



TREE SPECIES INVENTORY AT GREATER OUTDOORS

INTRODUCTION;

The plant inventory exercise was conducted to document and assess the diversity, distribution, and condition of tree species present at the Great Outdoors in Kalanamu. The assessment focused on evaluating the availability and suitability of these species and their potential for seed sourcing to support conservation and restoration efforts. Particular attention was given to species maturity, reproductive status, and overall health to determine their viability for seed collection.

The exercise produced reliable, site-specific baseline data to inform planning and decision-making for restoration interventions, including enrichment planting and the establishment of a tree nursery production at the Great Outdoors. The findings are intended to guide species selection, prioritize seed sources, and support long-term restoration and management objectives for the site.

A species inventory was undertaken using rapid survey methods to identify tree species present on site and assessment of their seed production potential and suitability for restoration planting. This approach used systematic documentation and analysis of target species, ensuring that seed collection efforts in future will prioritize ecologically appropriate and genetically suitable sources for conservation and restoration purposes.

Activities Implemented

The following key activities were undertaken during the seed survey exercise:

- Identification and documentation of existing tree species at the Great Outdoors, including records of species present, accessibility, and the general health status of individual trees.
- Verification of species identity and provenance to ensure consistency with restoration and conservation objectives.
- Assessment of potential mother trees through evaluation of maturity and overall suitability for seed collection.
- Development of a preliminary phenology calendar indicating expected periods of flowering, fruiting, seed availability, collection, and use.
- Identification of priority indigenous tree species appropriate for restoration and enrichment planting at the Great Outdoors.

Objectives of the Activity

The tree species inventory was guided by the following objectives:

- To identify, document, and map priority indigenous tree species, capturing information on species composition, spatial distribution, and overall health status.
- To assess the availability, viability, and seed production potential of mother trees, including consideration of seed maturity, seasonal patterns, and expected yield.
- To determine priority species and levels of seed availability to support restoration, enrichment planting, and nursery development at the Great Outdoors, while identifying gaps that may necessitate external seed sourcing.
- To generate practical, action-oriented guidance for seed collection, protection of key seed sources, and effective integration of collected seed into nursery production and restoration activities.

SURVEY IMPLEMENTATION;

The tree species inventory was conducted from 7th to 9th January 2026, covering a total of three days of fieldwork, at the Great Outdoors site in Luwero District. The assessment was conducted in collaboration with on-site personnel and focused on the identification of indigenous tree species, alongside an evaluation of their seed production and natural regeneration potential.

Field observations were undertaken to assess tree maturity and suitability as seed sources using established indicators, including tree height, diameter at breast height (DBH), and reproductive cues such as the presence of flowers, fruits, seed litter, seedlings, and wildlings on the forest floor. These indicators informed the classification of trees as either confirmed mother trees or potential future mother trees, providing a sound basis for seed collection planning and conservation decision-making.

Tree species were identified using a combination of observable morphological characteristics, locally recognized species names, and reference to standard tree identification manuals. Final species verification was conducted through collaborative review with the Tooro Botanical Gardens Herbarium, ensuring a high level of taxonomic accuracy and reliability of the inventory records.

FINDINGS;

A total of 48 tree species were recorded within the survey area (Table 1), the majority of which were indigenous species occurring through natural regeneration, with only a limited number of species like *Milicia excelsa*, *Croton macrostachyus* and *Vepris nobilis* identified as planted vegetation. The occurrence of naturally regenerated individuals indicates active natural recovery processes, likely supported by seed dispersal, existing soil seed banks, and other underlying

forest ecological dynamics. This pattern suggests that the site retains a degree of ecological resilience and demonstrates meaningful potential for continued natural regeneration.

The general health condition of the trees was good, with no observed cases of disease, pathogenic infection, or severe pest infestation during the assessment period. This overall vitality enhances the site's suitability for seed sourcing, as healthy parent trees are more likely to produce viable and genetically robust seed.

Notably, more than 75% of the recorded species were indigenous, including one globally endangered species, *Milicia excelsa* (Mvule), which was relatively abundant on site with at least 19 individuals recorded. This finding underscores the high conservation value of the site and its importance as a refuge for native species, as well as its relevance for indigenous species restoration initiatives.

