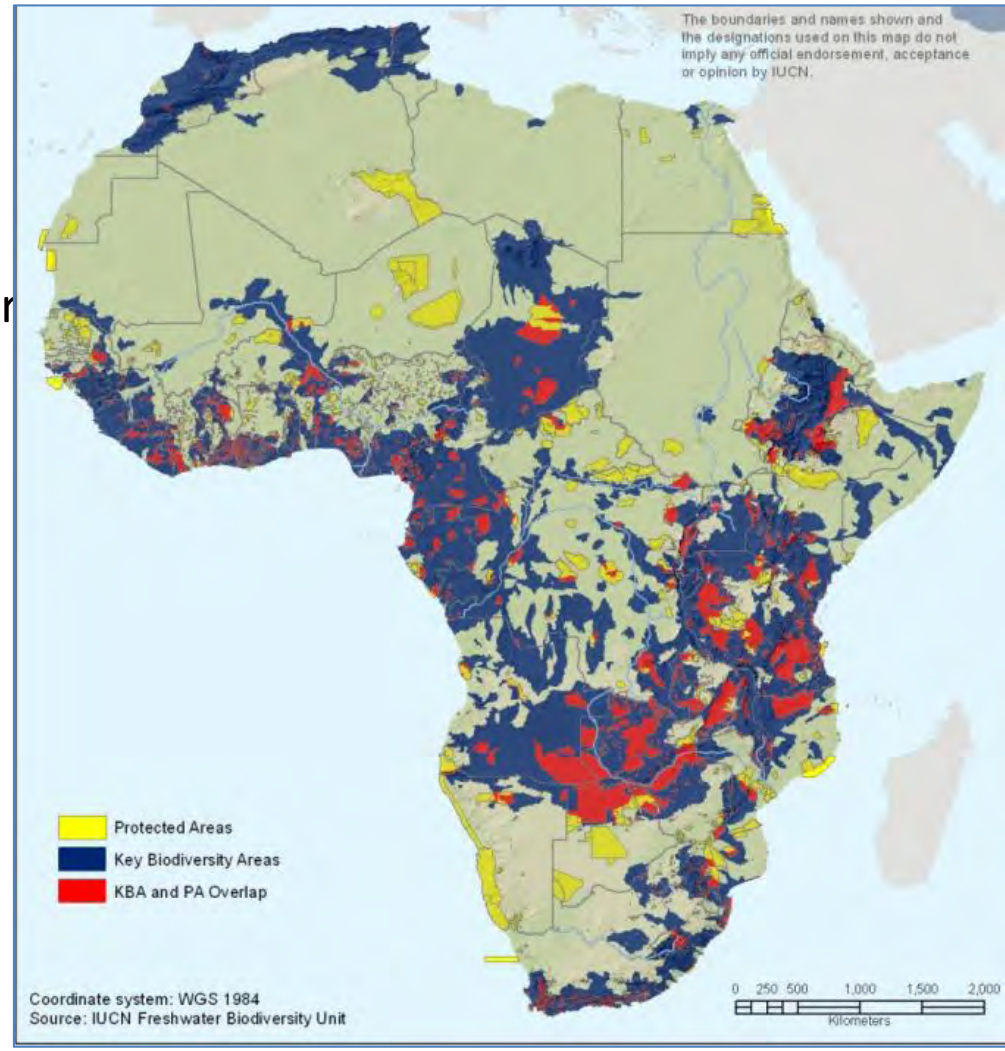



Criterion 1
Criterion 2
Criterion 3
Crabs
Fish
Molluscs
Odonata


The boundaries and names shown and the designations used on this map do not imply any official endorsement, acceptance or opinion by IUCN.
Coordinate system: WGS 1984
Source: IUCN Freshwater Biodiversity Unit
0 250 500 1,000 1,500 2,000
Kilometers

