

Identifying & including growth variables in a modeling framework at different spatial scales for Eucalypts plantation



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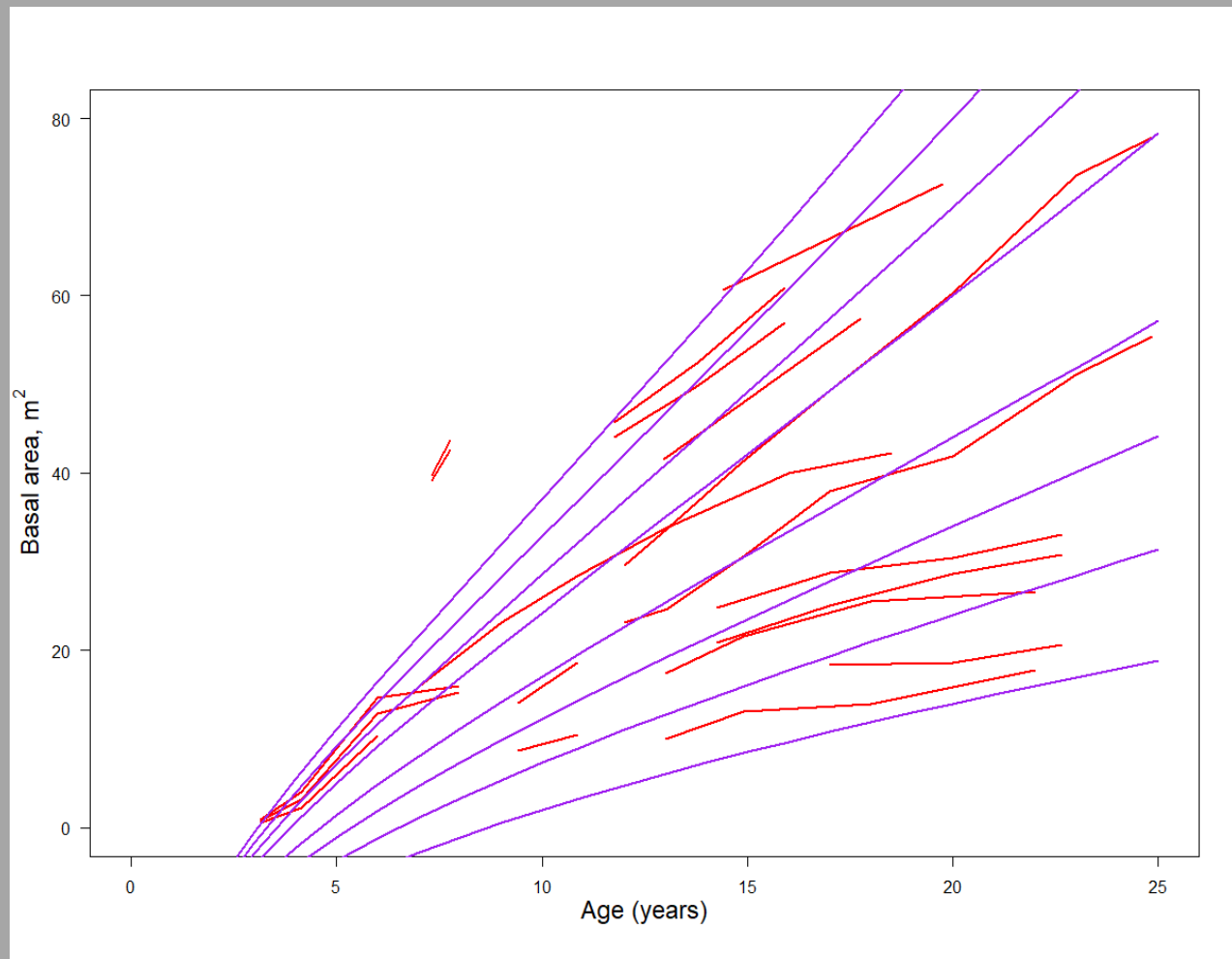
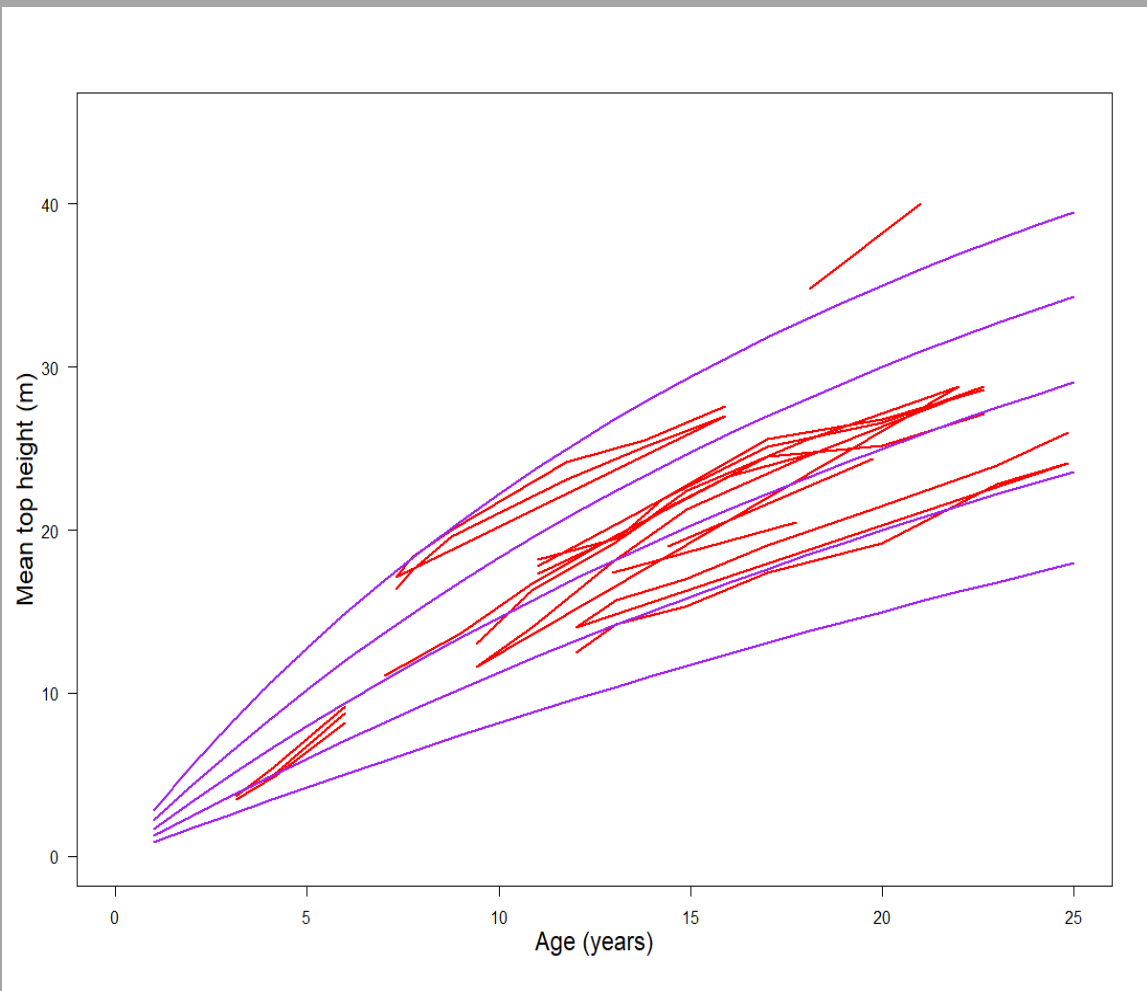


