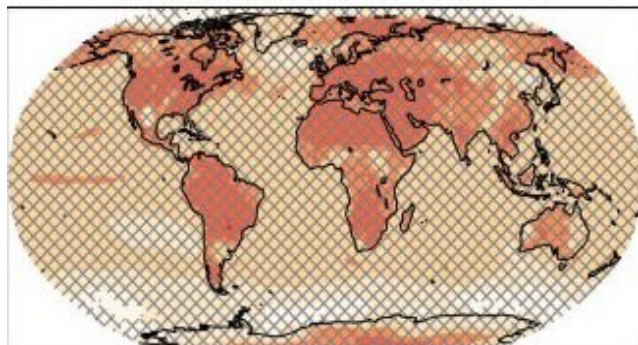


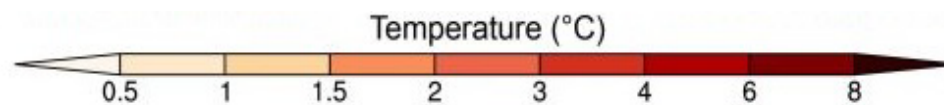
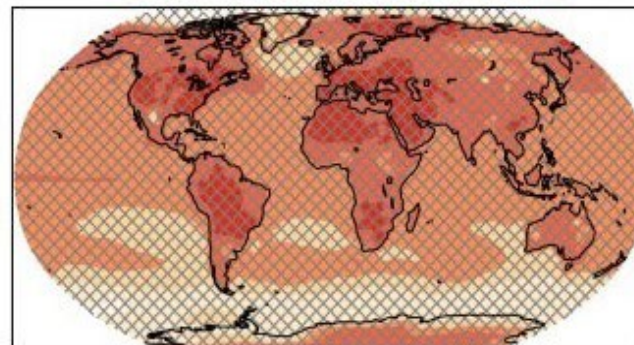
Quality of forest seeds for climate and food security

Elisa Vieira

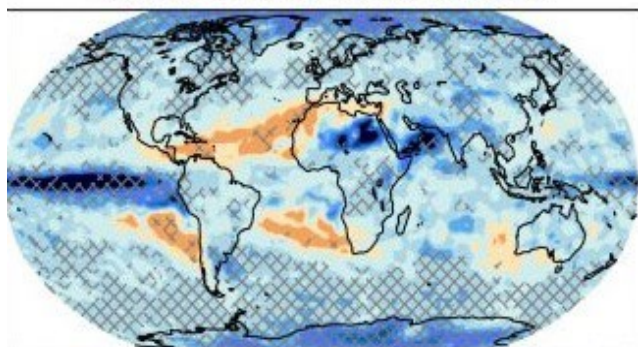
Change in temperature of hottest days (TXx) at 1.5°C GMST warming



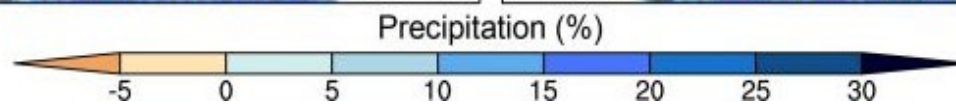
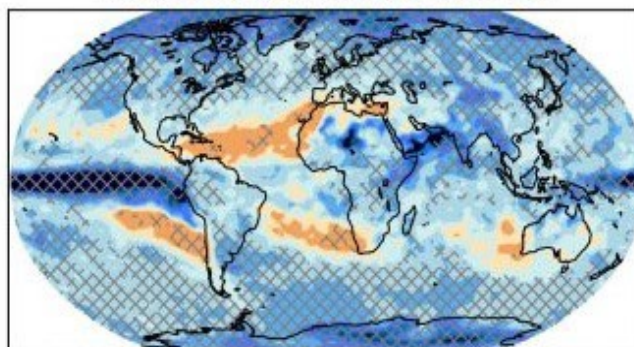
Change in temperature of hottest days (TXx) at 2.0°C GMST warming



Change in extreme precipitation (Rx5day) at 1.5°C GMST warming



Change in extreme precipitation (Rx5day) at 2.0°C GMST warming





**Up to 534 mm
of precipitation
in one week!!!**



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Rice fields in the state of Rio Grande do Sul (Brazil), flooded due to the floods of May 2024.