10 (ten) of the recorded species were non-native. While some of these, notably *Eucalyptus grandis*, *Senna spectabilis*, and *Broussonetia papyrifera*, occurred at relatively high densities, other non-native species were present at low densities. These non-native species do not currently pose an immediate ecological threat. With regular monitoring and targeted management interventions, the spread of non-native species at the site can be effectively controlled and their potential impacts minimized.

Overall, the observed species composition and general health of the vegetation indicate that the site is ecologically functional. The diversity and condition of the tree community demonstrate that the area represents a valuable resource for sustainable seed collection, biodiversity conservation, and informed landscape restoration planning.

Table 1. Inventory of Tree Species Identified at the Great Outdoors.

No	Name	Origin	Growth form	Size	Tally	Seed source potential	Conservation status	Notes
1	<i>Acanthus polystachyus</i> (Matovu)	Native	Shrub/Tree	Mature	Common	Not suitable	Invasive	The shrub has invasive tendencies that have started to show making it an important species to look out for and manage before things get out of hand
2	<i>Albizia coriaria</i> (Mugavu)	Native	Tree	Mature	Common	Confirmed mother tree	LC	This species is among the most abundant at the site, with numerous mature individuals, indicating strong potential as a seed source for restoration and conservation initiatives.
3	<i>Albizia grandibracteata</i> (Nongo)	Native	Tree	Mature	Common	Confirmed mother tree	LC	There are many mature individuals across the site with many wildlings. This indicates that the site is a viable source of seed for the species as so many wildlings are on site.
4	<i>Anthocleista grandiflora</i>	Native	Tree	Pole	2	Not mother	LC	Only two confirmed sightings of the species and both of them poles without any capacity to produce seed.
5	<i>Antiaris toxicaria</i> (Kirundu)	Native	Tree	Sapling	1	Not mother tree	LC	One tree found on site and is still a sapling with no seed production potential.
6	<i>Atrocarpus hetrophyllus</i>	Exotic	Tree	Mature	Common	Not suitable	LC	Common with many fruiting trees, not considered for our restoration efforts as it is a non-native tree species.

7	<i>Bridelia micrantha</i> (Katazamiti)	Native	Tree	Mature	Common	Confirmed mother tree	LC	This species is common on the site, with numerous fruiting individuals, indicating a reliable seed source. It is also ecologically important, serving as a food source for wildlife, particularly birds.
8	<i>Broussonetia papyrifera</i> (Nkulaido)	Exotic	Tree	Mature	Common	Not suitable	Invasive	This species is common on the site, with many seedlings and saplings around, and has taken over some patches and exhibits invasive tendencies at current it needs to be managed to reduce its density.
9	<i>Canarium schweinfurthii</i> (Muwafu)	Native	Tree	Mature	16	Potential mother tree	LC	Trees not so abundant around the site and most of which are immature and at pole size there is possible potential of seed production, the fruits serve as an important food source for both wildlife and humans, rendering the species exceptionally valuable for restoration planting.
10	<i>Casalabeca thevetia</i>	Exotic	Shrub/Tree	Mature	Common	Confirmed mother tree	LC	Common with many actively fruiting trees, little use for restoration activities as this is a non-native tree species.
11	<i>Croton macrostachyus</i> (Musogasoga)	Native	Tree	Pole	35	Not mother	LC	The species at the site were recently planted and only about three years old on average and are currently not fruiting
12	<i>Dovyalis affra</i>	Native	Tree	Mature	Common	Confirmed mother tree	LC	Common as a hedge with some individuals fruiting, not part of our current planting list, the species has