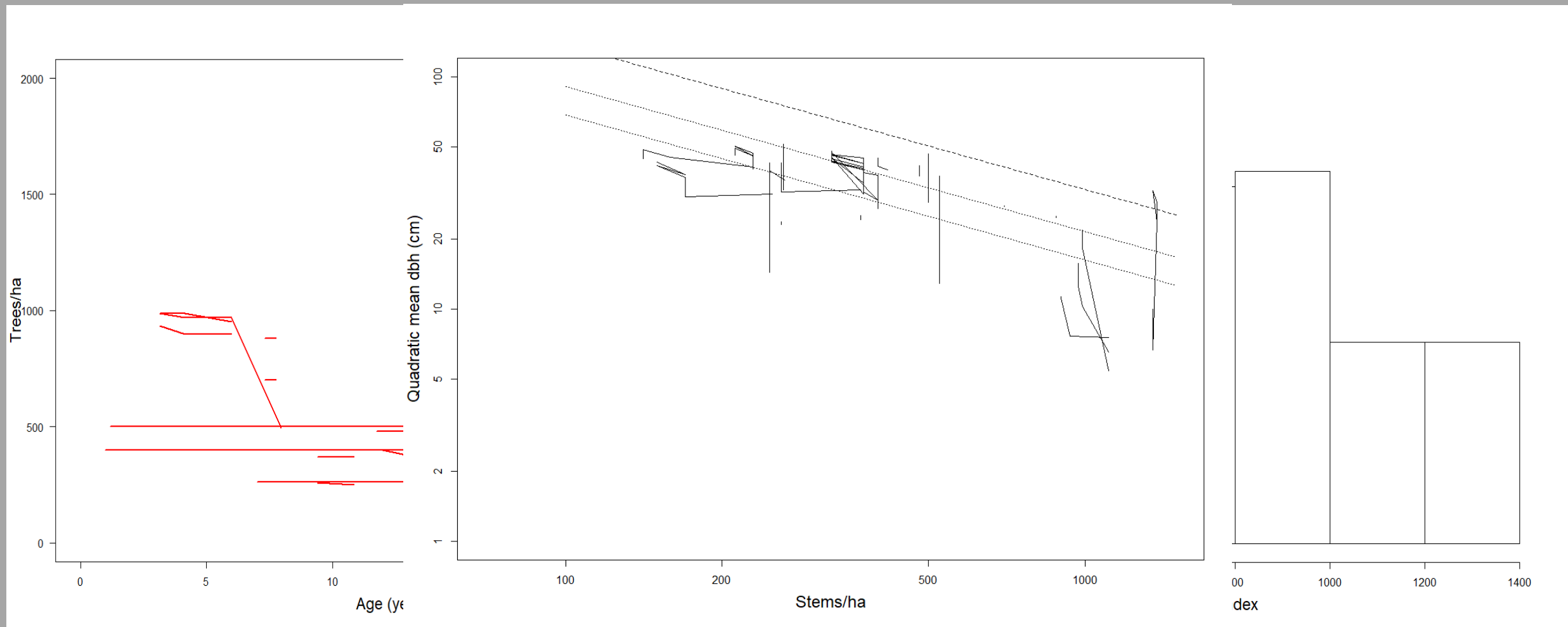
1. A preliminary growth model for mature *E. globoides* **SCION**
2. Macro-site height model for *E. globoides* **NZDFI**
3. Micro-site height and survival model for *E. globoides* **NZDFI**
4. Major limitations and future needs
5. Possible implementation of this study



A preliminary growth model for mature *E. globoidea*

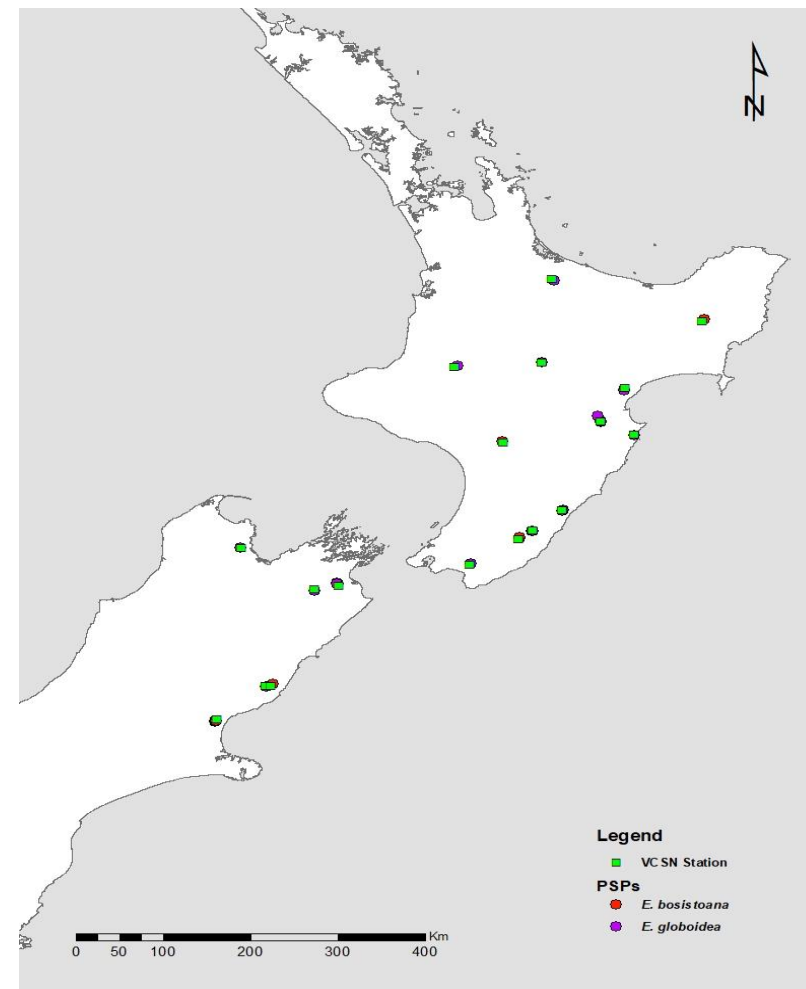
Atribute	Model	a coef.	b coef.	c coef.	d coef.
Mean top height	Hossfeld 1 st order polymorphic	0.012701	-1.023352		-
Basal area	Schumacher 2 nd order polymorphic	-	-6.5768	-0.1244	-
Mortality	Reineke SDI curve /Clutter model				-
Stand volume	Jansen, 1996	0.45785	0.03190	-0.36289	-0.12886





