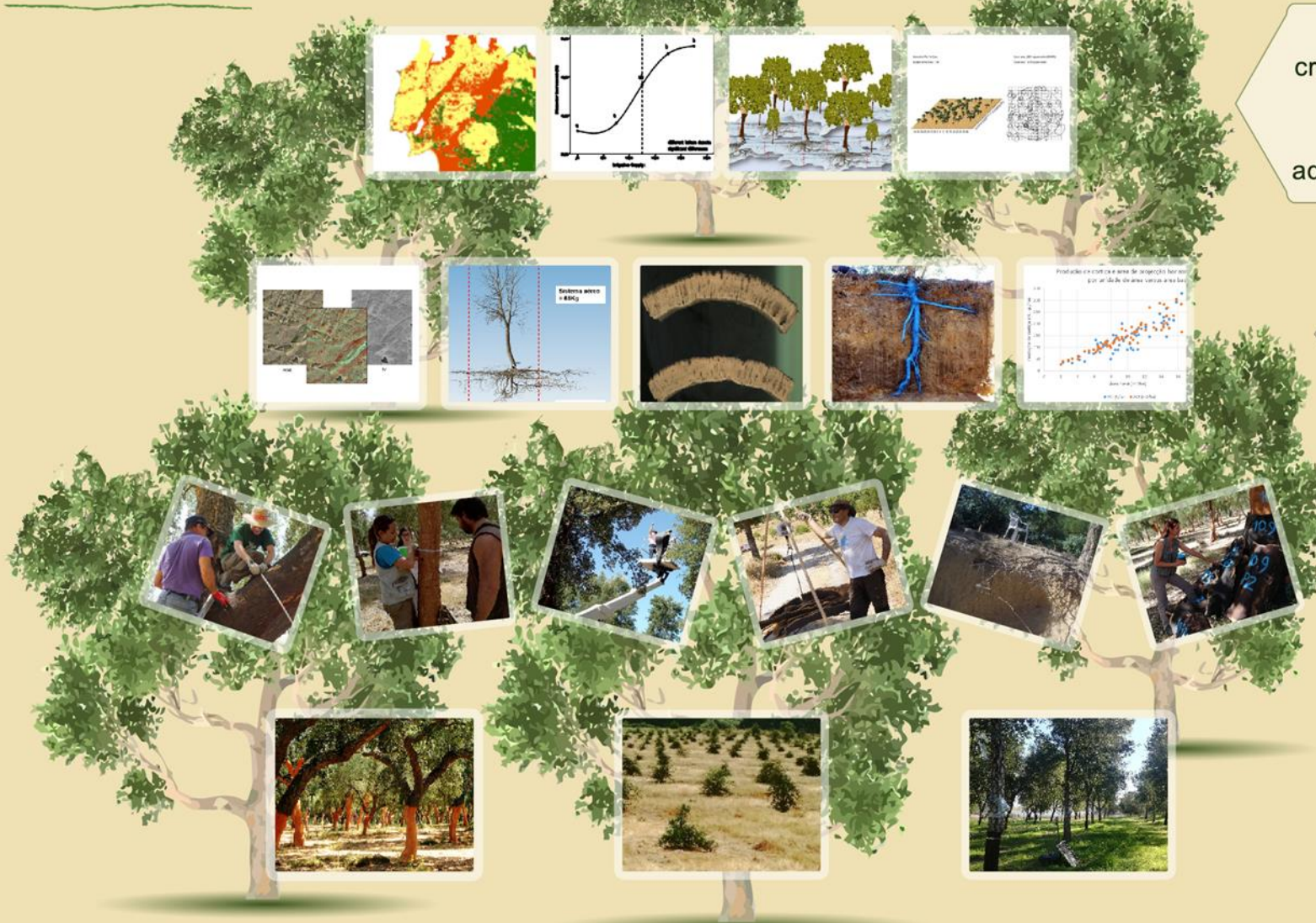


Structural - functional characteristics of cork oaks and their vulnerability to disturbance

**Constança Camilo-Alves
Nuno de Almeida Ribeiro
Ana Poeiras**

Universidade de Évora

calves@uevora.pt



Modelos de:
crescimento, silvicultura,
vitalidade, fertirrega,
económicos, gestão
adaptativa, ordenamento