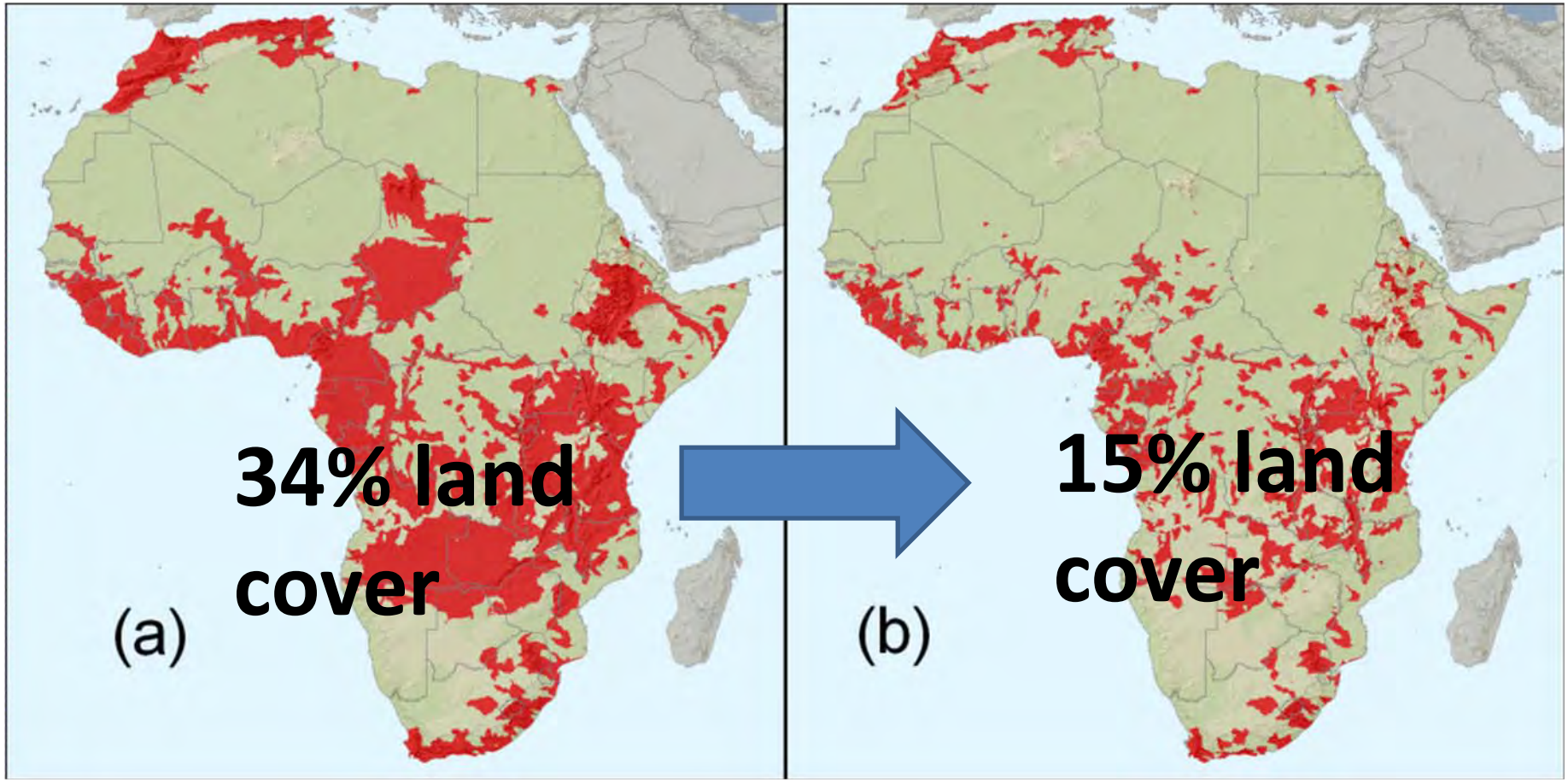
Phase 2 – overlaps with existing PAs/KBAs

- Rationalise KBA and PA boundaries
- Identify shortfalls in existing PA cover
- Coverage variable across the continent
- Within priority sub-catchments circa 16% of river length within a PA
- Management often not targeting freshwater habitats/species
- In South Africa only 50% of rivers within PAs were intact



Systematic Conservation Planning

Can use tools such as MARXAN or ZONATION to prioritise sites.

