AOL Writing Workshop

Red List Species Guidelines Primer

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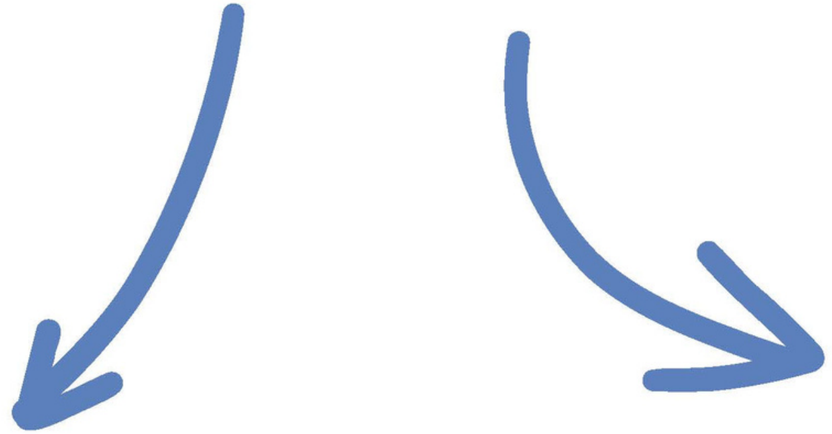
2023-2024 Writing Prompt Rubric

Indicators	0 No Evidence	1 Limited Evidence (Response indicates majority of the criteria below)	2 Full Evidence (Response indicates the majority of the criteria below)	Score (Record Score in this column)
Questioning/ Processing	No evidence	• Questions/processes are basic and lack specificity • Poses closed-ended questions • Basic exploration of thought	• Questions/processes are probing and specific • Poses opened-ended questions • Highly developed/purposeful exploration of thought which challenge assumptions	
Information Gathering/ Analysis	No evidence	• Irrelevant, illogical, and/or confusing thought processes • Superficial information gathering including limited and/or unreliable resources • Minimal analysis of topic	• Relevant and logical thought processes based on evidence • Information gathering includes multiple methods of collection including valid and reliable resources • In-depth analysis and synthesization of topic	
Fluency/ Originality of Ideas	No evidence	• Generates few ideas (1 or 2) specific to the topic • Minimal explanation of ideas • Ideas lack originality	• Generates multiple ideas (3 or more) specific to the topic • Provides clear and concise explanation of ideas • Ideas are original and demonstrate unique viewpoints	
Presentation/ Reasoning	No evidence	• Presents ideas in a poorly organized manner which does not directly address the topic and/or has minimal practical application • Presents vague evidence of meaningful possibilities • Minimal acknowledgement or pursuit of a counter argument	• Presents ideas in a clear and well-organized manner which directly addresses and can be applied to the topic • Presentation provides detailed/clear descriptions of meaningful possibilities • Clearly presents and/or pursues counter argument(s)	
Point of View/ Perspective	No evidence	• Describes potential impact on limited audiences or audiences that would only be minimally impacted	• Describes impact a wide range of audiences or one where the solution would have a major impact	
Total **10**				

2 Types of AOL Prompts



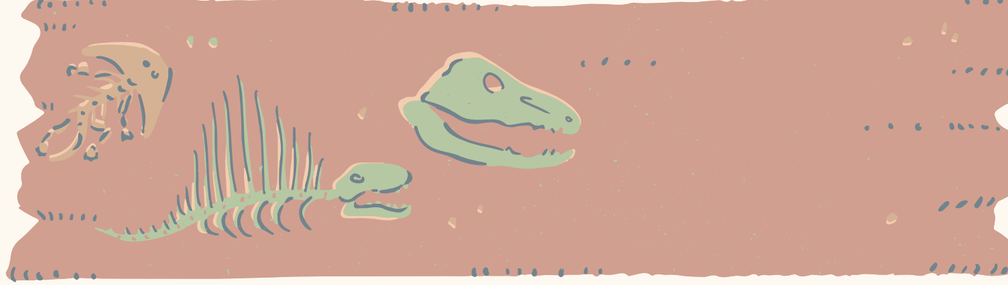
Solution, Contribution & Innovation

How can you...
What solution ....

Situational Prompts

If you are...
Pretend that you are ...

