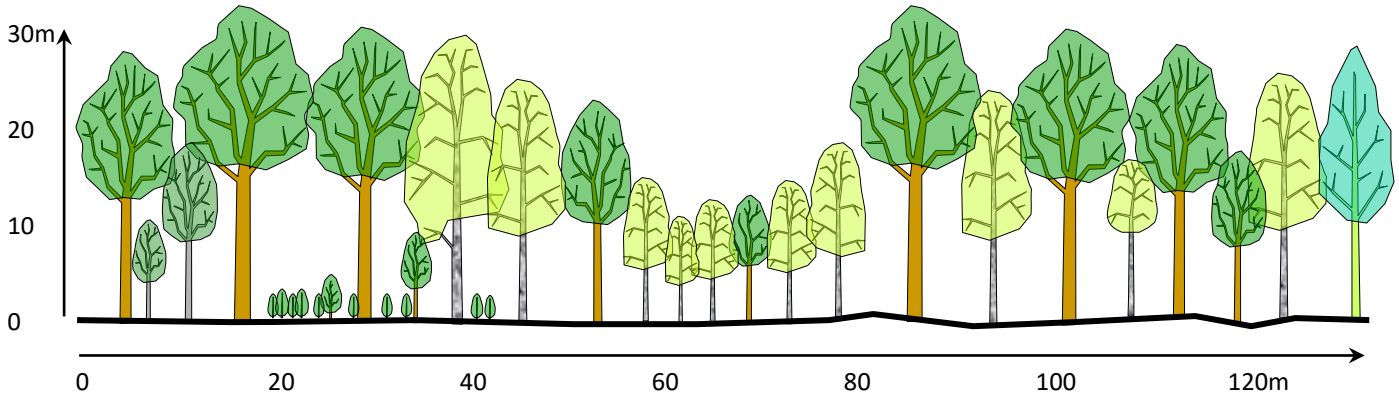
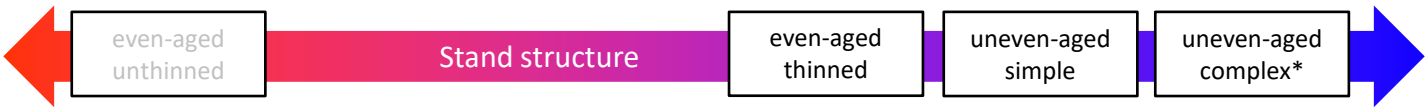
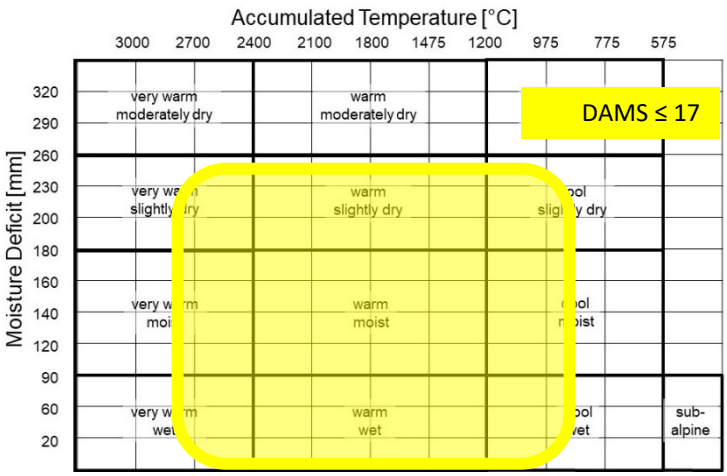
FDT 5.2.1 SOK and BI