								some potential ecological value as it provides food for wildlife.
13	<i>Dracaena fragrans</i> (Luwanyi)	Native	Tree	Pole	Common	Potential mother tree	LC	This species is common, especially as a boundary marker and for fencing poles. One tree was found to be actively flowering offers potential as a source of planting material, particularly through vegetative propagation methods.
14	<i>Eryobotia Japonica</i> (Nsaali)	Exotic	Tree	Mature	3	Not suitable	LC	3 mature trees seen two of which are actively fruiting at the moment, not a tree that is part of our restoration efforts.
15	<i>Erythrina abyssinica</i> (Jirikiti)	Native	Tree	Mature	Common	Confirmed mother tree	LC	The species is widespread on the site, with many individuals. The presence of flowering trees suggests potential for seed collection.
16	<i>Eucalptus grandis</i>	Exotic	Tree	Mature	Common	Not suitable	LC	Abundant around the site with most of the trees at reproductive age, these are non-native and don't provide any ecological restoration value.
17	<i>Euphorbia tirucalli</i> (Nkoni)	Native	Tree	Pole	4	Not suitable	LC	The site has many individuals of the species, all too young to produce seed. They could potentially be used for vegetative propagation, but they do not constitute a viable source of seed.
18	<i>Ficus asperlifolia</i> (Luwawu)	Native	Tree	Mature	Common	Confirmed mother tree	LC	Mature trees with many individuals actively fruiting, potential mother trees for collection of seed and enrichment planting.

19	<i>Ficus brachypoda</i> (Mukokowe)	Native	Tree	Mature	Common	Potential mother tree	LC	This species is available on the site, fruiting mature individuals serve as an important food source for wildlife and could provide planting material, especially through vegetative propagation methods.
20	<i>Ficus exasperata</i> (Luwawu)	Native	Tree	Mature	Common	Potential mother tree	LC	This species is common around the site boundaries, with fruiting trees observed. It is well suited for restoration planting, serves as an important food source for wildlife, and could provide a viable seed source.
21	<i>Ficus natalensis</i> (Mutuba)	Native	Tree	Mature	common	Potential mother tree	LC	Mature trees of this species were found during the survey, neither of which was fruiting or flowering. These individuals could potentially provide planting material through vegetative propagation and need further monitoring to ascertain their seeding potential.
22	<i>Ficus vallis-choude</i> (Kikokowe)	Native	Tree	Mature	Common	Confirmed mother tree	LC	Common around the place with many of the trees actively fruiting, good food for wildlife and at the moment the regenerative capacity of this particular species may not require intervention.

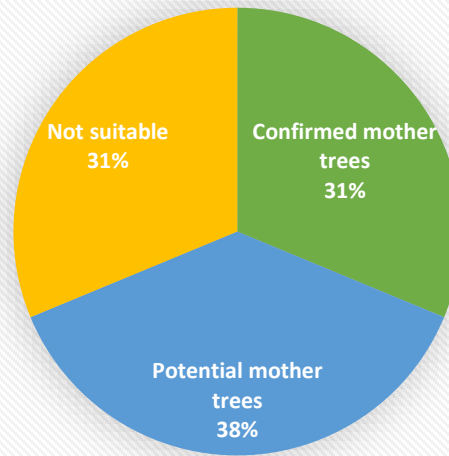
23	<i>Jatropha carcus</i> (Kiroowa)	Native	Tree	Mature	Common	Potential mother tree	LC	This species is common on site, primarily coppices from vegetative propagation. These trees may provide food for wildlife and could be used as a source of planting material through both seed collection and vegetative propagation.
24	<i>Macaranga schweinfurthii</i>	Native	Tree	Mature	8	Potential mother tree	LC	Few individuals are present around the site, the none of which were flowering but there's possibility of them being mothers. The species is well suited for restoration planting, especially in wet and swampy habitats.
25	<i>Maesa lanceolata</i> (Kiwondowondo)	Native	Tree	Mature	9	Potential mother tree	LC	Only 9 individuals of this species were found around the site, each with fruiting potential. The species is well suited for restoration planting in wet habitats, including swamps and along riverbanks.
26	<i>Maesopsis eminii</i> (Musizi)	Native	Tree	Mature	28	Potential mother tree	LC	This species is common on the site, with many potential mother trees. It is a possible seed source and is highly suitable for restoration planting due to its importance as a food source for wildlife, especially birds.
27	<i>Margaritaria discoidea</i> (Kamenyambazzi)	Native	Tree	Sapling	6	Not mother tree	LC	The trees around the site are saplings and provide no current potential for seed production.