SITUATIONAL AOL WRITING PROMPT BREAKDOWN



The US Fish & Wildlife Service wants to remove 23 animal species from the Endangered Species List. The agency intends to remove these animals from the list because they are believed to be extinct, which means all individuals of that species have died out. Affected animals include the ivory-billed woodpecker (bird) and eight mussels (shellfish) species.

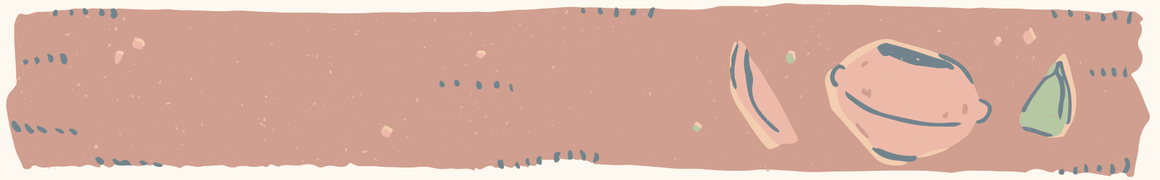
A. Imagine you are a wildlife biologist working to update the Endangered Species List and make recommendations to the US Fish & Wildlife Service. What questions must you ask to assess whether these species are extinct?

B. What types of information might you use to support your findings? What criteria would you use to judge the accuracy and authenticity of the evidence you gather?

C. How would you present your arguments to the US Fish & Wildlife Service? How would you acknowledge differing points of view?

1 Step One

Read each sentence and look for powerful keywords.



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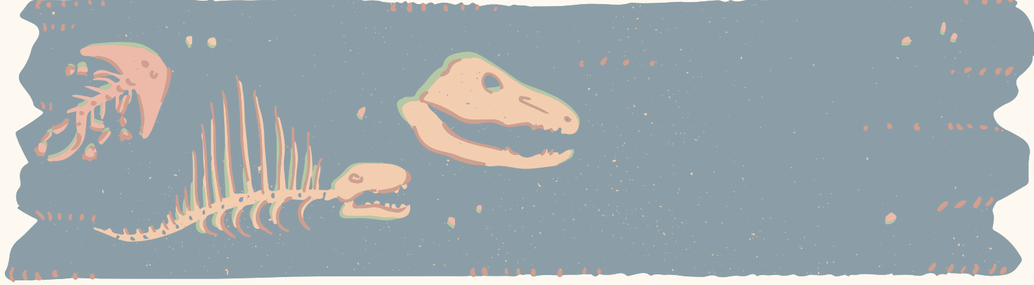

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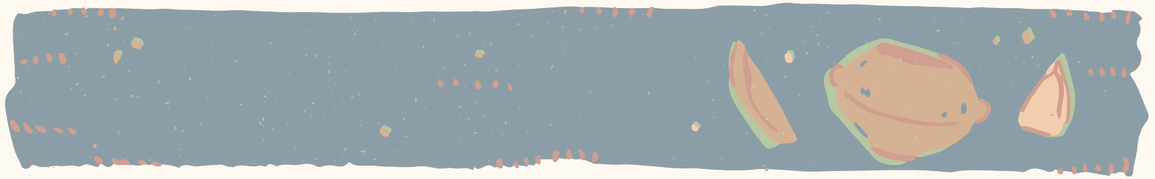
2

Step Two

What does the prompt ask you to do?



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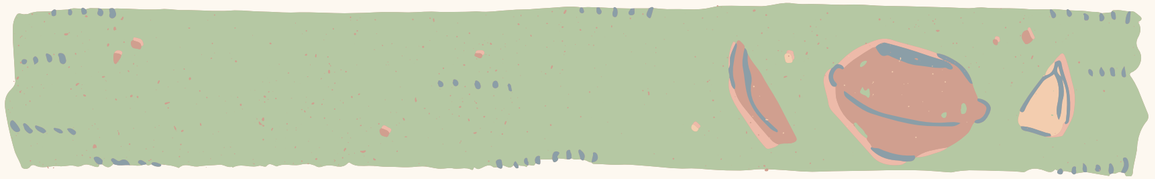
3

Step Three

Connect them to your past experiences and the AOL Writing Rubric.



