





The Future of El Yunque

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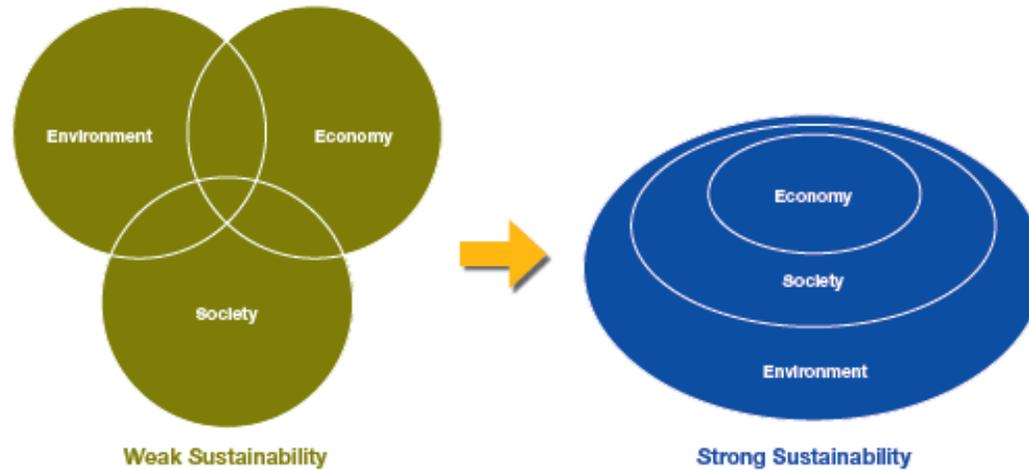
Important Legal Frameworks



- Plan de Zonificación Especial del Yunque, 1982
- Caribbean National Forest and Luquillo Experimental Forest: Land and Resource Management Plan, 1997
- Río Mameyes and Icacos Wild & Scenic River Designation, 2003
- El Toro Wilderness, Public Law, 2005
- All Lands Policy, 2009

All Lands and the New Sustainability Model

Figure I-1. Triple Bottom Line: interconnected and interdependent benefits.



Source: Maureen Hart—Sustainable Measures

2009: All Lands Policy



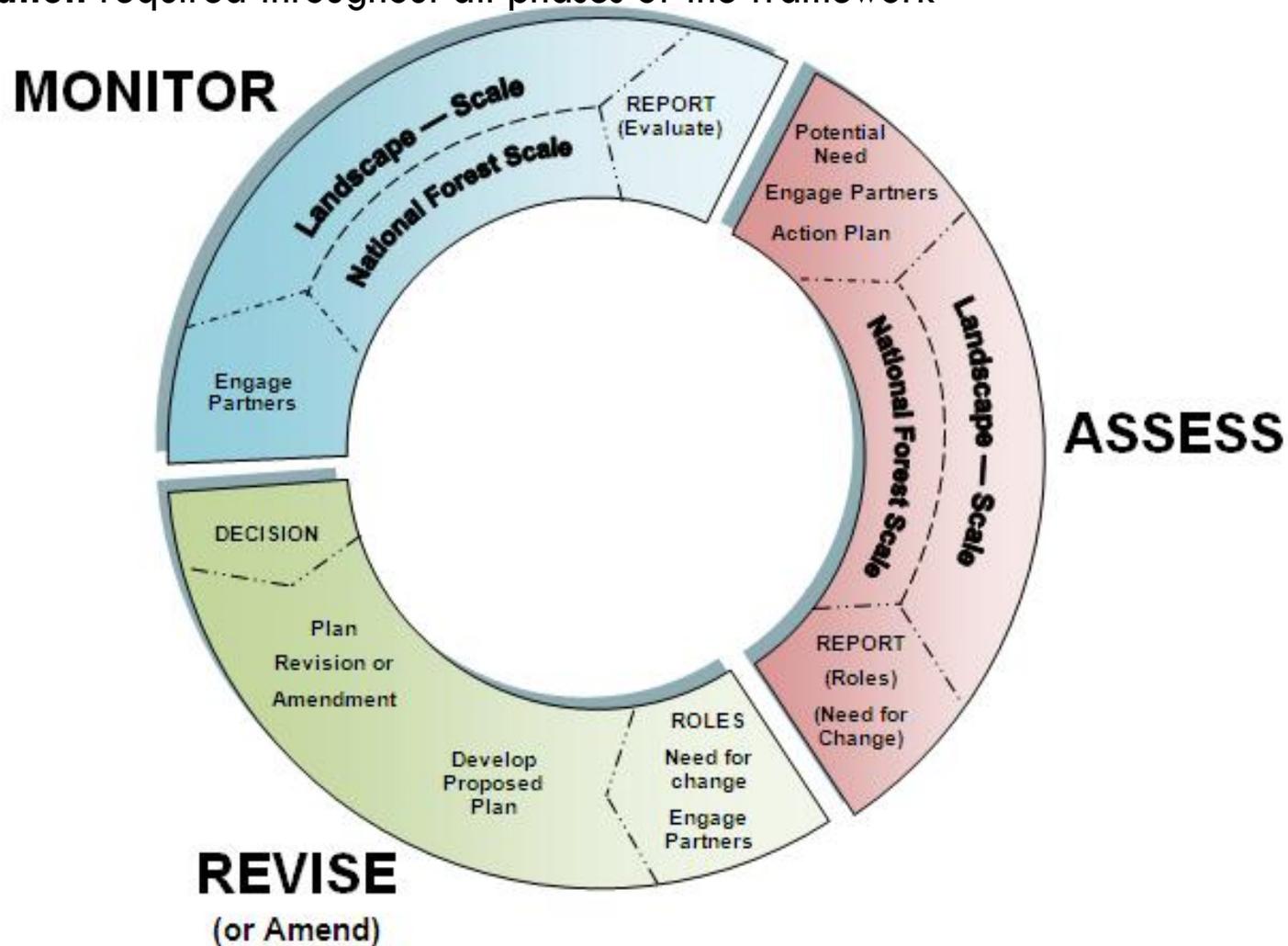
- Policy unveiled by the U.S. Department of Agriculture
- States that both public and private forestlands are environmental and economic assets that are in critical need of restoration and conservation.
- Focuses on the use of collaborative management to focus on reestablishing these natural resources to make our forests more resilient to climate change, protect water resources, and improve forest health while also creating employment opportunities (USDA, 2009).

