Coconut Palm
Age & Form Factor

STAR Meeting Nadi, Fiji

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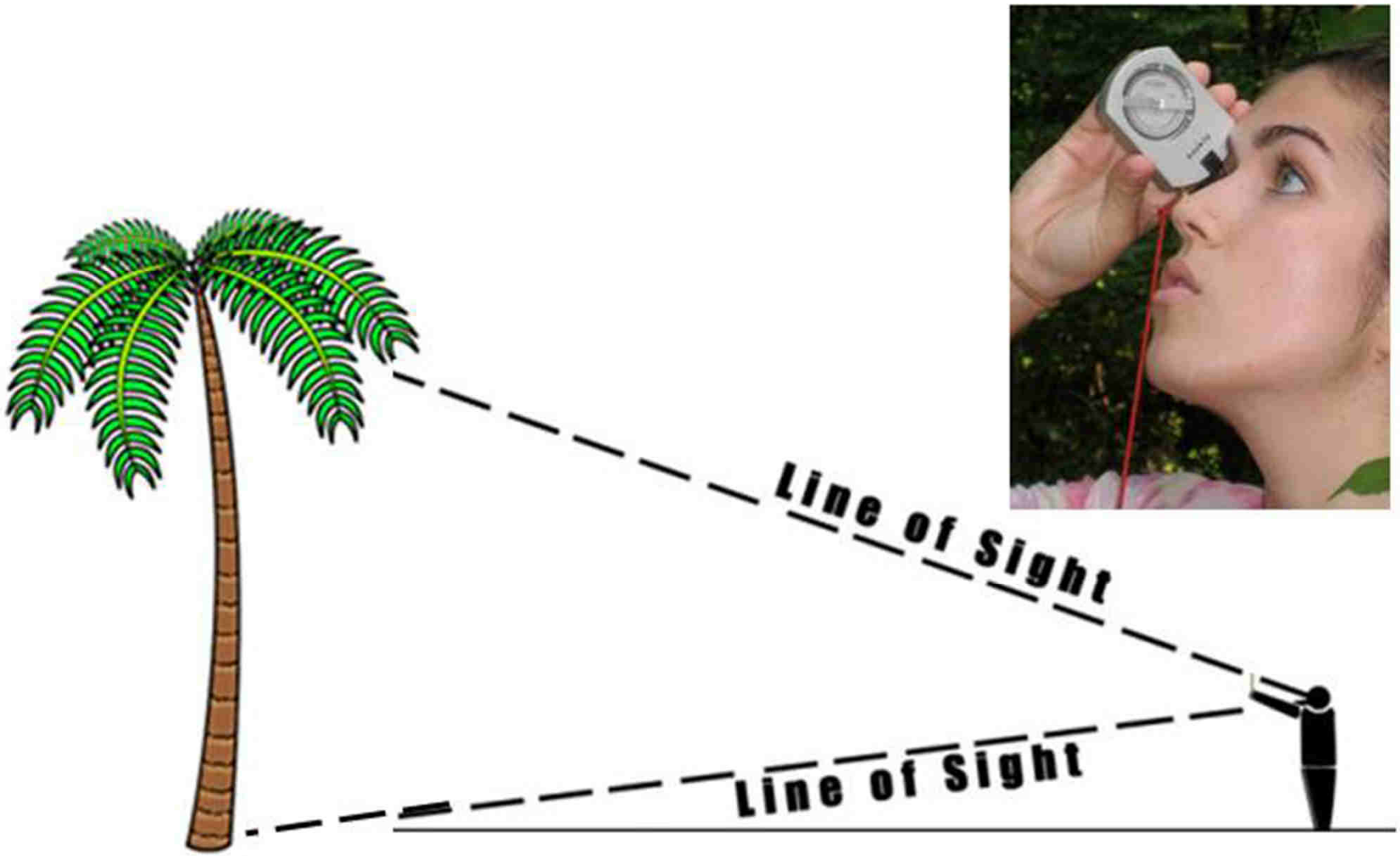
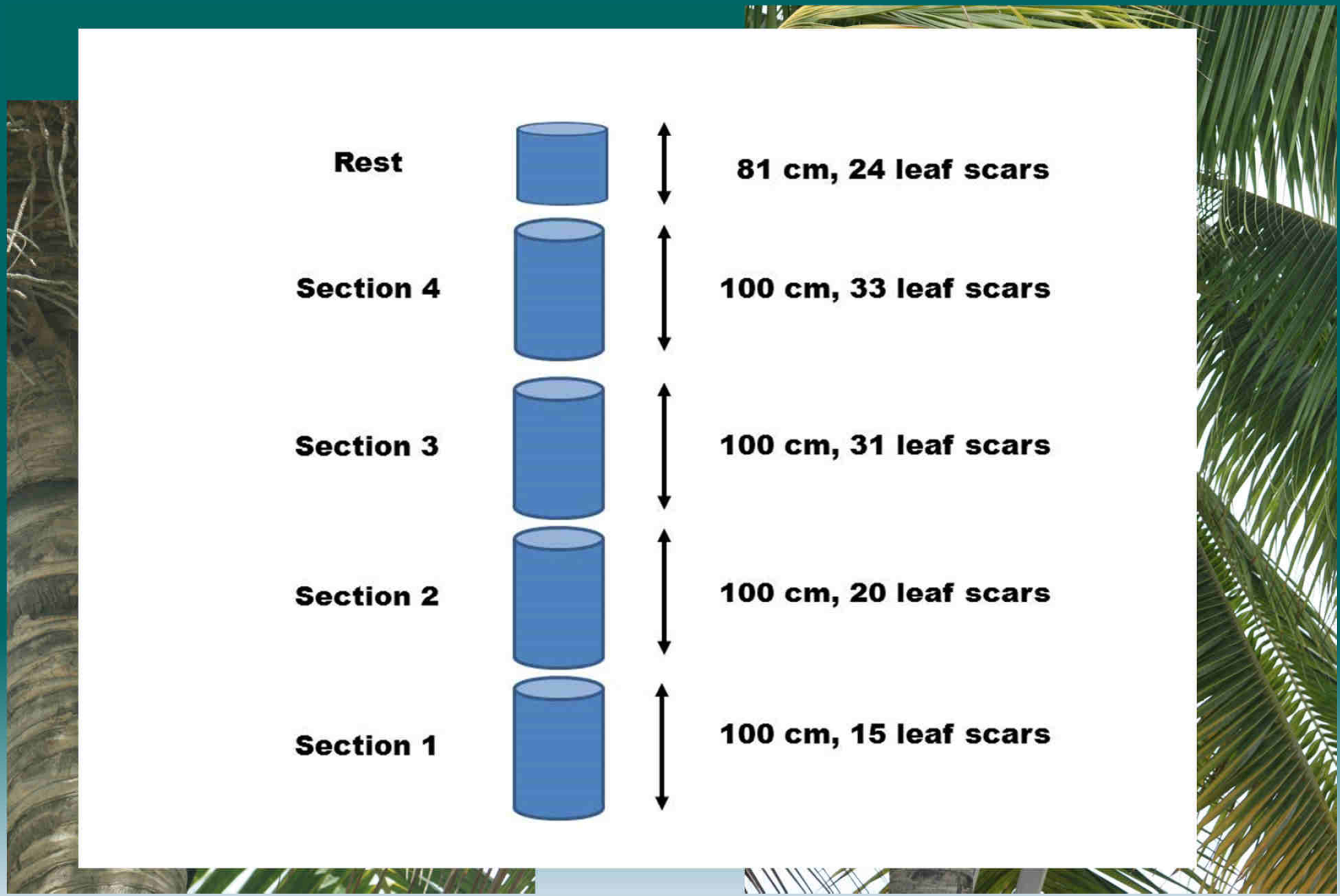
Why Care about Coconut Palms ?