Análise dos dados,
modelação, SIG's,
Metodologia 3D

Recolha
de informação
estrutural-funcional
em campo

Ensaio
experimentais
permanentes



Machoqueira
Irricork
regasuber

Mitra

Google Earth

Data SIO, NOAA, U.S. Navy, NGA, GEBCO
Image Landsat / Copernicus

300 km

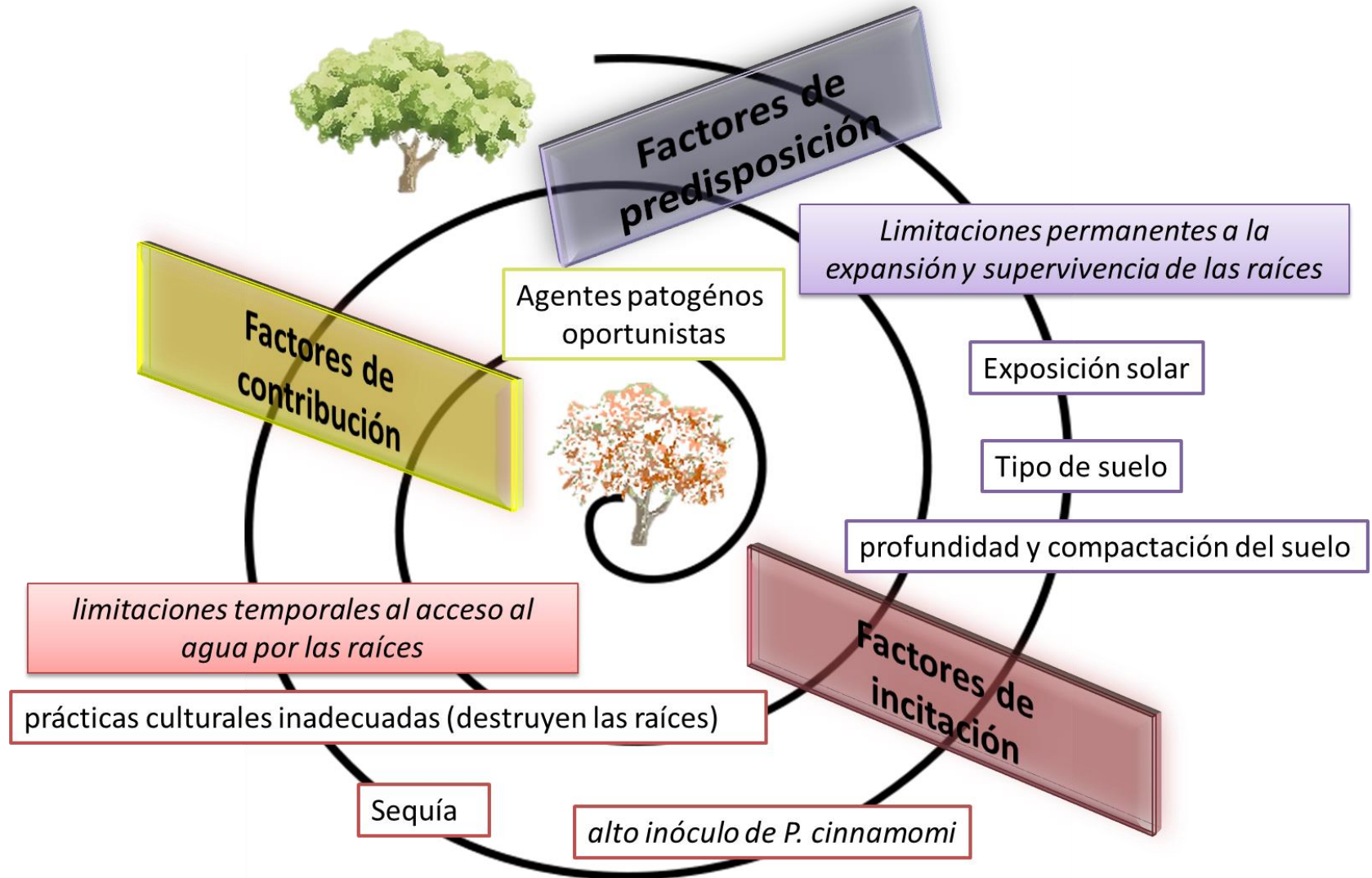


spirale de déclin

Facteurs associés à la mortalité

common denominator:

- Root limitations
- Developemt
- Survival
- **WATER STRESS**





FACTORES ASOCIADOS A LA SECA DE LOS ALCORNOQUES: ESTUDIO DIACRÓNICO EN EL DISTRITO DE ÉVORA

FACTORES DE LA SECA		FINCA #1	FINCA #2
PREDISPOSICIÓN	Suelos poco profundos	> 90%	> 90% (mucha erosión)
	Orientación al Sur / Oeste	38% Sur, 29% Oeste	20% Sur, 32% Oeste
	Declive superior al 15%	55%	39%
INCITAMENTO	<i>Phytophthora cinnamomi</i>	12%	48%
	Matéria orgânica	3,41 ± 0,70 %	1,78 ± 0,81 %
	Macro/micro nutrientes	>	<
	Capacidad de cambio de cationes	>	<
	Intensidad de lo gradeo	> !!!	<

MORTALIDAD DE LOS ALCORNOQUES (2002-2013)

