The journey of a forestry consultant

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Forestry Economist
International Fellow from Costa Rica
World Forestry Center
2019
Area:
- Oregon 99K Miles$^2$
- Costa Rica 20K Miles$^2$ (1/5)

Population Density:
- Oregon 40 Hab/Mile$^2$ (2018)
- Costa Rica 250 Hab/Mile$^2$ (2017) 6.25x

Republic of Costa Rica

Interesting Facts:
- Most stable democracy in LatAm (130+ years)
- Abolished its own army (1948)
- Developed a green economy in the last 3 decades
  - Basis for a successful nature-based tourism industry
Biological bridge
± 6.5% of the number of species in the world in 0.03% of the world’s continental surface
Costa Rica Dense Natural Forest Cover Timeline
Costa Rica Dense Natural Forest Cover Timeline

Homestead Law 1960
Costa Rica Dense Natural Forest Cover Timeline

1940

1950

1960

1961

1977

1983

Homestead Law 1960

First Forestry Law 1969
Costa Rica Dense Natural Forest Cover Timeline

National Parks Early 70's

Homestead Law 1960

First Forestry Law 1969
Costa Rica Dense Natural Forest Cover Timeline

1940

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1960

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National Parks Early 70’s

Forestry Schools 1975-76
Costa Rica Dense Natural Forest Cover Timeline

1940
1950
1960
1961
1977
1979
1983

National Parks
Forestry Schools
Reforestation incentives
First Forestry Law 1969
Homestead Law 1960
Costa Rica Dense Natural Forest Cover Timeline

- 1940
- 1950
- 1960
- 1961
- 1977
- 1979
- 1983

National Parks
- Early 70's
- Forestry Schools 1975-76
- Reforestation incentives 1979

Homestead Law 1960
- First Forestry Law 1969

ITCR-1980
Costa Rica Dense Natural Forest Cover Timeline

- **1940**: Initial forest cover.
- **1950**: Further expansion of forest cover.
- **1960**: Homestead Law implemented.
- **1961**: Further expansion of forest cover.
- **1969**: First Forestry Law.
- **1975-76**: Forestry Schools established.
- **1977**: Eco-tourism incentives introduced.
- **1979**: Reforestation incentives.
- **1980**: Early 80's eco-tourism.
- **1983**: Continued expansion of forest cover.

**Key Events**:
- **1960**: Homestead Law
- **1969**: First Forestry Law
- **1975-76**: Forestry Schools
- **1977**: Eco-tourism incentives
- **1979**: Reforestation incentives
- **1980**: Early 80's eco-tourism
Costa Rica Dense Natural Forest Cover Timeline

- **1940**: National Parks Early 70’s
- **1950**: Forestry Schools 1975-76
- **1960**: Homestead Law
- **1961**: First Forestry Law 1969
- **1975-76**: Reforestation incentives Early 80’s
- **1977**: Eco-tourism
- **1979**: ITCR-1980
- **1983**: U of Idaho 1989
Costa Rica Dense Natural Forest Cover Timeline

1940

National Parks Early 70’s

1950

Homestead Law 1960

1975-76 Forestry Schools

1961

Reforestation incentives 1979

Early 80’s Eco-tourism

1977

1983

Costa Rica Dense Natural Forest Cover

U of Idaho 1989

Payment for Environmental Services 1996
Costa Rica practically doubled its forest cover in the last 30 years.
Current versus potential condition of forests in Central America

Current condition of Central American forests and woodlands

Potential extent of Central American forests and woodlands

Source: WRI.org
Current versus potential condition of forests in Central America

Current condition of Central American forests and woodlands

Potential extent of Central American forests and woodlands

Source: WRI.org
Forestry plantation investments

Time
± 20 years
Forestry plantation investments

Time ± 20 years
Forestry plantation investments

Time ± 20 years
Forestry plantation investments

Time ± 20 years

- $
Forestry plantation investments

Precommercial thinning

Time
± 20 years
Forestry plantation investments

- Precommercial thinning
- Commercial thinning

Time ± 20 years
Forestry plantation investments

Time ± 20 years

- Precommercial thinning
- Commercial thinning
- Commercial thinning

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Forestry plantation investments

- Comercial thinning
- Precomercial thinning

Time ± 20 years

-$\$
Forestry plantation investments

- Precommercial thinning
- Commercial thinning
- Commercial thinning
- Commercial thinning
- Clear cut

Time ± 20 years

-$\$ - $\$
Forestry plantation investments

- Growth:
  - Diameter
  - Height

Growth:

Time ± 20 years

- Precommercial thinning
- Commercial thinning
- Commercial thinning
- Commercial thinning
- Clear cut
Forestry plantation investments

- **Growth:**
  - Diameter
  - Height

- **Yield:** (Expected products)
  - Diameter
  - Length
  - Quality (shape, knots)
  - Sap/Heartwood ratio
  - Market requirements

- **Time ± 20 years**

- **Precommercial thinning**
- **Commercial thinning**
- **Commercial thinning**
- **Commercial thinning**
- **Clear cut**
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For i = 1 To No_Int_Silv Step 1
If myrecordset2.Prescripción = k Then 'Prescripción
myrecordset7.MoveNext 'Pry_02_20
myrecordset3.MoveNext 'Datos
myrecordset6.MoveNext 'Pry_02_120
While myrecordset7.EOF = False
    Set myconnection4 = CurrentProject.Connection
    instruction4 = "SELECT * FROM FADVol_KP" & myrecordset7.Curvas_MRL_DAP
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My work at the WFC

Objectives

1. Learning about best forest management practices and technological trends in the forest products supply chain in the PNW

2. Evaluating my growth and yield projection tool and setting improvement goals for it where needed
Objective #1: Best forest management practices
Objective #2: Evaluation of my G&Y projection tool

Internship with Greenwood Resources Inc.

• Validating my growth and yield projection tool
Findings

My G&Y projection tool:

- Produces:
  - Highly detailed product merchandizing projections on a log by log basis
  - More realistic products valuation

- Needs some tweaks:
  - Time-efficient in processing, in some of its modules
  - Add new output formats to it
What am I taking back home?

- A list of improvements to work on my G&Y tool
- A close understanding of the kind of work GWR does and may need help with in the future
- A strong professional network to
  - Connect with Central American reforestation actors
  - Develop faculty lead study trips to Central America
- A very enriching experience of living within a society with a better-balanced eco-culture between forestry and conservation
Thank you all for your support!