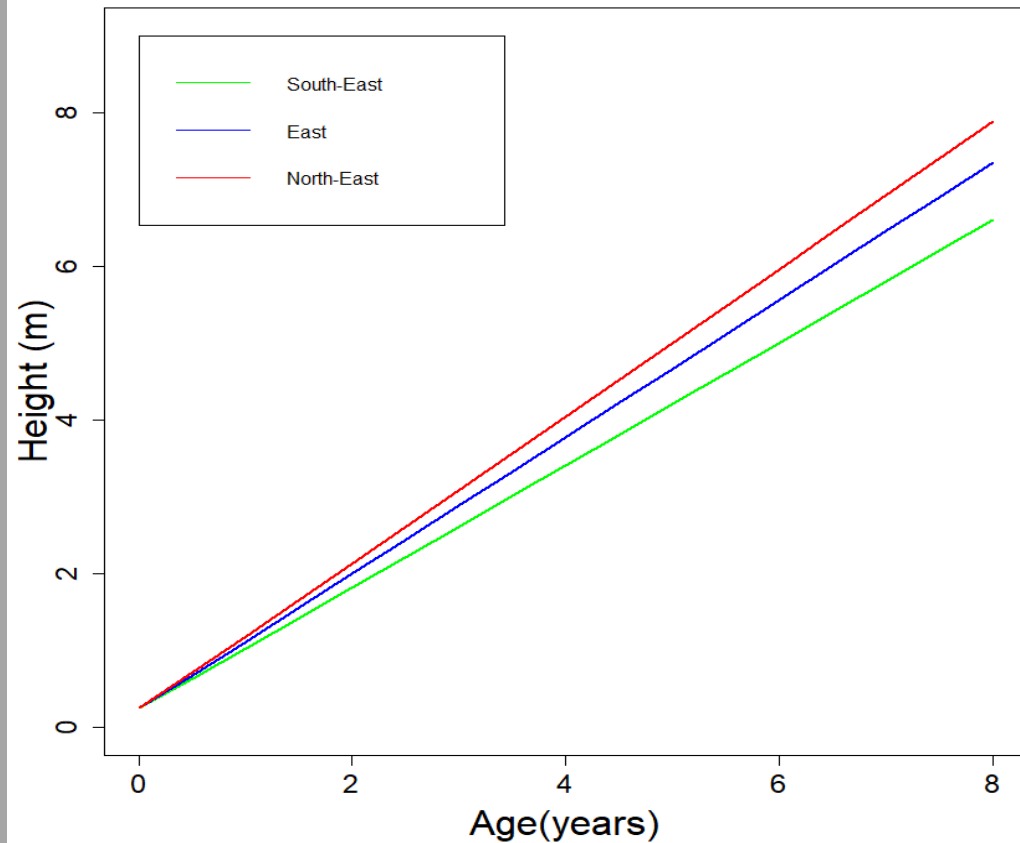


Macro-site modelling

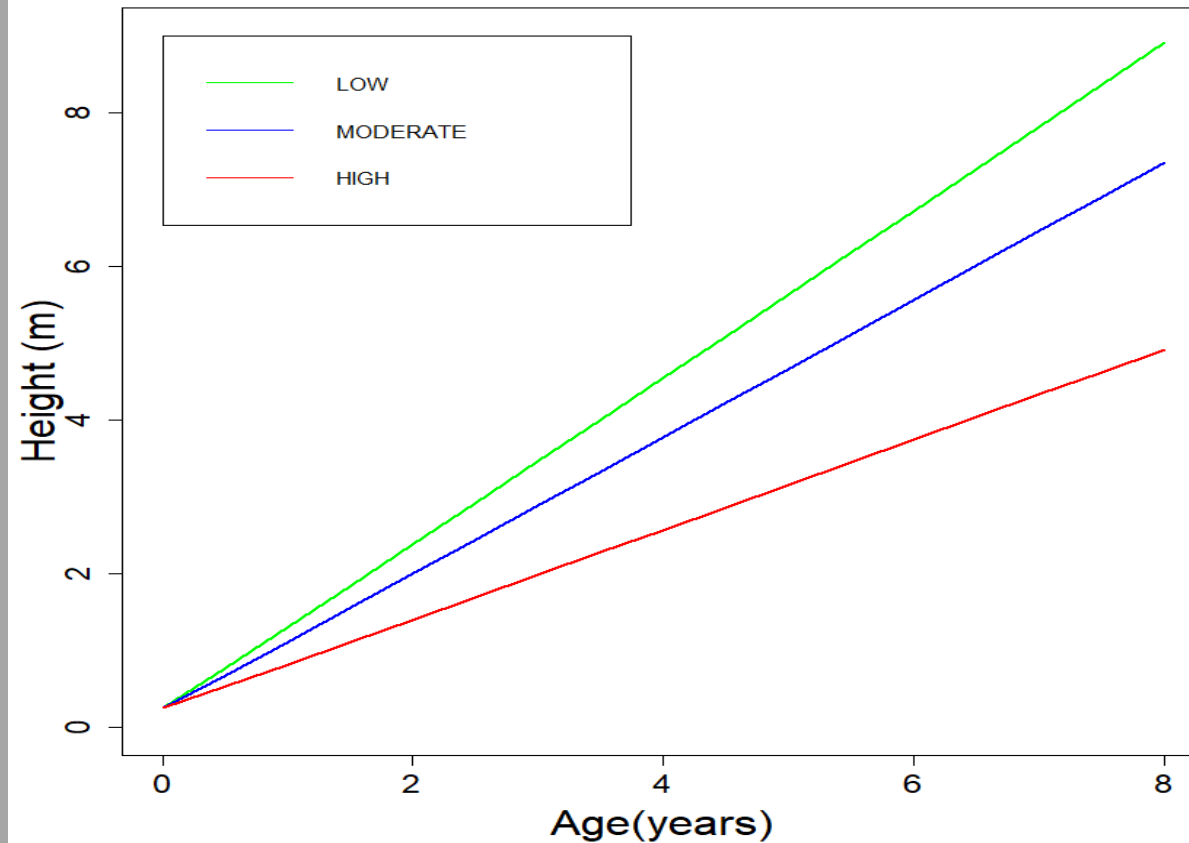




Effect of Aspect

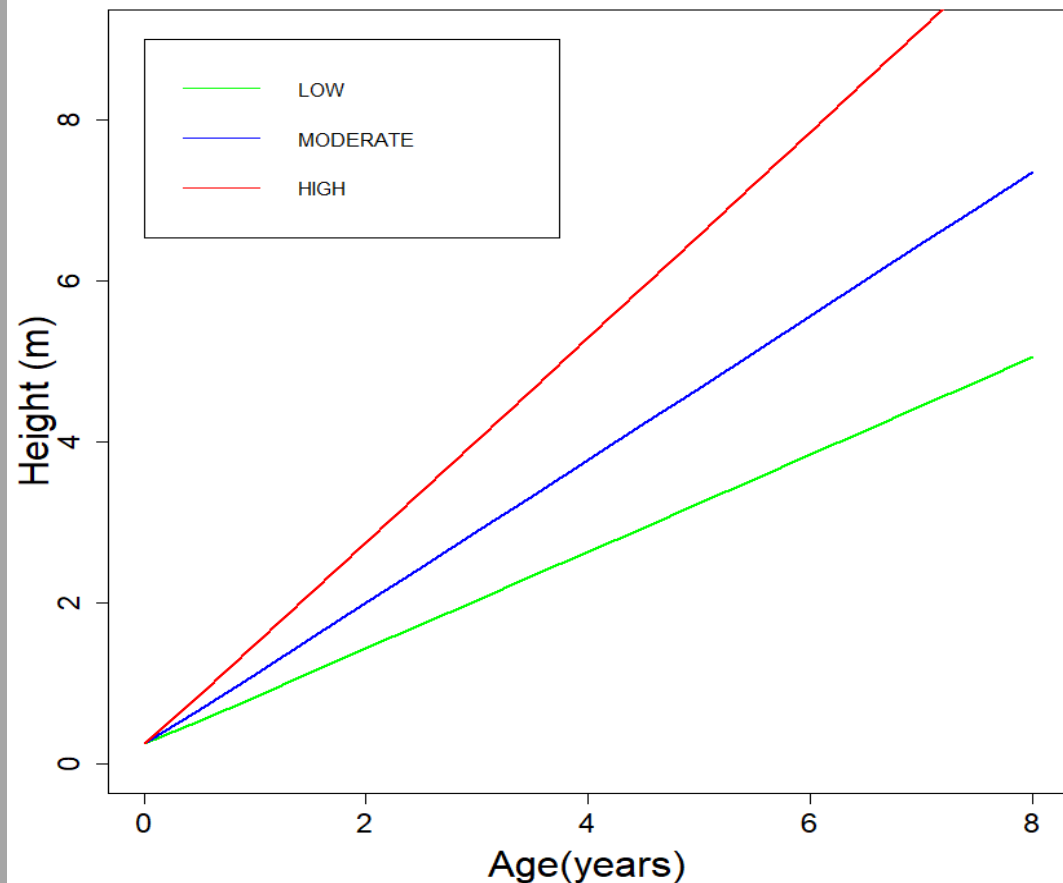


Effect of Wind exposure index