Early Adoption of 2012 Planning Rule

1982 Rule	Preferred Alternative
“plans shall provide for multiple uses and sustained yield of goods and services in a manner that <u>maximizes long term net public benefits</u> ”	“plans will guide management of NFS lands so they are ecologically sustainable and contribute to social and economic sustainability... and have the capacity to provide people and communities with ecosystem services and multiple uses that provide a range of social, economic, and ecological benefits for the present and into the future”

Framework

Collaboration required throughout all phases of the framework



Today we announce El Yunque's Plan Revision

- Overall objective: Create a **collaborative** and **science-based** planning process that will guide management of El Yunque's lands so they are ecologically sustainable and contribute to social and economic sustainability
- Year 1 – Assessment, 2012-2013
- Year 2/3 – Plan development, 2013-2015

Species Diversity and Viable Populations

§ 219.9

Diversity

1982 Rule	Preferred Alternative
<p>Requires plans to maintain habitat to support viable populations of all existing native and desired non-native vertebrate species in the planning area.</p>	<p>Requires plans to maintain or restore ecological conditions and watersheds (coarse-filter).</p> <p>The coarse-filter should provide conditions for the vast majority of species.</p> <p>When coarse filter isn't enough, there will be additional plan direction for T&E, proposed, candidate and species of conservation concern.</p>

Diversity *(continued)*

1982 Rule	Preferred Alternative
<p>No allowances for when it is beyond the capability of the land or the authority of the FS to maintain a species in the plan area.</p>	<p>When it is beyond the FS authority or capability of the plan area, unit will provide ecological conditions to contribute to viable populations of species of conservation concern within their range.</p>

