

Roatán Spiny-tailed Iguana (*Ctenosaura* oedirhina)

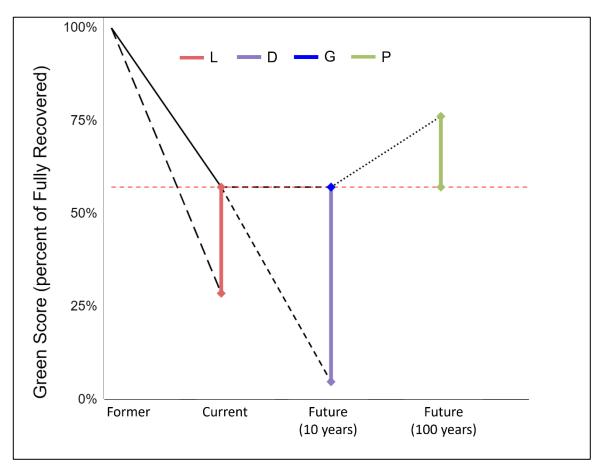


Figure S1. Graphical representation of the conservation metrics based on the Green Scores. Key: Vertical arrows represent the four conservation metrics: L – Conservation Legacy (may not appear if current and counterfactual states are the same); D – Conservation Dependence (may not appear if current and future-without-conservation states are the same); G – Conservation Gain (may not appear if current and future-with-conservation states are the same); P – Recovery Potential (may not appear if current and potential states are the same). Horizontal red dashed line represents the Current Green Score. Solid black line: observed change in the Green Score of the species (ignore it if "Former" state is not specified). Long-dashed black line: (counterfactual) past

change expected in the absence of past conservation efforts. Dashed black lines: future scenarios of change expected with and without current and future conservation efforts. Dotted black line: long-term potential change expected with future conservation innovation and efforts.

Table S1. Conservation Actions (<u>list of action codes</u>).

	Full Description	Past actions (no longer occurring)	Current actions	Actions planned within 10 years	Actions that could be implemented in the long-term aspiration scenario	Notes
1.1	1.1 Land/water protection: Site/area protection		Existing protected private lands, Barbareta.	Private land buffer areas.	Rural communities, Port Royal NP.	Existing protected areas are under grass roots protection, thus require continued decisions by landowners to protect the area, as they are not obliged by law. Additionally, if land ownership changes this protection could be lost, thus it is considered ongoing/future action.
1.2	1.2 Land/water protection: Resource & habitat protection		Existing protected private lands, Barbareta.	Private land buffer areas.	Rural communities, Port Royal NP.	Existing protected areas are under grass roots protection, thus require continued decisions by landowners to protect the area, as they are not obliged by law. Additionally, if land ownership changes this protection could be lost, thus it is

Classification	Full Description	Past actions (no longer occurring)	Current actions	Actions planned within 10 years	Actions that could be implemented in the long-term aspiration scenario	Notes
	•	<u> </u>				considered
2.1	2.1 Land/water management: Site/area management		Existing protected private lands, Barbareta.	Private land buffer areas.	Rural communities, Port Royal NP.	ongoing/future action.
2.2	2.2 Land/water management: Invasive/problematic species control		Existing protected private lands.		Private land buffer areas.	
2.3	2.3 Land/water management: Habitat & natural process restoration					
3.1.1	3.1.1 Harvest management		Existing protected private lands, Barbareta.	Private land buffer areas.	Rural communities, Port Royal NP.	
3.1.2	3.1.2 Trade management		Existing protected private lands, Barbareta.	Private land buffer areas.	Rural communities, Port Royal NP.	
3.1.3	3.1.3 Limiting population growth				•	
3.2	3.2 Species recovery					
3.3.1	3.3.1 Species re- introduction: Reintroduction				Private land buffer areas, Rural communities, Port Royal National Park, Wild Areas.	