THE IUCN RED LIST CATEGORY & CRITERIA

International Union for Conservation of Nature

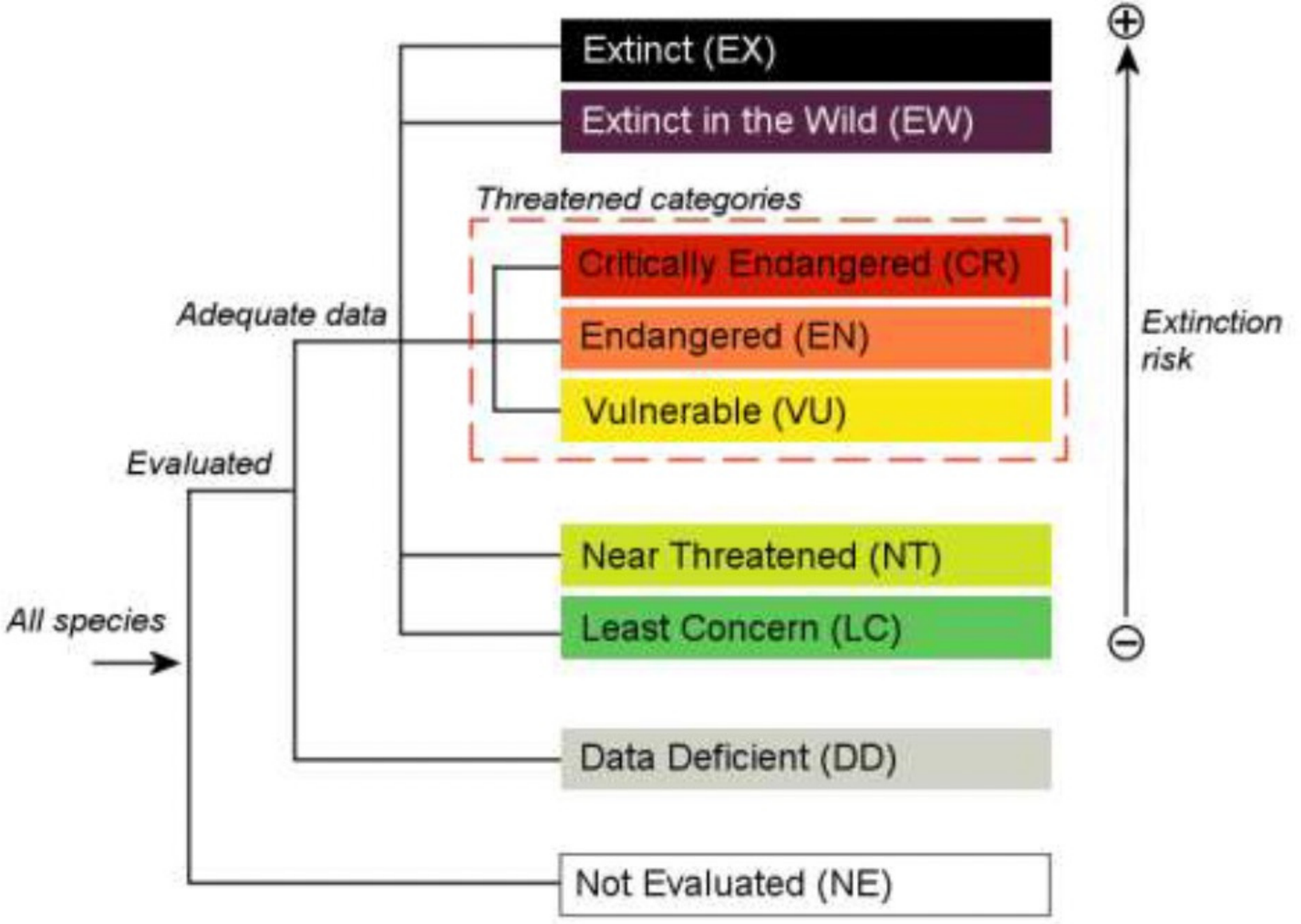


Figure 2.1. Structure of the IUCN Red List Categories

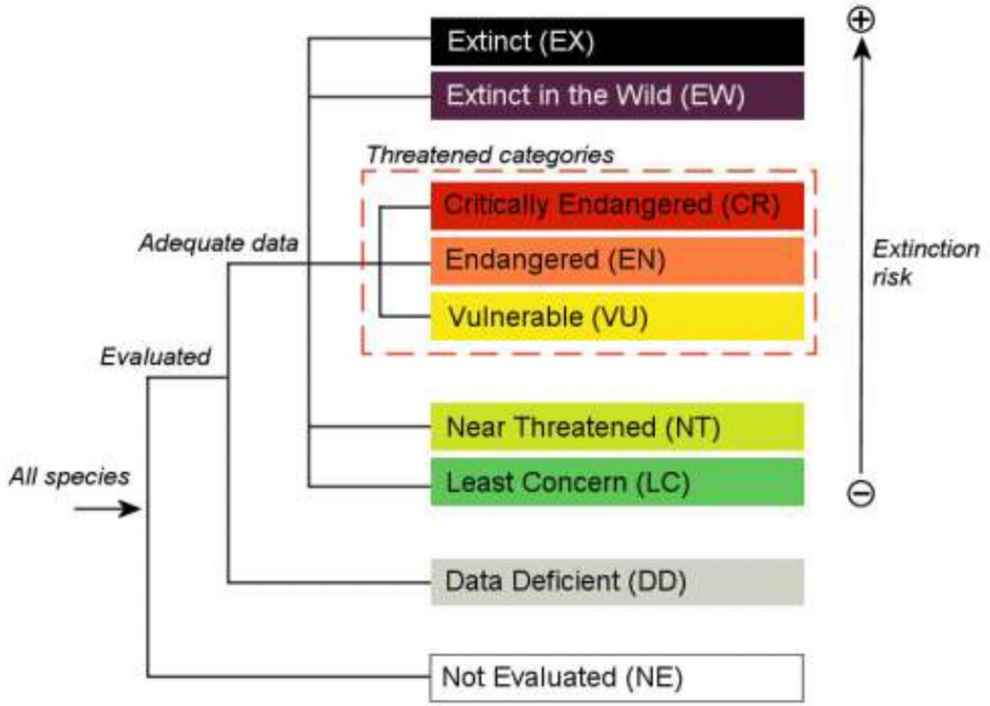


Figure 2.1. Structure of the IUCN Red List Categories

The definitions of the three threatened categories (vulnerable, endangered, and critically endangered) are based on five criteria: population reduction rate, geographic range, population size, population restrictions, and probability of extinction.

Threatened categories have different thresholds for these criteria. As the population and range of the species decrease, the species becomes more threatened.