At Risk Species



**Federally recognized
threatened, endangered,
proposed and candidate
species (sec. 12.51).**

**Potential species of
conservation concern (sec.
12.52).**

Focal Species

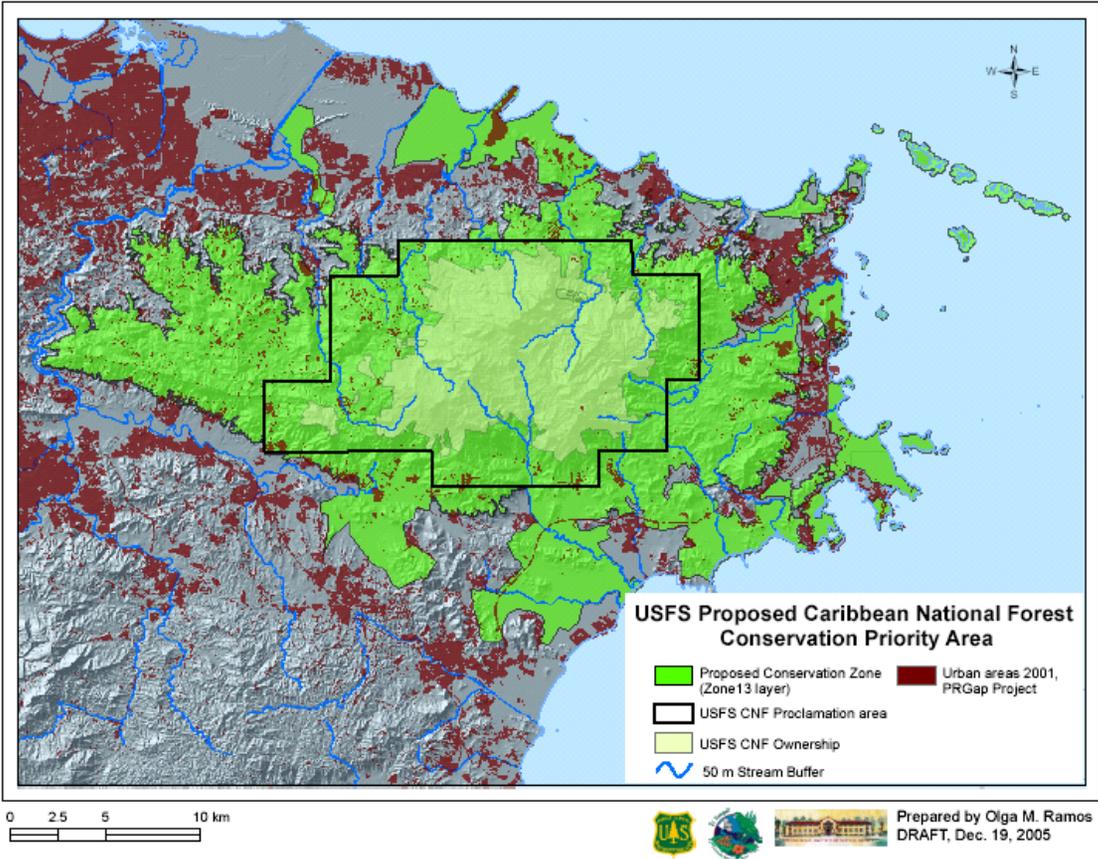
Species of Conservation Concern

1982 Rule	Preferred Alternative
Not a part of the 1982 rule	<p>Regional Forester identifies species of conservation concern (SCC).</p> <p>To be selected:</p> <ul style="list-style-type: none">• SCC must be known to occur in the plan area;• There must be substantial evidence the species is at risk• Not T& E candidate or proposed

Focal Species

1982 Rule	Preferred Alternative
1982 rule used MIS instead. MIS meant to indicate effects of management on multiple species.	Small set of focal species chosen to indicate health of habitat. Used to test whether habitat provisions of plan are providing the expected benefits.
Requires monitoring population trends.	Doesn't require population trend data.
Some courts said MIS requires project monitoring.	Applies only at plan level.