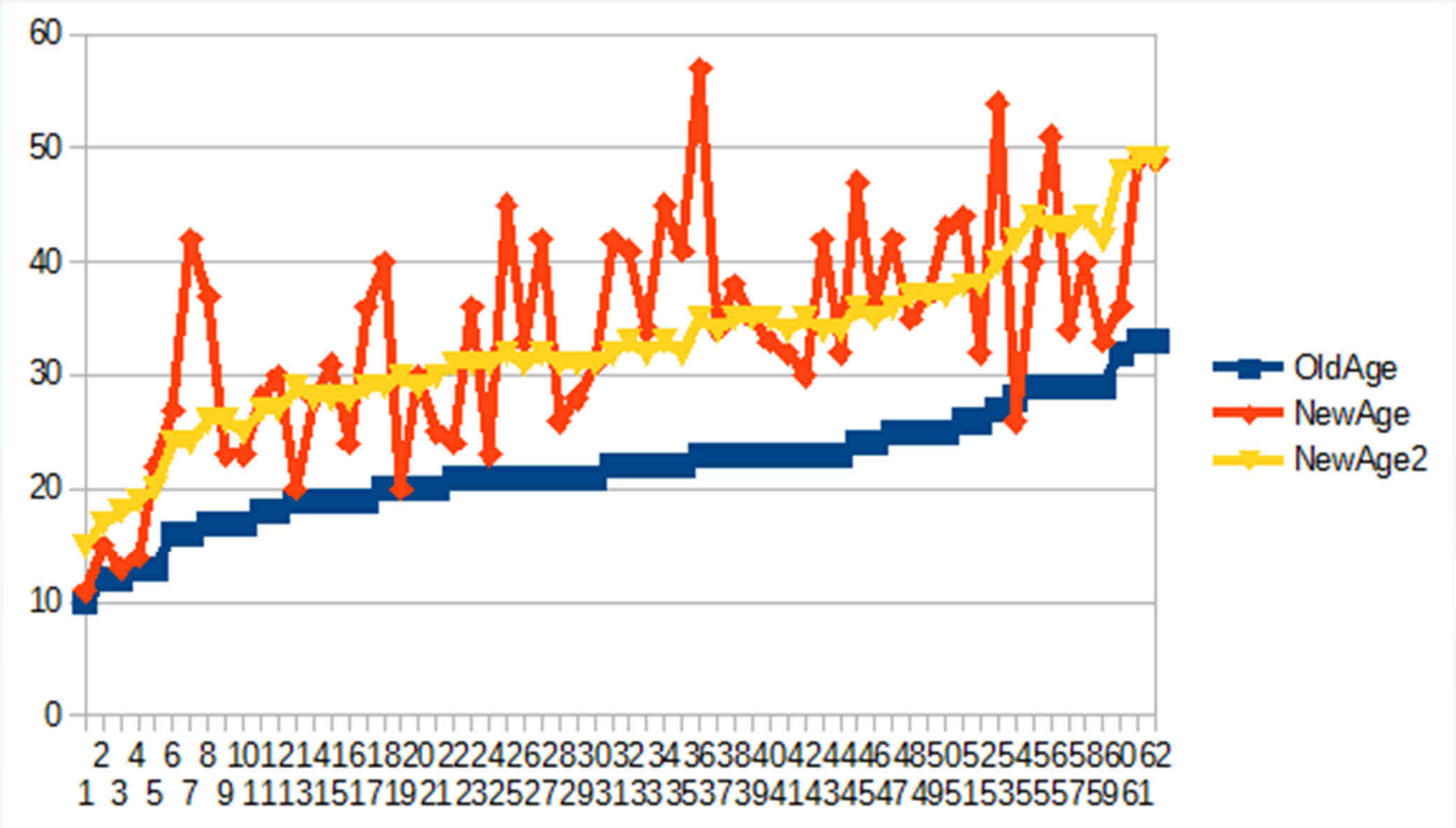
- Coconut oil is a valid product:
  - Pharma industry
  - Substitute of diary products (yogurt)
- Carbon binding vegetation
- Food security
- Income for outer islands