Extinct

A species is extinct when there is no reasonable doubt that the last remaining individual of that species has died.
(Endangered Species, National Geographic)

Cause: Habitat Loss

Extinct

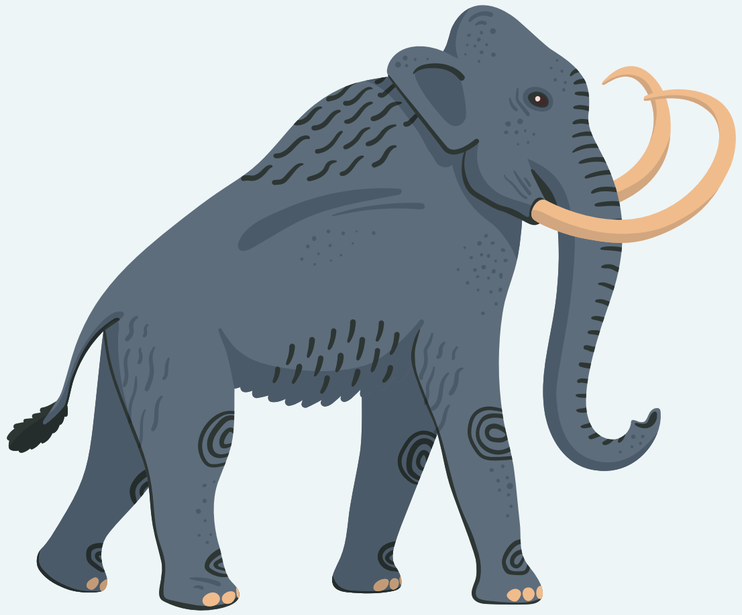
A taxon is Extinct when there is no reasonable doubt that the last individual has died. A taxon is presumedExtinct when exhaustive surveys in known and expected habitat, at appropriate times throughout its historic range, have failed to record an individual. Surveys should be over a time frame appropriate to the taxon’s life cycles and life form.