28	<i>Melia azedarach</i>	Exotic	Tree	Mature	112	Not suitable	LC	Mature trees seen on site and are actively fruiting currently but as a non-native tree species it's not part of our restoration efforts
29	<i>Milicia excelsa</i> (Muvule)	Native	Tree	Mature	19	Potential mother tree	EN (National)	This is a globally threatened species, with mature individuals observed on site. The mature trees may serve as a viable seed source for the species and need further monitoring during the season.
30	<i>Morus spp</i>	Exotic	Shrub/Tree	Mature	4	Not suitable	LC	Only 4 individuals on site and these offer no immediate restoration value but have possible food source for both human and wild life
31	<i>Nauclea nyasica</i>	Exotic	Tree	Pole	12	Not suitable	LC	None of the trees actively fruiting and have little restoration value as they are non-native species.
32	<i>Neobutonia macrocalyx</i> (Mweganza)	Native	Tree	Mature	Common	Confirmed mother tree	LC	Not actively fruiting but due to the large number of seedlings and wildlings the plants the regenerative capacity of the species is reached for the species making it not a priority species for seed collection
33	<i>Phoneix reclinata</i> (Muziru)	Native	Tree	Mature	Common	Confirmed mother tree	LC	Common tree around the site with many individuals with active fruiting and flowering.
34	<i>Pseudospondias microcarpa</i> (Muziru)	Native	Tree	Mature	3	Confirmed mother tree	LC	One tree found flowering and has potential for seed collection making it a suitable mother

35	<i>Psidium guajava</i> (Mupeera)	Exotic	Tree	Pole	Common	Potential mother tree	LC	Not a native species and the regenerative capacity of the species is stabilized making it a least concern species for the restoration efforts
36	<i>Rhus vulgaris</i>	Native	Tree	Pole	3	Not mother	LC	Not a mature tree and has no seed and fruit production capacity
37	<i>Sapium ellipticum</i> (Musasa)	Native	Tree	Mature	Common	Confirmed mother tree	LC	The species is commonly distributed across the site, with numerous fruiting and seed-producing trees, indicating that the site is a viable source of seed for the species.
38	<i>Senna spectabilis</i> (Cassia)	Exotic	Tree	Mature	Common	Not suitable	Invasive	Although the species occurs at low density on the site, it has the potential to become invasive. Active management is needed to prevent its proliferation and maintain ecological balance.
39	<i>Spathodea campanulata</i> (Kifabakazi)	Native	Tree	Mature	common	Confirmed mother tree	LC	All individuals of this species observed on the site were potential mother trees, bearing flowers and seeds, indicating they could serve as a reliable source for seed collection.
40	<i>Syzygium cordatum</i> (Kanzirinziro)	Native	Tree	Mature	Common	Potential mother tree	LC	None of the trees actively fruiting but potential from seed in bird dropping is observed around the forest, possible mothers but also regenerative capacity for the species stable and not priority at the moment

41	<i>Terminalia superba</i>	Exotic	Tree	Mature	Common	Not suitable	LC	Many trees around the site mostly in a pure stand model, possible to be at production age but not a target species for restorative planting.
42	<i>Trema orientale</i> (Kasisa)	Native	Tree	Mature	Common	Confirmed mother tree	LC	There are many mature trees around the site, with a significant number currently flowering and fruiting, suggesting they could serve as a viable seed source for the species.
43	<i>Trichilia dregeana</i> (sekoba)	Native	Tree	Mature	5	Potential mother tree	LC	Only a few mature individuals of this species were found on the site, with none actively fruiting, suggesting they may not be a viable seed source.
44	<i>Vachellia spp</i> (Munyinya)	Native	Tree	Mature	Common	Confirmed mother tree	LC	Common mature tree seen most of which are fruiting at the moment, possible restoration planting value for the species.
45	<i>Vepris nobilis</i> (Muzo)	Native	Tree	Pole	Common	Potential mother tree	LC	Most of the trees seen are pole size, only one individual seen is a possible mother that is actively fruiting.
46	<i>Vernonia amygalylina</i> (Mululuza)	Native	shrub/Tree	Mature	Common	Confirmed mother tree	LC	Many individuals present around the place with most of them actively fruiting with wonderful regenerative capacity no not a priority species for restoration and/or seed collection
47	<i>Vernonia auriculifera</i> (kikookoma)	Native	Shrub/Tree	Mature	Common	Confirmed mother tree	LC	Many individuals present around the place with most of them actively fruiting with wonderful regenerative capacity no not a priority species for restoration and/or seed collection