Classification	Full Description	Past actions (no longer	Current actions	Actions planned	Actions that could be implemented in the long-term aspiration scenario	Notes
3.3.2	3.3.2 Species re-	occurring)	Current actions	within 10 years	Scenario	MOIG2
3.3.2	introduction: Benign introduction					
3.4.1	3.4.1 Ex situ conservation: Captive breeding/artificial propagation				Existing protected private lands, Private land buffer areas, Barbareta.	
3.4.2	3.4.2 Ex situ conservation: Genome resource bank				,	
4.1	4.1 Education and Awareness: Formal education			Existing protected private lands, Rural communities.	Existing protected private lands, Private land buffer areas, Rural communities, Urban Roatán.	
4.2	4.2 Education and Awareness: Training		Existing protected private lands.	Existing protected private lands, Private land buffer areas, Rural communities.	Existing protected private lands, Private land buffer areas, Rural communities, Urban Roatán.	
4.3	4.3 Education and Awareness: Awareness & communications		Existing protected private lands.	Private land buffer areas, Rural communities,		

Classification	Full Description	Past actions (no longer occurring)	Current actions	Actions planned within 10 years	Actions that could be implemented in the long-term aspiration scenario	Notes
				Barbareta, Urban Roatán.		
5.1.1	5.1.1 Legislation: International level					
5.1.2	5.1.2 Legislation: National level		Existing protected private lands, Private land buffer areas, Rural communities, Barbareta, Port Royal National Park, Wild Areas, Urban Roatán.			
5.1.3	5.1.3.Legislation: Subnational level					
5.1.4	5.1.4 Legislation: Scale unspecified					
5.2	5.2 Policies and regulations					
5.3	5.3 Private sector standards & codes					
5.4.1	5.4.1 Compliance and enforcement: International level					

Classification	Full Description	Past actions (no longer occurring)	Current actions	Actions planned within 10 years	Actions that could be implemented in the long-term aspiration scenario	Notes
5.4.2	5.4.2 Compliance and enforcement: National level			Existing protected private lands, Private land buffer areas, Rural communities, Barbareta, Port Royal National Park, Wild Areas, Urban Roatán.	communities, Barbareta, Port Royal National Park, Wild Areas,	
5.4.3	5.4.3 Compliance and enforcement: Subnational level			Existing protected private lands, Private land buffer areas, Rural communities, Barbareta, Port Royal National Park, Wild Areas, Urban Roatán.	communities, Barbareta, Port Royal National Park, Wild Areas,	
5.4.4	5.4.4 Compliance and enforcement: Scale unspecified		Existing protected private lands, Private land buffer areas	Existing protected private lands, Private land buffer areas.	Existing protected private lands, Private land buffer areas.	
6.1	6.1 Livelihood, economic & other incentives: Linked			Rural communities, Urban Roatán.	Rural communities, Urban Roatán.	

Classification	Full Description	Past actions (no longer occurring)	Current actions	Actions planned within 10 years	Actions that could be implemented in the long-term aspiration scenario	Notes
	enterprises &					
6.2	livelihood alternatives 6.2 Livelihood, economic & other incentives: Substitution			Rural communities, Urban Roatán.	Rural communities, Urban Roatán.	
6.3	6.3 Livelihood, economic & other incentives: Market forces					
6.4	6.4 Livelihood, economic & other incentives: Conservation payments					
6.5	6.5 Livelihood, economic & other incentives: Non- monetary values					

 Table S2. Threats (list of threat codes).

