



SINGLING OR FARMER MANAGED NATURAL REGENERATION (FMNR)

This amazing forest restoration process enables the quick reestablishment of a healthy canopy. The process begins with cutting back excessive bushy shoot growth from the stump of a previously cut down coppice species tree. The objective is to leave only one to two dominant stems, which quickly grow back into a tree as the well-established root system below the stump efficiently redirects all its energy towards the remaining stems. The result is a fast-growing tree providing shade, moisture retention, and soil nutrients from leaf litter.

SEED BALLS

Also referred to as “seed bombs,” a seed ball is a marble-sized ball made of clay, compost, soil, and seeds. Eden ensures that the seed inserted into the center of the ball is a fast-growing pioneer species with a high germination percentage. Eden’s field teams produce millions of seed balls every month, resulting in the replanting of large areas where the natural flora was formerly destroyed.

The method begins with local villagers collecting native species seeds from fast-growing pioneer species. Seeds are sorted and separated. Next, soil for the seed balls is mixed, which includes compost, soil, and clay. One to two seeds are embedded inside the soil mixture and rolled into marble-sized balls. The seed balls are then dried and stored. At the onset of the rainy season, the seed balls are placed in small holes that have been dug and are lightly covered with soil to ensure that they stay in place. Within a few days, germination takes place, and the tree begins to grow.

SEEDLING NURSERY

Eden builds and manages efficient seedling nurseries. Eden’s seedling nurseries are all built, managed, and maintained by Eden staff. Production can range in size between 25,000 seedlings to 400,000 seedlings per nursery. Eden’s nurseries are primarily used to produce slower growing native species trees to ensure diversity at our planting sites. Our nurseries also include agroforestry trees, which are distributed to local village communities.

BARE ROOT

Eden utilizes bare root transfers in two distinct ways. First, at the onset of the rainy season, forest bare root seedlings are harvested from healthy or remnant forests, which typically see a large influx of small seedling growth beneath the canopy. Forest bare root involves the gentle collection of these seedlings and quickly replanting the seedling at an adjacent deforested area. Transferring the seedlings does not harm the healthy forest, as overcrowding and excessive shade from the canopy means only a tiny percentage of the seedlings would have survived. This planting method strategically leverages nature’s abundance.

Second, in addition to growing seedlings in nursery planting tubes, many of our nurseries also include seedbeds. Seedbeds are produced in raised soil located within the nursery and populated with an abundance of seeds. After the seeds germinate, the seedlings are efficiently harvested from the soil beds and quickly transferred to the planting site.

DIRECT SEEDING

Direct seeding is the sowing of seeds directly in the soil just before the onset of the rainy season. Direct seeding bypasses the nursery phase. Please note, the planters sow the seeds randomly versus planting in long straight rows as a means to duplicate how trees naturally grow.

MANGROVE PROPAGULES

Propagules are elongated, dart-shaped seedlings of various mangrove species typically growing in estuary habitats. These strange looking, elongated, vegetative structures begin the germination process while still attached to the parent tree. In nature, the parent tree supplies the propagule with nutrients and water until it becomes mature enough to drop off of the branch. However, only a small percentage of the propagules survive within a healthy mangrove system as overcrowding and excessive shade hampers growth to maturity.

As a means to quickly and efficiently restore deforested areas, Eden hires villagers to collect ripe propagules, and then count and sort the baby trees by species. The teams then take the propagules to restoration sites where the various species are planted within specific tidal zones as a means to ensure a healthy, diverse forest. The propagules are planted directly into the mud without the need for a nursery stage. The newly planted mangrove trees begin producing their own propagules within a four to five-year time span. Eden’s mangrove restoration teams harvest and plant throughout the year as many mangrove species produce propagules in both the rainy and dry seasons.

