

“Pine tapping in Tunisia: New socio-economic opportunities?”

Science to Practice Event (Webinar INRGREF)

September 8-9, 2020

PINE TAPPING IN AREAS WITHOUT RESIN PRODUCTION TRADITION

Focus on pine tapping workers situation

Aida Rodriguez - Alejandro Ordoñez - Alejandro Cunningham
Fundación Cesefor - Cooperativa Pinaster SA - PCA

Coordinator



Partners



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 774632

“Pine tapping in Tunisia: New socio-economic opportunities?”

Science to Practice Event (Webinar INRGREF) - September 8-9, 2020

www.incredibleforest.net
info@incredibleforest.net

PINE TAPPING IN AREAS WITHOUT RESIN PRODUCTION TRADITION

A FOUR STEP DIAGNOSIS SYSTEM



PINE TAPPING IN AREAS WITHOUT RESIN PRODUCTION TRADITION

A FOUR STEP DIAGNOSIS SYSTEM

*We have in our DIAGNOSIS SYSTEM: PINE FOREST,
LAND, TECHNIQUE & MANAGEMENT and PEOPLE...*

What is missing in this SYSTEM?



PINE TAPPING IN AREAS WITHOUT RESIN PRODUCTION TRADITION

A FOUR STEP DIAGNOSIS SYSTEM

A MARKET for PINE RESIN!



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 774632

“Pine tapping in Tunisia: New socio-economic opportunities?”

Science to Practice Event (Webinar INRGREF) - September 8-9, 2020

www.incredibleforest.net
info@incredibleforest.net

PINE TAPPING IN AREAS WITHOUT RESIN PRODUCTION TRADITION

A FOUR STEP DIAGNOSIS SYSTEM

... but we already have that!

*There are very clear market signals that show an
IMPORTANT increase in demand of PINE RESIN
in this decade.*





Alex CUNNINGHAM
Minas Gerais, Brazil



Alex CUNNINGHAM
Minas Gerais, Brazil



Alex CUNNINGHAM
São Paulo, Brazil



Alex CUNNINGHAM
São Paulo, Brazil

PINE TAPPING IN AREAS WITHOUT RESIN PRODUCTION TRADITION

A FOUR STEP DIAGNOSIS SYSTEM

*80 second hand metal drums with
plastic bag inlining.
190 kg of PINE RESIN each.
20 wood pallets with 4 drums each*



*1 Full Container Load (FCL)
15.2 mTons of PINE RESIN*



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 774632

“Pine tapping in Tunisia: New socio-economic opportunities?”

Science to Practice Event (Webinar INRGREF) - September 8-9, 2020

www.incredibleforest.net
info@incredibleforest.net

PINE TAPPING IN AREAS WITHOUT RESIN PRODUCTION TRADITION

A FOUR STEP DIAGNOSIS SYSTEM

China and Portugal in 2019 bought together more than 50 ktons of PINE RESIN from different origins!

CUSTOMS DATA

GLOBAL PINE RESIN SUPPLIERS		
EXPORTER	USD/mTon CFR	VOLUME
INDONESIA	930.00	> 100 FCL/month
BRAZIL	860.00	
VIETNAM	820.00	
UGANDA	825.00	10/20 FCL/month
NICARAGUA	730.00	< 5 FCL/month
LAOS	680.00	
TANZANIA	665.00	
SOUTH AFRICA	605.00	
MADAGASCAR	560.00	
CUBA	510.00	
CONGO	466.00	
1 FCL/month = 20 metric Tons/month		
Reference prices.		

PINE TAPPING IN AREAS WITHOUT RESIN PRODUCTION TRADITION

A FOUR STEP DIAGNOSIS SYSTEM - PINE FOREST

Pine Forest

What pine species?

Does the resin of this pine species have commercial value?

What is the cost to access the pine trees?