ISTA
100 YEARS
A CENTURY OF PROGRESS IN SEED QUALITY ASSURANCE



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2 billion trees



12 million ha



148 million ac





**Crop – Livestock – Forest
Integration**



Agroforestry system



Source: Luiz Maranhão Froufe
Embrapa Forestry

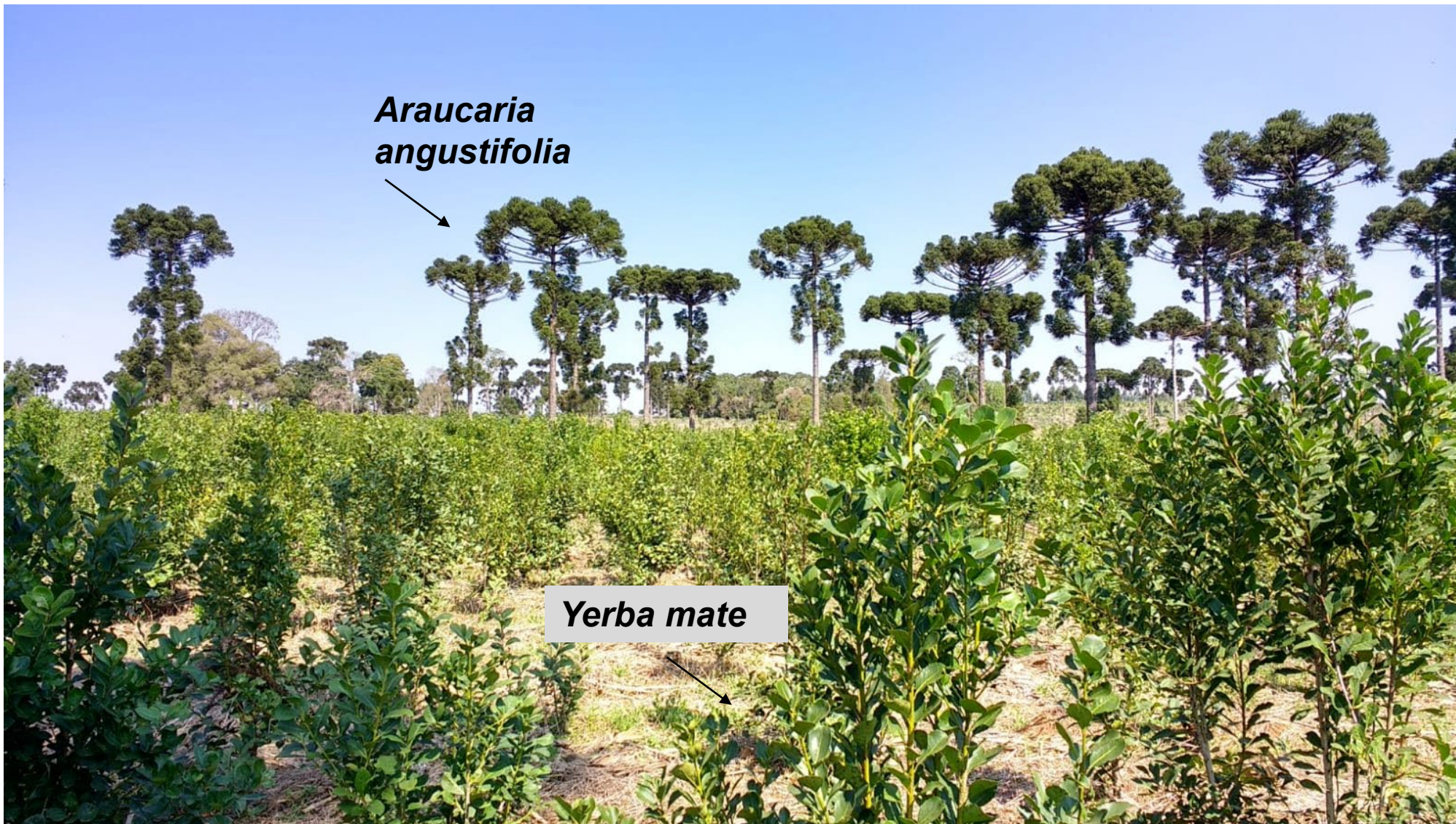


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*Araucaria
angustifolia*



Yerba mate





*Grevillea
robusta* trees





**17,430.000 hecatares with
Crop – Livestock – Forest
Integration**





Targeted grazing for wildfire risk reduction.



Source: Liza Zabek – BC Ministry of Agriculture and Food



Silvopasture established post clear cut harvest.

Silvopasture & natural stand Christmas tree production



12 million ha – 2,600 ton seeds/year.
Best production = 17 ton/year

Growth



Years



Pinus taeda cone production ↓ 54%

Year	Rain (mm)	Cone production (bags)
2021	49	2,445
2022	131	1,13

Source: Kolecti Company

Pinus taeda harvert in the south region of Brazil - 2024



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Purity

Genetic



Germination
Vigour

Seed
Health



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Thank you

- FTSCom members
- Liza Zabek (Canada)
- Embrapa Forestry colleagues
- Kolecti Company

I have no actual or potential conflict of interest in relation to this presentation.

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