

The relationship between leaf area index and forest microclimate

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Change in
vegetation cover

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graph TD; A[Change in vegetation cover] --> B[Shift in microclimate]; B --> C[Impact on biodiversity];
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A vertical flowchart with three rounded rectangular boxes. The top box is light green and contains the text 'Change in vegetation cover'. A black arrow points down from the bottom center of the green box to the top center of the middle box. The middle box is light blue and contains the text 'Shift in microclimate'. Another black arrow points down from the bottom center of the blue box to the top center of the bottom box. The bottom box is light red and contains the text 'Impact on biodiversity'.

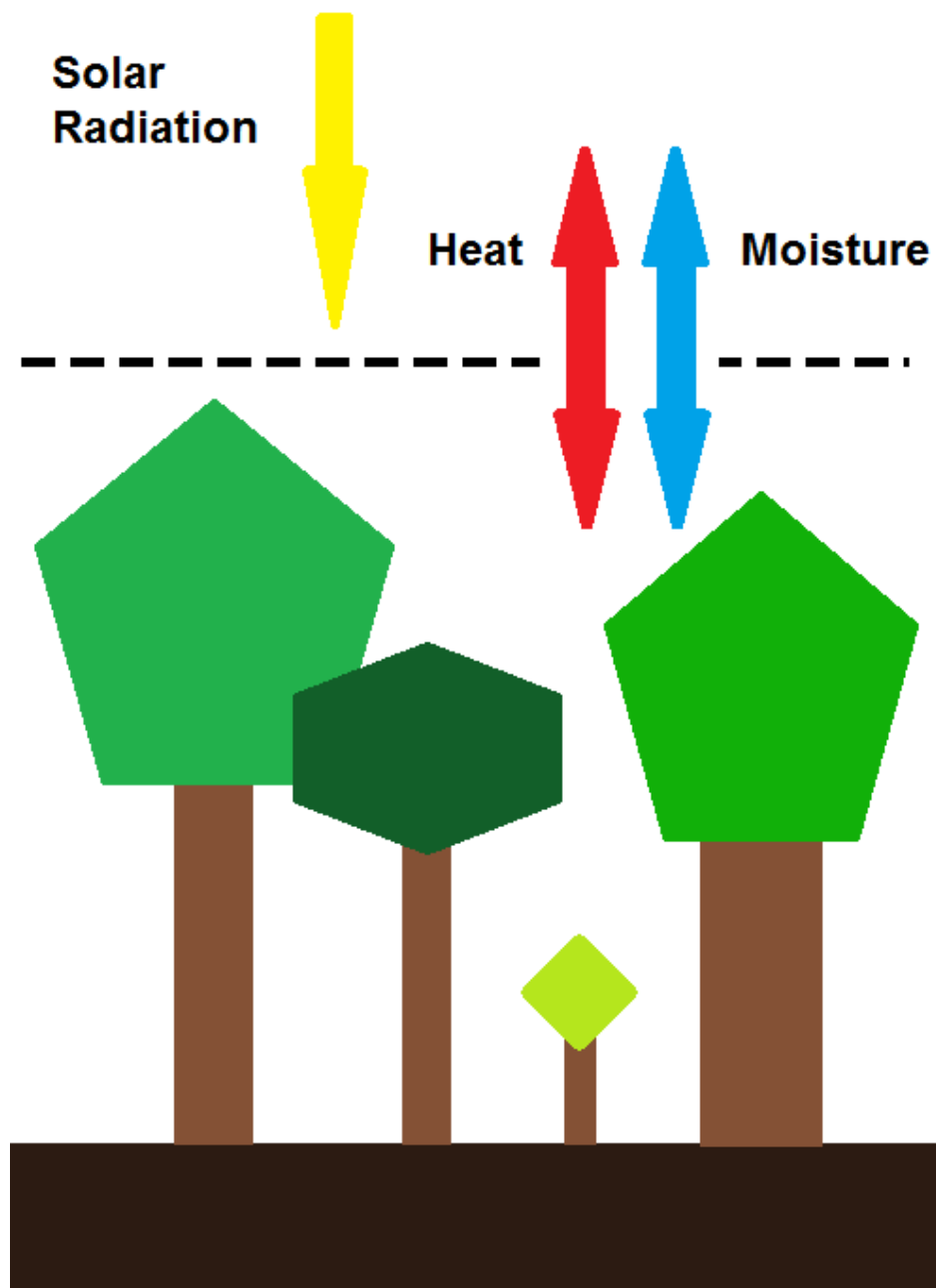
Shift in
microclimate

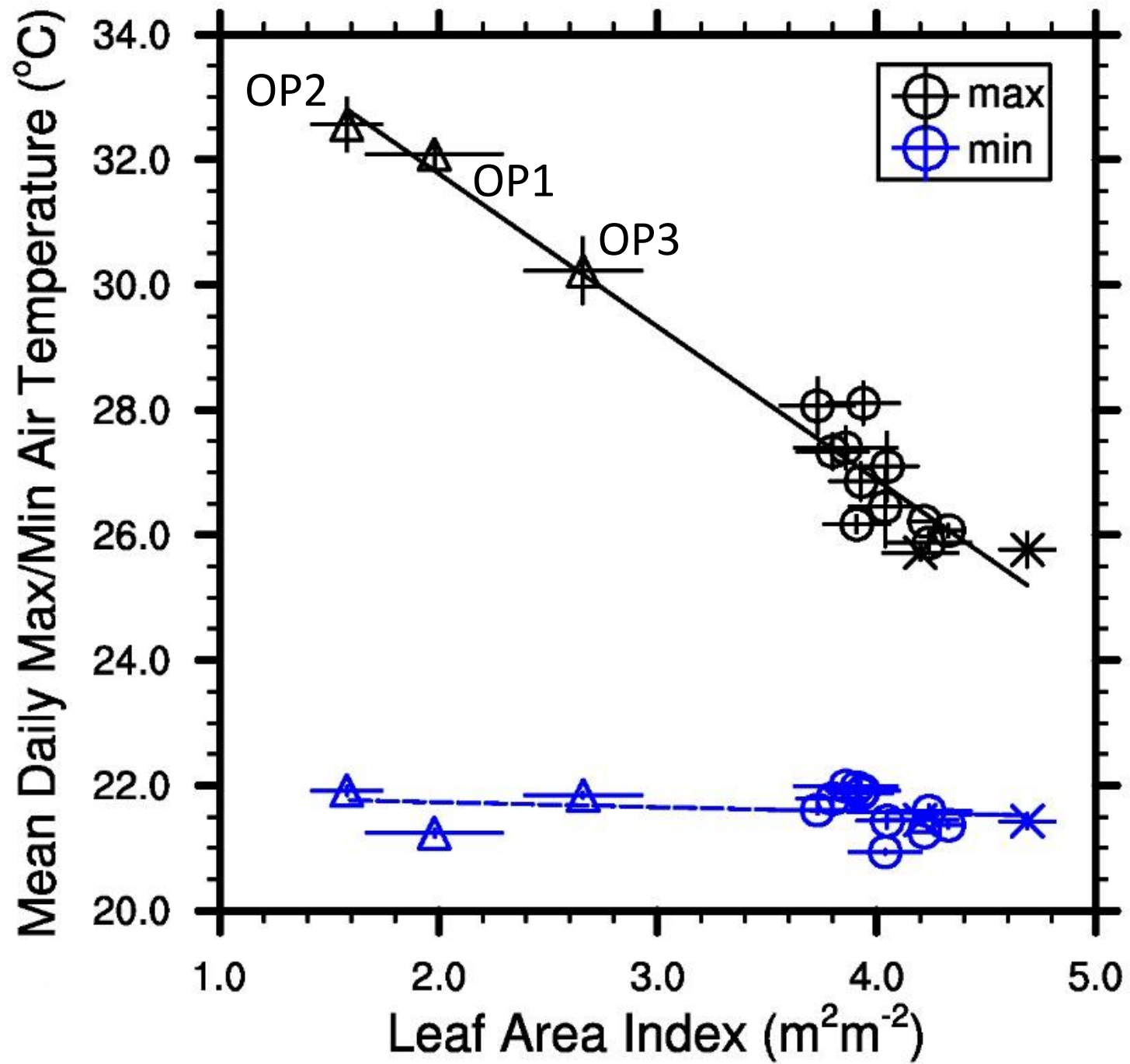
Impact on
biodiversity

Microclimate at SAFE

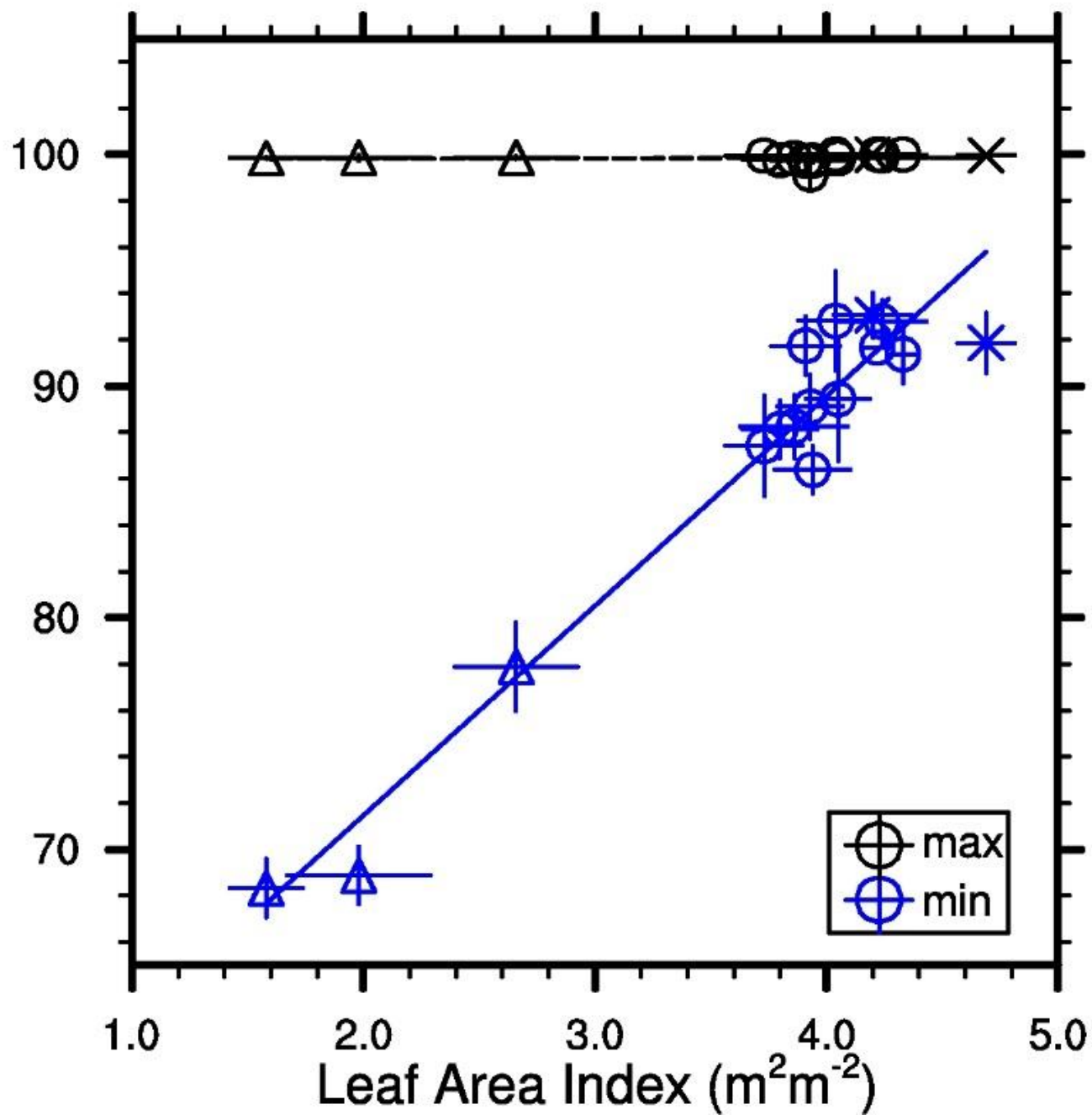
- We are monitoring:
 - Air temperature
 - Relative Humidity
 - Soil Temperature