PINE TAPPING IN AREAS WITHOUT RESIN PRODUCTION TRADITION

A FOUR STEP DIAGNOSIS SYSTEM - PINE FOREST

- *Pine resin quality and yield.*
- *Legal access to the forest at a reasonable fee.*

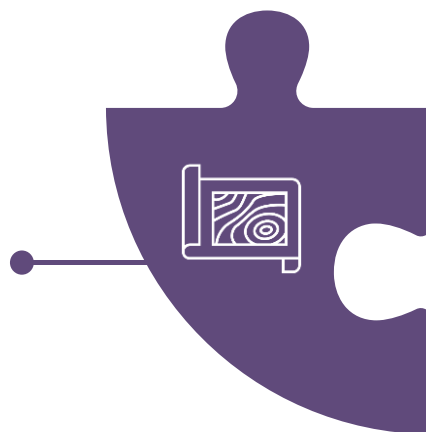


PINE TAPPING IN AREAS WITHOUT RESIN PRODUCTION TRADITION

A FOUR STEP DIAGNOSIS SYSTEM - LAND

Land

Who owns the land?
Is there any type of document that can
be produced declaring that the pine
tappers have legal access to land and
pine trees?



PINE TAPPING IN AREAS WITHOUT RESIN PRODUCTION TRADITION

A FOUR STEP DIAGNOSIS SYSTEM - LAND

- *Can we have a documented prove of access to the land and forest?*



PINE TAPPING IN AREAS WITHOUT RESIN PRODUCTION TRADITION

A FOUR STEP DIAGNOSIS SYSTEM - TECHNIQUE & MANAGEMENT



Technique / Management

Do we have a sustainable pine tapping technique?
Can we train a local management team?