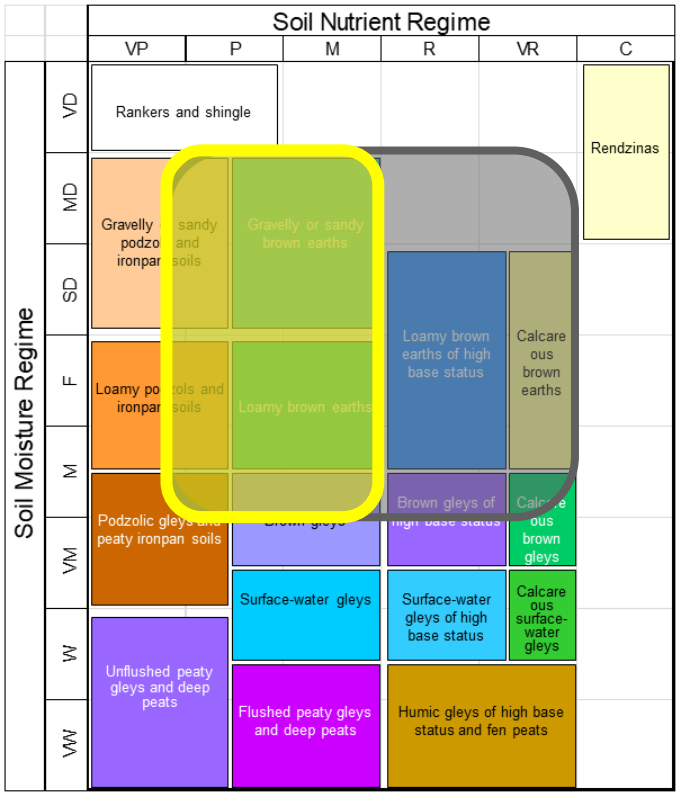


1. Structure and dynamics:
Single to multiple-storeyed stand of dominant SOK with BI in individual tree to small area (≤ 1 ha) mixture. Category C minor species may include BE, SP, ROW, ASP, AR and others according to local site conditions.
Species distribution: SOK 50 – 80% BI 20 – 50% minor species: 10 – 30%
Stands may be managed under LIMA / CCF regimes, with management aiming to create a diverse stand structure. Natural regeneration should account for all of the BI component and the majority of minor species; SOK is to be regenerated naturally wherever possible.



2. Ecological suitability:
Represents various successional stages of NVC types W16, W15, W17 and W4 in lowland and upland climatic zones. Suitable for poorer soils of sandy to sandy loam texture across a wide moisture range where SOK performs at the lower end of the GYC range and may be at risk of shake.





3. Management objectives:

Economic (SOK GYC < 6): SOK – sawlogs, target DBH > 50cm in 120 – 180yrs, optional
BI – sawlogs, target DBH > 30cm in 60 – 80yrs, optional

Environmental and social: Diverse woodland of natural appearance providing a range of habitats for light demanding species and high conservation value. Presence of deadwood and veteran trees. Attractive to visitors because of its open structure and diversity.

4. General management principles for the FDT

Species in this FDT are generally compatible to grow in mixture (CS = 2) but for timber quality spatial separation in groups to small areas will be preferable. SOK responds well to thinning interventions throughout its lifetime and the Q/D management approach with high initial stocking density may be used provided sawlog production is a viable option. BI will have to be managed on a much shorter rotation than SOK and therefore requires a different management strategy with wider initial spacing and earlier interventions if it is to be grown into sawlog dimensions. As a typical pioneer species BI will outgrow SOK at young age but lose its competitive advantage later, thinning interventions will have to adapt accordingly with regard to tree species and time. Crown thinning should be applied throughout, starting at 10 – 14m top height in BI and 16 – 18m in SOK. LIMA / CCF methods should be used to introduce and maintain the desired horizontal and vertical stand structure.

5. Timeline

stage	H_{100} [m]	intervention
Establishment		• Natural regeneration in densities of > 10000 seedlings/ha or planting of 2000 (BI) – 5000 (SOK) trees/ha. Most commonly SOK may be established in clusters (20 – 30 plants at 0.3 – 1m spacing) and BI recruited from natural infill.
Young stand	< 3	• Protection against animals / plants as necessary. • Regulation of species composition and minor species as required.
Thicket stage	4 – 8	• SOK: Negative selective respacing (removal of undesirable trees). • BI: Systematic respacing to about 1500 – 2000 trees/ha if necessary, cleaning or pollarding of aggressive BI overtopping promising SOK. • Regulation of species composition and minor species as required.
Pole stage	10 – 14	• SOK: Continue negative respacing if necessary, otherwise shift to positive selection and carefully promote up to 200 FC tree candidates/ha by removing 1 – 2 competitor(s). Maintain closed canopy for ongoing self-pruning. • BI: Start thinning interventions, generally as crown thinning. Up to 300 FC trees/ha may be selected, pruning may be considered.
Pole to small timber stage	16 – 18	• SOK: Thinning interventions start when the majority of FC tree candidates have reached the desired length of clean bole. Select 80 – 100 FC trees/ha, and thin to release their crowns from competitive neighbours (crown thinning).
Timber stage		• Monitor species composition, stand density, stability and health, and thin accordingly. Live crown length of FC / dominant trees should always remain > 50% of tree height. Apply crown thinning as long as necessary for the benefits of FC trees. • Assess potential for natural regeneration and decide on harvesting method when BI approaches target DBH; improve conditions if necessary. • Monitor occurrence and growth rate of BI regeneration, review FDT and / or supplement by planting if necessary.
Final harvesting and regeneration stage		• Time final harvesting operations in SOK with mast years if possible. • Monitor light level, ground vegetation, occurrence and growth rate of regeneration, supplement by planting if necessary, or restock.