Extinct in the Wild

A species is extinct in the wild when it only survives in cultivation (plants), in captivity (animals), or as a population well outside its established range. A species may be listed as extinct in the wild only after years of surveys have failed to record an individual in its native or expected habitat. *(Endangered Species, National Geographic)*

Cause: Overhunting and Habitat Loss

Extinct in the Wild



A taxon is Extinct in the Wild when it is known only to survive in cultivation, in captivity, or as a naturalized population well outside the past range. A taxon is presumed Extinct in the Wild when exhaustive surveys in known and expected habitats have failed to record an individual at appropriate times throughout its historic range. Surveys should be over a time frame appropriate to the taxon's life cycle and life form.

Critically Endangered

1) Population reduction rate

A critically endangered species' population has declined between 80 and 90 percent. This decline is measured over ten years or three generations of the species, whichever is longer.

A species is classified as critically endangered when its population has declined at least 90 percent, and the cause of the decline is known. A species is also classified as endangered when its population has declined at least 80 percent, and the cause of the decline is not known.

Critically Endangered

2) Geographic range

A critically endangered species' extent of occurrence is less than 100 square kilometers (39 square miles). A critically endangered species' area of occupancy is estimated to be less than 10 square kilometers (4 square miles).

Critically Endangered

3) Population size

A species is classified as critically endangered when there are fewer than 250 mature individuals. A species is also classified as critically endangered when the number of mature individuals declines by at least 25 percent within three years or one generation, whichever is longer.

Critically Endangered

4) Population restrictions

A species is classified as critically endangered when its population is restricted to less than 50 mature individuals. When a species' population is this low, its area of occupancy is not considered.

Critically Endangered

5. The probability of extinction in the wild is at least 50 percent within ten years or three generations, whichever is longer.

Critically Endangered

A taxon is Critically Endangered when the best available evidence indicates that it meets any of the criteria A to E for Critically Endangered, and it is therefore considered to be facing an extremely high risk of extinction in the wild.

Endangered

1) Population reduction rate

A species is classified as endangered when its population has declined between 50 and 70 percent. This decline is measured over 10 years or three generations of the species, whichever is longer.

A species is classified as endangered when its population has declined at least 70 percent and the cause of the decline is known. A species is also classified as endangered when its population has declined at least 50 percent and the cause of the decline is not known.

Endangered

2) Geographic range

An endangered species’ extent of occurrence is less than 5,000 square kilometers (1,930 square miles). An endangered species’ area of occupancy is less than 500 square kilometers (193 square miles).

Endangered

3) Population size

A species is classified as endangered when fewer than 2,500 mature individuals exist. When a species population declines by at least 20 percent within five years or two generations, it is also classified as endangered.

Endangered

4) Population restrictions

A species is classified as endangered when its population is restricted to less than 250 mature individuals. When a species' population is this low, its area of occupancy is not considered.

Endangered

5) Probability of extinction in the wild is at least 20 percent within 20 years or five generations, whichever is longer.

Endangered

A taxon is endangered when the best available evidence indicates that it meets any of the criteria A to E for Endangered and is therefore considered to be facing a very high risk of extinction in the wild.

Vulnerable

A1) Population reduction rate

A species is classified as vulnerable if its population has declined between 30 and 50 percent. This decline is measured over ten years or three generations of the species, whichever is longer. A generation is the period between the birth of an animal and the time it can reproduce.

Vulnerable

A species is vulnerable if its population has declined at least 50 percent, and the cause of the decline is known. Habitat loss is the leading known cause of population decline.

A species is also classified as vulnerable if its population has declined at least 30 percent and its cause is unknown. For example, a new, unknown virus could kill hundreds or even thousands of individuals before being identified.

Vulnerable

2) Geographic range

A species is vulnerable if its “extent of occurrence” is estimated to be less than 20,000 square kilometers (7,722 square miles). An extent of occurrence is the smallest area that could contain all sites of a species’ population. If all members of a species could survive in a single area, the size of that area is the species’ extent of occurrence.