Maintain Ecological Processes



El Yunque's Watersheds

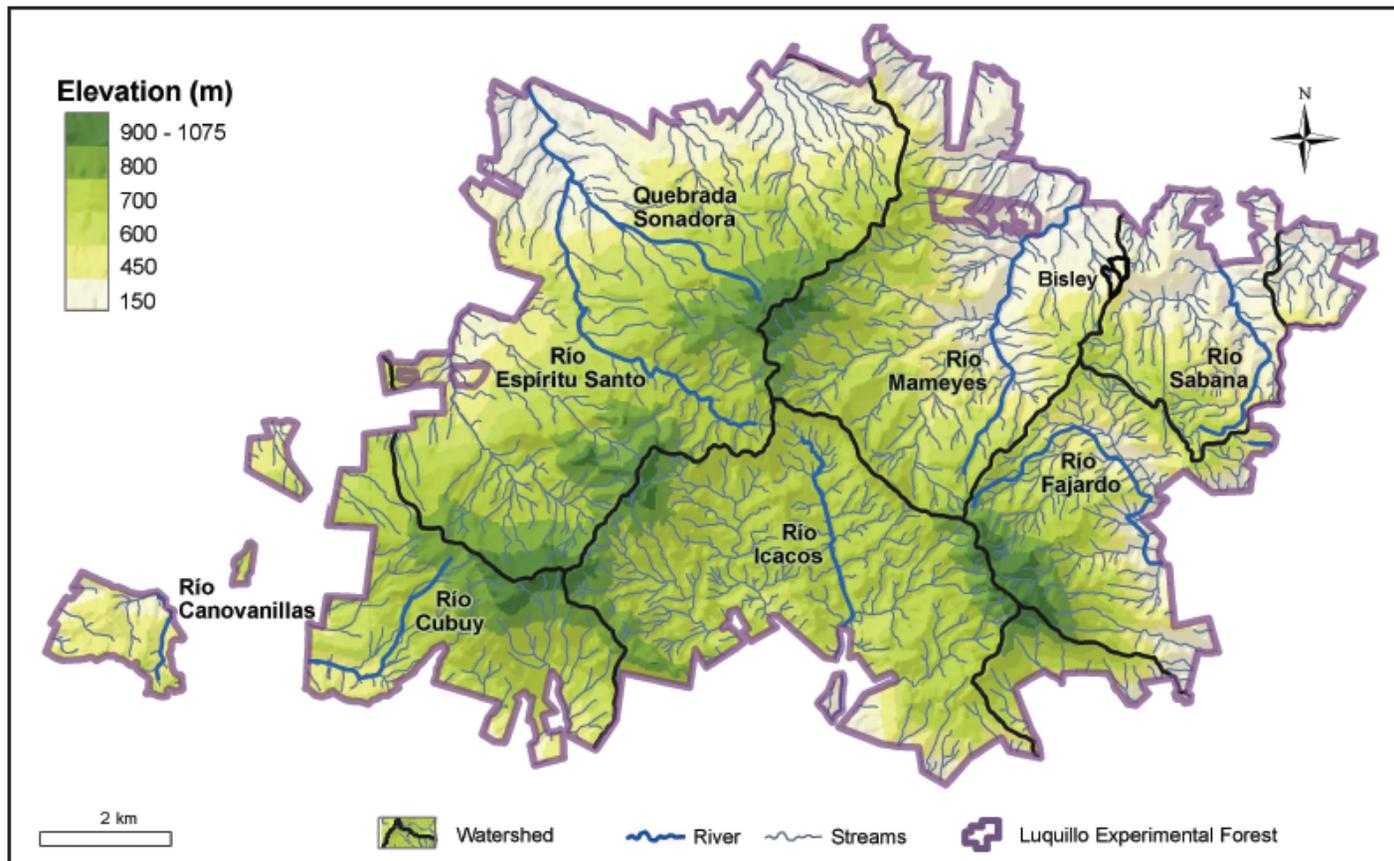


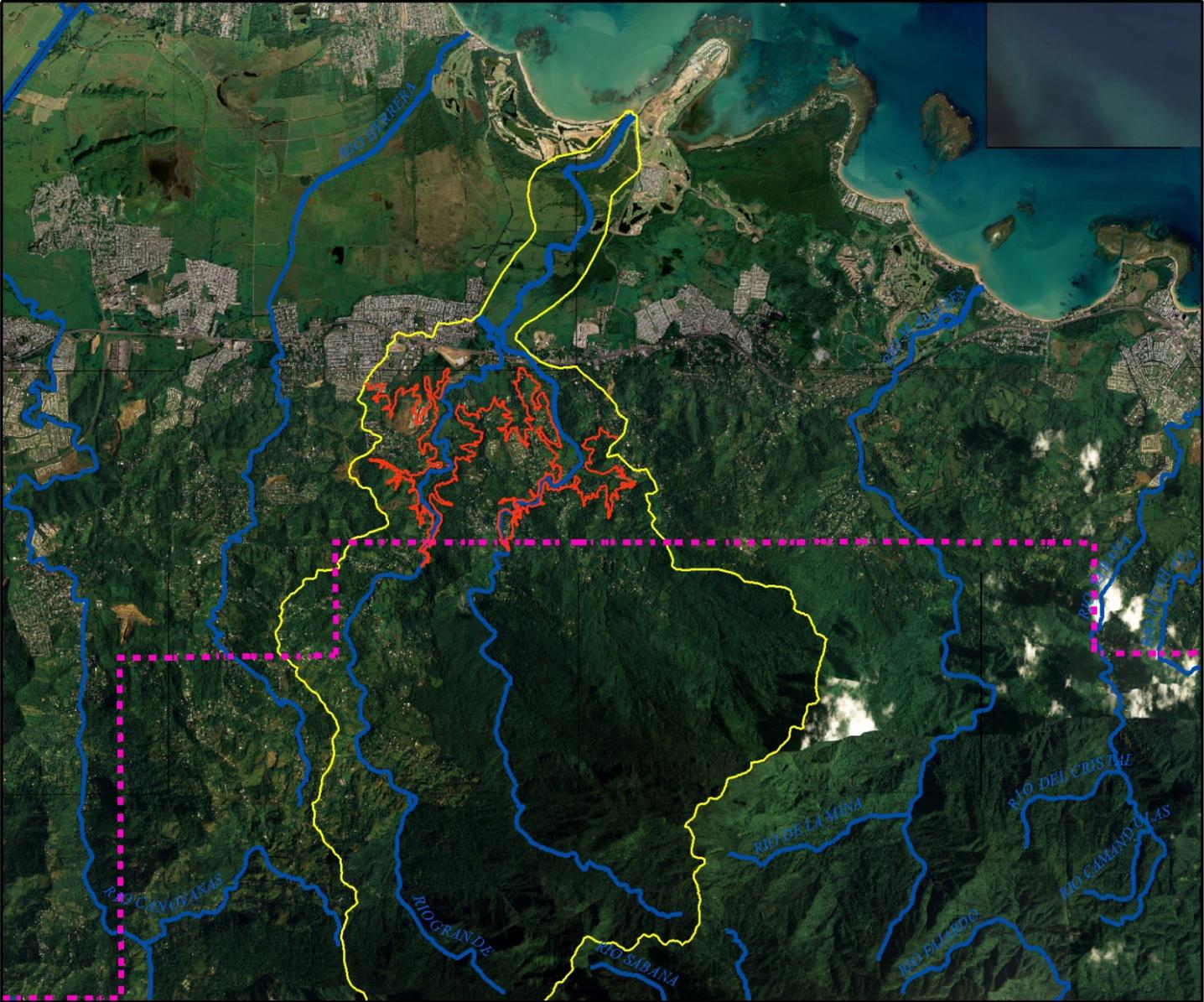
Figure 3.—Elevation and rivers of the Luquillo Experimental Forest.

Maintaining Ecological Processes

- Drainage Basin Level
- Landscape Level



Rio Espiritu Santo Watershed and Proposed Biological Corridor



Legend

- Biological Corridor
- Rivers
- - - EYNF proclamation area
- REsp_santo watershed

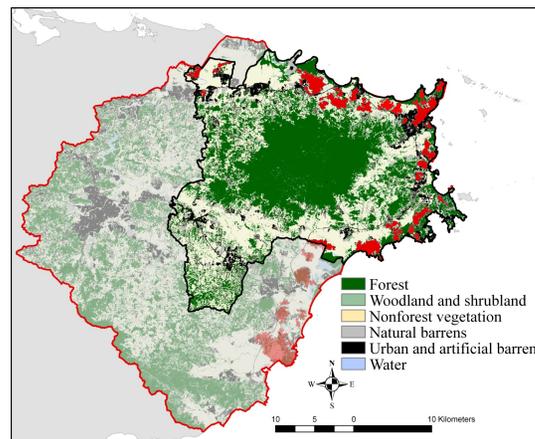
0 1 2 4 Kilometers

US Forest Service, 2010
Lambert Conformal Conic Projection
1:92,466

What are we watching?

Emerging Forest on Abandoned Lands: Puerto Rico's new Forest

Riparian Zones Connections





Emerging Forests

New forest that emerge naturally on abandoned lands previously converted to agriculture and degraded.

Highly fragmented (60% were less than 2.5 acres).

Have a combination of species new to the landscape.

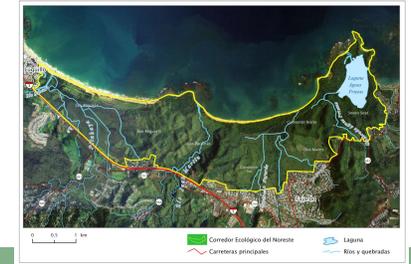
Alien species establish and maintain forest cover which facilitates regeneration of native species.

