GUIDE SPECIES COMPOSITION AT EARLY STAGES OF STAND DEVELOPMENT

OBJECTIVE

Help transition forests to new and better-adapted compositions.

DESCRIPTION

Natural disturbances often initiate increased seedling development and genetic mixing and can be used to facilitate adaptation. Silvicultural prescriptions can mimic natural disturbance to promote regeneration in the absence of natural disturbance.
Examples: preventing and removing undesired species, including invasive non-native or aggressive native species, in order to reduce competition for moisture, nutrients, and light; controlling beech suckers, sprouts, and brush by using herbicide or mechanical treatment in areas affected by beech bark disease in order to reduce competition with the regeneration of other species; planting or seeding sufficient stocks of desired species before undesirable species have the chance to establish or compete; performing timber stand improvement to favour and promote the growth of desirable growing stock.

EXPECTED RESULTS

Desired species promoted and competition from undesirable, poorly adapted, or invasive species reduced; conversion to a different forest type.

RESULT INDICATORS

Number of forests regenerated.

INVOLVED ACTORS

Natural manager, ecosystem expert, government, community.

EXPECTED TIMELINE FOR ACTION

- Medium term (5-10 years)
- Long term (> 10 years)

BEST PRACTICES

- Canada
- Catalogna – Spain
- Hokkaido – Japan

CRITICALITIES

Drier conditions and increased stress.

SCOPE OF THE ACTION

- Adaptation

TYPE OF PROPOSED ACTIONS

- Green

SECTOR OF ACTION

- Agriculture / Forests / Land use
- Biodiversity / Conservation of ecosystems
- Public health
- Urban settlement
- Other

CLIMATE IMPACTS

- Change or loss of biodiversity
- Drought
- Extreme precipitation
- Extreme temperatures
- Fires
- Floods
- Strong winds
- Other

IMPLEMENTATION SCALE

- Province
- Region / Country

SOURCE

https://adaptationworkbook.org/niacs-strategies/forest