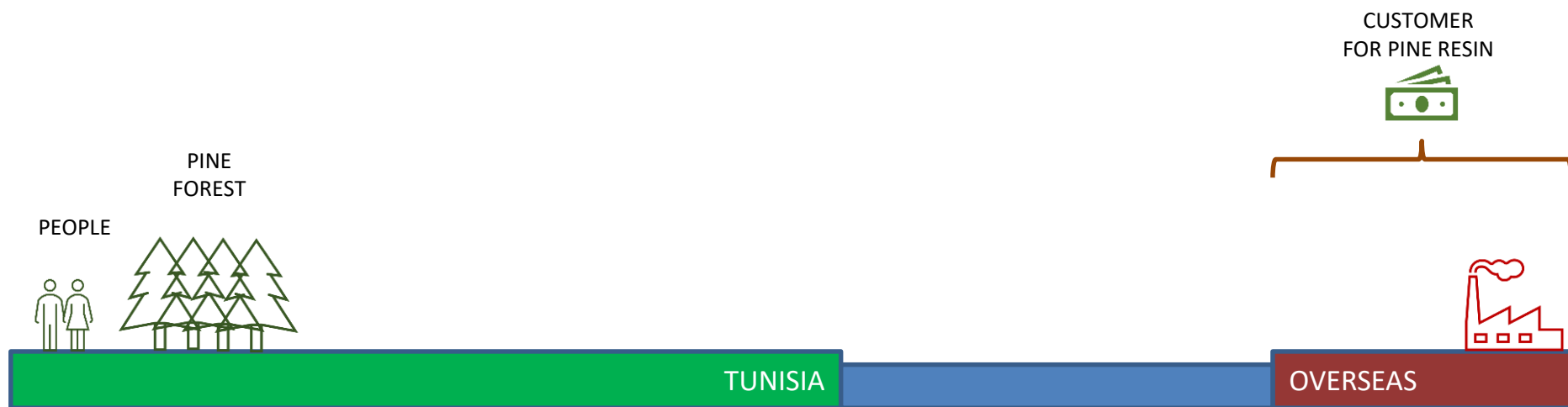
PINE TAPPING IN AREAS WITHOUT RESIN PRODUCTION TRADITION

A FOUR STEP DIAGNOSIS SYSTEM - TECHNIQUE & MANAGEMENT

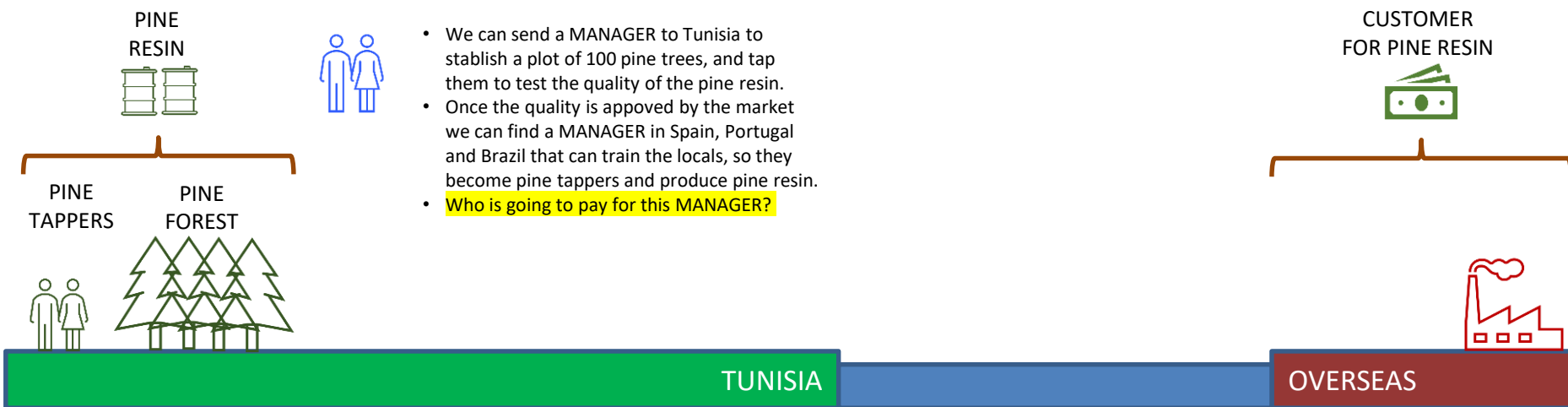
- *Have we selected the most suitable tapping technique to tap the forest?*
- *Do we have the suitable management in place to launch a full operation?*



