WHY ARE FORESTS IMPORTANT?

ECOSYSTEM SERVICES
BEES POLLINATE TREES

In China people pollinate trees by using brushes, but it's very time consuming.
In our daily lives we use many goods and services which come from natural sources.

The silent work and interaction of many living organisms provides us with food, water, fresh air, energy and medicine.

Many of these vital factors are invisible to our eyes and therefore unknown and underestimated, even though we are completely dependent on their existence and function.
which we use. Ecosystems are considered to be the units of natural capital.
Ecosystem services are the many and varied benefits to humans provided by the natural environment and from healthy ecosystems.
A system = a group of interacting or interrelated entities that form a unified whole. Examples include the circulatory system, or a bicycle.

Eco= habitat, which consists of a community of organisms such as plants, animals and microbes, that live together in a particular area and interact among each other and the environment, resulting in the exchange of matter and energy.

ECOSYSTEM
TYPES OF ENVIRONMENTAL ECOSYSTEMS

TERRESTRIAL ECOSYSTEMS
- Forest ecosystems
- Pasture ecosystems
- Tundra ecosystems
- Dessert ecosystems

WATER ECOSYSTEMS
- Freshwater ecosystems
- Marine ecosystems
The importance of ecosystems

The ecosystem provides a habitat for wild animals and plants. It supports the creation of different food chains and networks and controls environmental procedures. The latter involves the movement of biogenic and non-biogenic components and helps maintain energy flow in the ecosystem, including the circulation of carbon, nitrogen, oxygen and water.
HEALTHY ECOSYSTEMS MAINTAIN RICH BIODIVERSITY

When you think of an ecosystem, such as a forest, there are many organisms that are important. Trees, deer, plants, birds, squirrels, and insects are prominent members of the ecosystem. There are many more organisms that live in an ecosystem that are not as noticeable. We often forget about all the bacteria, fungus, and tiny insects that are equally important. Ecosystems depend on many organisms to keep them in balance.

ORGANISMS ONLY SURVIVE IN AN ECOSYSTEM WHEN THEIR SPECIFIC NEEDS ARE MET

Cricket eating a leaf: All organisms have needs, such as food, water, and air. If the needs of the organisms in the ecosystem are not met, they cannot survive.

Animals usually need food, water, and shelter. For example: if deer need to eat grass and the place they live in (their ecosystem) no longer has grass, they have to move somewhere else or risk not surviving.
FOREST ECOSYSTEM
## Forest Ecosystem Services

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<td>• Disease control</td>
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There are more organisms in one tablespoon of soil than humans on Earth.

Our food relies on pollinators. For example every third piece of our food is produced with their help.

Local and endogenous food can be a 1,000 times more nutritious than regular food.

The total value of global ecosystem services according to a 2014 research was estimated to be around $125 trillion.
Ecosystems provide services when their natural conditions are not disturbed

What factors can affect the self-recovery of the eco-systems?
Examples of Ecosystem Protection Benefits

Panama Canal: Rehabilitation of the surrounding forests is more profitable than cleaning the canal bed from the soil which is caused by soil erosion.
TROPICAL RAINFORESTS

Even though tropical rainforests cover only about 6% of the Earth's land surface, they release 40% of oxygen into the atmosphere through photosynthesis.

NORTHERN FRANCE

Mineral water companies consider it more profitable to pay farmers for forest protection than to build water treatment plants.
ENDANGERED FORESTS
30% of the global land area is forest-covered

50% of forested areas have shrunk in the last 50 years
CAUSES OF FOREST ENDANGERMENT

FOREST FIRES
NATURAL FOREST FIRES DESTROY MUCH OF THE FORESTS

CLIMATE CHANGE
CLIMATE CHANGE IS THE CAUSE OF FOREST DAMAGE

NATURAL DISASTERS
Forests are damaged by storms, mudslides, insect attacks
CAUSES OF NATURALLY OCCURRING WILDFIRES

LIGHTNING

CLIMATE CHANGE

PEAT WILDFIRES
Deforestation occurs mainly through human activity

What is deforestation?

DEFORESTATION REFERS TO THE DECREASE IN FOREST AREAS ACROSS THE WORLD THAT ARE LOST FOR OTHER USES
Deforestation Reasons

AGRICULTURE
Forests are being cut down to get more arable lands and to raise farm animals.

URBAN PLANNING
As the population grows, forests are being cut down to build roads and buildings.

MINING INDUSTRY
Many forests are being destroyed due to wood and paper production, as well as mining.
Deforestation for obtaining arable land
Forests are being replaced by palm groves
PALM OIL AND PEAT
The high demand for soy is due to the fact that it is also used as fodder and as vegetable fuel.
FOREST CUTTINGS FOR MINING
Teghut Mine in Armenia
Deforestation Damage

- Declining Biodiversity
- Disruption of Water Cycle
- Increase in Soil Erosion
- Drought Frequency
Loss of forests-as a result and consequence of climate change
BECAUSE OF DEFORESTATION

Not only does the carbon accumulated in the wood emit to the atmosphere

BUT ALSO

the ability of trees to absorb carbon dioxide from the atmosphere is reduced
THE INCREASE OF CARBON EMISSIONS

DEFORESTATION IS THE CAUSE OF

20%
ASHTARAK PARK
ESTABLISHED IN 2016
WHAT IS THE PARK FOR?

Ashtarak Park will serve as a green recreation area for the residents of this new district situated just outside Ashtarak town.

The Trees will beautify the territory, provide shade, clean air and bring more life and health to a future community.

The majority of the trees in the park were planted by visiting school groups, as part of the Building Bridges program,
ATP plants forests on community owned lands which are leased for 20 years. After the end of the contract, the forest is handed back to the community. Armenia Tree Project’s Environmental Education and Forestry departments cooperate with the local authorities, as well as with community members and representatives to inform them about the importance of forests and the sustainable management of resources. Thus, it is expected that they will become the “owners” of these forests and manage them wisely.

ATP has planted over 1028 hectares of new forests in Armenia. ATP continues to monitor these forests and provide expertise to the residents to ensure that they are maintained properly and passed on to Armenia’s future generations.
PICTURED HERE IS THE LIVING MEMORIAL OF PROMINENT ARMENIAN INTELLECTUAL HRANT DINK.

PLANTED IN 2007, IN PARTNERSHIP WITH WWF ARMENIA AND THE CRITICAL ECOSYSTEM PARTNERSHIP FUND.

THE FOREST IS COMPRISED OF PINE AND WILD APPLE TREES.

ATP WORKS ON 37 SUCH FORESTRY PROJECTS IN ARMENIA.
The main part of the forest covers 11 ha, and the second part is 2.3 ha. In 2030 the forest will be handed over to the community.
AFTER 14 YEARS OF CONSTANT CARE AND ATTENTION, THE TREES HAVE GROWN ENOUGH TO FORM A CANOPY AND THE LAND CAN NOW BE CONSIDERED A TRUE FOREST!
EXPLORING THE FOREST
IN THE ECO CAMPS
VISITS TO THE THE MIRAK FAMILY REFORESTATION NURSERY AND THE NEARBY FOREST.

STUDENTS PRACTICE WEEDING
MAKING MULCH IN THE NURSERY

BIRD-WATCHING IN THE FOREST
HANDS-ON LEARNING STARTING FROM A YOUNG AGE
WHAT CAN YOU DO?

CONSUME WISELY
Reduce your intake of palm oil products

PLANT TREES
Take part in tree plantings and help preserve forests

DISSEMINATE INFORMATION
Tell your friends, family members what you have learned about forests