TREE SPECIES REPRESENTATION



■ Confirmed mother trees ■ Potential mother trees ■ Not suitable

Of the tree species recorded within the survey area, 31% (15 species) were confirmed as mother trees. These individuals met established criteria for seed collection, including appropriate age, physiological maturity, adequate size, and evidence of recent or active fruiting at the time of assessment. The presence of these confirmed mother trees indicates that seed collection can be carried out sustainably, without compromising the long-term survival, regeneration potential, or genetic integrity of the species. Moreover, the spatial distribution and adequate spacing of these trees support effective cross-pollination and genetic exchange, ensuring the maintenance of healthy breeding populations. Consequently, these species represent ideal candidates for sustained and repeated seed harvesting, provided that collection follows best-practice guidelines that safeguard associated ecological interactions, including those involving wildlife and other dependent species.

Another 31% (15 species) of recorded trees were classified as potential mother trees. While several individuals met key criteria such as appropriate size, age, and spatial distribution, they lacked evidence of recent flowering or fruiting during the survey period. Continued growth, maturation, and seasonal monitoring will allow for the confirmation of their suitability as mother trees for seed collection in the future. For some species in this category, however, low population sizes make long-term or repeated seed collection ecologically unfeasible, as this could compromise their regenerative capacity and negatively impact ecological interactions, including those involving dependent wildlife. Limited and carefully managed seed collection may still be possible for some of these species if accompanied by close monitoring, adherence to sustainable harvesting thresholds, and consideration of species-specific ecological requirements.

Eighteen species (38% of those recorded) were deemed unsuitable for seed collection and were classified into two main categories. The first category consisted of non-native species that do not align with the project's restoration and conservation objectives. As these species fall outside the intended ecological framework, they are excluded from seed sourcing and propagation activities.

CHALLENGES AND LESSONS LEARNED;

The local personnel engaged in the activity demonstrated limited familiarity with some of the tree species present. Several local names provided for tree species could not be reliably matched to their corresponding scientific taxa, making them unsuitable for accurate identification. This underscores the need for further investigation and cross-verification to establish reliable links between local and scientific nomenclature.

Additionally, the assessment was conducted outside the fruiting period for certain species, which limited the ability to conclusively determine their status as confirmed or potential mother trees. Consequently, continued and seasonal monitoring of the site is required to accurately evaluate the reproductive status and seed production potential of all recorded species.

To strengthen future assessments, it is recommended that voucher specimens be collected during subsequent field activities. These specimens will facilitate provenance tracking, enable definitive

species verification, and support the accuracy and reliability of future inventories and seed collection planning.

CONCLUSION;

The species inventory conducted at the Great Outdoors site in Luwero District demonstrates that the area retains significant ecological value. The presence of a diverse collection of predominantly indigenous tree species, combined with generally good tree health and active natural regeneration, indicates a functioning and resilient forest system. However, some species encountered, including *Senna spectabilis*, *Acanthus polystachus*, *Lantana camara*, and *Broussonetia papyrifera*, exhibit invasive tendencies. Their densities should be actively managed to minimize potential negative impacts on ecological succession and forest dynamics.

Approximately one-third of the recorded tree species were confirmed as mother trees, with additional species identified as potential future seed sources pending further maturation and seasonal monitoring. This provides a strong foundation for sustainable, long-term seed collection while maintaining ecological integrity, genetic diversity, and associated wildlife interactions.

There is also notable overlap of native species between the Great Outdoors and Nalumuli sites, indicating that propagation material could be shared across locations to enhance genetic diversity and resilience. This highlights the potential for coordinated seed collection and integration between the two sites.

Some constraints were encountered during the assessment, including limited local taxonomic knowledge, incomplete local nomenclature, and the timing of the survey outside peak fruiting seasons. These challenges can be effectively addressed through continued monitoring, seasonal follow-up surveys, and the collection of voucher specimens to support herbarium verification and provenance tracking.

Overall, the Great Outdoors site presents considerable potential for ecological restoration and the conservation of indigenous tree species. With appropriate management, documentation, and monitoring, the site can support reliable and ecologically responsible seed collection that contributes significantly to landscape restoration, biodiversity conservation, and sustainable forestry initiatives.