CONCEPT OF FOREST DEVELOPMENT PHASES (FDP): *IDENTIFICATION AND CLASSIFICATION ISSUES*

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LIFE CYCLE: AN ORGANISM VS FOREST ECOSYSTEM

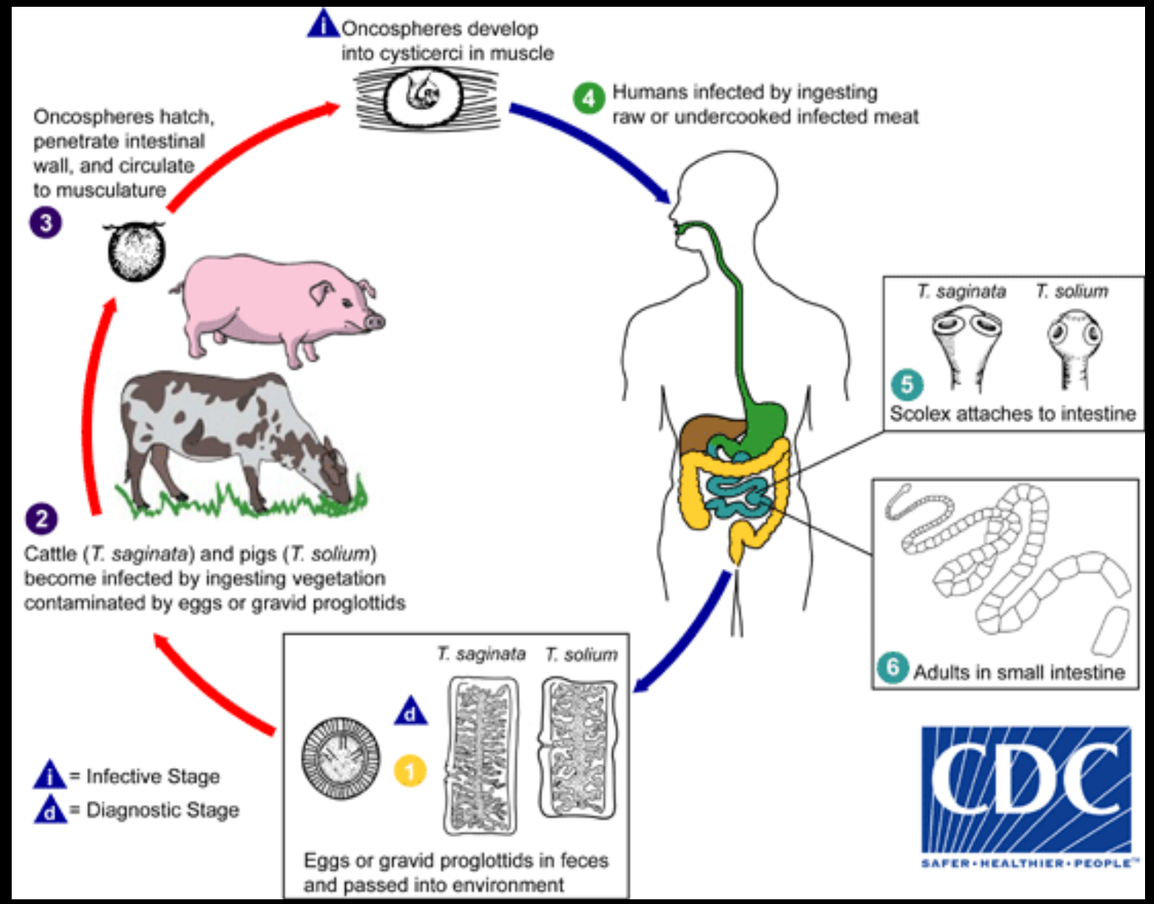


