

Looking for the GAPs

How does the SACR priority
assessment relate to national GAP
analysis?

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South America Priorities Assessment

- 1. Develop “building blocks” for priorities & gap assessment by completing terrestrial ecosystem map**
- 2. Identify priority ecoregions where TNC should concentrate efforts**
- 3. Develop “provisional ecoregional portfolios” to give first approximation of priority terrestrial areas in South America**



South America Priorities Assessment:

Task One: Developing the “Building Blocks” for the
Priorities Assessment - Completing the Ecosystem Map
- Natureserve Classification System



GAPs at different levels:

MHTs

Planning Areas

Ecoregions

Ecosystems

Natural Communities

Species

Conservation Targets



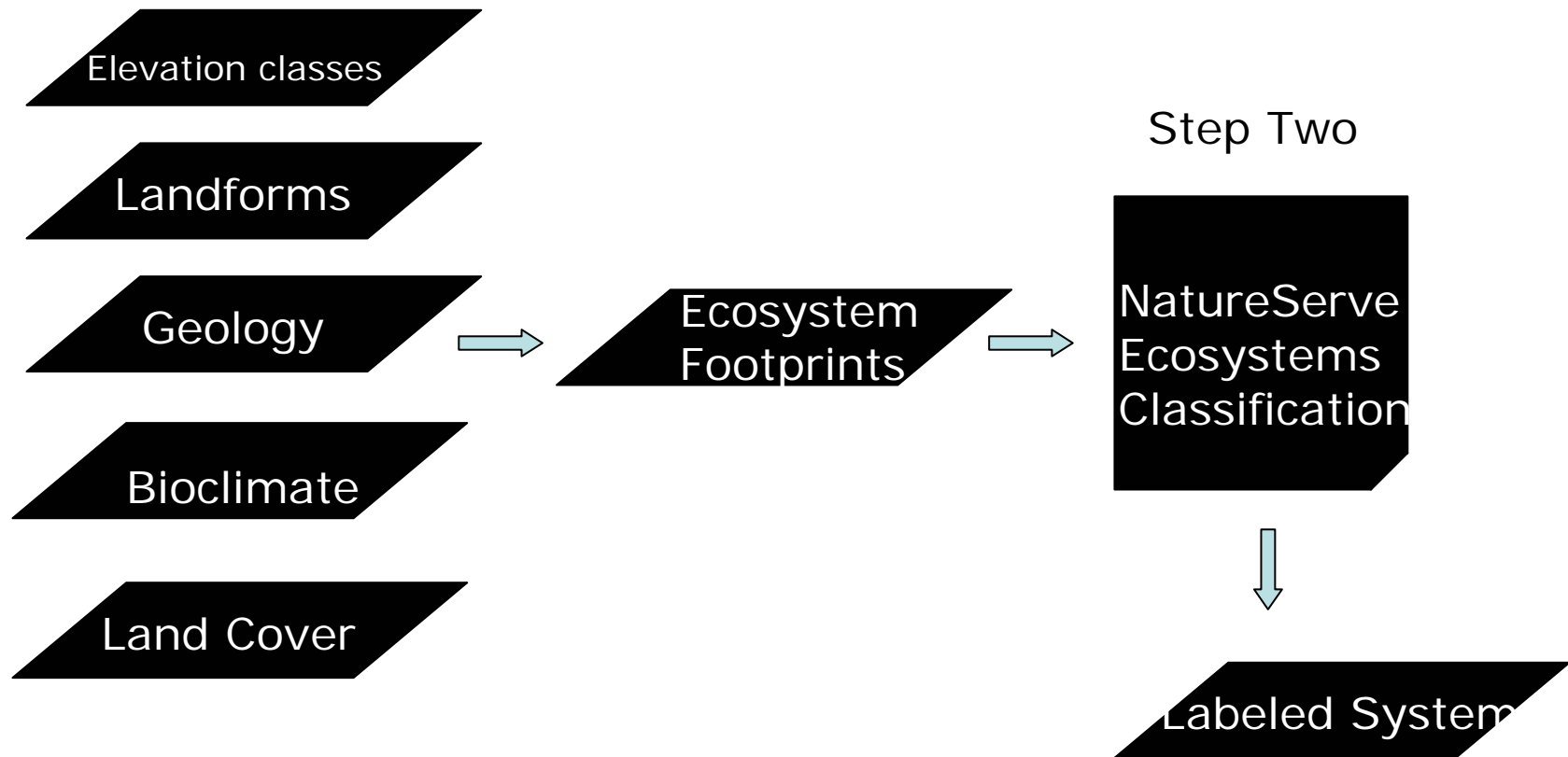
Why NatureServe's Ecosystem Classification?