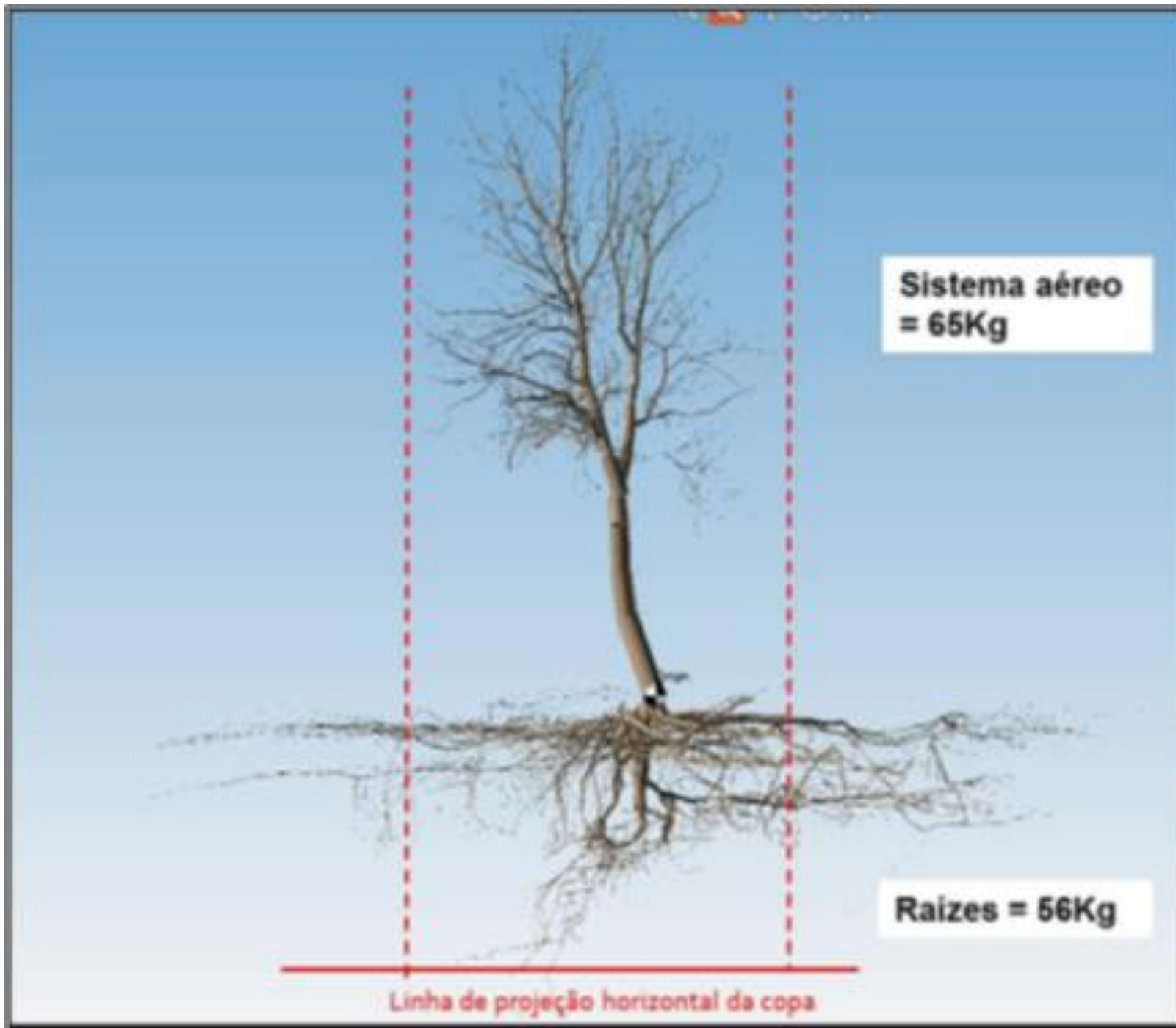
5593

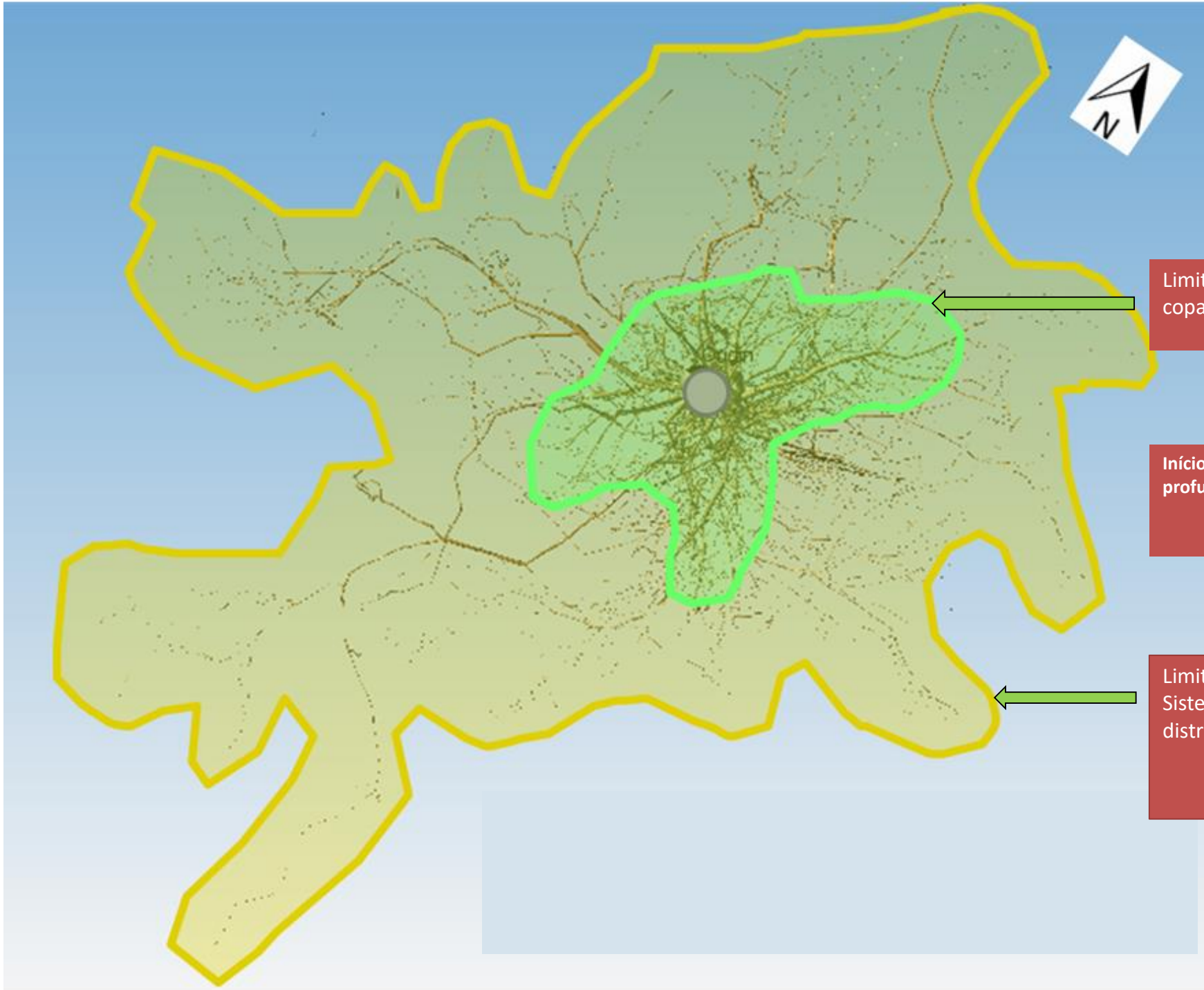
5133

Las fincas presentan los mismos factores asociados a la seca, pero en intensidades diferentes