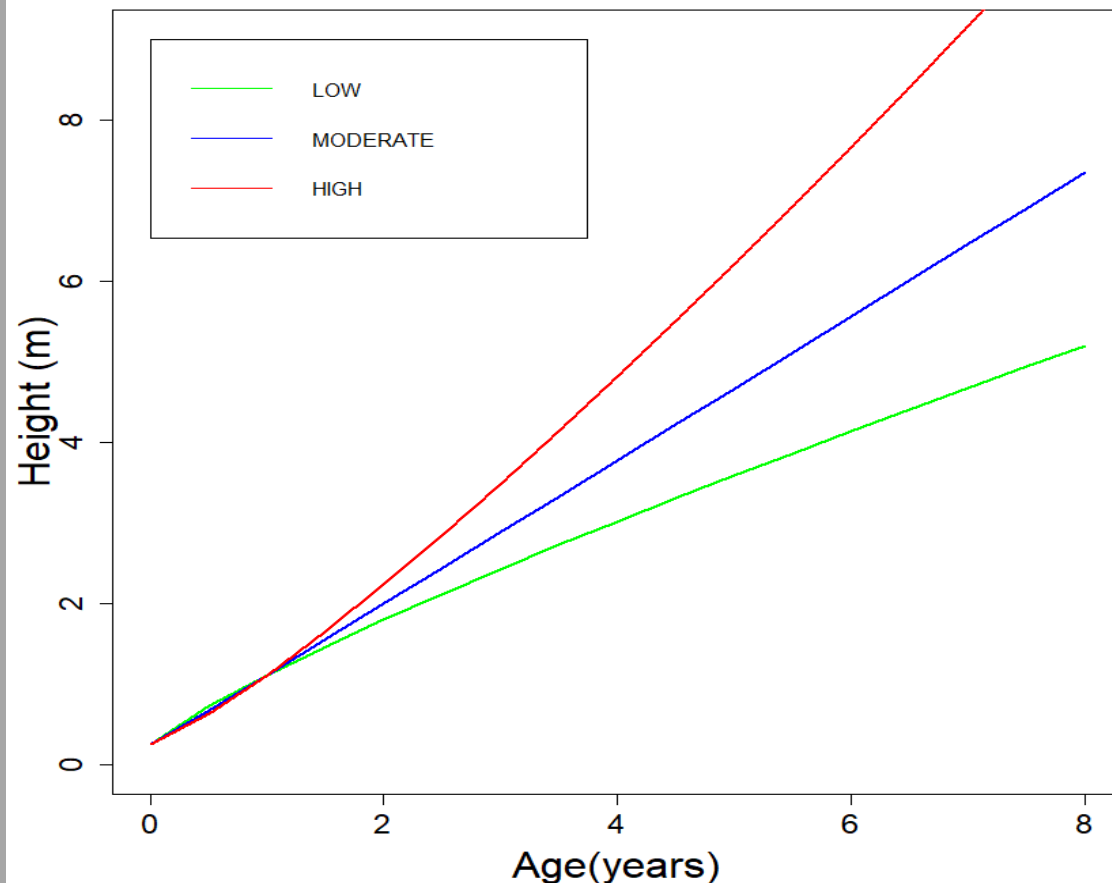




Effect of P retention

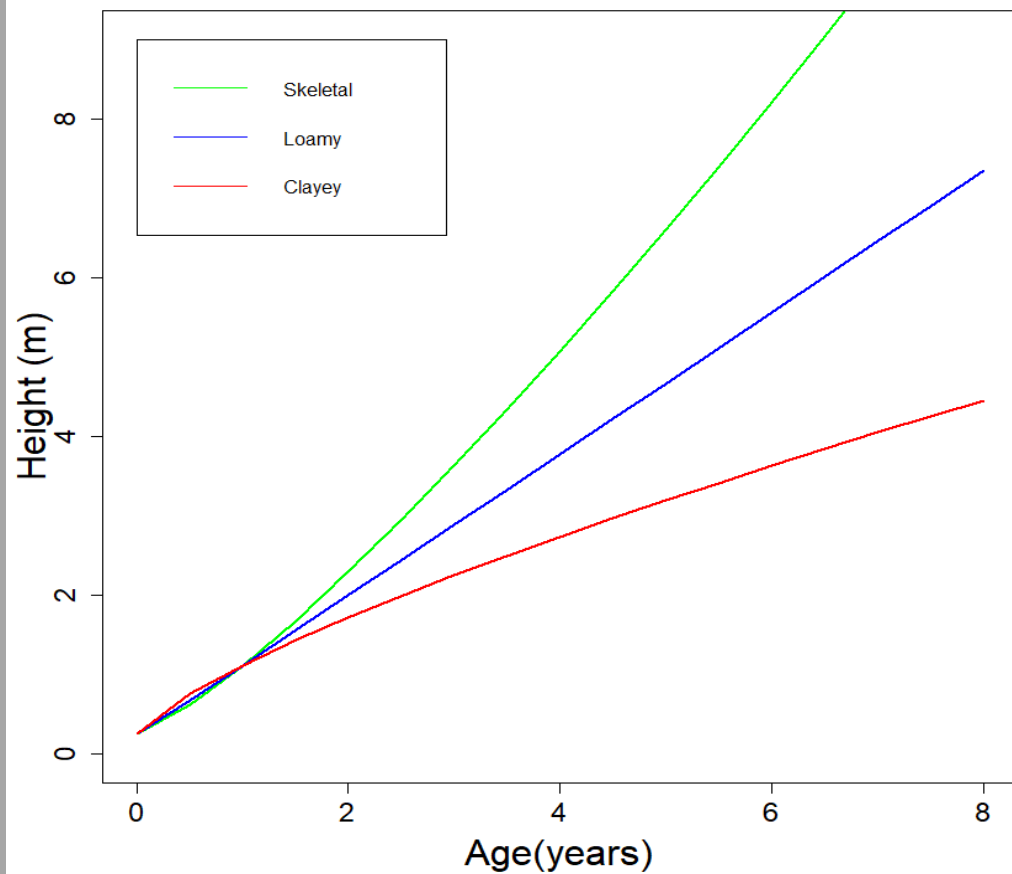


Effect of CEC

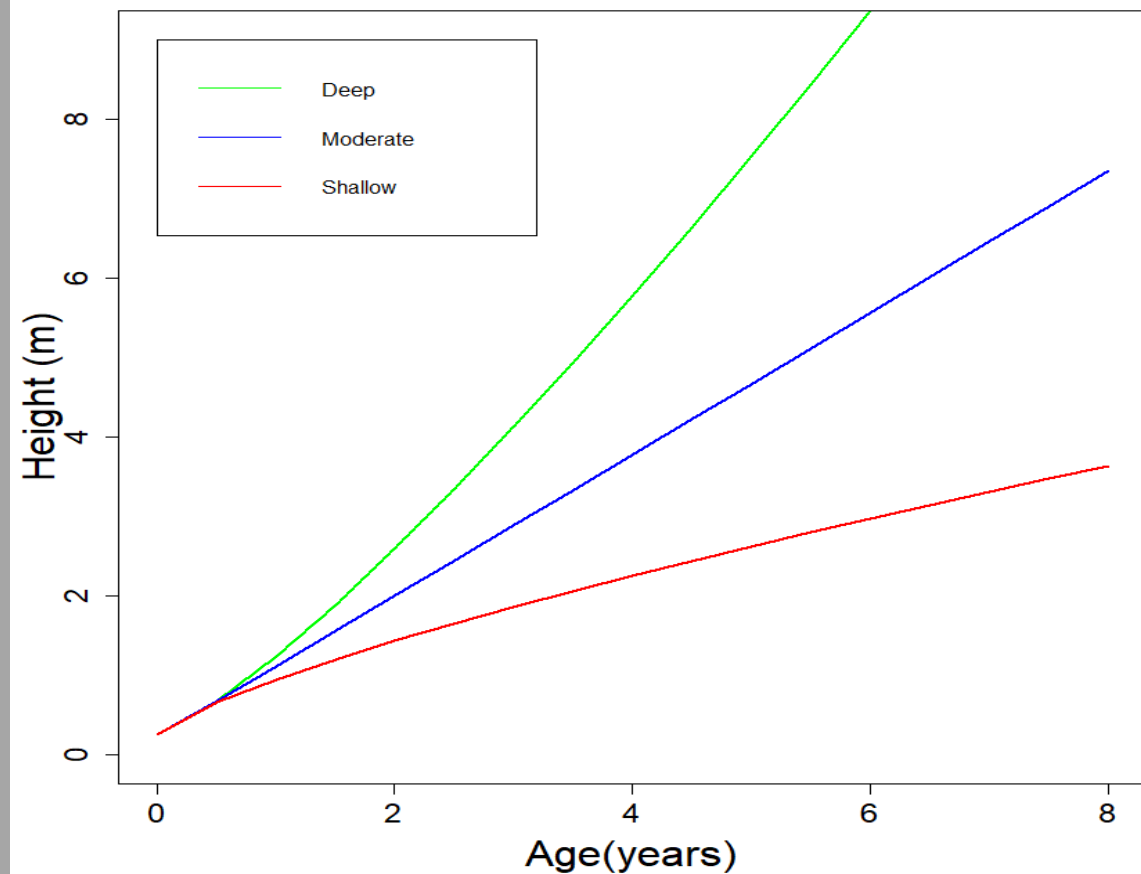




Effect of soil texture

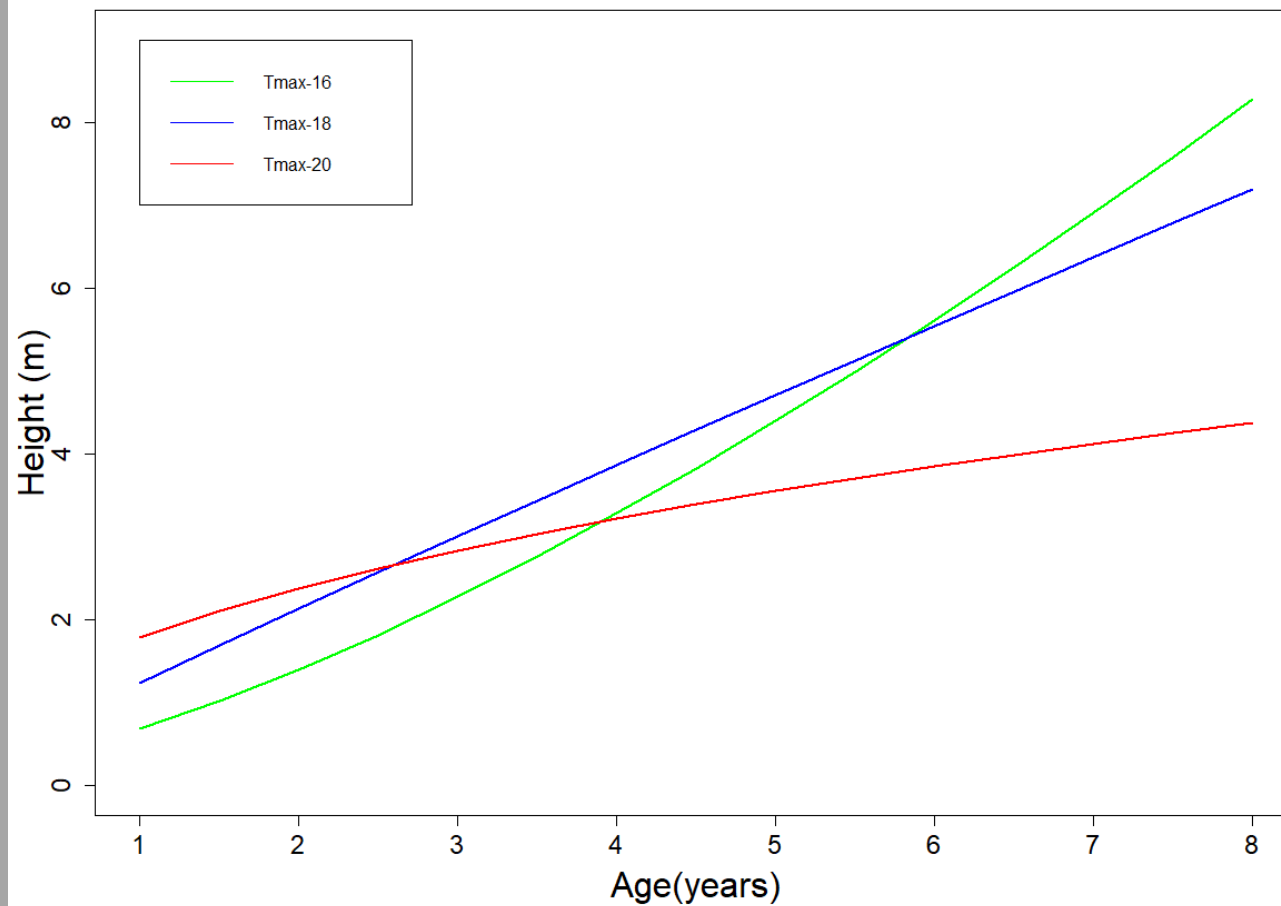