- *Standardized ecosystem classification - coarse filter targets for ecoregional assessments*
- *Mappable, co-occurring vegetative associations sharing similar substrates, ecological processes, and environmental gradients*
- *Developed by world's best experts*
- *800+ systems described*
- *Cost - ~\$150k*





Modeling Methodology





The Ecosystems of
South America



SACR Approach to Priority Setting

Priority = PA Representation + Urgency + Irreplaceability

- *PA Representation – how well (or how poorly) our ecosystems targets are represented in PAs*
- *Urgency – combination of past conversion and current level of “vulnerability” for each ecoregion*
- *Irreplaceability – # of irreplaceable sites per ecoregion for species-level conservation (threatened, endangered, endemic)*



PA Representation Analysis

Representation Factor for each ecoregion is based on
of ecosystems that have less than 5% of their area
included in IUCN I-IV protected areas



PA Representation Analysis

Central Savannas

Central Savannas	MHT	Current level of protection (IUCN I-IV)	# targets in ecoregion	Poor Representation: % targets that are less than 5% protected
Caatinga Enclaves moist forests	Moist Trop Forest	0.62	13	100.00
Uruguayan savanna	Trop Grass/Savan	0.23	13	100.00
Caatinga	Deserts Xeric Shrub	0.65	19	94.74
Atlantic dry forests	Dry Trop Forest	3.19	16	93.75
Pantanal	Flooded Grass/Sav	3.43	41	90.24
Cerrado	Trop Grass/Savan	1.32	43	81.40

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Urgency Analysis

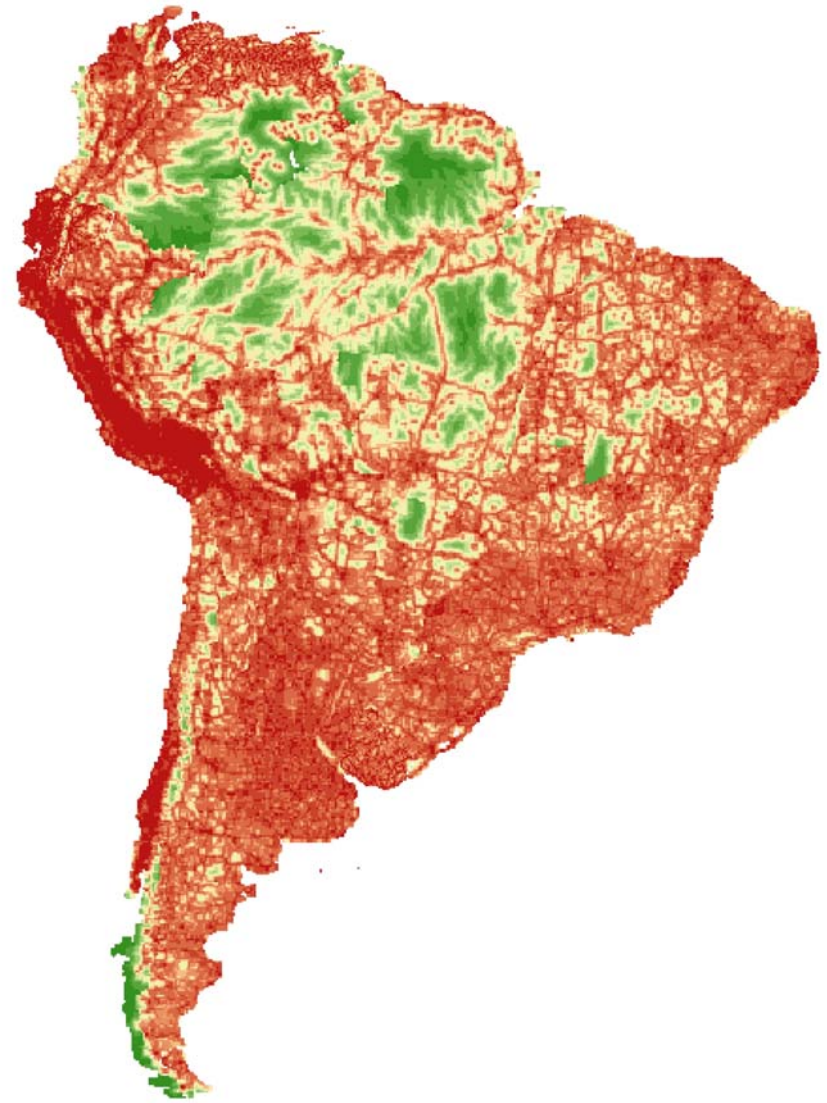
Urgency = Past land conversion
+Accessibility
+Population density

*The Nature
Conservancy*



SAVING THE LAST GREAT PLACES ON EARTH

Accessibility Map



Urgency Analysis: Central Savannas

Central Savannas	% ecoregion converted	Vulnerability	Threat index	Urgency Factor
Uruguayan savanna	47.80	4.00	191.20	41
Caatinga	52.73	3.00	158.19	34
Atlantic dry forests	68.01	2.00	136.02	29
Cerrado	59.70	2.00	119.40	26
Caatinga Enclaves moist forests	18.42	5.00	92.10	20
Humid Chaco	19.93	3.00	59.79	13
Dry Chaco	18.47	3.00	55.41	12
Pantanal	13.18	2.00	26.36	6