- Mediterranean tree – adaptations and plasticity







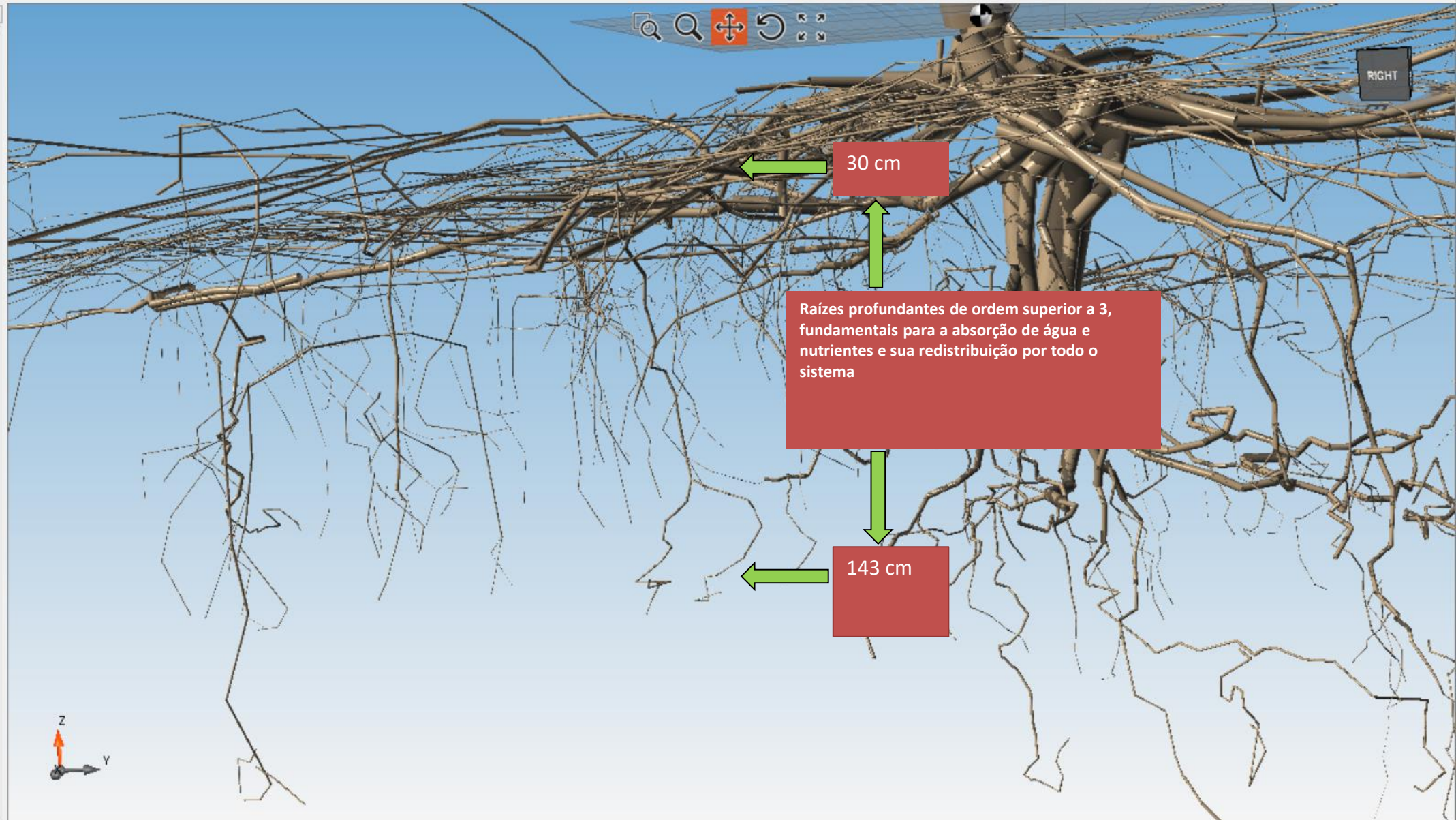
Limites da projecção da copa

Início da distribuição de raízes profundantes ordem superior a 3

Limites da projecção do Sistema radicular distribuição



id	Topo
1	~/A1/S1
2	~/<S2
3	~/<S3
4	~/<S4
5	~/<S5
9	~/A1/S1
10	~/A1/S1
11	~/A1/S1
12	~/A1/S1
13	~/A1/S1
14	~/A1/S1
26	~/A1/S1
27	~/<S2
28	~/<S3
29	~/<S4
30	~/<S5
31	~/<S6
88	~/A1/S1
89	~/A1/S1
90	~/A1/S1
91	~/A1/S1
95	~/A1/S1
96	~/A1/S1
97	~/A1/S1
98	~/A1/S1
102	~/A1/S1
103	~/A1/S1



