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MY FOREST ARMENIA

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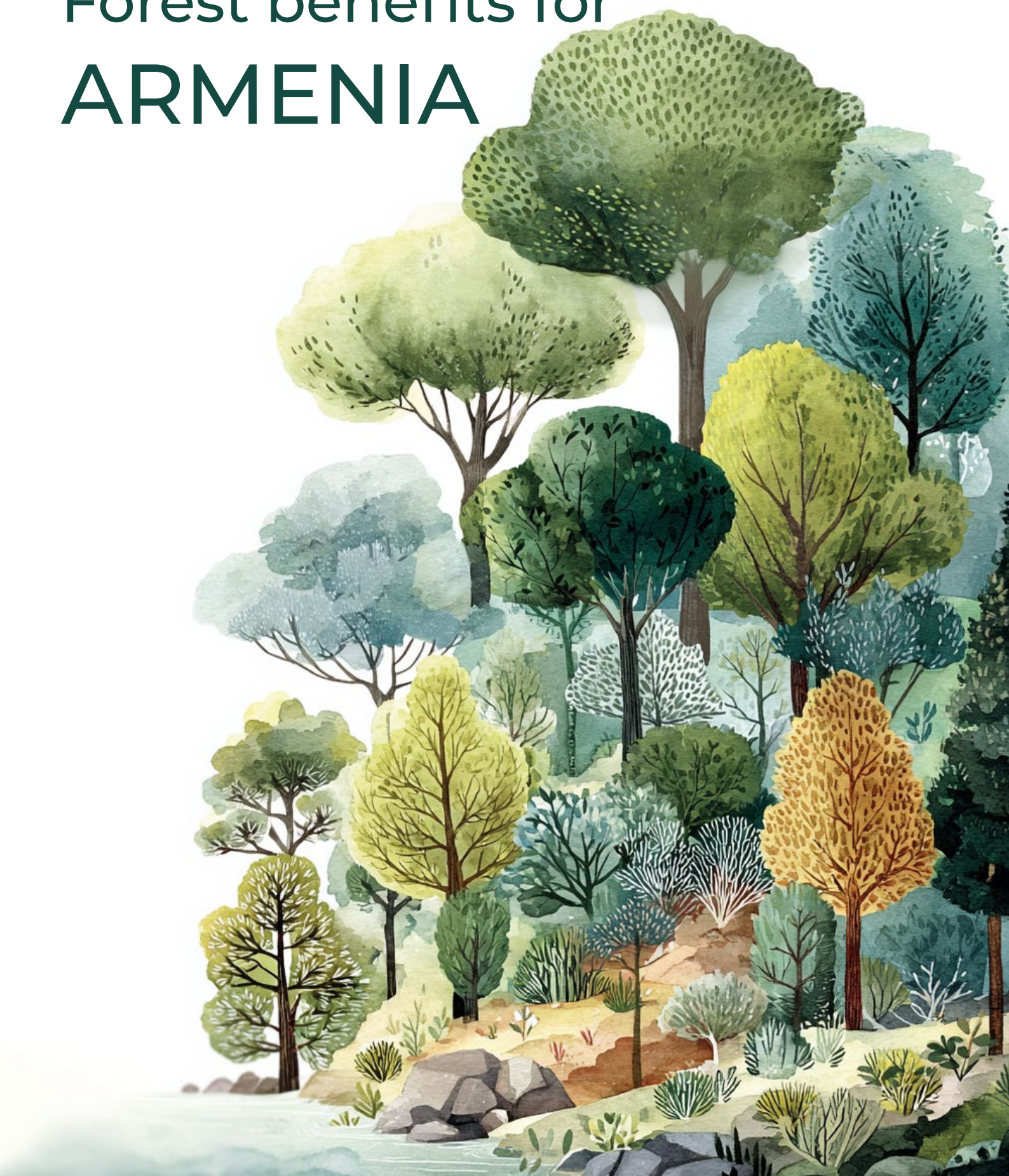
Forest benefits for ARMENIA



What are forests?

Forests are among the most important ecosystems on earth. These diverse communities develop as the branches and leaves of trees form a canopy, intercept falling raindrops, and cast shade, thus creating the conditions for forests to establish themselves. Among the plant species that occur are fungi, mosses, lichens, ferns, herbs, climbing plants, and grasses. Forest animals include numerous insects, mammals, amphibians, birds, and reptiles. Altogether, more than 80 per cent of land plants and animals live in forests.

In Armenia, natural forests are composed of beeches, oaks, hornbeams, and many other tree and shrub species. The particular composition of a forest reflects local soil and climatic conditions as well as land use and forest management practices. Over decades and centuries, forests develop naturally through ecological succession and changing environmental conditions.

Throughout the history of Armenia, forests have played an important role in supporting the country's rich biodiversity and providing natural resources. Their importance extends beyond Armenia, as they are part of the wider Caucasus region, which is recognized globally for its high biodiversity and ecological value.