Classification	Full Description	Past threats (no longer occurring)	Current threats	Threats expected to emerge or continue over next 10 years	Threats that would be relevant in the long-term aspiration scenario
1.1	1.1 Residential & commercial development: Housing & urban areas		Urban Roatán.	Private land buffer areas, Rural communities, Urban Roatán.	Rural communities, Urban Roatán.
1.2	1.2 Residential & commercial development: Commercial & industrial areas		Urban Roatán.	Rural communities, Urban Roatán.	Rural communities, Urban Roatán.
1.3	1.3 Residential & commercial development: Tourism & recreation areas		Existing protected private lands, Private land buffer areas, Rural communities, Port Royal National Park, Urban Roatán.	Existing protected private lands, Private land buffer areas, Rural communities, Port Royal National Park, Urban Roatán.	Existing protected private lands, Private land buffer areas, Rural communities, Port Royal National Park, Urban Roatán.
2.1.1	2.1.1 Agriculture & aquaculture: Annual & perennial non-timber crops: Shifting agriculture				
2.1.2	2.1.2 Agriculture & aquaculture: Annual & perennial non-timber crops: Small-holder farming				
2.1.3	2.1.3 Agriculture & aquaculture: Annual & perennial non-timber crops: Agro-industry farming				
2.1.4	2.1.4 Agriculture & aquaculture: Annual & perennial non-timber crops: Scale Unknown/Unrecorded				

Classification	Full Description	Past threats (no longer occurring)	Current threats	Threats expected to emerge or continue over next 10 years	Threats that would be relevant in the long-term aspiration scenario
2.2.1	2.2.1 Agriculture & aquaculture: Wood & pulp plantations: Small-holder plantations			•	
2.2.2	2.2.2 Agriculture & aquaculture: Wood & pulp plantations: Agroindustry plantations				
2.2.3	2.2.3 Agriculture & aquaculture: Wood & pulp plantations: Scale Unknown/Unrecorded				
2.3.1	2.3.1 Agriculture & aquaculture: Livestock farming & ranching: Nomadic grazing				
2.3.2	2.3.2 Agriculture & aquaculture: Livestock farming & ranching: Small-holder grazing, ranching or farming				
2.3.3	2.3.3 Agriculture & aquaculture: Livestock farming & ranching: Agro-industry grazing, ranching or farming				
2.3.4	2.3.4 Agriculture & aquaculture: Livestock farming & ranching: Scale Unknown/Unrecorded				
2.4.1	2.4.1 Agriculture & aquaculture: Marine & freshwater aquaculture: Subsistence/artisanal aquaculture				

Classification	Full Description	Past threats (no longer occurring)	Current threats	Threats expected to emerge or continue over next 10 years	Threats that would be relevant in the long-term aspiration scenario
2.4.2	2.4.2 Agriculture & aquaculture: Marine & freshwater aquaculture: Industrial aquaculture				
2.4.3	2.4.3 Agriculture & aquaculture: Scale Unknown/Unrecorded				
3.1	3.1 Energy production & mining: Oil & gas drilling				
3.2	3.2 Energy production & mining: Mining & quarrying				
3.3	3.3 Energy production & mining: Renewable energy				
4.1	4.1 Transportation & service corridors: Roads & railroads		Existing protected private lands, Private land buffer areas, Rural communities, Wild Areas, Urban Roatán.	Existing protected private lands, Private land buffer areas, Rural communities, Wild Areas, Urban Roatán.	Existing protected private lands, Private land buffer areas, Rural communities, Wild Areas, Urban Roatán.
4.2	4.2 Transportation & service corridors: Utility & service lines				
4.3	4.3 Transportation & service corridors: Shipping lanes				
4.4	4.4 Transportation & service corridors: Flight paths				
5.1.1	5.1.1 Biological resource use: Hunting & collecting terrestrial animals: Intentional use (species being assessed is the target)		Private land buffer areas, Rural communities, Port Royal National Park,	Rural communities, Port Royal National Park, Wild Areas, Urban Roatán.	Wild Areas, Urban Roatán.