Effect of PRD





Effect of Tmax

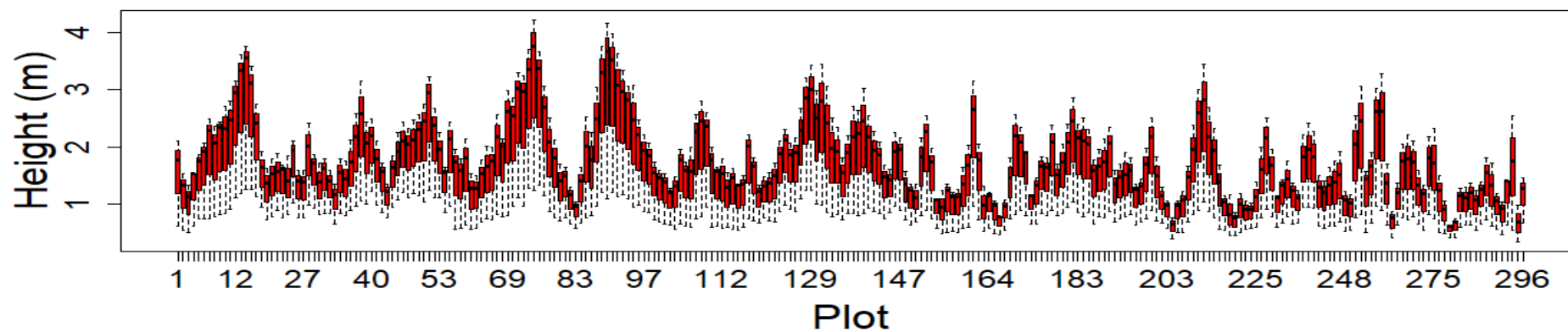


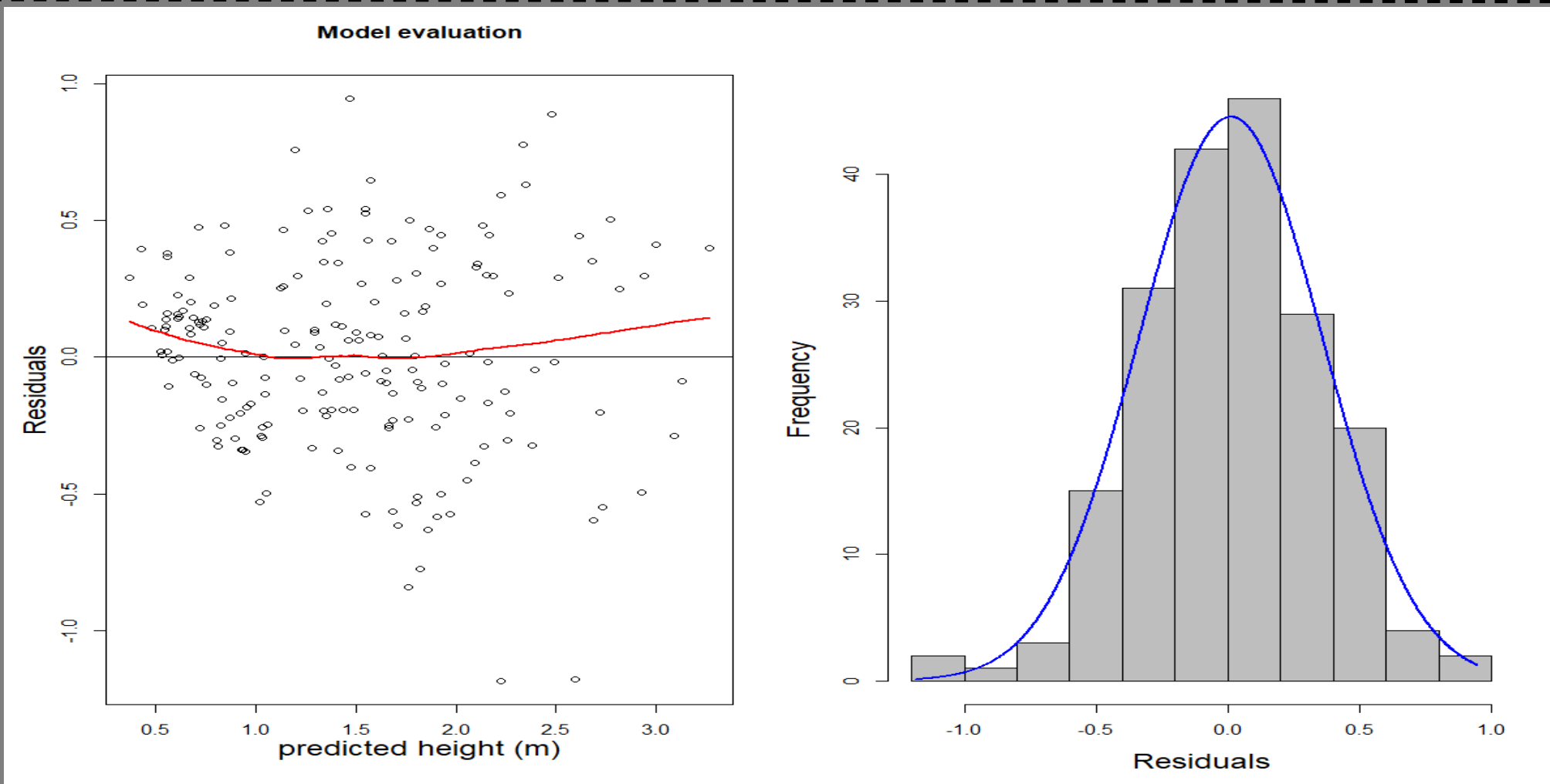


Micro-site modelling



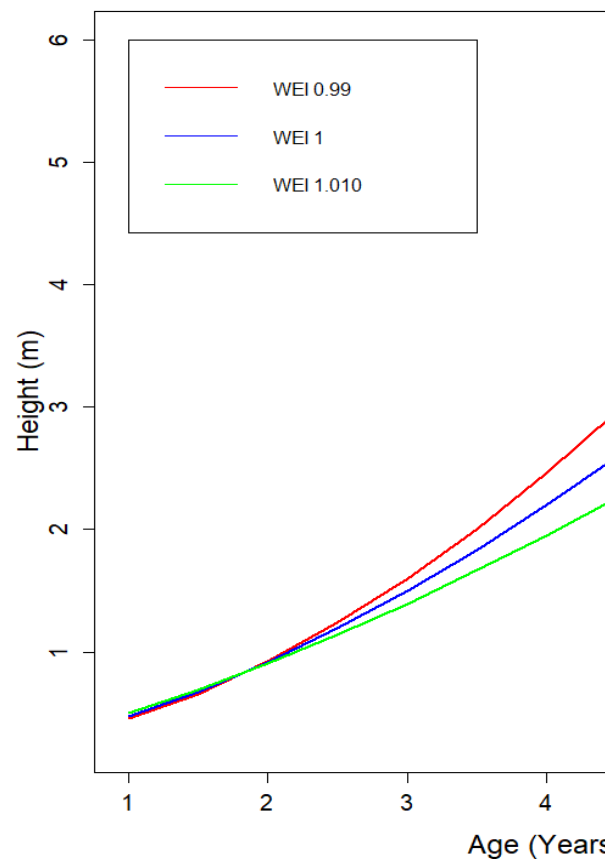
Height of *E. globoides*



