

The IUCN Red List Criteria Analysis of **Rhinella Granulosa**

“The Common Lesser Toad”

Biodiversity Dynamics and Conservation

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Taxonomy

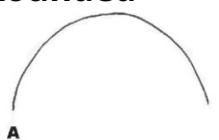


(Baldo et al, 2010)

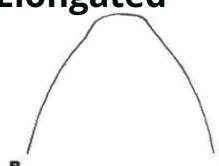
Some Characteristics

Head Shape

Rounded



Elongated



Subtriangular



Color Pattern



Ranges from:
“dark brown”
to “olive green”

Males 60-70 mm,
females 80-90 mm.

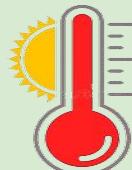
(Narvae and Rodriguez, 2009)

Suitable Environmental Conditions

Tropical and
Subtropical
Areas



Warm
Temperatures
(20-30)



High
Humidity



Geographic Range



- Brazil
- Argentina
- Guyana
- French Guiana
- Surinam
- Colombia
- Venezuela
- Bolivia
- Panama
- Paraguay

Suitable Habitats

System:

Terrestrial



Freshwater (Inland Waters)



(Baldo et al, 2010)

Suitable Habitats

Habitat Type:



(Baldo et al, 2010)

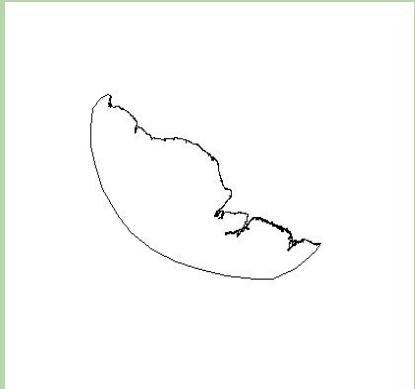
The key Criteria For Species Red-Listing

1. Population Decline (may be estimated by habitat/range decline.)
2. Restricted Range/Area Of Occupancy
EOO(Extent Of Occurrence)
AOO(Area Of Occupancy)
3. Small Population & Decline
4. Very Small or Restricted Population
5. Quantitative Analyses (PVA) Suggesting Extinction Risk

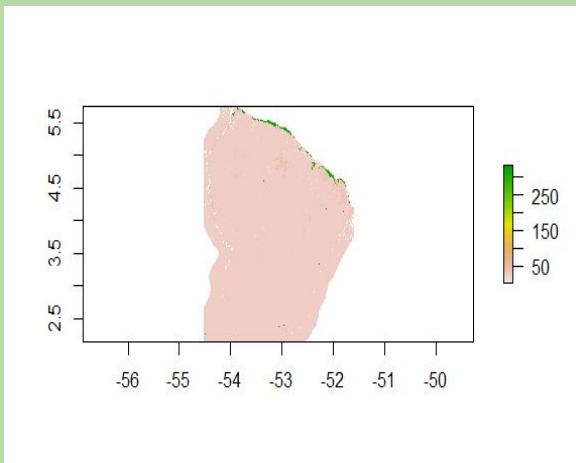
Rstudio Steps

1

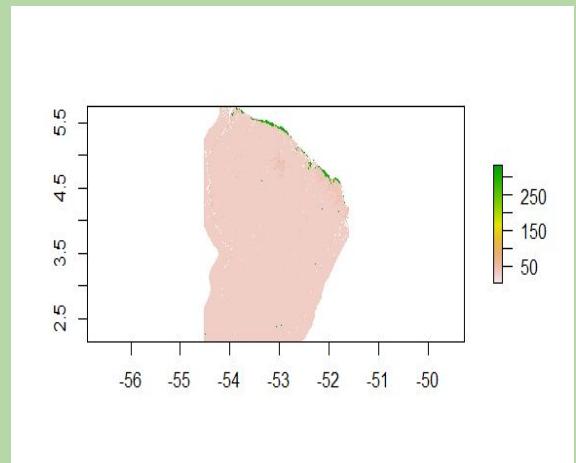
Import land-use and species distribution data for 2005 and 2012.



Species distribution



Land use 2005



Land-use 2012

Rstudio Steps

2

Reclassify land-use data to identify suitable areas for the species across the whole Guiana

	category	name	renelosa
1	1	urban	0
2	13	orpailage and mining activities	0
3	21	arable	0
4	22	permanent colture	0
5	23	grassland	1
6	24	heterogeneous colture	0
7	31	forest	1
8	32	savannah	1
9	33	bare	0
10	34	degraded forest	0
11	41	inland wetland	1
12	42	marine wetland	0
13	51	inland water	1
14	318	mangroves	0
15	332	inselberg	0

- 0: absent
- 1: present

Rstudio Steps

3

Calculate the area of the suitable habitat in 2005 and 2012

2005 Area (km2)

Suitable	98,491.787
Non-Suitable	1,525.293

Area of the suitable habitat (2005)

2012 Area (km2)

Suitable	98,285.391
Non-Suitable	1,740.846

Area of the suitable habitat (2012)

Suitable Habitat 2012 < Suitable Habitat 2005

Analysis

	Critically Endangered	Endangered	Vulnerable
EOO	<100 km ²	<5000 km ²	<20,000 km ²
AOO	<10 km ²	<500 km ²	<2,000 km ²

	Critically Endangered	Endangered	Vulnerable
	≥ 90%	≥ 70%	≥ 50%
	≥ 80%	≥ 50%	≥ 30%

- Habitat Loss = 98,491.787 - 98,285.391 = 206.396 km²**
- % Habitat Decline = 0.21%**



Species is



(IUCN Red List, 2010)

Future Scenario

2012 Area (km²)

Suitable	98,285.391
Non-Suitable	1,740.846

Area of the suitable habitat (2012)

future Area (km²)

Suitable	62,480.40
Non-Suitable	37,762.11

Area of the suitable habitat (future)

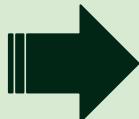
Suitable Habitat future < Suitable Habitat 2012

Analysis

- Habitat Loss = $98,285.391 - 62,480.40 = 35,804.991 \text{ km}^2$
- % Habitat Decline = 36.5%

	Critically Endangered	Endangered	Vulnerable
E00	<100 km ²	<5000 km ²	<20,000 km ²
AOO	<10 km ²	<500 km ²	<2,000 km ²

Critically Endangered	Endangered	Vulnerable
≥ 90%	≥ 70%	≥ 50%
≥ 80%	≥ 50%	≥ 30%



Species will be **vulnerable** in the future.

References

Baldo, D. et al. (2008) *The IUCN Red List of Threatened Species*, IUCN Red List of Threatened Species.
Available at: <https://www.iucnredlist.org/species/54655/86595684> (Accessed: 09 December 2023).



Thank You!

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