Classification	Full Description	Past threats (no longer occurring)	Current threats	Threats expected to emerge or continue over next 10 years	Threats that would be relevant in the long-term aspiration scenario
			Wild Areas, Urban Roatán.		
5.1.2	5.1.2 Biological resource use: Hunting & collecting terrestrial animals: Unintentional effects (species being assessed is not the target)				
5.1.3	5.1.3 Biological resource use: Hunting & collecting terrestrial animals: Persecution/control		Private land buffer areas, Rural communities, Urban Roatán.	Rural communities, Urban Roatán.	Urban Roatán.
5.1.4	5.1.4 Biological resource use: Hunting & collecting terrestrial animals: Motivation Unknown/Unrecorded				
5.2.1	5.2.1 Biological resource use: Gathering terrestrial plants: Intentional use (species being assessed is the target)				
5.2.2	5.2.2 Biological resource use: Gathering terrestrial plants: Unintentional effects (species being assessed is not the target)				
5.2.3	5.2.3 Biological resource use: Gathering terrestrial plants: Persecution/control				
5.2.4	5.2.4 Biological resource use: Gathering terrestrial plants:				

Classification	Full Decemention	Past threats		Threats expected to emerge or continue	Threats that would be relevant in the long-term aspiration
Classification	Full Description Motivation	occurring)	Current threats	over next 10 years	scenario
	Unknown/Unrecorded				
5.3.1	5.3.1 Biological resource use: Logging & wood harvesting: Intentional use: subsistence/small scale (species being assessed is the target [harvest]				
5.3.2	5.3.2 Biological resource use: Logging & wood harvesting: Intentional use: large scale (species being assessed is the target) [harvest]				
5.3.3	5.3.3 Biological resource use: Logging & wood harvesting: Unintentional effects: subsistence/small scale (species being assessed is not the target) [harvest]				
5.3.4	5.3.4 Biological resource use: Logging & wood harvesting: Unintentional effects: large scale (species being assessed is not the target) [harvest]				
5.3.5	5.3.5 Biological resource use: Logging & wood harvesting: Motivation Unknown/Unrecorded				

Classification	Full Description	Past threats (no longer occurring)	Current threats	Threats expected to emerge or continue over next 10 years	Threats that would be relevant in the long-term aspiration scenario
5.4.1	5.4.1 Biological resource use: Fishing & harvesting aquatic resources: Intentional use: subsistence/small scale (species being assessed is the target) [harvest]				
5.4.2	5.4.2 Biological resource use: Fishing & harvesting aquatic resources: Intentional use: large scale (species being assessed is the target) [harvest]				
5.4.3	5.4.3 Biological resource use: Fishing & harvesting aquatic resources: Unintentional effects: subsistence/small scale (species being assessed is not the target) [harvest]				
5.4.4	5.4.4 Biological resource use: Fishing & harvesting aquatic resources: Unintentional effects: large scale (species being assessed is not the target) [harvest]				
5.4.5	5.4.5 Biological resource use: Fishing & harvesting aquatic resources: Persecution/control				
5.4.6	5.4.6 Biological resource use: Fishing & harvesting aquatic				

Classification	Full Description	Past threats (no longer occurring)	Current threats	Threats expected to emerge or continue over next 10 years	Threats that would be relevant in the long-term aspiration scenario
	resources: Motivation Unknown/Unrecorded				
6.1	6.1 Human intrusions & disturbance: Recreational activities				
6.2	6.2 Human intrusions & disturbance: War, civil unrest & military exercises				
6.3	6.3 Human intrusions & disturbance: Work & other activities				
7.1.1	7.1.1 Natural system modifications: Fire & fire suppression: Increase in fire frequency/intensity				
7.1.2	7.1.2 Natural system modifications: Fire & fire suppression: Suppression in fire frequency/intensity				
7.1.3	7.1.3 Natural system modifications: Fire & fire suppression: Trend Unknown/Unrecorded		Wild Areas.	Wild Areas.	Wild Areas.
7.2.1	7.2.1 Natural system modifications: Dams & water management/use: Abstraction of surface water (domestic use)				
7.2.2	7.2.2 Natural system modifications: Dams & water				

