Methodology:

**Field site:** This study was conducted this in the Western Ghats, Kadumane (12.8639 – 12.9389 N and 75.6361 – 75.6833 E), Karnataka, India. This is a mid elevation forest ranging from 900 to 1100 meters above sea level and receives more than 5000 mm of rainfall annually. More than 4700 flowering plants have been recorded from the region. The forest was logged for timber until 1996 and firewood collection still persists in the landscape. This is a human-modified landscape of tea, forest fragments and small human settlements.

**Experimental design:** This study was done on seedlings of 16 woody plant species (Table 1). Species were chosen according to: (1) availability and germination of sufficient seeds, (2) sufficient degree of seedling shade-tolerance for regeneration in the understory. Each species’ sapling was planted in pairwise combination of control and drought at 13 different locations. The rain-sheltered layers without compromising for light availability was chosen to simulate the drought treatment. This set up is set up both in the forest interior and edge. Monthly censuses were done to track the soil moisture, seedling growth and survival.

**Trait collection:** After the end of experiment, all surviving saplings from the forest edge and interior were harvested for trait collection. Functional traits such as Leaf Mass per unit Area (LMA), Leaf Dry Matter Content (LDMC), Stem Specific Density (SSD), Main Root Specific Density (MRSD), and Fine Root Specific Density (FRSD) were collected using standard protocols.

**Biomass collection:** The harvested saplings were then cut in to root, stem and leaf components and oven dried for over 4 days at 70ºC in the hot air oven. These were then weighed to get total biomass, above ground biomass and below ground biomass.

**Statistical Analysis:** Linear regression model was used to test soil moisture difference for paired treatments of control and drought in both the forest interior and forest edge. Principal Component analysis was done to reduce the traits space. To study if the traits explain seedling’s survival in paired treatments between forest edge and interior, generalised linear mixed effect models were used. Linear mixed models were used to test if seedling’s drought resistance in forest edge and interior can be explained by the functional traits. To test the biomass accumulation difference among paired treatments in both the forest edge and interior, liner mixed effect model was used.

**Table 1:** Contains the common name, Scientific name and Family name of the saplings used in this study.

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| S.No | Common name | Scientific name | Family name |
| 1 | Jackfruit | *Artocarpus heterophyllus* | Moraceae |
| 2 | Beauty Leaf | *Calophyllum apetalum* | Calophyllaceae |
| 3 | Cinnamon | *Cinnamomum verum* | Lauraceae |
| 4 | Forest Apple | *Eugenia gardneri* | Myrtaceae |
| 5 | Malabar Tamarind | *Garcinia gummi-gutta* | Clusiaceae |
| 6 | Hopea | *Hopea parviflora* | Dipterocarpaceae |
| 7 | Wight's Lophopetalum | *Lophopetalum wightianum* | Celastraceae |
| 8 | Malabar Nutmeg | *Myristica malabarica* | Myristicaceae |
| 9 | Sal Tree (Shorea robusta) | *Shorea robusta* | Dipterocarpaceae |
| 10 | Big Leaf Mahogany | *Swietenia macrophylla* | Meliaceae |
| 11 | Clove Berry | *Syzygium caryophyllatum* | Myrtaceae |
| 12 | Java Plum | *Syzygium cumini* | Myrtaceae |
| 13 | Rose Apple | *Syzygium stomaticum* | Myrtaceae |
| 14 | Ceylon Gooseberry | *Syzygium zeylanicum* | Myrtaceae |
| 15 | Indian Copal Tree | *Vateria indica* | Dipterocarpaceae |
| 16 | Hairy Artocarpus | *Artocarpus hirsutus* | Moraceae |