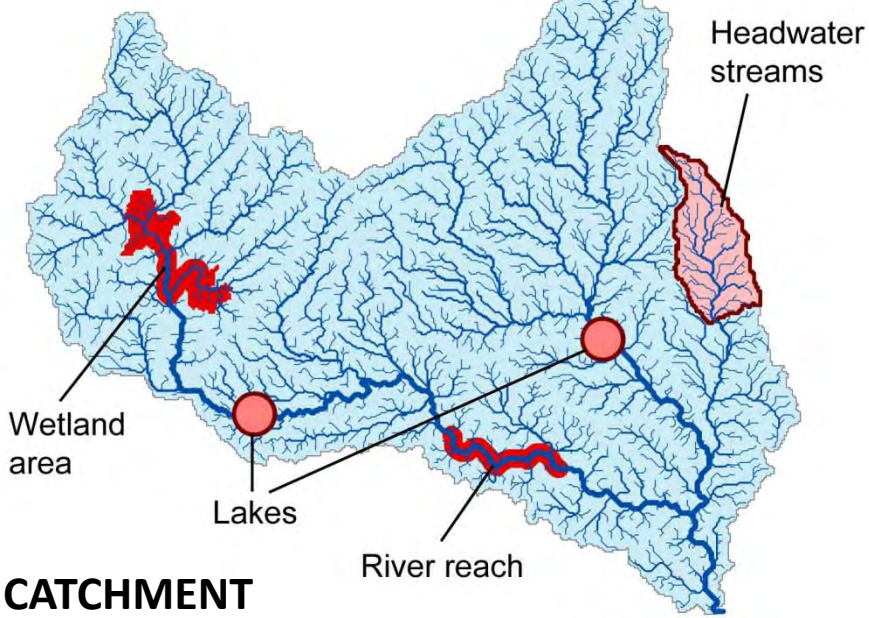


GOAL: To **PRIORITISE** sub-catchment for action.

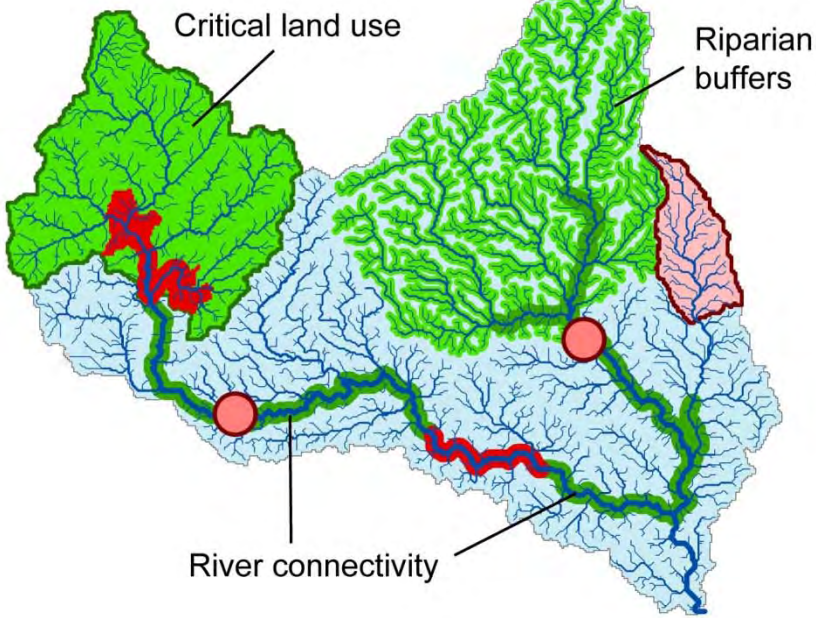
Phase 3 - stakeholder consultation

- Site boundaries
- Context within catchment activities
- Social considerations
- Site or Catchment?