Classification	Full Description	Past threats (no longer occurring)	Current threats	Threats expected to emerge or continue over next 10 years	Threats that would be relevant in the long-term aspiration scenario
	management/use: Abstraction of surface water (commercial use)				
7.2.3	7.2.3 Natural system modifications: Dams & water management/use: Abstraction of surface water (agricultural use)				
7.2.4	7.2.4 Natural system modifications: Dams & water management/use: Abstraction of surface water (unknown use)				
7.2.5	7.2.5 Natural system modifications: Dams & water management/use: Abstraction of ground water (domestic use)				
7.2.6	7.2.6 Natural system modifications: Dams & water management/use: Abstraction of ground water (commercial use)				
7.2.7	7.2.7 Natural system modifications: Dams & water management/use: Abstraction of ground water (agricultural use)				
7.2.8	7.2.8 Natural system modifications: Dams & water management/use: Abstraction of ground water (unknown use)				
7.2.9	7.2.9 Natural system modifications: Dams & water management/use: Small dams				

Classification	Full Description	Past threats (no longer occurring)	Current threats	Threats expected to emerge or continue over next 10 years	Threats that would be relevant in the long-term aspiration scenario
7.2.10	7.2.10 Natural system modifications: Dams & water management/use: Large dams				
7.2.11	7.2.11 Natural system modifications: Dams & water management/use: Dams (size unknown)				
7.3	7.3 Natural system modifications: Other ecosystem modifications				
8.1.1	8.1.1 Invasive & other problematic species, genes & diseases: Invasive nonnative/alien species/diseases: Unspecified species				
8.1.2	8.1.2 Invasive & other problematic species, genes & diseases: Invasive non-native/alien species/diseases: Named species		Existing protected private lands, Private land buffer areas, Rural communities, Barbareta, Port Royal National Park, Wild Areas, Urban Roatán.	Existing protected private lands, Private land buffer areas, Rural communities, Barbareta, Port Royal National Park, Wild Areas, Urban Roatán.	Areas, Urban Roatán.
8.2.1	8.2.1 Invasive & other problematic species, genes & diseases: Problematic native species/diseases: Unspecified species				
8.2.2	8.2.2 Invasive & other problematic species, genes &				

Classification	Full Description	Past threats (no longer occurring)	Current threats	Threats expected to emerge or continue over next 10 years	Threats that would be relevant in the long-term aspiration scenario
	diseases: Problematic native species/diseases: Named species				
8.3	8.3 Invasive & other problematic species, genes & diseases: Introduced genetic material				
8.4.1	8.4.1 Invasive & other problematic species, genes & diseases: Problematic species/diseases of unknown origin: Unspecified species				
8.4.2	8.4.2 Invasive & other problematic species, genes & diseases: Problematic species/diseases of unknown origin: Named species				
8.5.1	8.5.1 Invasive & other problematic species, genes & diseases: Viral/prion-induced diseases: Unspecified "species" (disease)				
8.5.2	8.5.2 Invasive & other problematic species, genes & diseases: Viral/prion-induced diseases: Named "species" (disease)				
8.6	8.6 Invasive & other problematic species, genes & diseases: Diseases of unknown cause				

Classification	Full Description	Past threats (no longer occurring)	Current threats	Threats expected to emerge or continue over next 10 years	Threats that would be relevant in the long-term aspiration scenario
9.1.1	9.1.1 Pollution: Domestic &	occurring)	Current tineats	Over flext to years	Scenario
5.1.1	urban waste water: Sewage				
9.1.2	9.1.2 Pollution: Domestic & urban waste water: Run-off				
9.1.3	9.1.3 Pollution: Domestic & urban waste water: Type Unknown/Unrecorded				
9.2.1	9.2.1 Pollution: Industrial & military effluents: Oil spills				
9.2.2	9.2.2 Pollution: Industrial & military effluents: Seepage from mining				
9.2.3	9.2.3 Pollution: Industrial & military effluents: Type Unknown/Unrecorded				
9.3.1	9.3.1 Pollution: Agricultural & forestry effluents: Nutrient loads				
9.3.2	9.3.2 Pollution: Agricultural & forestry effluents: Soil erosion, sedimentation				
9.3.3	9.3.3 Pollution: Agricultural & forestry effluents: Herbicides & pesticides				
9.3.4	9.3.4 Pollution: Agricultural & forestry effluents: Type Unknown/Unrecorded				
9.4	9.4 Pollution: Garbage & solid waste		Rural communities, Wild Areas, Urban Roatán.	Rural communities, Wild Areas, Urban Roatán.	Rural communities, Wild Areas, Urban Roatán.