Serve as refugia for native organisms.

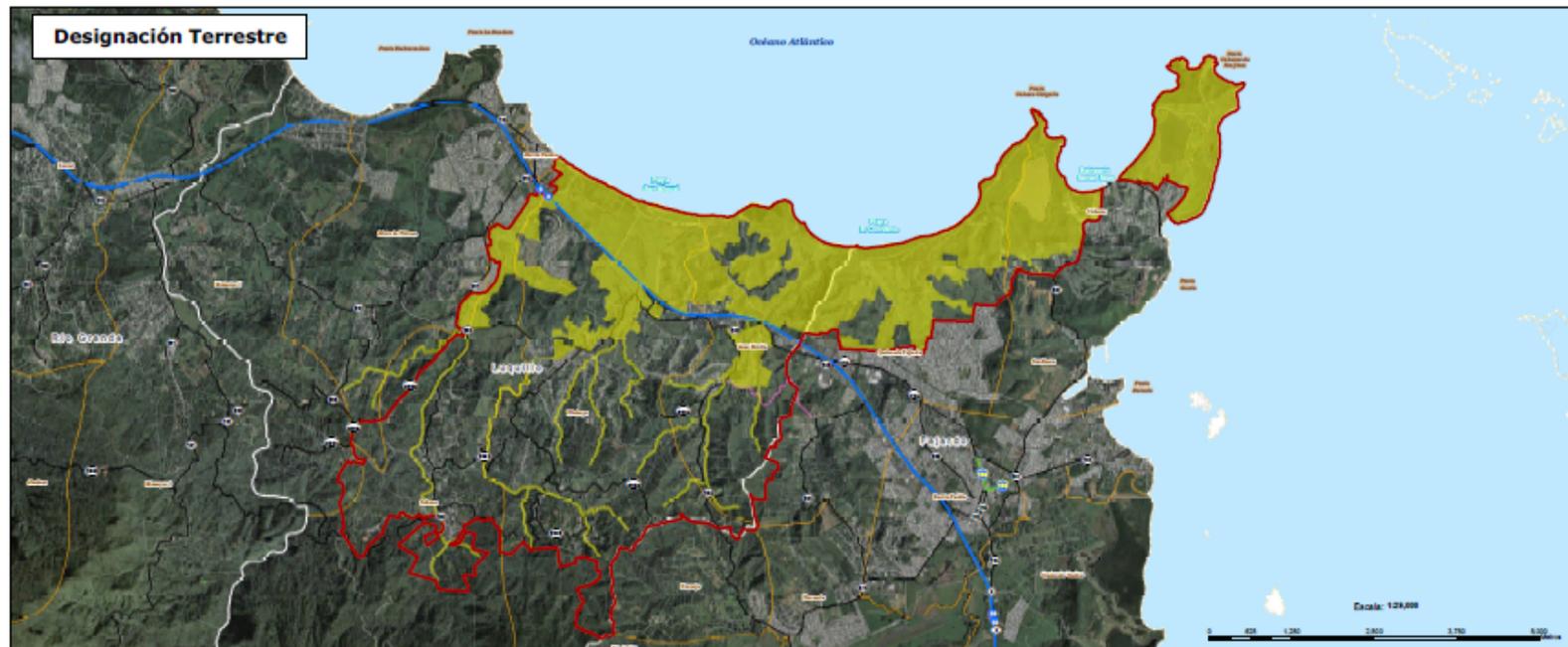
It takes them 60-80 years to have the similar species as native forest.

There are over 275,000 acres in this state.

Emerging Forest



Documento de Vista Pública
**Mapa Designación Área de Planificación Especial
de la Gran Reserva del Noreste**



Recommended Strategy



Increased land conservation, restoration and improvement activities on the ground.