Fertirrigation

réduire le temps nécessaire à une forêt productive

supprimer l'arrosage

créer des modèles de croissance pour les régions les plus septentrionales



20 anos



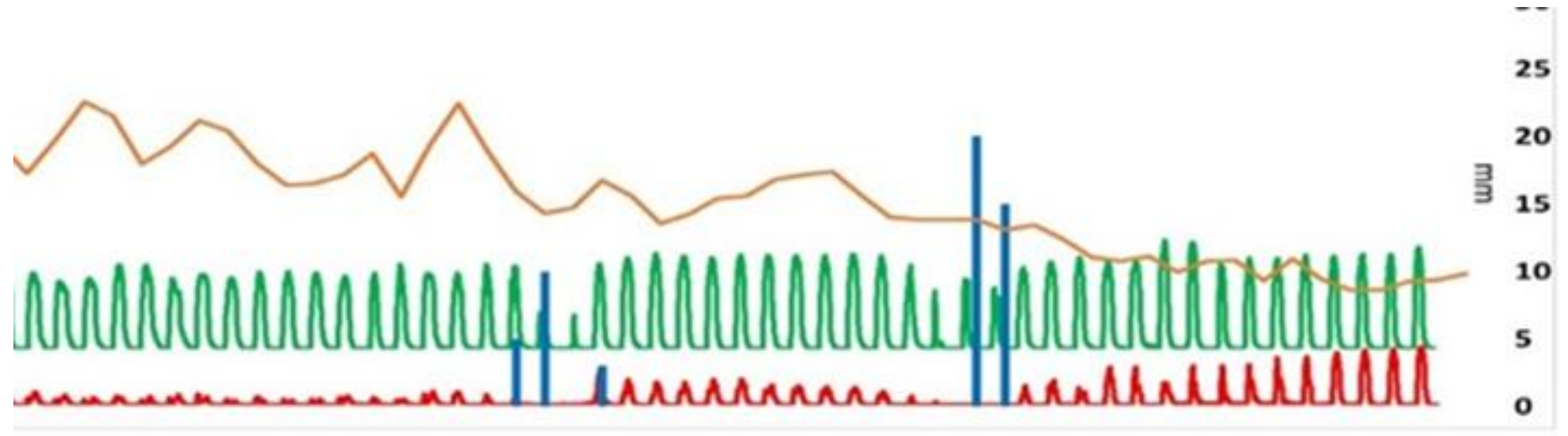
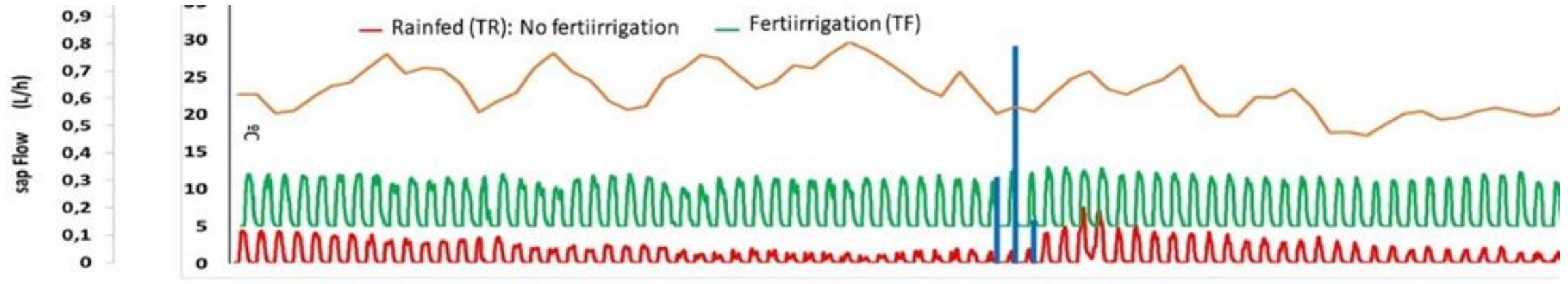
10 anos