Classification	Full Description	Past threats (no longer occurring)	Current threats	Threats expected to emerge or continue over next 10 years	Threats that would be relevant in the long-term aspiration scenario
9.5.1	9.5.1 Pollution: Air-borne pollutants: Acid rain	V			
9.5.2	9.5.2 Pollution: Air-borne pollutants: Smog				
9.5.3	9.5.3 Pollution: Air-borne pollutants: Ozone				
9.5.4	9.5.4 Pollution: Air-borne pollutants: Type Unknown/Unrecorded				
9.6.1	9.6.1 Pollution: Excess energy: Light pollution				
9.6.2	9.6.2 Pollution: Excess energy: Thermal pollution				
9.6.3	9.6.3 Pollution: Excess energy: Noise pollution				
9.6.4	9.6.4 Pollution: Excess energy: Type Unknown/Unrecorded				
10.1	10.1 Geological events: Volcanoes				
10.2	10.2 Geological events: Earthquakes/tsunamis				
10.3	10.3 Geological events: Avalanches/landslides				
11.1	11.1 Climate change & severe weather: Habitat shifting & alteration				Existing protected private lands, Private land buffer areas, Rural communities, Barbareta, Port Royal

Classification	Full Description	Past threats (no longer occurring)	Current threats	Threats expected to emerge or continue over next 10 years	Threats that would be relevant in the long-term aspiration scenario
					National Park, Wild Areas, Urban Roatán.
11.2	11.2 Climate change & severe weather: Droughts				
11.3	11.3 Climate change & severe weather: Temperature extremes				
11.4	11.4 Climate change & severe weather: Storms & flooding				Existing protected private lands, Private land buffer areas, Rural communities, Barbareta, Port Royal National Park, Wild Areas, Urban Roatán.
11.5	11.5 Climate change & severe weather: Other impacts				
12.1	12.1 Other threat				

Appendix 1: Assessor Self-Review

- Disclose any potential conflicts of interest, which could bias the assessment.
 None
- 2. Is there any discrepancy between this assessment and the Red List assessment for the species? If so, comment on the likely reason for this discrepancy.
 - Threats coded in the GSS differ from the Red List because the existence of all threats are included, not just the most pressing.
- 3. Review the impact that you assigned to the various threats and conservation actions. Would the trajectory of the species be very different if other choices were made? If so, review your justification for these choices. If appropriate, widen the bounds on tabs 4 and 5-8 (change the lower and upper plausible values) to reflect the uncertainty introduced by the possibility of these other choices. How, if at all, did this review question cause this assessment to change? If no changes were needed, please write "no changes".

If protection was enforced within the National Park and iguanas were reintroduced, the trajectory of this species in this SU would improve much faster. However, we have no control over when or if this will happen. Barbareta and all of SU 1 locations are protected through grassroots efforts of private owners. If these efforts were to cease, then the species would be extirpated from these areas and potentially become extinct. However, it is unlikely that this would happen. Climate change impacts are not predicted to occur until the long-term scenario, but if change happens sooner the impacts will be realized sooner. More information is needed on the predicted local effects of climate change, including sea level rise and storm frequency/intensity, and nesting locations to understand how this species would be impacted.