Image source: CDC

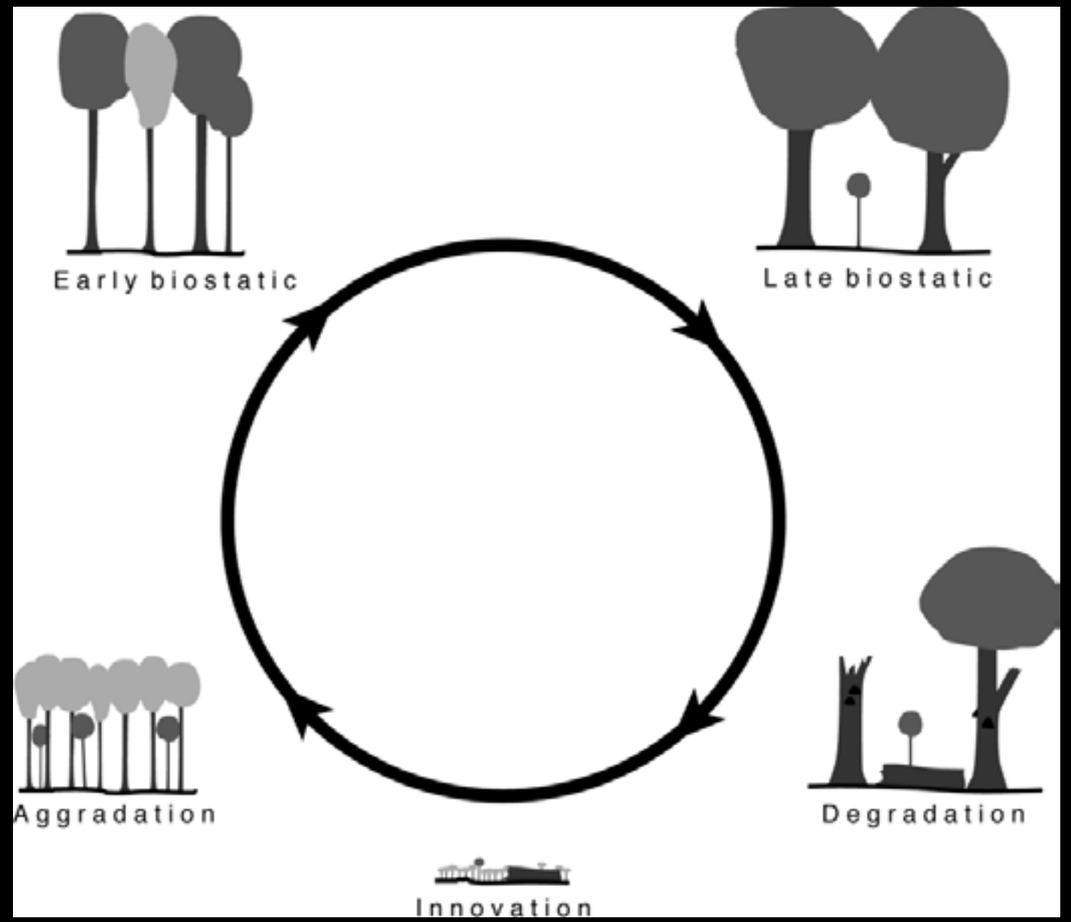
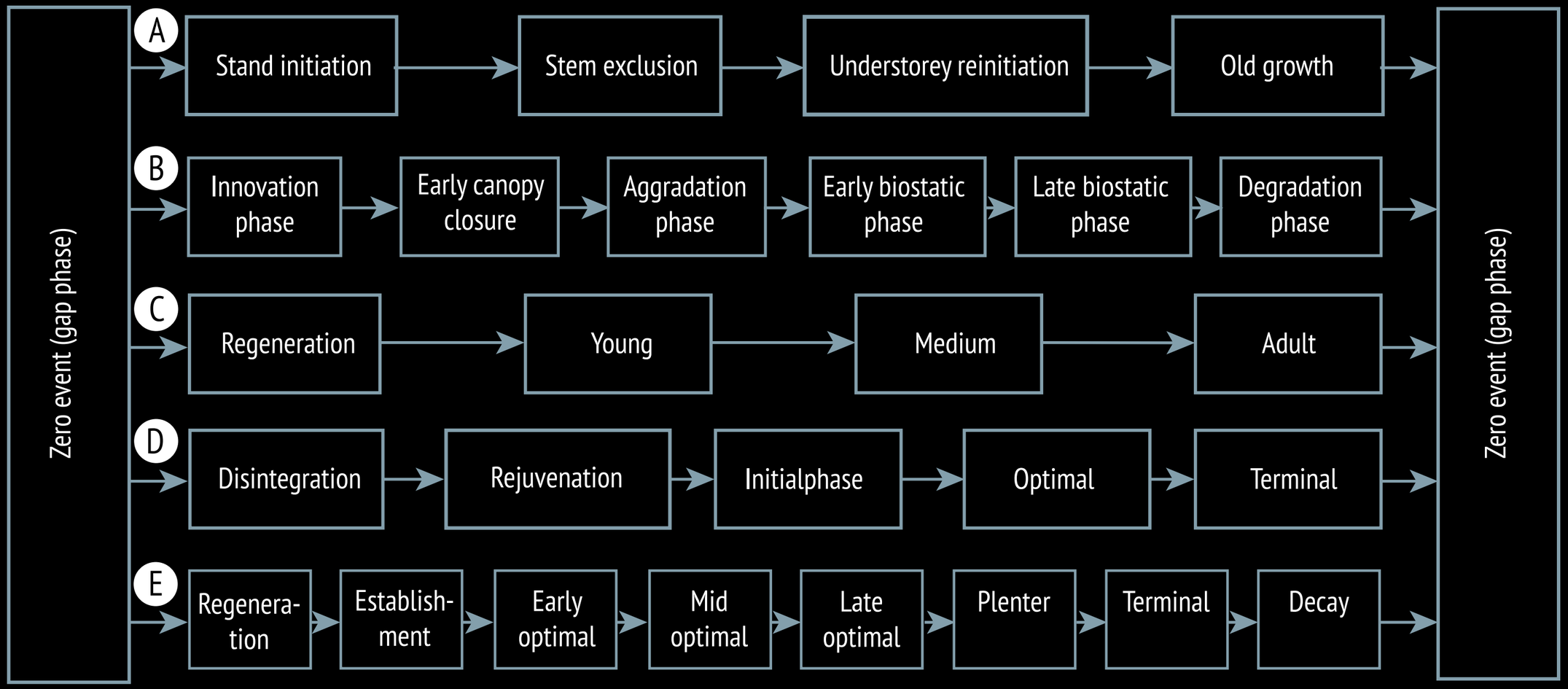