5 anos

Tarefas ensaios experimentais – parâmetros fisiológicos

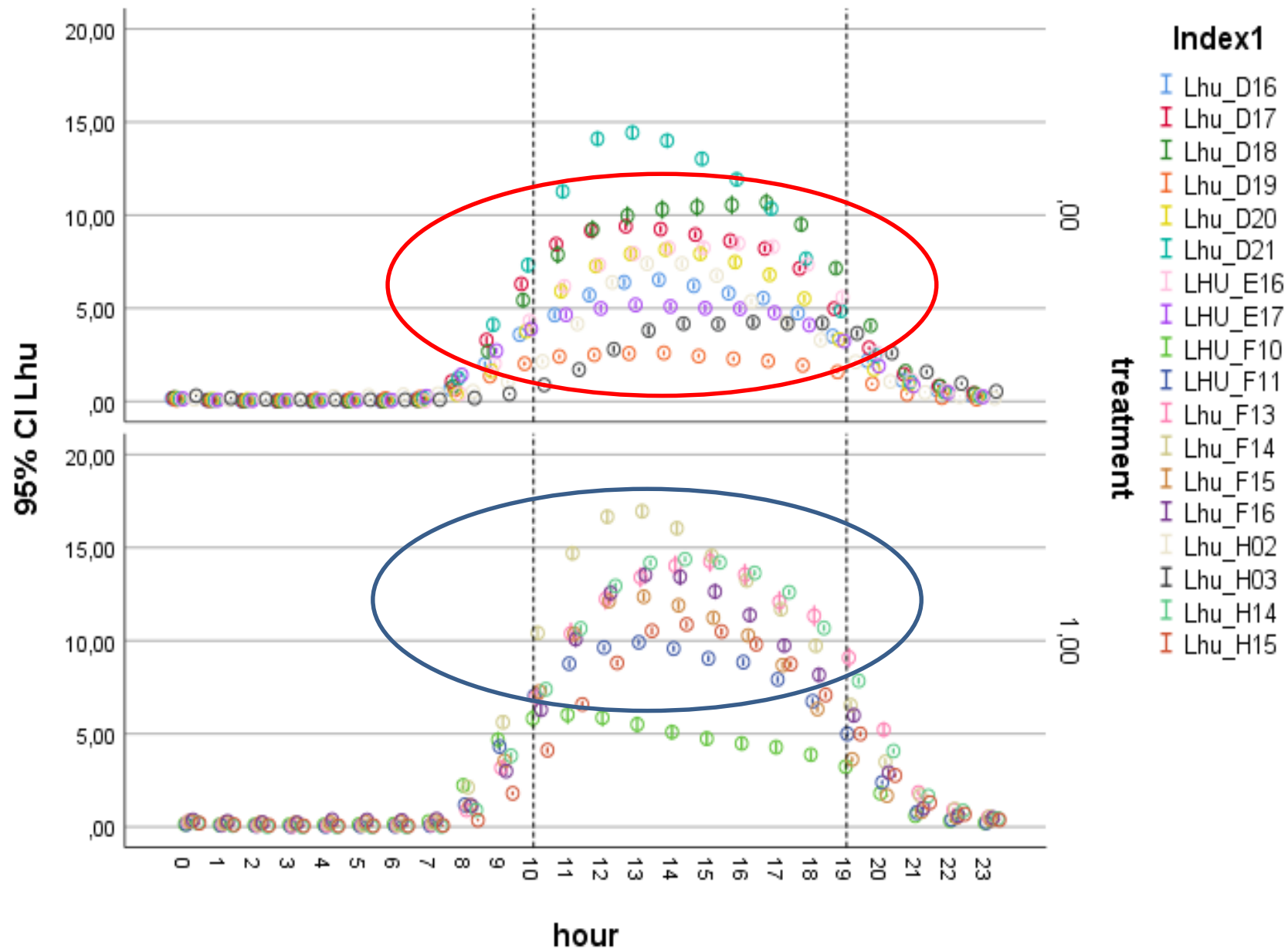


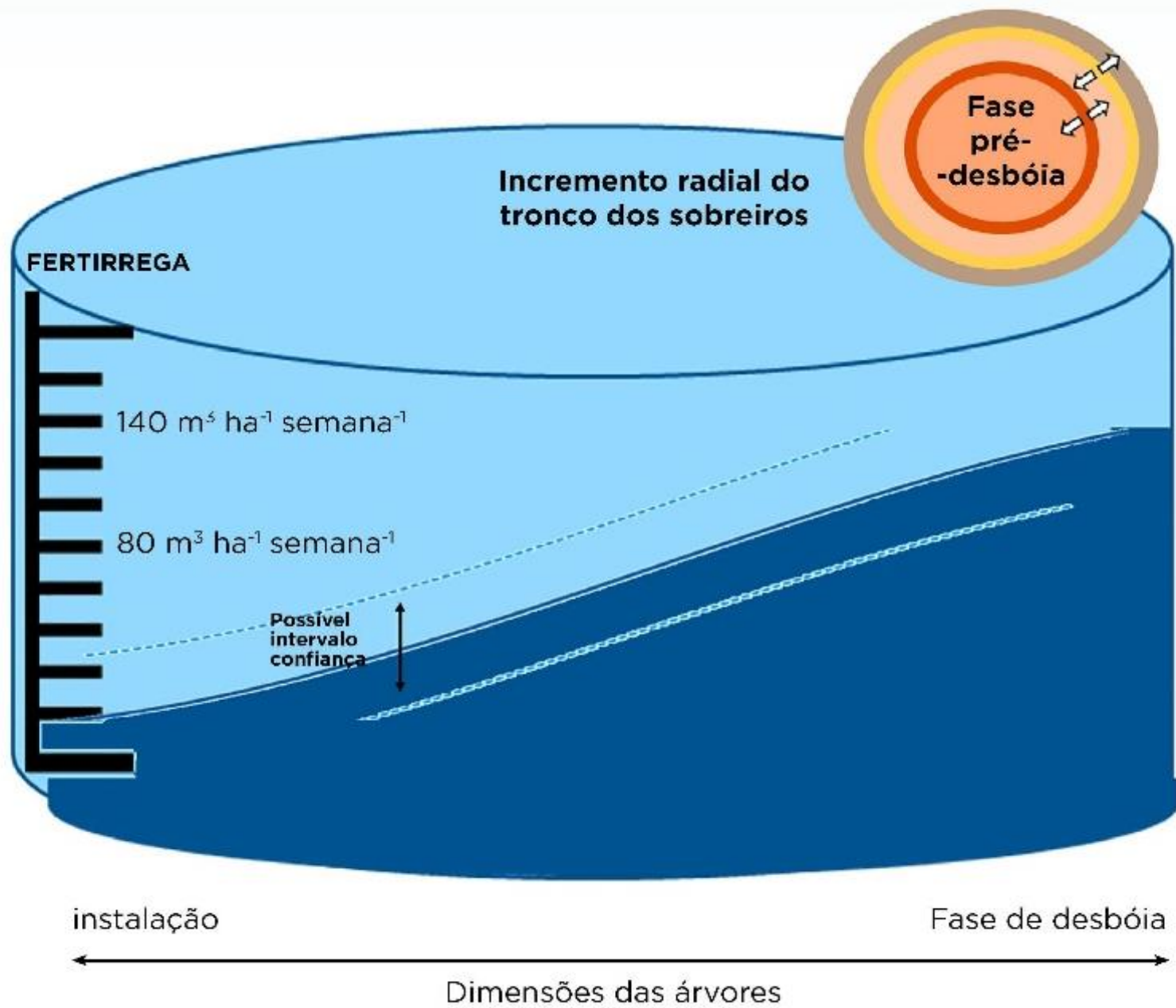


Sap flow

- Independent of
air vapour pressure deficit

When under water stress:
Reduced leaf area





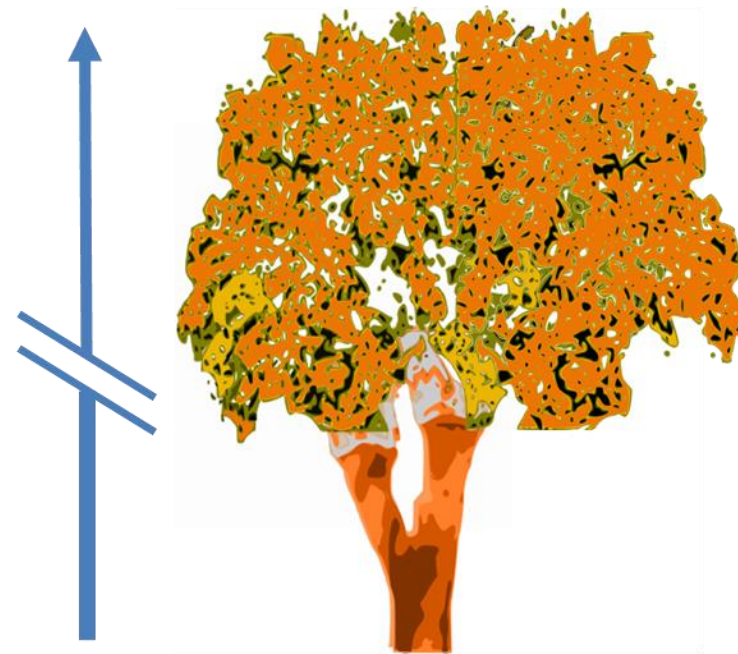
CONSECUENCIA DE LA DESTRUCCIÓN DE LAS RAÍCES Y LIMITACIÓN EN EL ACCESO AL AGUA

Decaimiento crónico



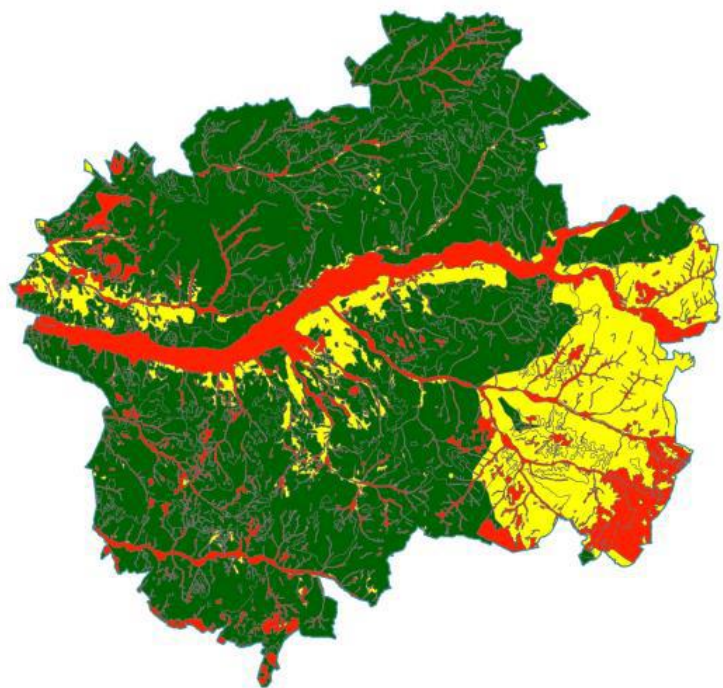
Poco flujo hídrico - fotosíntesis reducida

