

FAVOUR EXISTING GENOTYPES

OBJECTIVE

Favour existing genotypes that are better adapted to future conditions.

DESCRIPTION

Some genotypes may be better adapted to future conditions or changing conditions because of pest resistance, broad physiological tolerances, short regeneration times, or other characteristics.

Examples: planting stock from seeds collected from local trees that exhibit drought tolerance, pest resistance, or other desirable qualities; planting stock from seeds collected from healthy trees in warmer or drier locations in the region; retaining some survivors of a die-back event, such as drought-induced mortality or pathogenic blight, rather than salvage harvesting all trees in an affected area; creating and monitoring areas of natural regeneration in order to identify and promote well-adapted phenotypes; planting disease-resistant chestnuts in order to re-establish a form of this species on the landscape.

EXPECTED RESULTS

Identify and manage the genotypes that have adapted best during various life stages, allowing a population to persist where it may otherwise fail.

RESULT INDICATORS

Number of genotypes adapted to future conditions.

INVOLVED ACTORS

Public, private, non-government land managers, natural experts, communities, farmers.

EXPECTED TIMELINE FOR ACTION

- Long term (> 10 years)

BEST PRACTICES

- Mediterranean Basin
- Iberian Peninsula
- USA
- North America & British Columbia
- Ireland & Greater Antillean – Jamaica
- Australia

CRITICALITIES

Genotypes from other sites could interfere with the adaptation of local populations, if the imported resources are not adapted to withstand local pressures; availability of source material may also limit the

use of this approach.

SCOPE OF THE ACTION

- Adaptation

TYPE OF PROPOSED ACTIONS

- Green
- Soft

SECTOR OF ACTION

- Agriculture / Forests / Land use
- Biodiversity / Conservation of ecosystems
- Other

CLIMATE IMPACTS

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

IMPLEMENTATION SCALE

- Region / Country

SOURCE

<https://adaptationworkbook.org/niacs-strategies/forest#strategy-210>