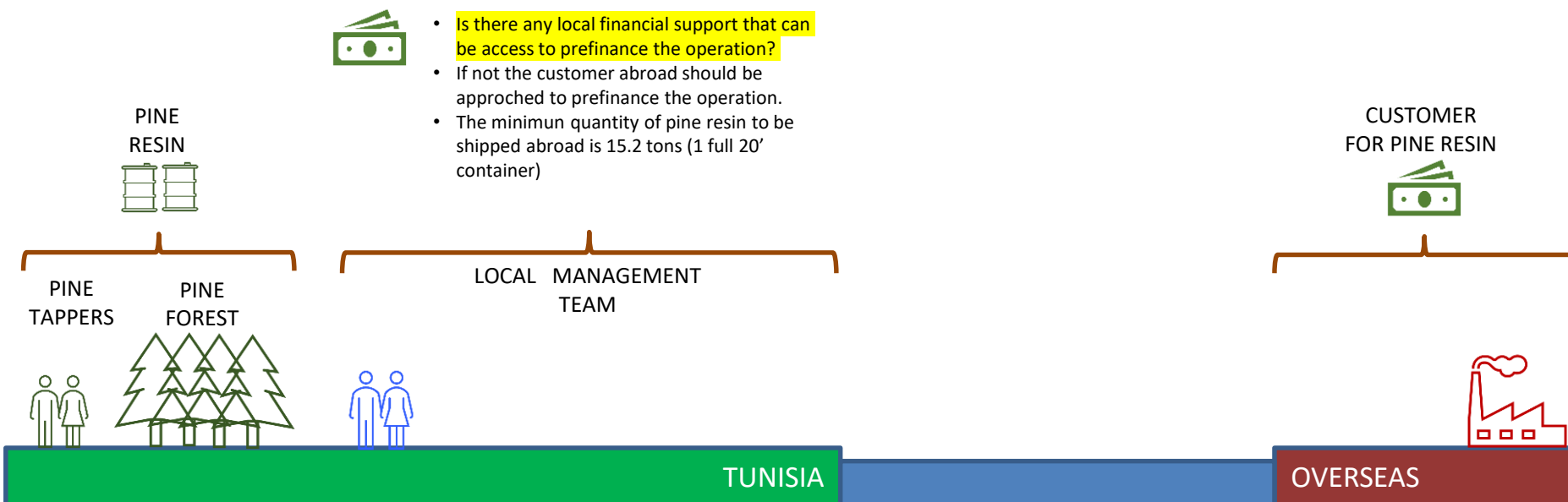
BUSINESS MODEL / WHAT WE HAVE



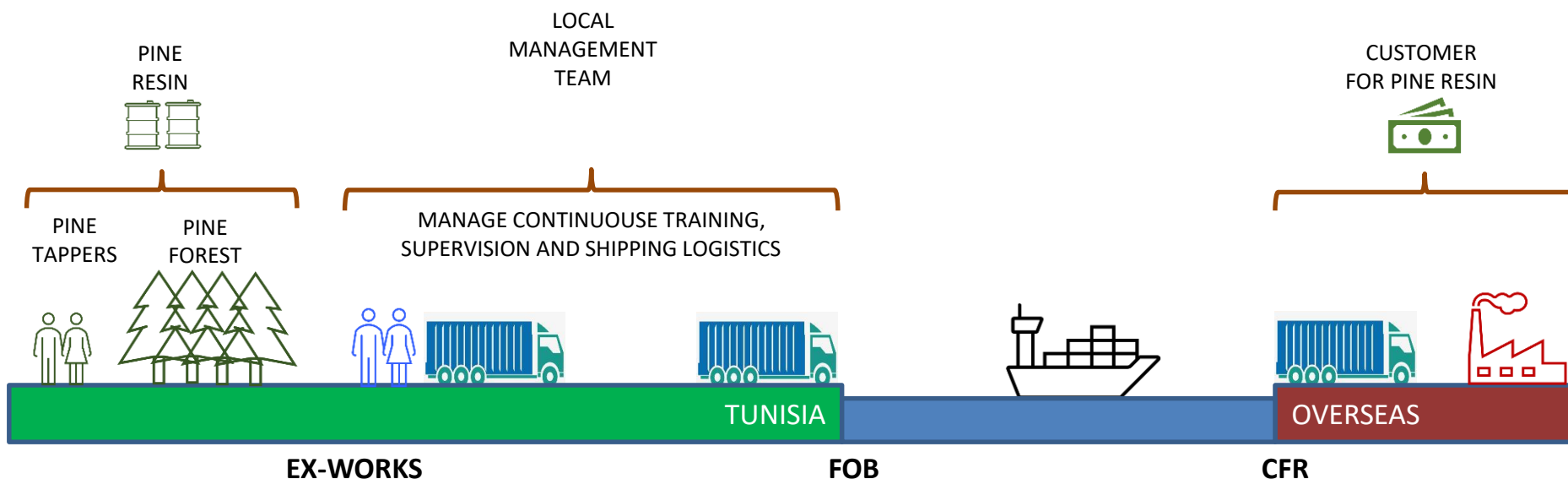
WE CAN BRING MANAGERS FROM ABROAD TO TRAIN LOCAL PEOPLE SO THEY BECOME PINE TAPPERS AND PRODUCE PINE RESIN



WITH THE APPROVAL OF THE QUALITY OF TUNISIAN PINE RESIN AND A LOCAL MANAGEMENT TEAM IN PLACE WE CAN LOOK FOR FINANCE TO EXPAND THE OPERATION



WITH PREFINANCE (LOCAL OR FROM ABROAD) WE CAN LAUNCH THE OPERATION!