Within Armenia, forest cover is limited, currently accounting for 11–14% of the territory, and highly fragmented, mainly concentrated in the northern regions of Tavush and Lori as well as in the southern region of Syunik.

Summary of forest benefits in Armenia

Protection

- Against land degradation and desertification
- Against landslides, avalanches, rockfall, entry of mud and driftwood into rivers in mountainous areas
- Against floods

Provision of...

- Biomass and wood for fuel and construction
- Non-timber products
  - Berries, herbs, mushrooms, honey, resin
  - Medicine plants
  - Seeds

Well-being

- Water regulation, storage, and availability
- Stabilisation of local temperature and moisture conditions
- Elimination of pollutants from water, air, and soil
- Soil formation and stabilisation
- Conservation
  - Habitat for native species, pollinators and beneficial organisms
  - Separation of wildlife, especially bears, from settlements
- Oxygen production
- Carbon sink
- Space for recreation, leisure, sports, and adventures
- Job creation (forestry, tourism)

Forest biodiversity is essential to the continuous provision of forest benefits. The mostly dry and continental climate of Armenia consisting of hot summers, cold winters, low rainfall and frequent drought periods requires consistent efforts for keeping a stable forest cover. Maintaining these benefits for future generations needs responsible management and respect for forest boundaries.

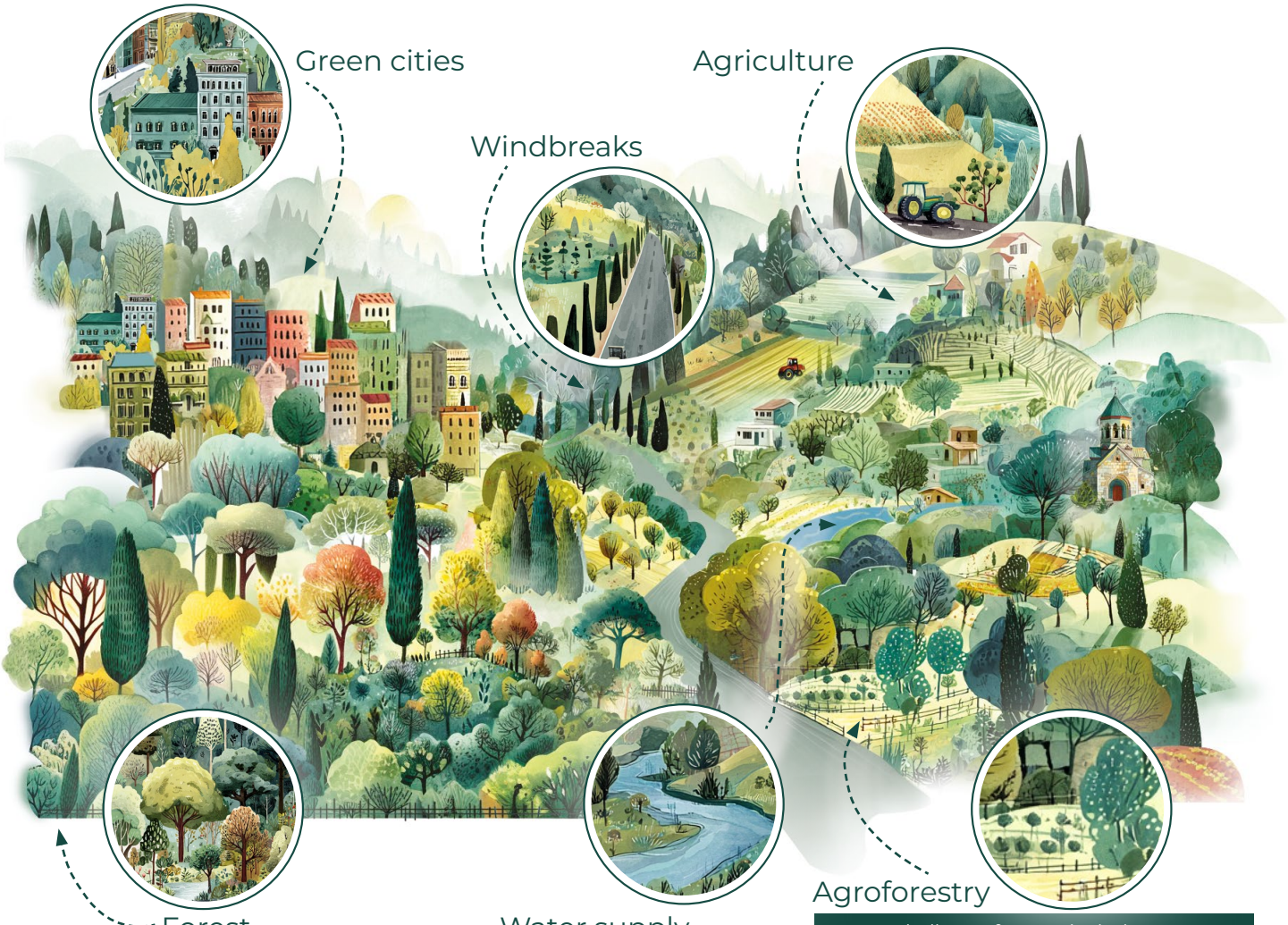
How agriculture can get along with a forest