Vulnerable

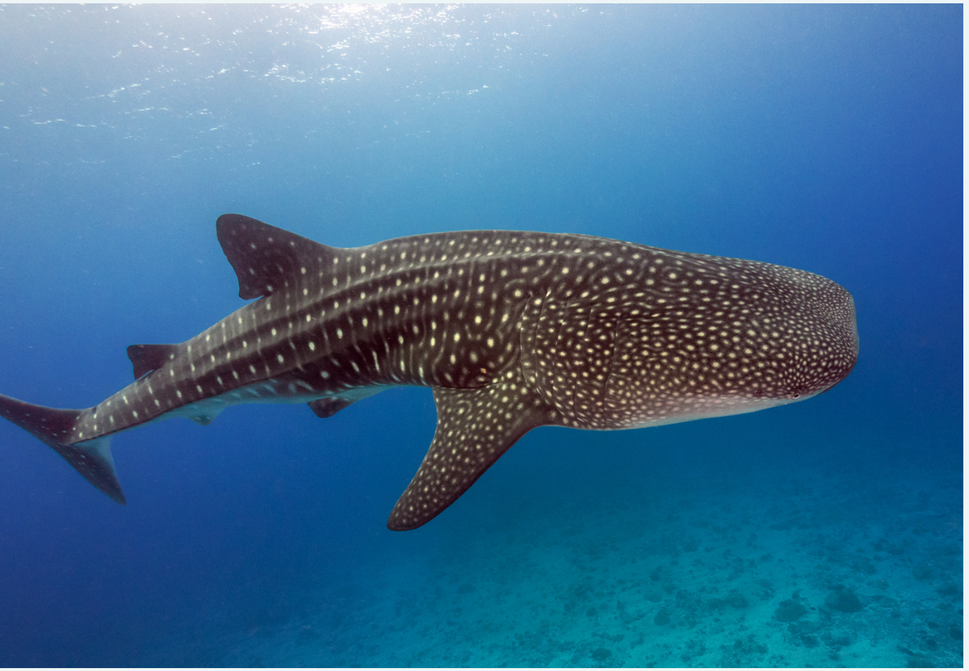
A species is also classified as vulnerable if its “area of occupancy” is estimated to be less than 2,000 square kilometers (772 square miles). An area of occupancy is where a specific population of that species resides. This area is often a breeding or nesting site in a species range.

Vulnerable

3) Population size

Species with fewer than 10,000 mature individuals are vulnerable. The species is also vulnerable if that population declines by at least 10 percent within ten years or three generations, whichever is longer.

Vulnerable



4) Population restrictions

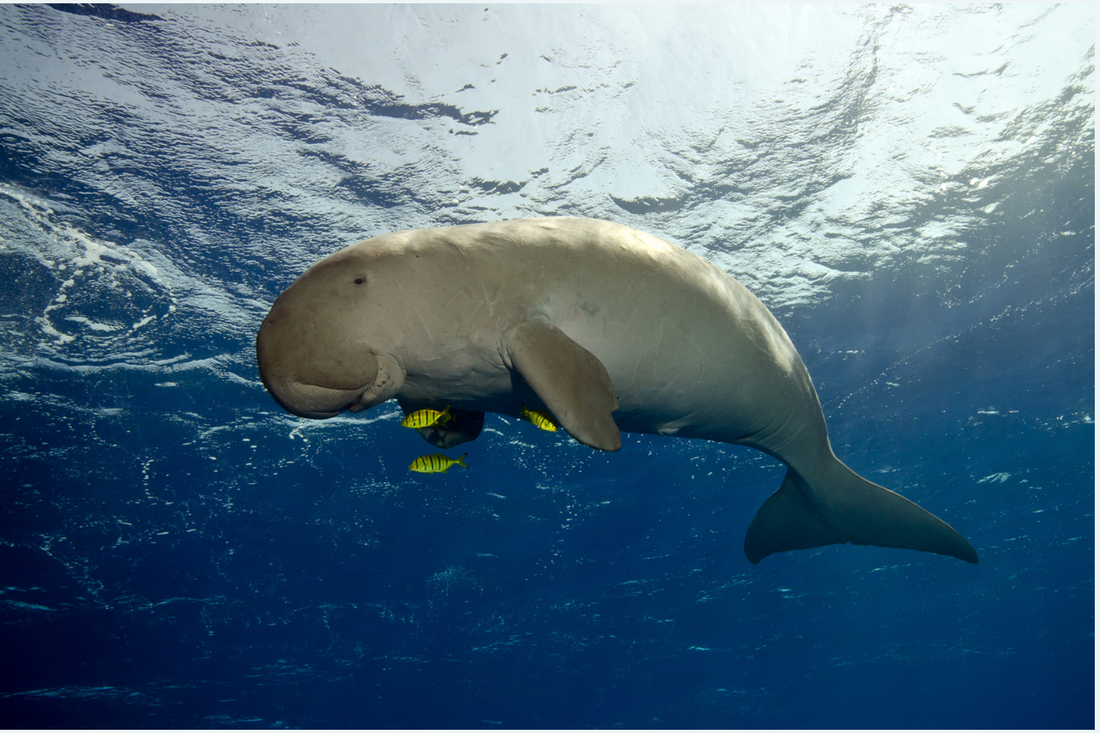
Population restriction is a combination of population and area of occupancy. A species is vulnerable if restricted to less than 1,000 mature individuals or an area of occupancy of less than 20 square kilometers (8 square miles).