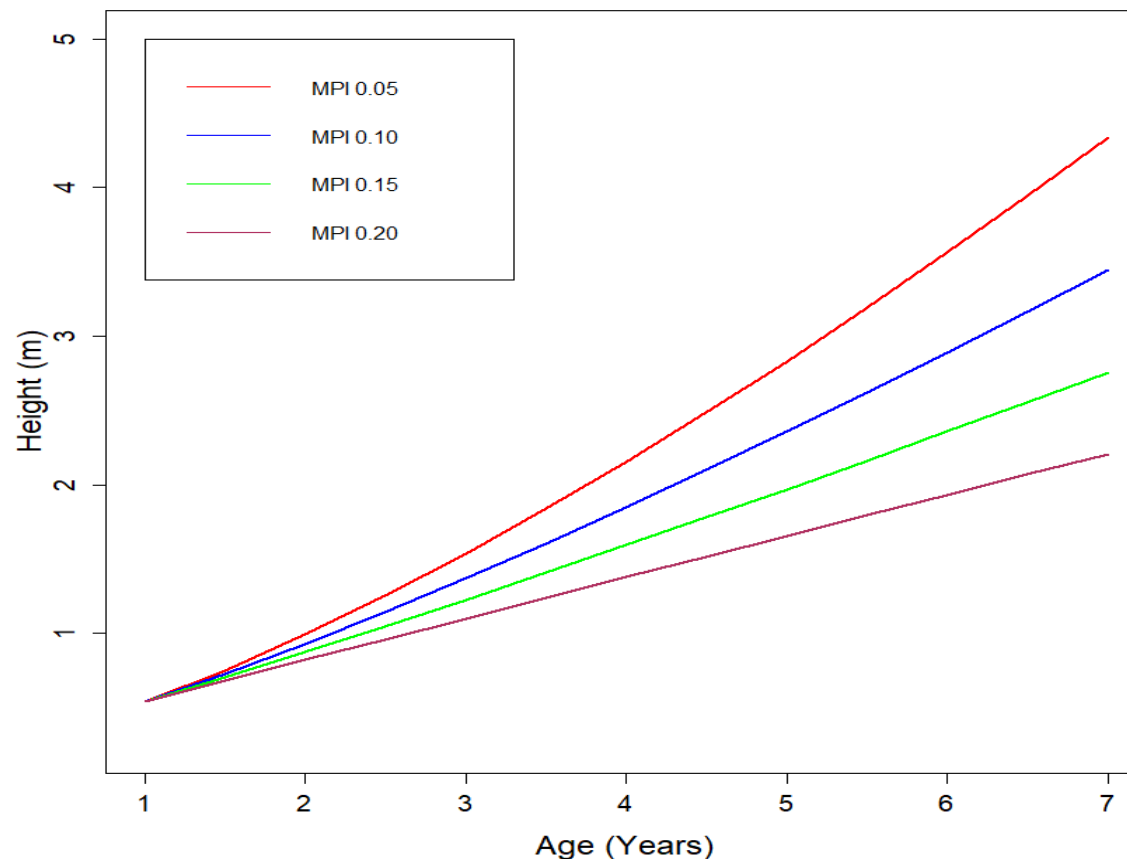




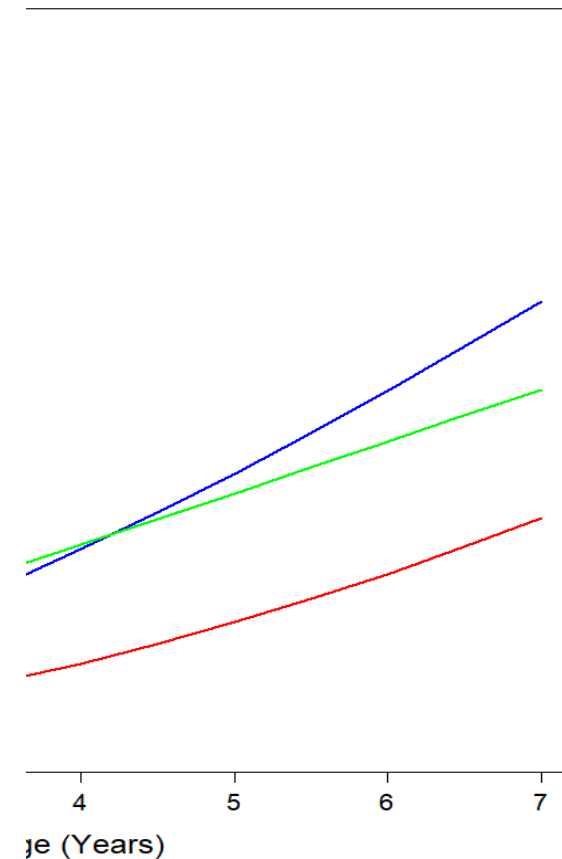
Effect of Wind Index



Effect of morphometric protective index

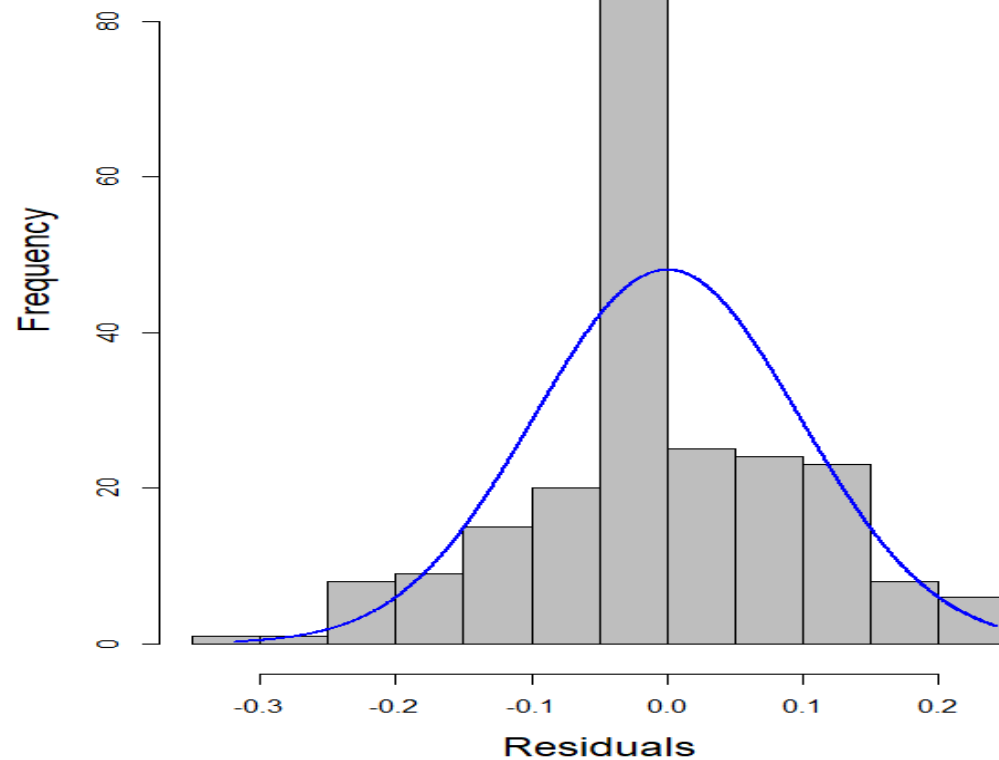
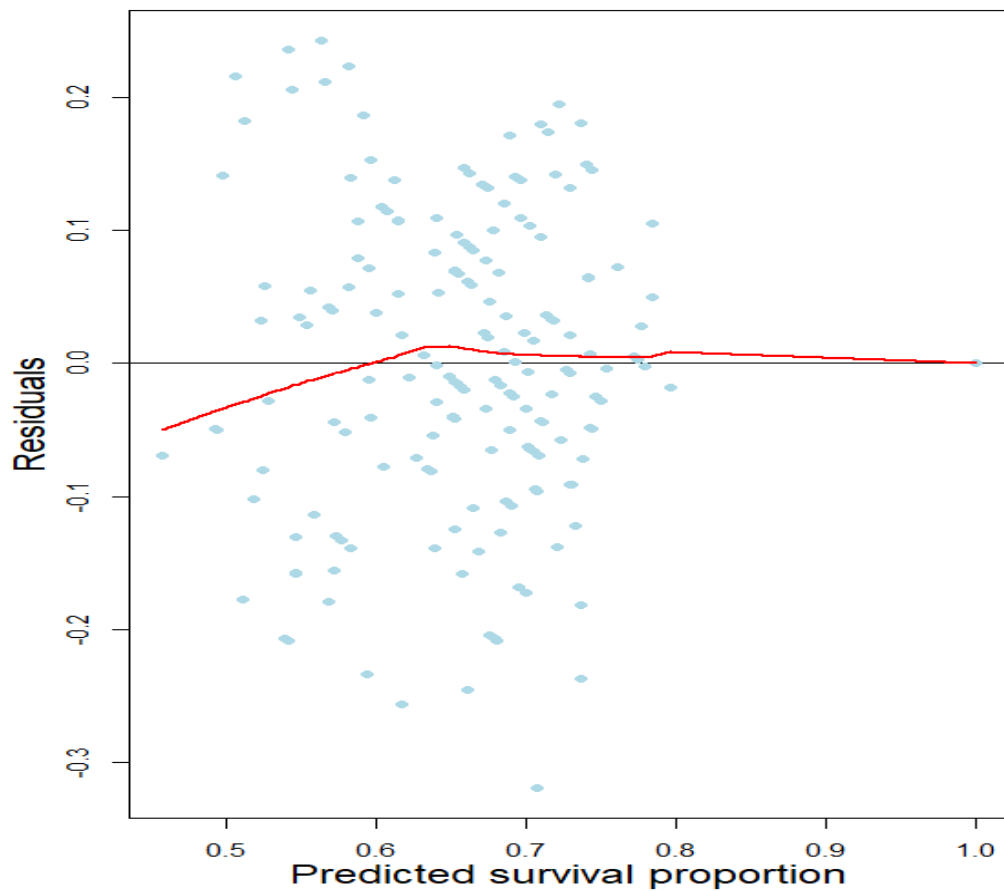