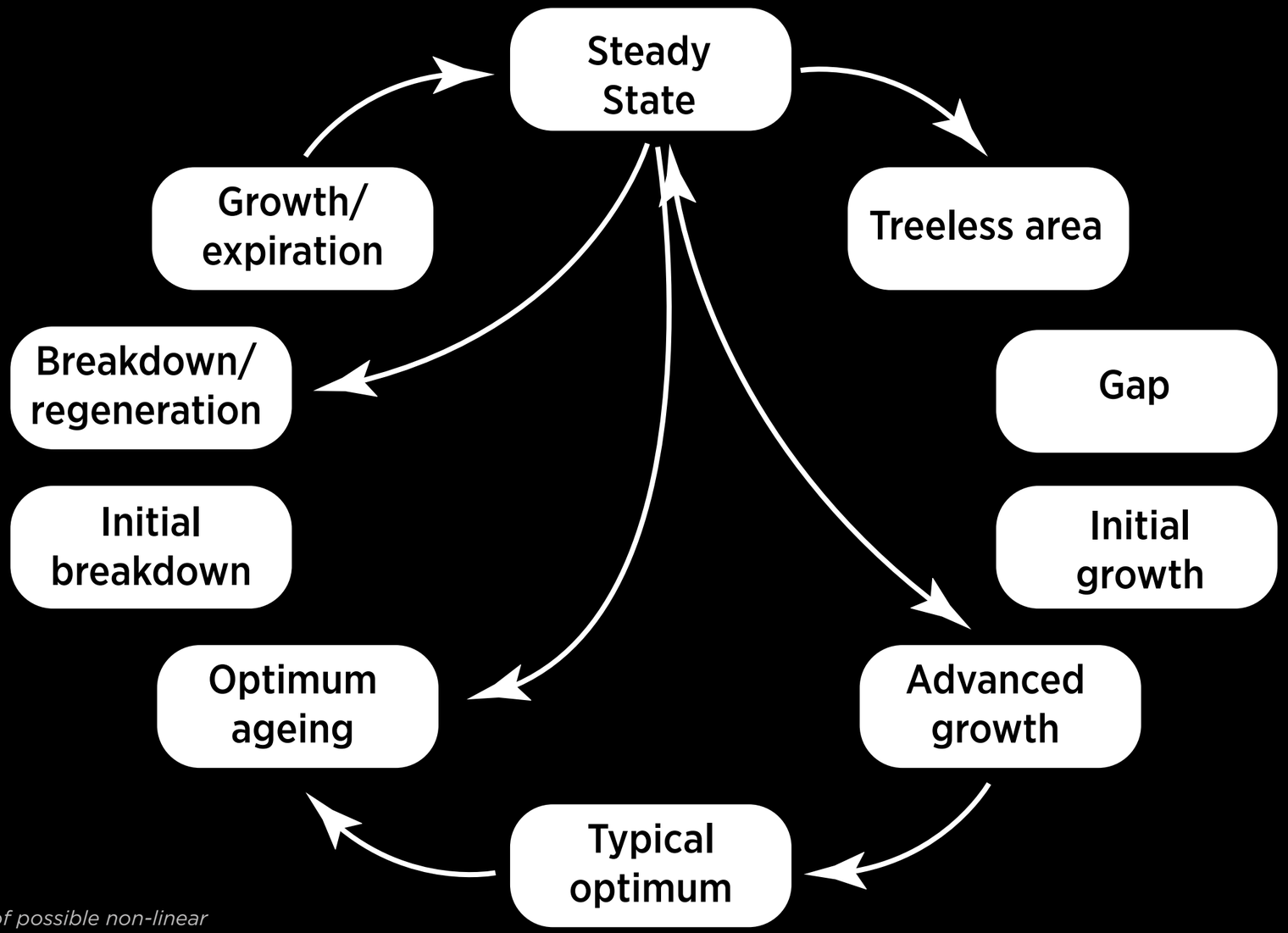
Image source: Christensen et al, 2007

DIFFERENT APPROACHES TO FDP IDENTIFICATION



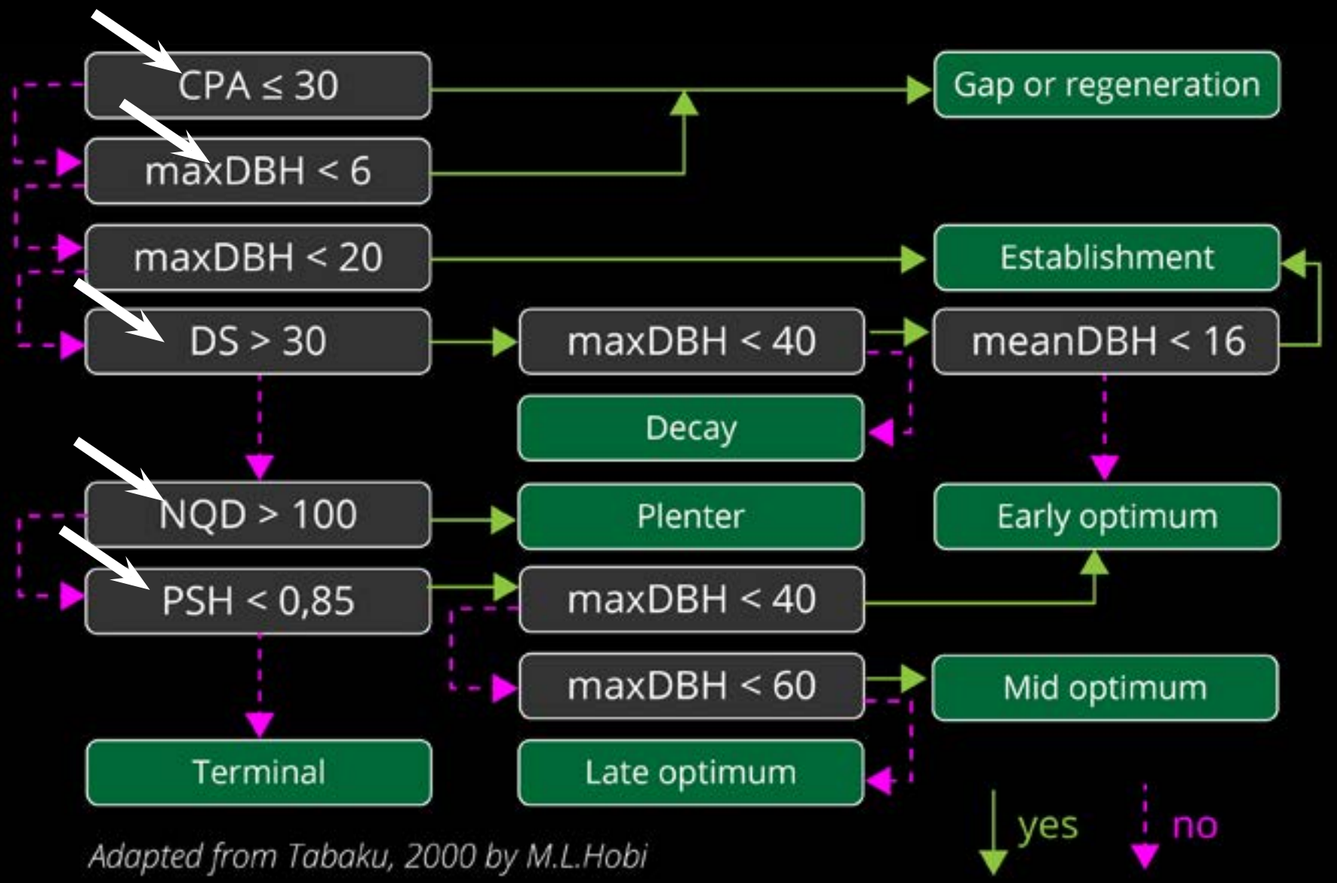
Different sequences of forest development phases depending on the classification approach: (A) Oliver & Larson [7]; (B) Oldeman [6]; (C) Duncker [2]; (D) Leibundgut [5]; (E) Tabaku et al. [9]. Not all the phases refer to the same hierarchical level.

NON-LINEAR APPROACHES



After Kral et al. (2018), examples of possible non-linear transitions between FDP

EXAMPLE OF A FDP IDENTIFICATION ALGORITHM



Adapted from Tabaku, 2000 by M.L.Hobi

CPA, DBH, DS, NQD - all of the parameters refer to aboveground biomass

COMMON FLAWS OF FDP CLASSIFICATION SYSTEMS

- no soil, belowground biomass or forest floor properties are taken into consideration
- no FDP assigning algorithm takes into consideration soil, belowground biomass or forest floor characteristics

BELOWGROUND BIOMASS, FOREST FLOOR AND SOIL PROPERTIES ARE IMPORTANT

- soil community is the mechanism linking the phases into a cycle
- affects soil productivity
- close-to-nature silviculture
- carbon emissions

SOIL AND BELOWGROUND PARAMETERS TO STUDY *IN RELATION TO FDP*

- pH & conductivity
- C/N ratio
- total carbon
- CO_2 emission
- humidity
- temperature
- content of water extractable organic matter
- forest floor quantity, density, humidity, acidity

THANK YOU FOR YOUR TIME

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