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Irreplaceability Analysis

Irreplaceability Factor calculated based on
of AZE sites and # of threatened vertebrate species



Irreplaceability Analysis: Central Savannas

Central Savannas	# AZE sites	# threat amphibian species	# threatened bird species	# threat mammal species	Irreplaceability Factor
Cerrado	4	3	23	27	41
Caatinga	4	3	9	10	32
Atlantic dry forests	1	0	4	9	24
Humid Chaco	0	1	12	7	21
Dry Chaco	0	6	9	11	18
Uruguayan savanna	0	5	8	7	18
Pantanal	0	0	6	9	12
Caatinga Enclaves moist forests	0	0			0

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Conservation Action Index

CAI = Representation Factor
+ Urgency Factor
+ Irreplaceability Factor



Conservation Action Index Central Savannas

Central Savannas	Representation Factor	Urgency Factor	Irreplaceability Factor	Conservation Action Index
Caatinga	95	34	32	161
Uruguayan savanna	100	41	18	159
Cerrado	81	26	41	148
Atlantic dry forests	94	29	24	146
Humid Chaco	96	13	21	129
Caatinga Enclaves moist forests	100	20	0	120
Dry Chaco	82	12	18	111
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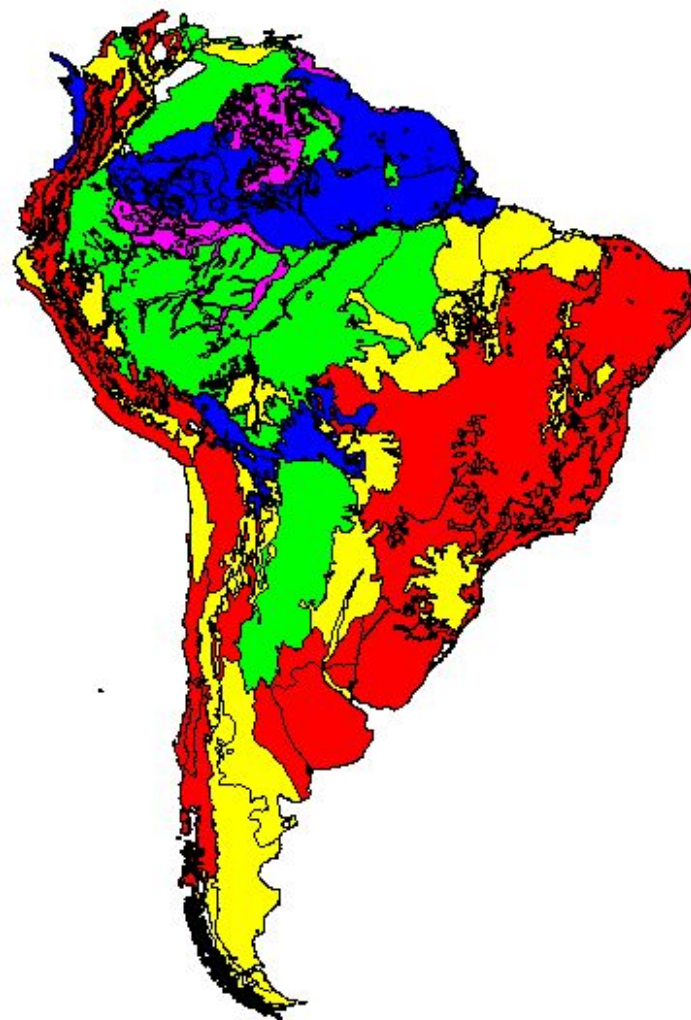
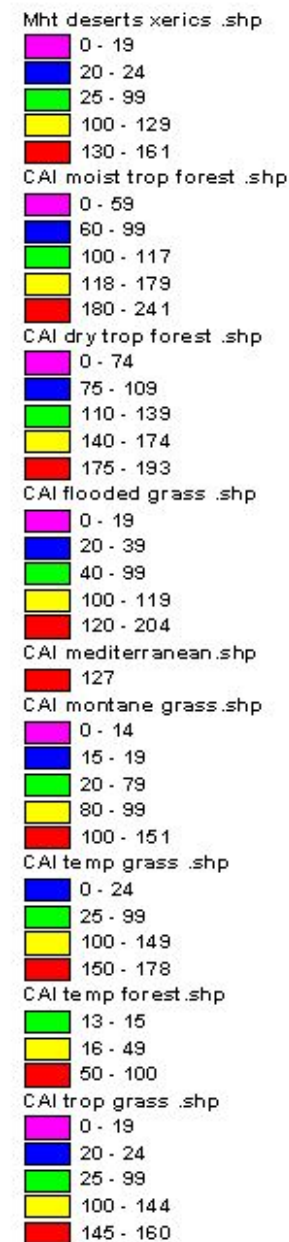
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Conservation Priorities by Major Habitat Type





South America Priorities Assessment:

Task Three: Developing provisional ecoregional portfolios

Used SPOT as the selected software, with 10% of each terrestrial ecosystem captured as the goal.



**Preliminary Portfolio
for South America**