Conclusion



The future of El Yunque requires compatible management strategies among different sectors engaged in land management activities



Ecosystem Diversity

Rule – 219.9 Diversity of Plant and Animal Communities

(a) Ecosystem plan Components (**coarse filter**)

Plan must provide for diversity of plant and animal communities as follows:

Ecosystem diversity. Plan components maintain or restore diversity of ecosystems and habitat types throughout plan area:

- Key characteristics associated with terrestrial and aquatic ecosystem types
- Rare aquatic and terrestrial plant and animal communities
- Diversity of native tree species similar to that existing in plan area

1921.53a – Diversity of Plant and Animal Communities

- Complementary ecosystem and species-specific approach will be used to maintain the diversity and the persistence of native species in the plan area

Assessing species at risk

1921.53 – Ecological Sustainability

Assess species at risk. Species at risk are endangered, proposed and candidate species and potential species of conservation concern present in the plan area

The responsible official should:

- Identify the set of species at risk in the plan area
- Evaluate the vulnerability status of species at risk and determine key risk factors
- Use existing information for the evaluation

Plant and Animal Diversity *(continued)*

Final Rule

If coarse filter plan components are insufficient to provide the ecological conditions necessary to:

- Contribute to the recovery of federally listed T&E species,
- Conserve proposed and candidate species
- Or maintain a viable population of each species of conservation concern (SCCs) within the plan area. [If this is beyond the FS authority or capability of the plan area, unit will provide ecological conditions to contribute to viable populations of species of conservation concern within their range.]

Then,

Additional species specific plan components must be developed to provide such ecological conditions.

Species of Conservation Concern

Regional Forester identifies species of conservation concern (SCC).

To be selected:

- SCC must be known to occur in the plan area;
- There must be substantial concern about the species' capability to persist over the long-term in the plan area
- Not T& E, candidate or proposed

Species of Conservation Concern

Species of conservation concern will include:

- Species with ranks of G/N/T 1-2 on the NatureServe ranking system

Other potential species of conservation concern:

- Species with ranks of S 1-2 on the NatureServe ranking system
- Listed as a T or E species by the States or Tribes
- Species with the greatest conservation needs identified by the State Comprehensive Wildlife Strategies
- USFWS Birds of Conservation Concern Priority list

Viability Populations

Rule – 219.9 Diversity of Plant and Animal Communities

(b) Additional, species-specific plan components

When it is beyond FS authority or capability of the plan area to maintain or restore conditions to contribute to viable populations of species of conservation concern, the responsible official shall:

- Document the basis for that determination
- Include plan components to maintain or restore ecological conditions to contribute to maintain a viable population of the species within its range

Plan Components for Diversity

13.14 Identifying and Assessing key Characteristics of Terrestrial, Aquatic, and Riparian Ecosystems (43.11c)

Selected Key ecosystem characteristics:

- Are identified and evaluated during assessment phase
- Inform the development of plan components
- Are useful for defining and monitoring progress towards ecological integrity
- Have been substantially influenced by past management or disturbances and/or
- May be influenced by future management or disturbances
- Are useful to handle a topic of wide spread public interest

Selection of key ecosystem characteristics should be guided by the following:

- Appropriate scale
- Responsive to manipulation
- Relevant data available
- Measurable, mappable or rankable
- Influenced by past or future management activities
- Pertains to threatened, endangered, proposed, candidate, or species of conservation concern.
- Important to functions/processes which create or maintain ecosystems and services.

Species and Plan Components

27.11a Framework for Plan Components for Ecosystem Diversity, Ecosystem Integrity, and Plant and Animal Diversity (43.21)

The framework for developing and integrating plan components is an iterative process:

1. Develop initial plan components while considering need for change and ecosystem integrity status
2. Assess emerging options for sustaining ecological conditions with info on vulnerability status of species
3. Refine options that do not adequately address key species risk factors or sustain ecological conditions for species by adding plan components that both provide desired conditions and objectives for habitat characteristics and conditions
4. Focus plan components on key risk factors and threats that have contributed to the status of the species and have not been fully addressed.
5. Document rationale and assumptions in proposing plan components

Plan components need not be developed for each species

Species and Plan Components

27.1 1a Framework for Plan Components for Ecosystem Diversity, Ecosystem Integrity, and Plant and Animal Diversity (43.21)

- Responsible official should conduct an Endangered Species Act conservation review as part of the biological assessment development process
- Consulting agencies should be involved in evaluating how plan will contribute to recovery of listed species and conservation of proposed and candidate species

Management Areas (acres):

- (MA1) Administrative Sites: 204
- (MA2) Developed Recreation: 1158
- (MA3) Communication Sites: 198
- (MA4) Integrated: 6212
- (MA5) Wilderness: 10363
- (MA6) Research: 919
- (MA7) Research Natural Area: 6372
- (MA 8) Timber Demonstration: 1167
- (MA 9) Scenic and Recreation River Corridors: 1295