PINE TAPPING IN AREAS WITHOUT RESIN PRODUCTION TRADITION

A FOUR STEP DIAGNOSIS SYSTEM - PEOPLE



People

Do we have the required workforce
with easy access to the forest?



INDIVIDUAL or PINE TAPPING Co.

PINE TAPPING IN AREAS WITHOUT RESIN PRODUCTION TRADITION

A FOUR STEP DIAGNOSIS SYSTEM - PEOPLE

Crude Gum Cost Comparison by country		Brazil	Argentina	Indonesia	Vietnam	China
Land Scope	unit	Flat & Engineering for tapping	Flat & Engineering for tapping	Hill & Engineering for tapping	Mountain & Engineering for tapping	Mountain & Plane plantation
每亩树株 Trees per MU	tree	70	70			30
采脂时间 Tapping time	month	10	8	9	10	8
割面数/劳力 Cutting numbers	Cut	8500	4000	1000	1000	1300
每割面年产脂量 yield/cut/year	kg	3.8	4	5	3.5	3
劳力成本 labor cost	USD/hour	4.5	3.34		1	2.5
劳力成本 labor cost	RMB/hour	27.9	20.708	5	6.2	15.5
年度亩均产量 yield/MU /year	kg	266	280			90
每劳力总产量 output per labor	kg	32300	16000	5000	3500	3900
按日均8小时计年度人工费用 income per laboe per year	RMB	55800	33132.8	10000	12400	21700
每劳力采脂面积比较 land area per labor	mu / labor	121	57			43
劳力成本 labor cost per kg	RMB/kg	1.73	2.07	2.00	3.54	5.56
综合生产效率中国比各国 Efficiency comparison		322%	268%	278%	157%	100%

Source: Song Lifeng (2019)



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 774632

"Pine tapping in Tunisia: New socio-economic opportunities?"

Science to Practice Event (Webinar INRGREF) - September 8-9, 2020

www.incredibleforest.net
info@incredibleforest.net



Alex CUNNINGHAM
São Paulo, Brazil



Alex CUNNINGHAM
São Paulo, Brazil

Spanish Tapping Workers



Profile

- AGE
- GENDER
- FORMATION
- PHYSICAL CONDITION
- TRADITIONAL WORK
- EXPERIENCE



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 774632

“Pine tapping in Tunisia: New socio-economic opportunities?”

Science to Practice Event (Webinar INRGREF) - September 8-9, 2020

www.incredibleforest.net
info@incredibleforest.net



Spanish Tapping Workers **INITIAL DIFFICULTIES**

- PHYSICAL STATUS
- ECONOMIC
- SOCIAL
- LEGAL-ADMINISTRATIVE





Spanish Tapping Workers **PROFITABILITY**

**TO KNOW THEM AND TO OVERCOME THEM
BRINGS US CLOSER TO THE PROFITABILITY**

CURRENT CONDITIONS



AUTONOMOUS



WORKING DAY



ORGANIZATION



COMMERCIAL
RELATIONSHIP



LEGAL ISSUES

- **PROFITABLE OR NOT.** (PRODUCTIVITY OR PRODUCTION IN ABSOLUTE VALUE).
 - **POTENTIAL:**
FOREST UNIT CHARACTERISTICS.
TRAINING/EXPERIENCE.
CLIMATOLOGY.



Alex CUNNINGHAM
Ra Forest, FIJI



Alex CUNNINGHAM
São Paulo, Brazil



Alex CUNNINGHAM
São Paulo, Brazil



Alex CUNNINGHAM
Les Landes, France

THANK YOU

Contacts:

Aida Rodriguez Garcia: aida.rodriquez@cesefor.com

Alejandro Cunningham: alex@pinechemicals.org WhatsApp +55 15 9 9169-9296

Coordinator



Partners



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 774632

“Pine tapping in Tunisia: New socio-economic opportunities?”

Science to Practice Event (Webinar INRGREF) - September 8-9, 2020

www.incredibleforest.net
info@incredibleforest.net