Line of Sight
Line of Sight

Measurements



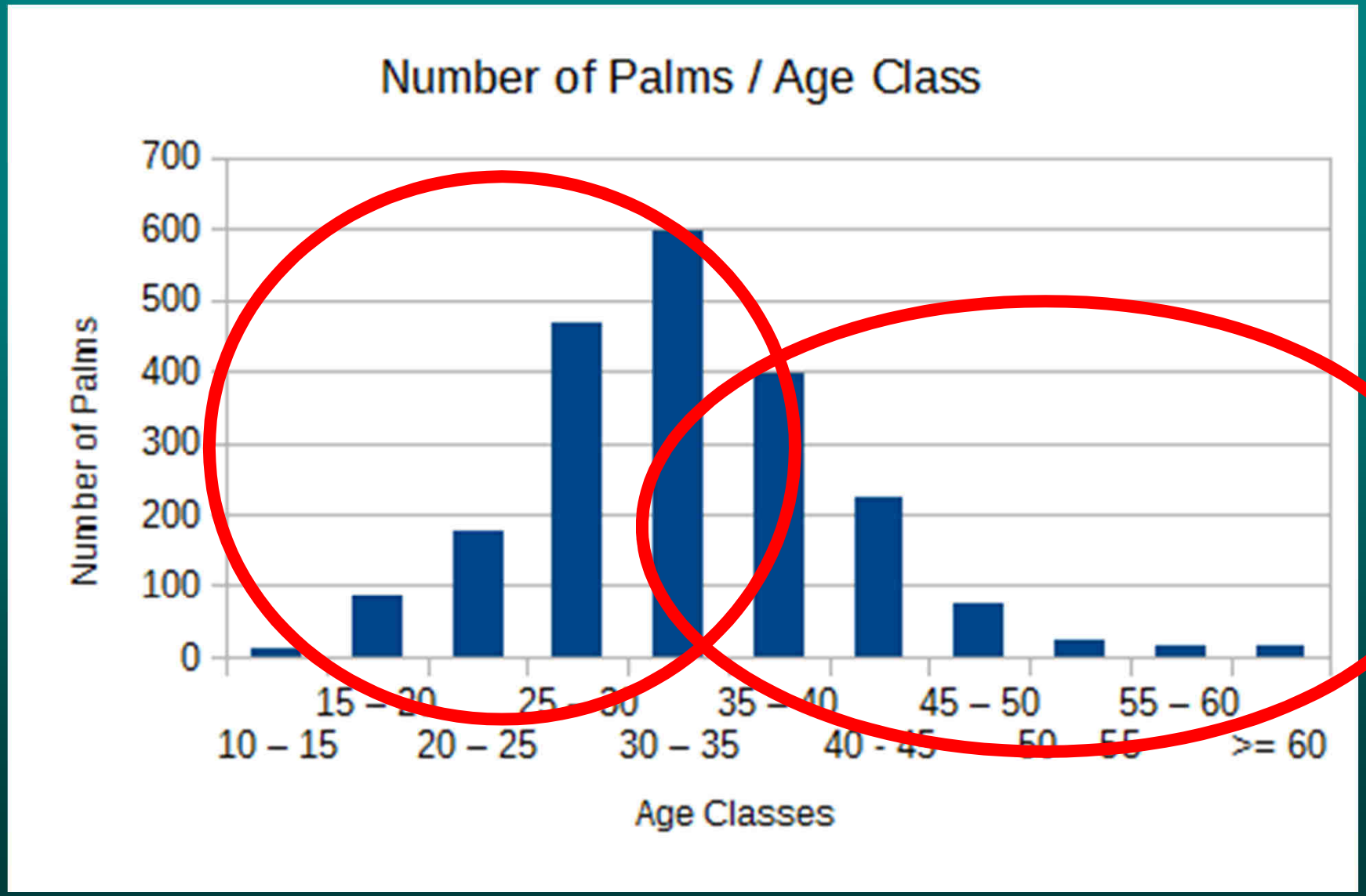
Age Estimation



Age Estimation

- Age = length of trunk / length of 11 leave scars + 5
- Age old method + (age old method / 2.06)