Muerte súbita

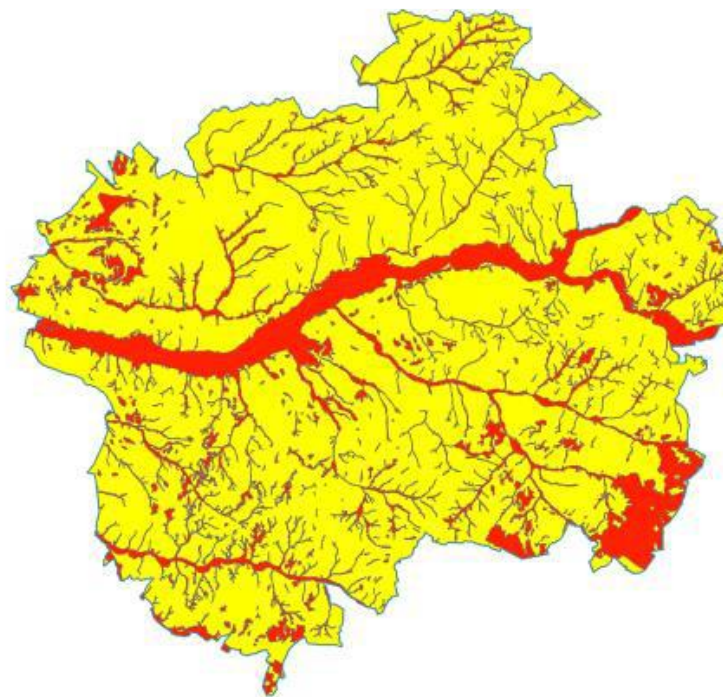


Cavitación de los vasos - Embolismo

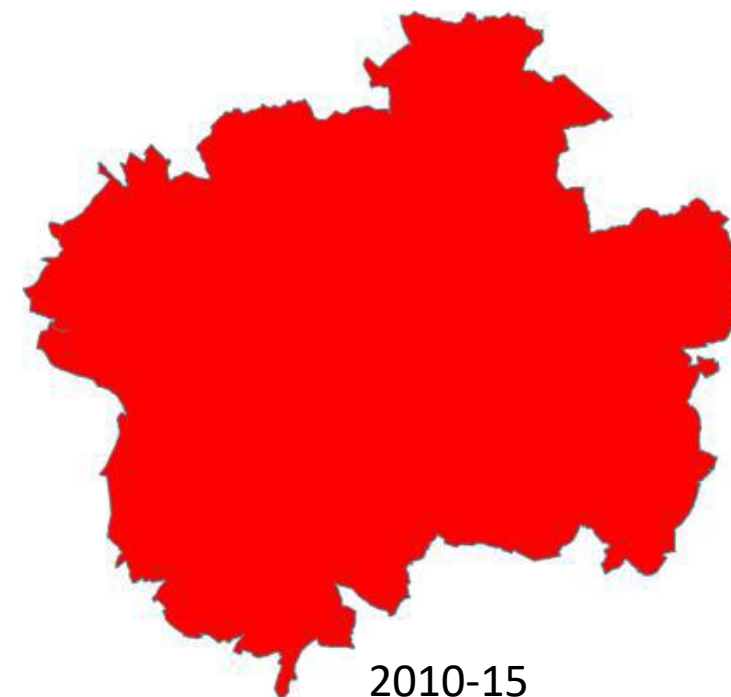
CLIMATE CHANGE



1996/99



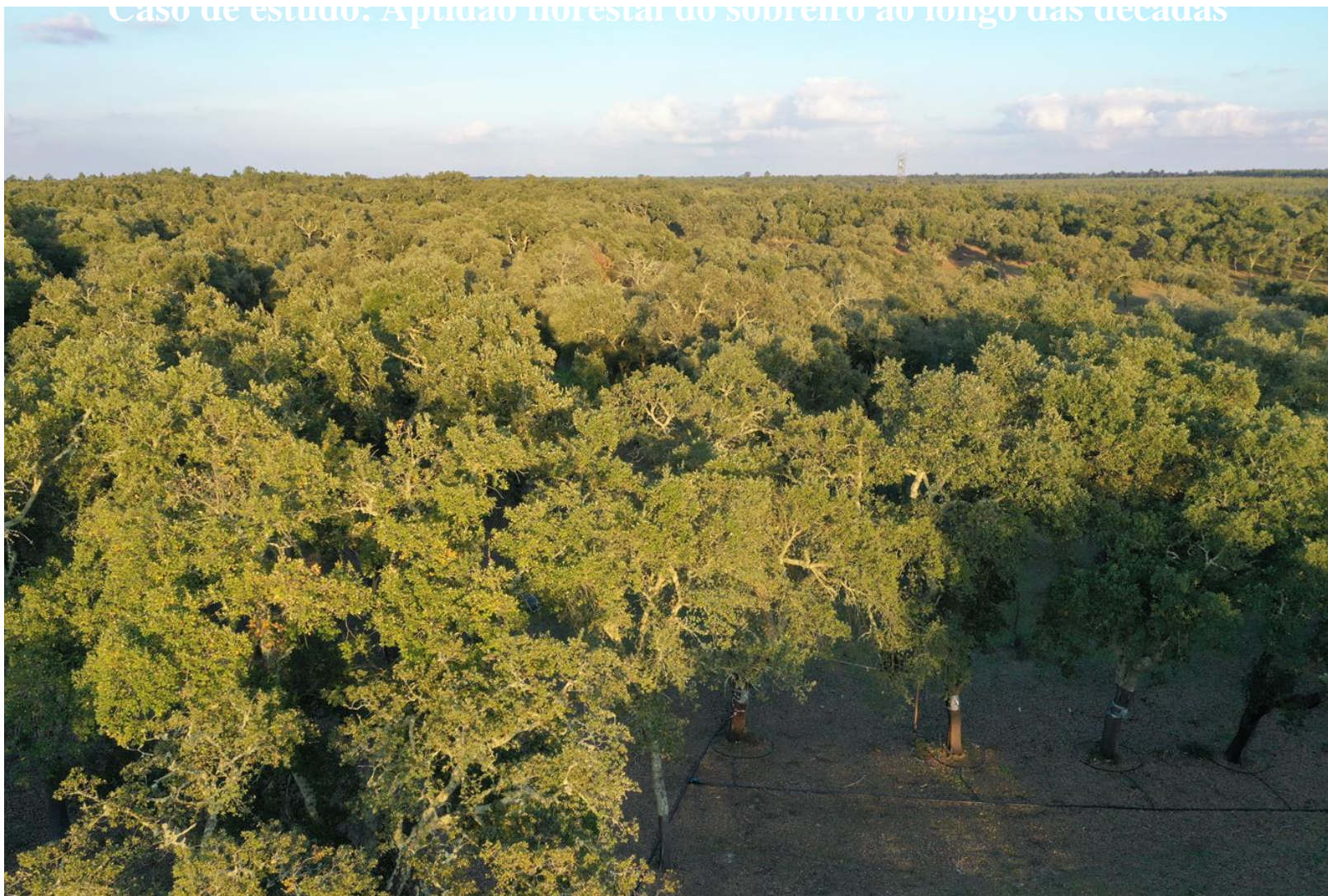
2000-2005

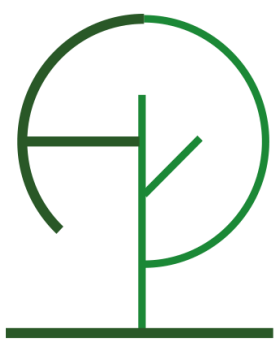


2010-15

CANOPY COVERAGE +40%

Caso de estudo. Aptidão florestal do sobrelito ao longo das décadas



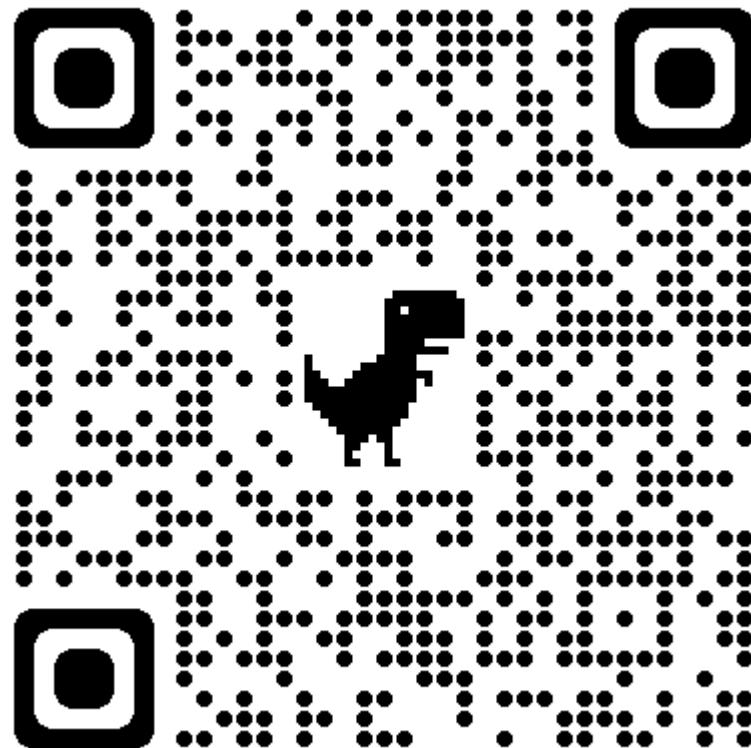


ECODENDRO

conservar para produzir produzir para conservar



UNIVERSIDADE
DE ÉVORA



**Investigação e Inovação
em rega de sobreiros**
Documentário sobre o projeto Regacok-TraDE





Merci

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