Forests support agriculture in many ways. They are home to pollinators such as bees and wasps, and provide water regulation and storage, reduce pollution, protect against flooding, and help stabilise local temperatures. In Armenia, where harsh environmental conditions are common, forests are essential for ensuring long-term agricultural productivity. Trees can mitigate extreme weather conditions by providing shade and acting as windbreaks to reduce the effects of heatwaves and strong winds. In many situations, planting trees and hedges on agricultural land makes good sense.

Over a million livestock are grazing the hillsides of Armenia. They should not be introduced into the forest. Cattle, sheep, goats, pigs, horses, and many other animals cause enormous damage to seedlings and small plants by trampling, browsing, and resting. This damage supresses natural regeneration, which is already limited due to Armenia's challenging growth conditions. As a result, only older trees remain. In the absence of younger trees, tree mortality leads to gaps in the forest canopy. As these gaps continue to grow, a forest can no longer provide protection and other services. Several decades of livestock pressure destroying regeneration will eventually cause the forest to collapse. Keeping livestock out of the forest is the only way to prevent this collapse.

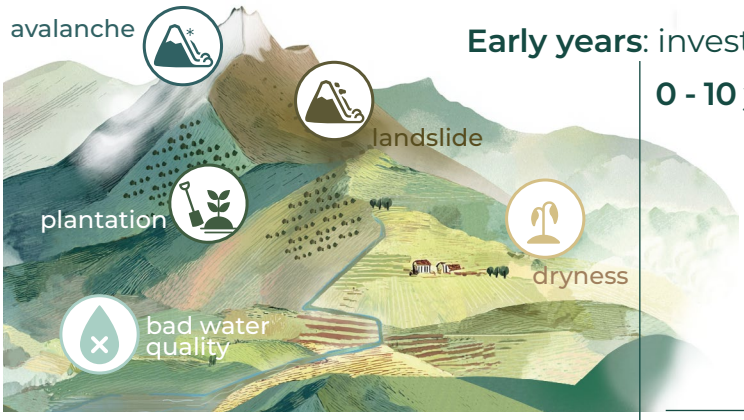
Besides reducing cattle pressure, you can decrease the impact on forests by preventing forest fires. In Armenia, forest fires are responsible for the destruction of large, forested areas. Preventing forest fires is therefore extremely important. Always make sure that fires are kept under control and never allowed to spread. Nevertheless, when we respect the boundaries of the forest, it will provide us and future generations with wood, clean water, and food. When we protect the forest from our cattle and forest fires, it will protect us and our children from floods, strong winds, and soil degradation.

Coexistence of settlements, agriculture and forests



In a nutshell: Agroforestry includes trees on agricultural land, which can improve productivity, biodiversity, and soil health, making farming more sustainable and diverse.

Evolution of forest benefits



Early years: investments

0 - 10 years

Plantation

High investments
- irrigation
- fencing
- weeding

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High risks
- landslides
- avalanches
- dryness
- waterloss
- storm/wind degradation

Midterm: equilibrium

10 - 20 years

Maintainance

Investments
- irrigation
- weeding
- replacement planting

$ $

Certain risks
- landslides
- avalanches
- dryness
- waterloss
- storm/wind degradation

Mature: benefits predominate, investments are rewarded

20 - 60 years

Thinning & natural regeneration

Investments
- dependance on use of wood

$

Lower risks

Longterm: sustainable close-to-nature forest management

60 - 140 years

Forest management

Promote
- natural regeneration
- species diversity

Income
- sustainable forestry

Minor risks

Future

Forest benefits : Increase with time

0 - 20 years

Provisioning :
berries, herbs

Wellbeing :
formation of soil, photosynthesis
(CO_2 sink, O_2 source)

20 - 60 years

Provisioning :
mushrooms, thin pole wood,
production of seeds

Wellbeing :
formation of habitats, purification of water,
air and soil, recreation

60 - 140 years

Protection :
from wind, avalanches, landslides

Provisioning :
large round wood

Wellbeing :
climate regulation, water quality

Outlook for the next factsheet

Where land is afforested, initial investments through planting as well as continuous management of the forested area are needed before a community can profit from forest benefits. In our next factsheet, we will explain practical measures for establishing and managing successful forest plantings.

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Target Audience

This factsheet is intended for local communities living near forest or reforestation areas or engaged with these areas. Further information is elaborated in the corresponding report.

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