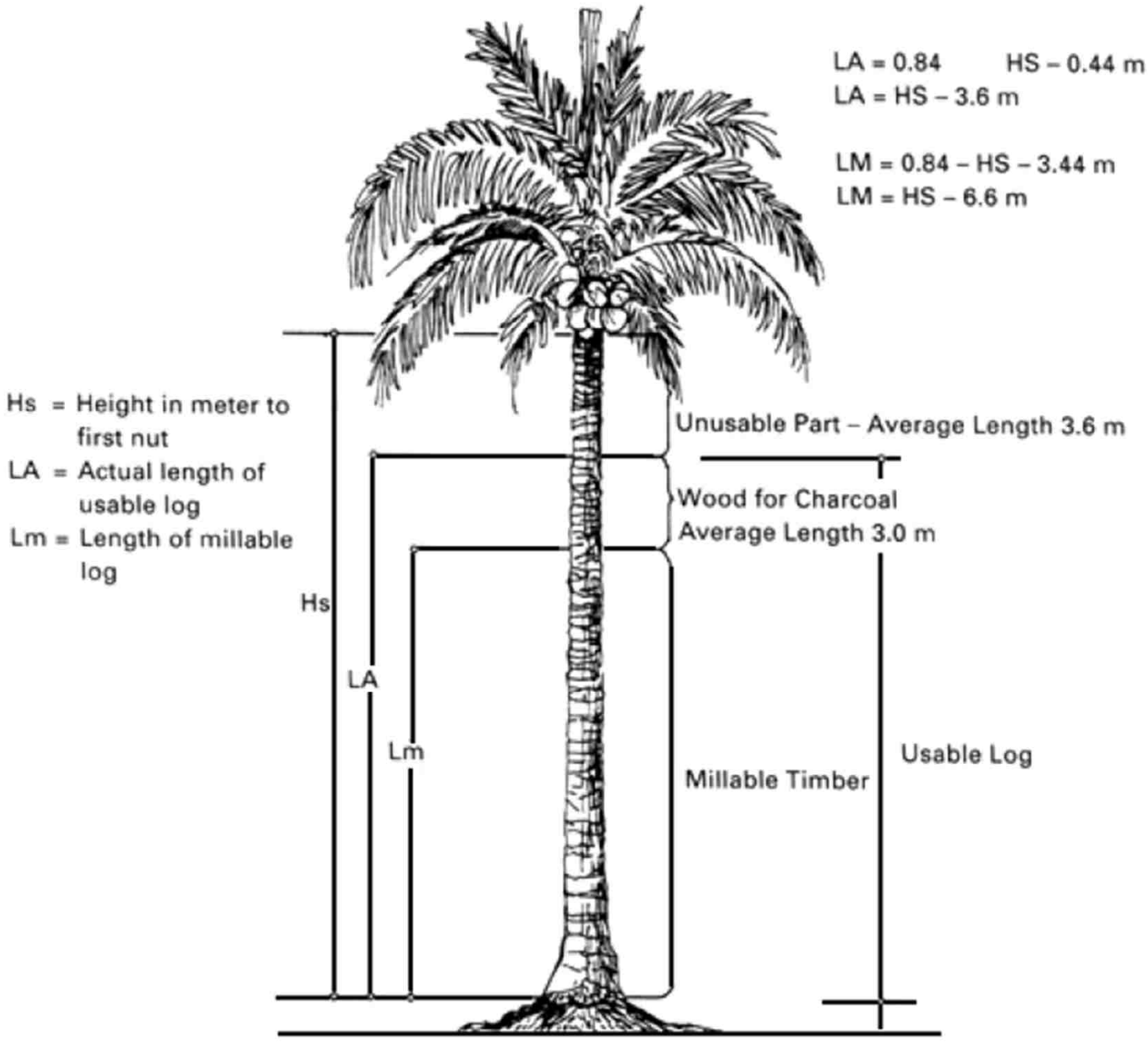
Situation Vava'u Group



Rhinoceros Beetle

Dead Palm Trunks

~ 25 dead palms per hectare


LA = 0.84 HS – 0.44 m
LA = HS – 3.6 m
LM = 0.84 – HS – 3.44 m
LM = HS – 6.6 m
Hs = Height in meter to first nut
LA = Actual length of usable log
Lm = Length of millable log
Unusable Part – Average Length 3.6 m
Wood for Charcoal
Average Length 3.0 m
Hs
LA
Lm
Millable Timber
Usable Log

Establishment of Form Factor

- ~ 60 palms over all diameter classes
- Measurement of diameter every metre
- Volume calculation
- Form factor

Measurements