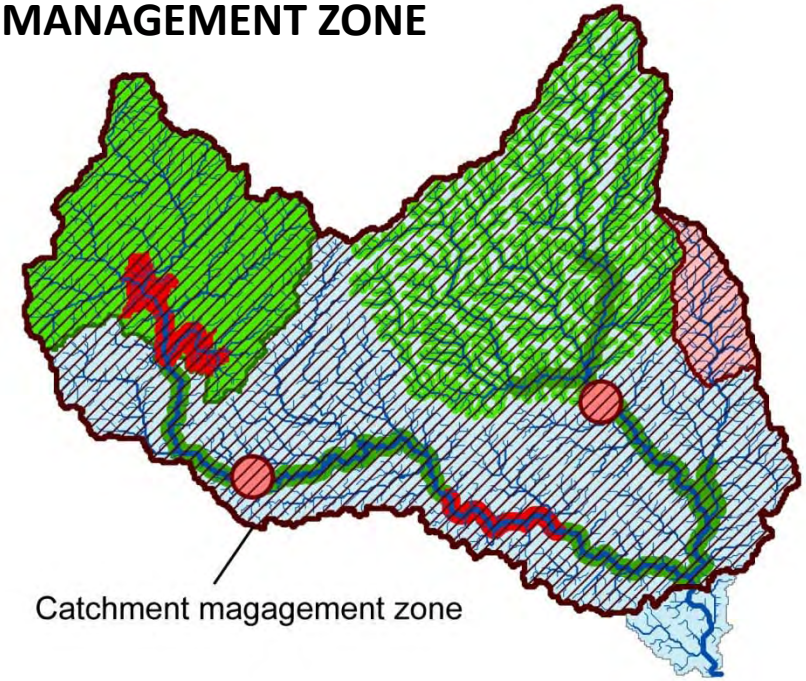
FOCAL AREA



CRITICAL MANAGEMENT ZONE



CATCHMENT MANAGEMENT ZONE



DECREASING LEVELS OF PROTECTION

FOCAL AREA

CRITICAL MANAGEMENT ZONE

