# INCREASE DIVERSITY OF NURSERY STOCK TO PROVIDE THOSE SPECIES OR GENOTYPES LIKELY TO SUCCEED

## OBJECTIVE

Maintain ecosystem function and diversity.

## DESCRIPTION

Changing climatic conditions will need to be paralleled by appropriate infrastructure and resources for regeneration, including the availability of genetically diverse material coming from seed orchards and nurseries.
Selecting good nursery stock and providing adequate planting conditions are very important practices to maximize ecosystem services, especially in street tree plantations. In sites with low to intermediate levels of degradation, where soils are largely intact and there are enough germplasm sources for the next generation (e.g., mature trees or a soil seed bank), natural regeneration may be the best choice. This bypasses some of the risks associated with introducing germplasm, by promoting the maintenance of genetic integrity and the recruitment of well-adapted seedlings.

## EXPECTED RESULTS

Providing an array of species and genotypes that can both meet short-term demand for traditional species and enable long-term adaptation.

## RESULT INDICATORS

Number of species in the nursery stock.

## INVOLVED ACTORS

Natural manager, farmer, nurseryman.

## EXPECTED TIMELINE FOR ACTION

- Short term (1-4 years)
- Medium term (5-10 years)
- Long term (> 10 years)

## BEST PRACTICES

- British Columbia
- Australia
- USA

## CRITICALITIES

The results of many provenance trials have not been published and data are not readily available: a concerted effort must be made in support of restoration efforts to locate information and make it available in a form that is relevant to restoration practitioners.

## SCOPE OF THE ACTION

- Adaptation

## TYPE OF PROPOSED ACTIONS

- Green

## SECTOR OF ACTION

- Agriculture / Forests / Land use
- Biodiversity / Conservation of ecosystems
- Public health
- Water resource management
- Other

## CLIMATE IMPACTS

- Change or loss of biodiversity
- Drought
- Extreme precipitation
- Extreme temperatures
- Floods
- Salinization and acidification of water
- Strong winds
- Other

## IMPLEMENTATION SCALE

- Municipality
- Region / Country

## SOURCE

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