Results

Form Factor

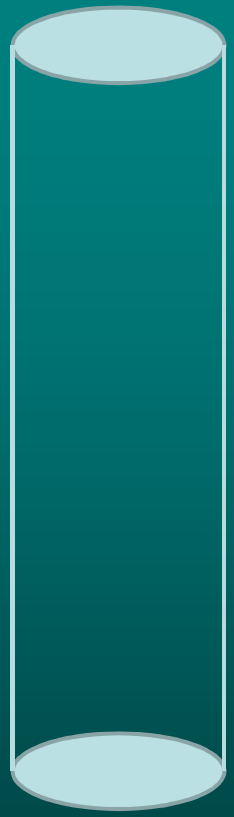
Standard Error: 0.01

95% Confidence interval: 0.71 0.76 2 %

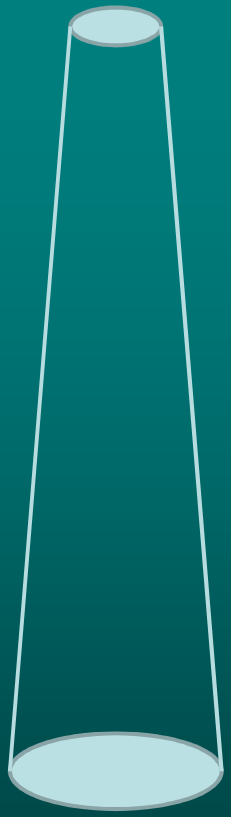
Min	Max	Avg	StDev	Trunks measured:
0.56	0.91	0.74	0.09	62

Trunk_ID	DBH	Trunk Height	Trunk Volume	Form Factor
TRUNK_001	27.06	11.78	0.56	0.83
TRUNK_002	24.83	7.69	0.30	0.81
TRUNK_003	22.60	11.95	0.40	0.83
TRUNK_004	26.42	15.38	0.60	0.71
TRUNK_005	34.38	19.42	1.07	0.59
TRUNK_006	31.20	13.47	0.59	0.57

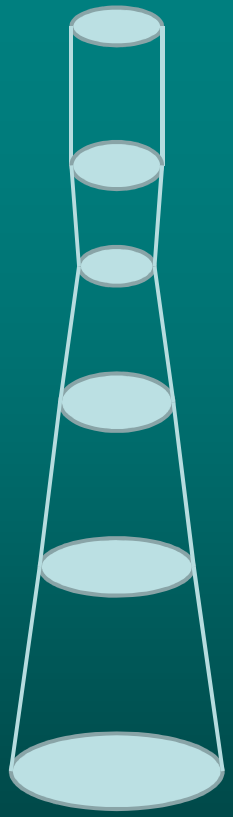
Trunk Form



Cylinder



Expected



Reality

Years of Drought

Thanks