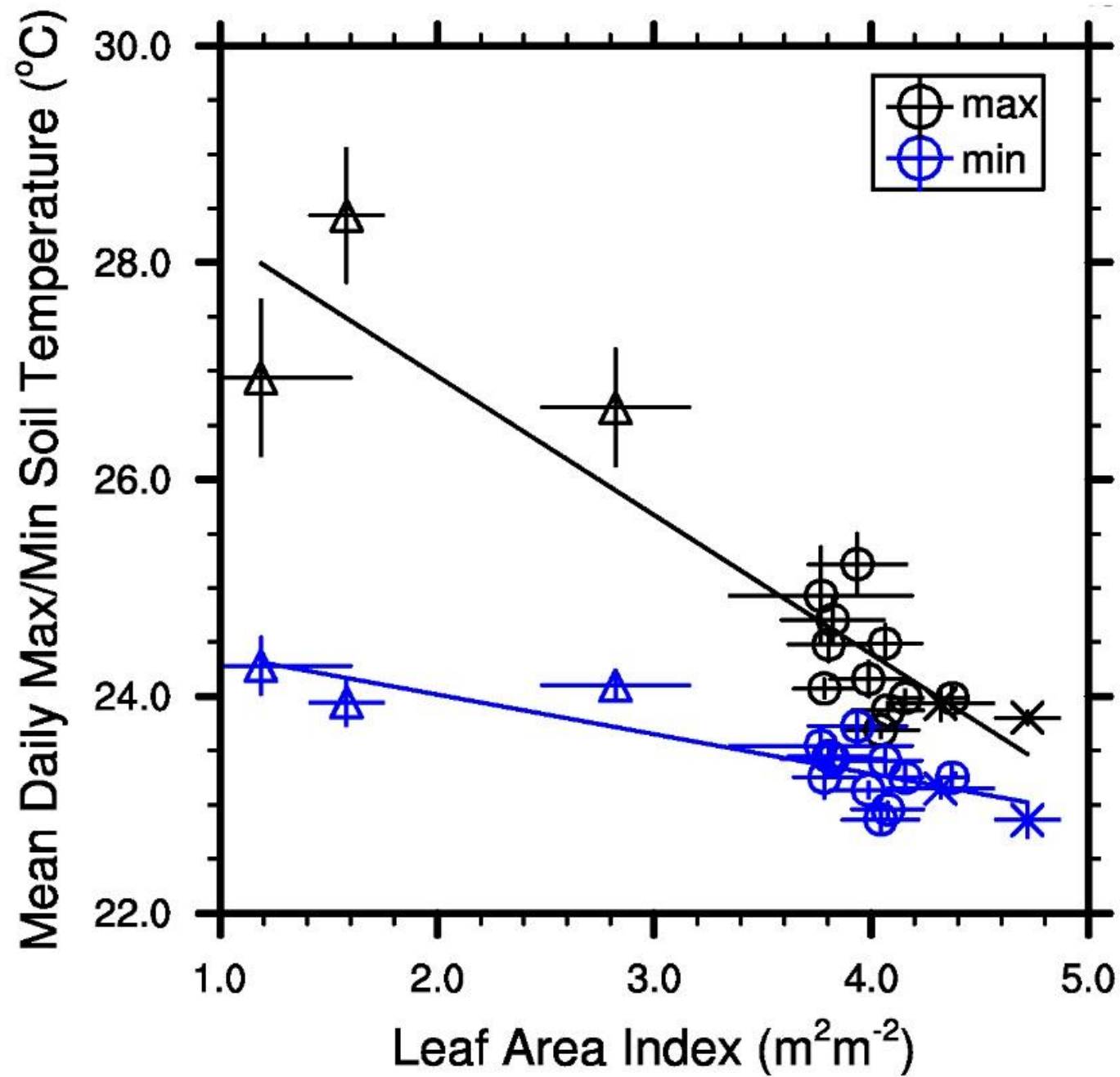


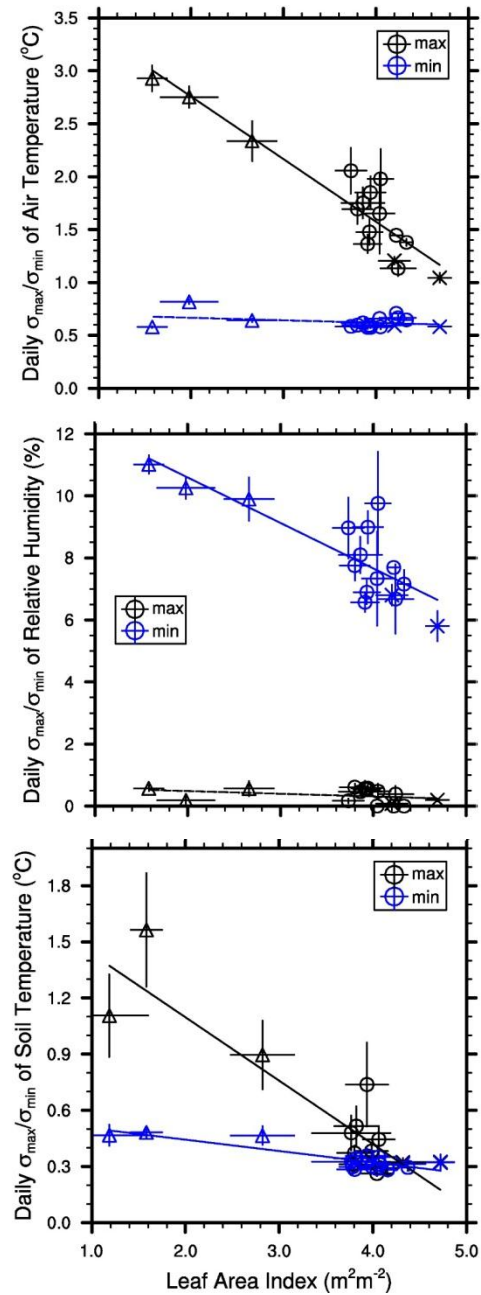
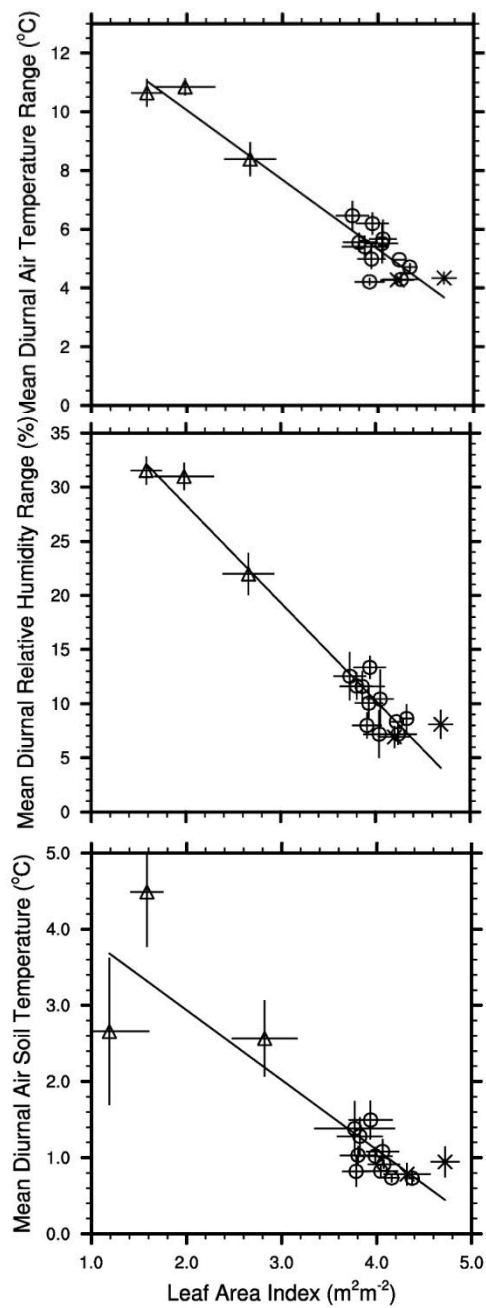




Mean Daily Max/Min Air Relative Humidity (%)







Summary of data

- Strong relationships between leaf area index and microclimate variables
- Low leaf area index (oil palm) canopies have hotter, drier conditions near the surface
- High leaf area index (primary forest) canopies have cooler, moister conditions near the surface
- Low leaf area index canopies have greater climate variability

Modelling Approach