CATCHMENT MANAGEMENT ZONE

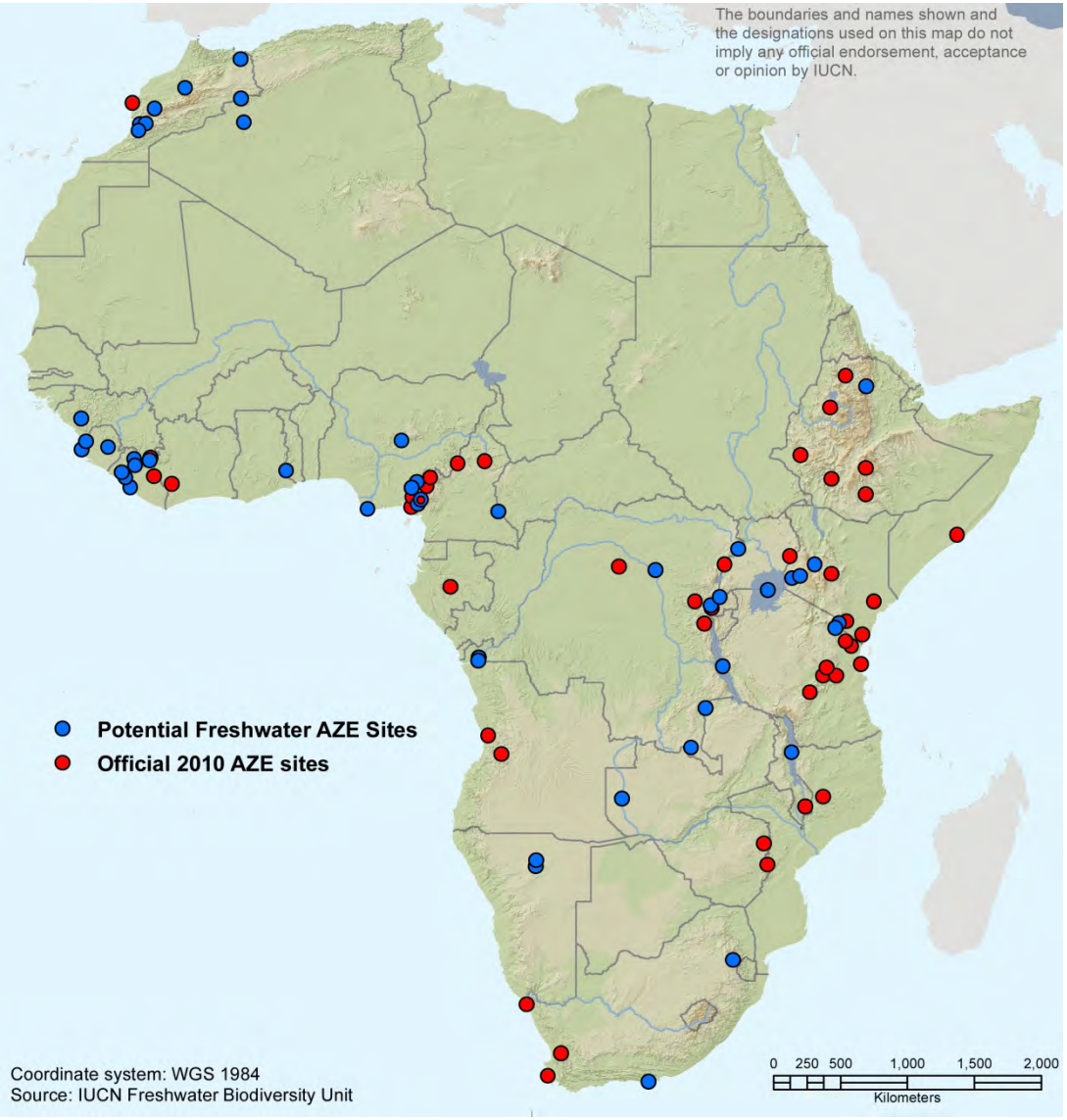
Alliance for Zero Extinction

Subset of KBAs.

Site that hold the last remaining populations of Critically Endangered or Endangered species.