Distance from the top ridge



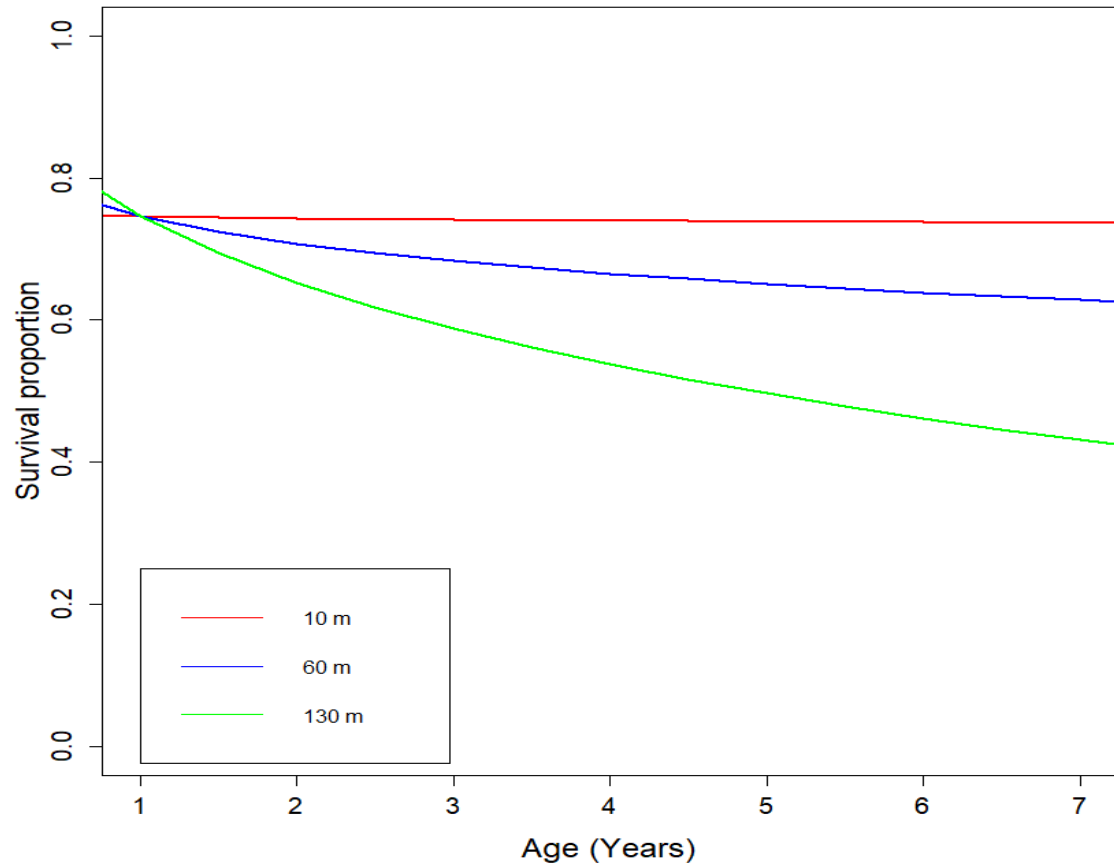


Model evaluation

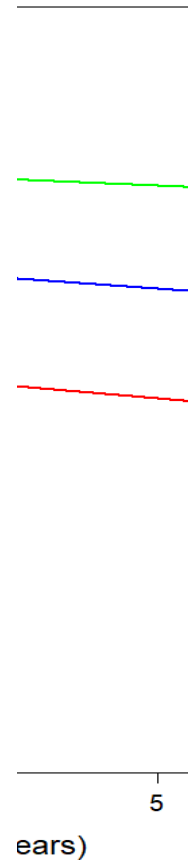




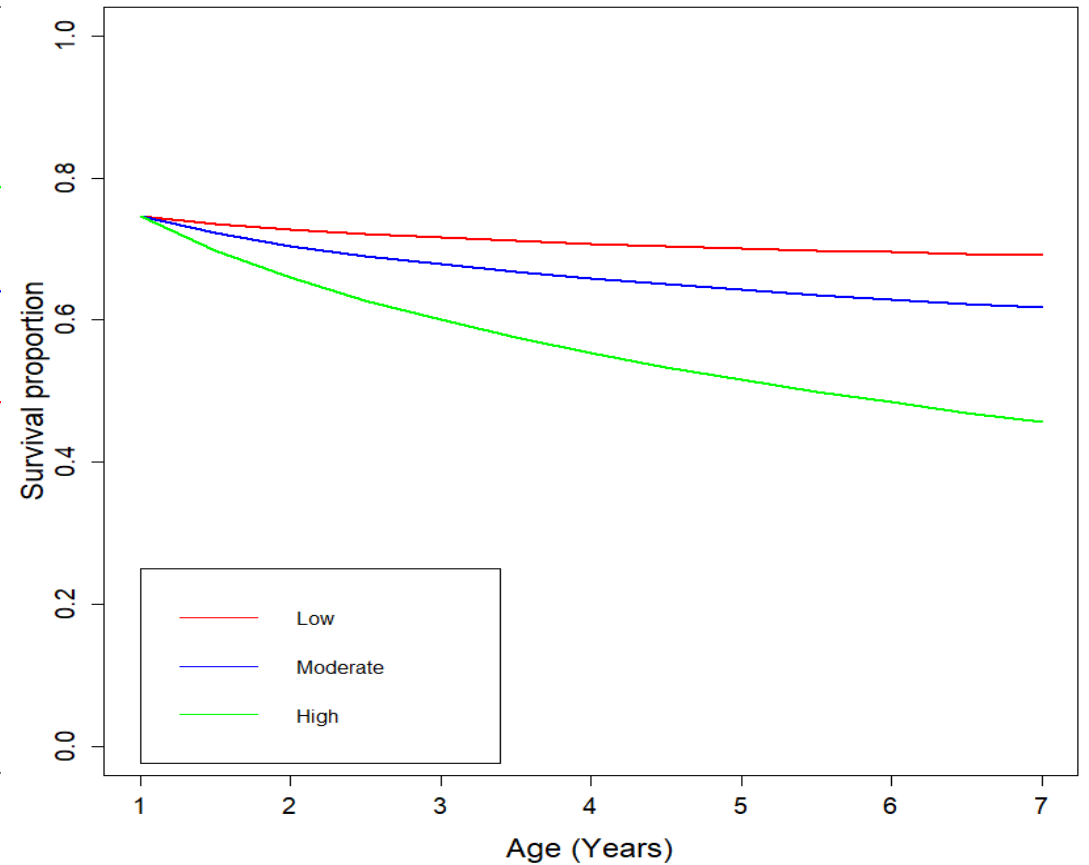
Effect of Distance from the top ridge



Effect of curvature

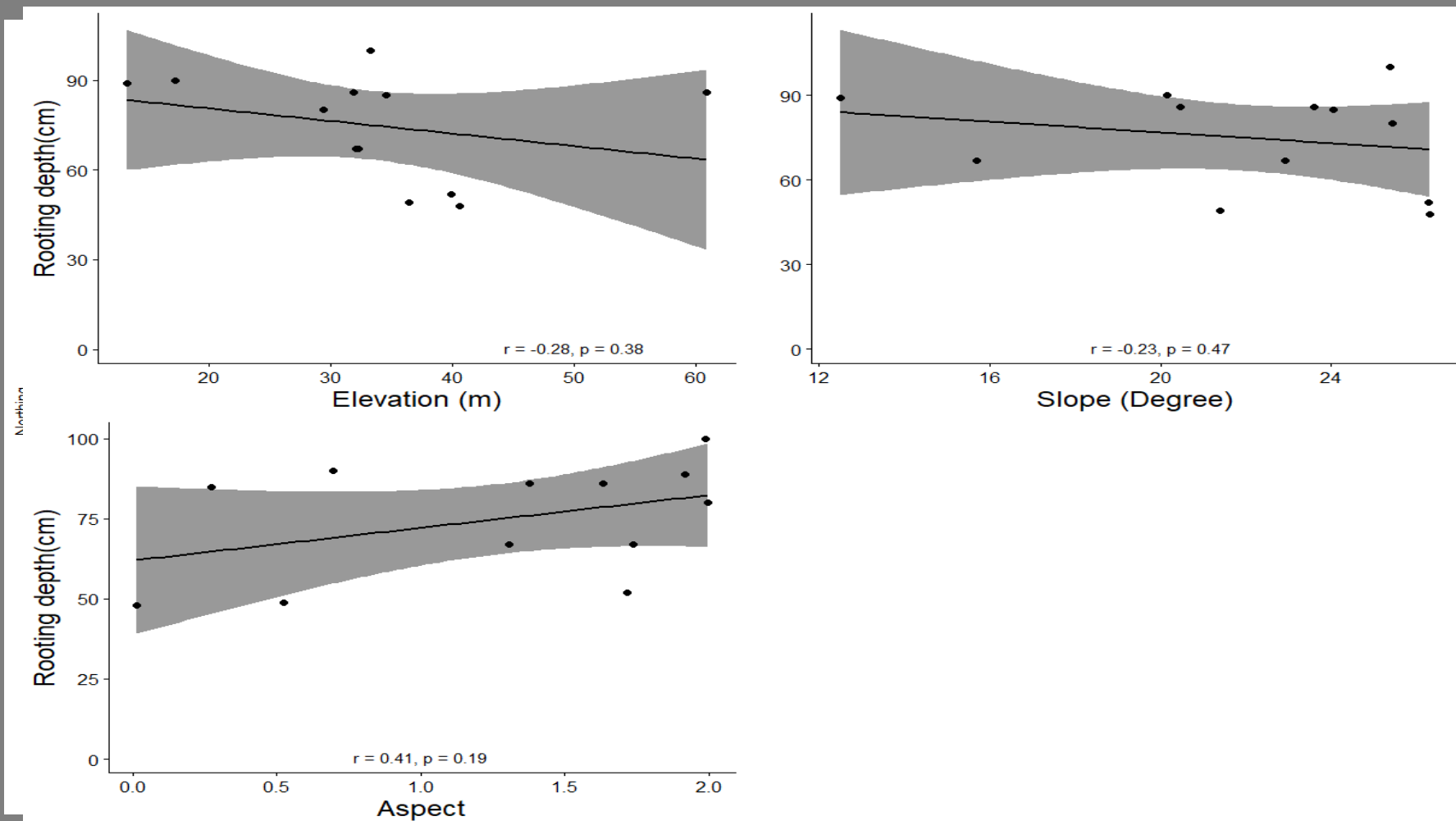


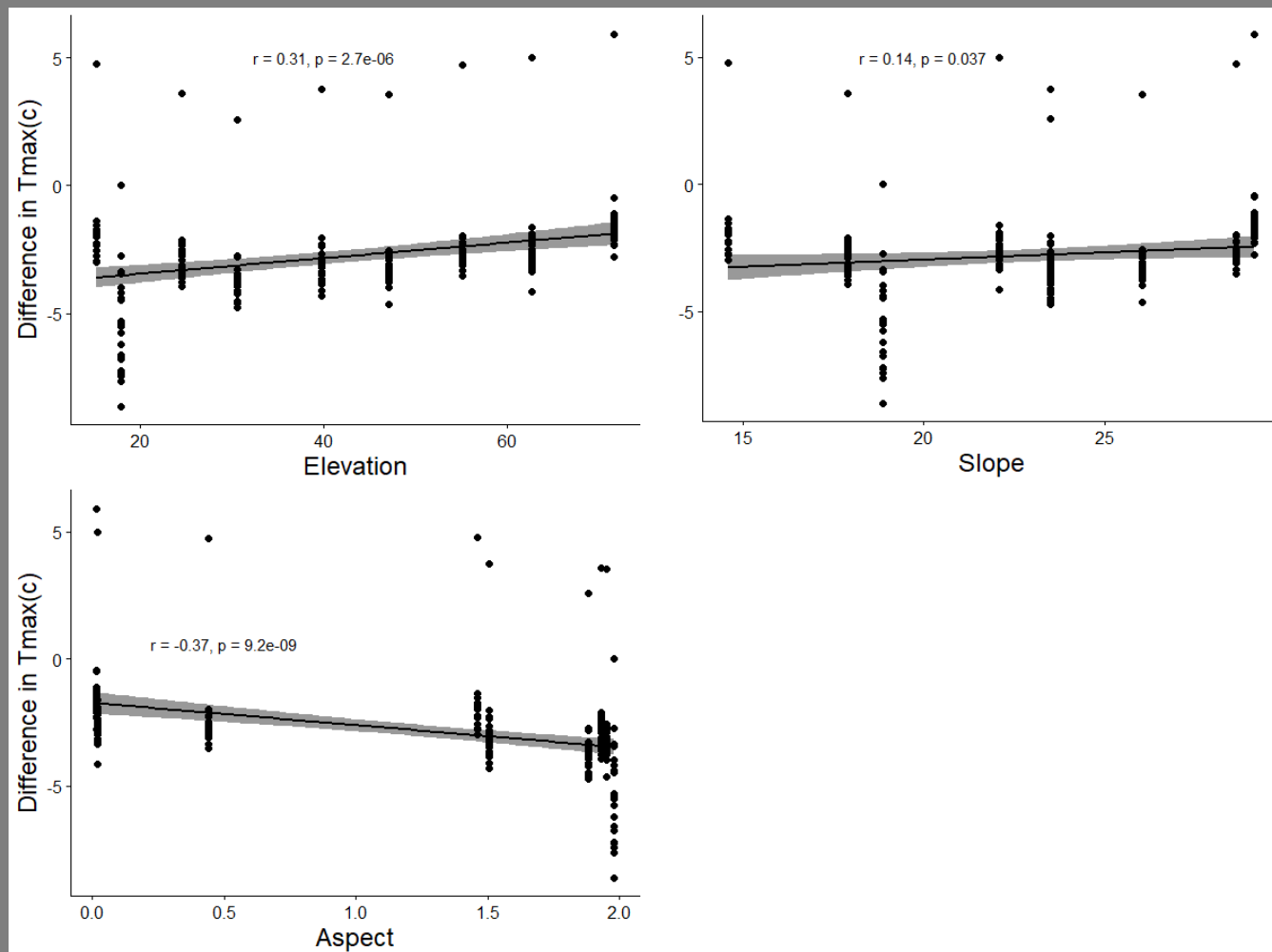
Effect of Wind exposure





Micro-site soil & climate







Limitations and future needs

Data quality, availability and organisation

1. A specialised soil study with proper logistic and financial support.
2. A proper species wise biomass study including site characteristics.



Implementation of this study

A preliminary mature stand growth and yield model for *E. globoidea*.

We can match species to micro-sites which ensure a **homogenous**, **diverse** and **secured** plantation growth.