Vulnerable

5) Probability of extinction in the wild is at least 10 percent within 100 years.

Biologists, anthropologists, meteorologists, and other scientists have developed complex ways to determine a species' probability of extinction. These formulas calculate the chances a species can survive, without human protection, in the wild.

Vulnerable



A taxon is Vulnerable when the best available evidence indicates that it meets any of the criteria A to E for Vulnerable, and it is therefore considered to be facing a high risk of extinction in the wild.

5 CRITERIA

- A. Population size reduction (past, present, and projected)
- B. Geographic range size, and fragmentation, few locations, decline or fluctuations
- C. Small and declining population size and fragmentation, fluctuations, or few subpopulations
- D. Very small population or very restricted distribution
- E. Quantitative analysis of extinction risk (e.g., Population Viability Analysis)

A. Population size reduction. Population reduction (measured over the longer of 10 years or 3 generations) based on any of A1 to A4

	Critically Endangered	Endangered	Vulnerable
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.

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.

A3 Population reduction projected, inferred or suspected to be met in the future (up to a maximum of 100 years) *[(a) cannot be used for A3]*.

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

based on any of the following:

- **(a)** direct observation *[except A3]*
- **(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.

B. Geographic range in the form of either B1 (extent of occurrence) AND/OR B2 (area of occupancy)			
	Critically Endangered	**Endangered**	**Vulnerable**
B1. Extent of occurrence (EOO)	< 100 km^2	< 5,000 km^2	< 20,000 km^2
B2. Area of occupancy (AOO)	< 10 km^2	< 500 km^2	< 2,000 km^2
AND at least 2 of the following 3 conditions:			
(a) Severely fragmented **OR** Number of locations	= 1	≤ 5	≤ 10
(b) Continuing decline observed, estimated, inferred or projected 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				
		Critically Endangered	Endangered	Vulnerable
Number of mature individuals		< 250	< 2,500	< 10,000
AND at least one of C1 or C2				
C1. An observed, estimated or projected continuing decline of at least (up to a max. of 100 years in future):		25% in 3 years or 1 generation (whichever is longer)	20% in 5 years or 2 generations (whichever is longer)	10% in 10 years or 3 generations (whichever is longer)
C2. An observed, estimated, projected or inferred continuing decline AND at least 1 of the following 3 conditions:				
(a)	**(i)** Number of mature individuals in each subpopulation	≤ 50	≤ 250	≤ 1,000
	(ii) % of mature individuals in one subpopulation =	90–100%	95–100%	100%
(b) Extreme fluctuations in the number of mature individuals				

D. Very small or restricted population			
	Critically Endangered	**Endangered**	**Vulnerable**
D. Number of mature individuals	< 50	< 250	**D1.** < 1,000
D2. *Only applies to the VU category* Restricted area of occupancy or number of locations with a plausible future threat that could drive the taxon to CR or EX in a very short time.	-	-	**D2.** typically: AOO < 20 km² or number of locations ≤ 5

E. Quantitative Analysis			
	Critically Endangered	**Endangered**	**Vulnerable**
Indicating the probability of extinction in the wild to be:	≥ 50% in 10 years or 3 generations, whichever is longer (100 years max.)	≥ 20% in 20 years or 5 generations, whichever is longer (100 years max.)	≥ 10% in 100 years