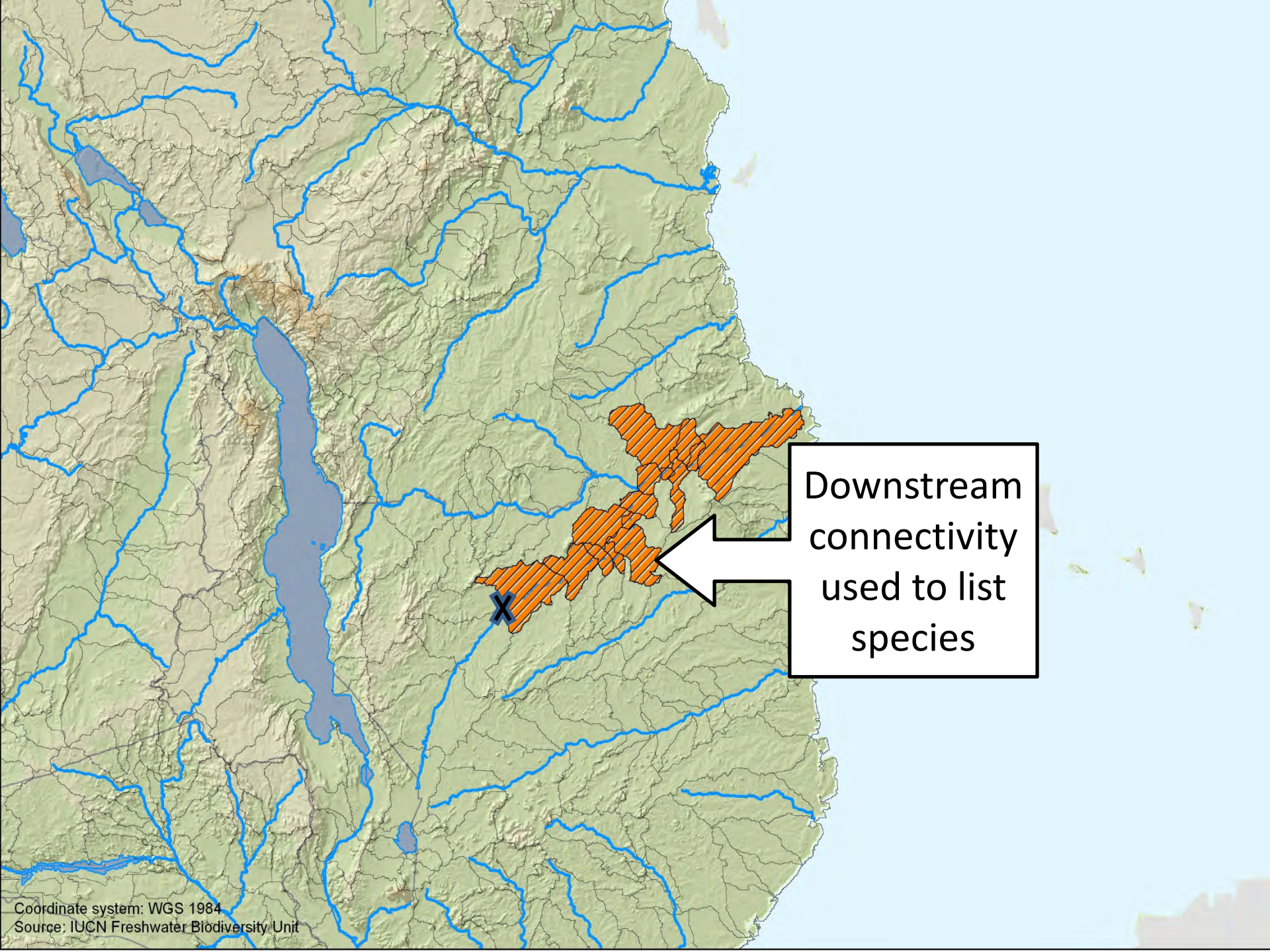
Pan-Africa assessment has helped identify 42 potential AZE sites for freshwater species.

http://www.zeroextinction.org/



Impacts of developmenmt


Site of potential dam/mine etc
X
Coordinate system: WGS 1984
Source: IUCN Freshwater Biodiversity Unit


Downstream connectivity used to list species
Coordinate system: WGS 1984
Source: IUCN Freshwater Biodiversity Unit

Using Red List Assessments to inform site surveys

IUCN Red List data (when available) can help EIA's and other site survey work in a number of ways. For example an EIA survey at a potential site for a mine, may identify many freshwater species, and by:

- incorporating the IUCN Red List category for each species will put the species into a global conservation context. Many of the species may be globally threatened with extinction.
- using information on the species global range provided by the Red List Assessment, those species endemic to the site, wider catchment or country can be identified.
- using other data from the Red List Assessment e.g. information on the species ecology, habitat needs, migratory habits, global range etc. possible mitigation measure can be informed.
- using species utilisation information, species that are important to local livelihoods or even national economies can be identified.

Summary of potential application of outputs to your work

- Regional planning
- Funding focus
- On the ground cons projects – such as EFLows
- IRBM
- Donor safeguards
- Private sector site selection
- EIAs
- PA design for FW systems
- ……