



Wind Erosion

An increase is observed in sand and dust movements in Turkey by the effect of the wind erosion in arid and semi-arid regions as a result of climate change.

Activities for Prevention of Wind Erosion

Wind erosion prevention activities are carried out in order to protect settlement zones, agricultural areas and rangelands and roads from wind erosion.



Wind Curtains in Agricultural Lands

In order to protect the agricultural lands from the wind erosion, the wind curtains are installed in three lines.

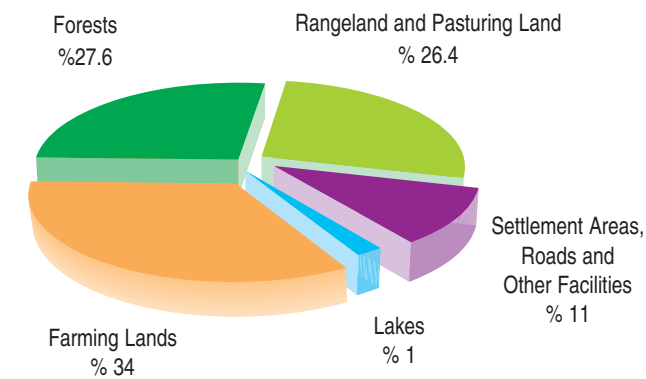


State of Forests in Turkey

Turkey has rich biological diversity value for plant types other than forest trees, non-wood forest products and fauna resources. The forest area in Turkey has been increased by 1,3 million hectares with the activities performed in the last 37 years.

Forests cover an area of 21.5 million ha. in Turkey (27.6 % of country's land surface). 99.9 % of country's forests are owned by the state. Thereabout half of the forests consists of coniferous species and the other half consists of broad-leaved species. Besides possessing circa 9000 plant species, including 3000 endemic species, and rich fauna resources; Turkey is among the temperate zone countries which are rich in terms of biological diversity. In Turkey; the distribution of forest ecosystems is as follows; rainforests and temperate zone in the north, Mediterranean forest ecosystems in the west and south regions, arid-semiarid forest ecosystems having mainly oak species in the East-Southeast regions, and transition zone forest ecosystems in the coastal and inner regions. Turkey's forests have rich biological diversity values in terms of plant species other than forest trees, non-wood forest products and fauna resources.

Lands Distribution in Turkey



Settlement areas, agricultural areas, ranges, roads and water resources are affected negatively from this movements. In order to prevent the transport of loose dry and thin formed soil on lands with insufficient vegetation by the effect of strong winds, activities are conducted to prevent wind erosion.

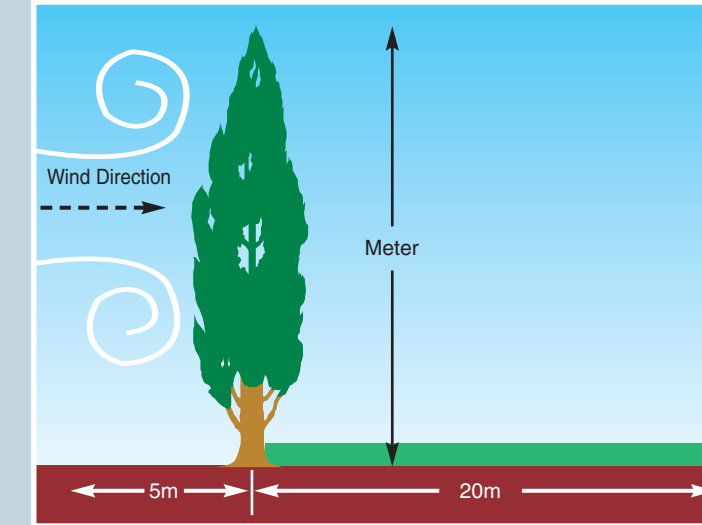
Protective Forest Belt

In order to protect settlement areas, agriculture areas and rangelands from wind erosion, protective forest lines are created. For the formation of such forest lines with 30-60 meter width, those types which are naturally growing in the region and suitable for climate and soil demands are used.

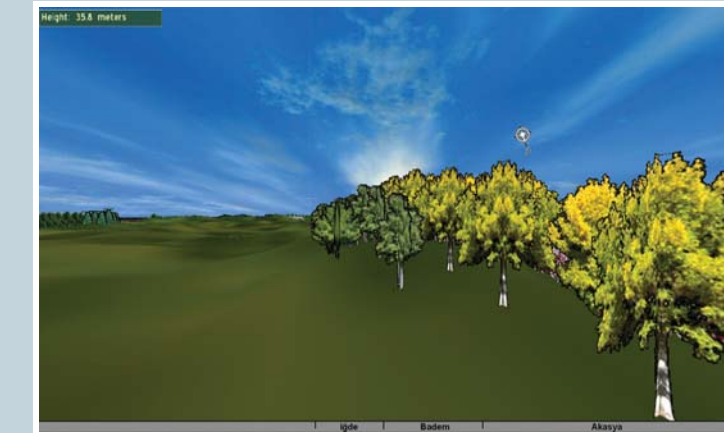


Wind Curtains

Wind curtains are generally built to protect the agricultural, pasture and roads subjected to wind erosion and reduce its effect on them. Wind curtains are generally formed in three lines, perpendicular to dominant wind direction.



The elm, oak, false locust, cedar, black pine, cypress are the species commonly used for the installation of wind curtains.

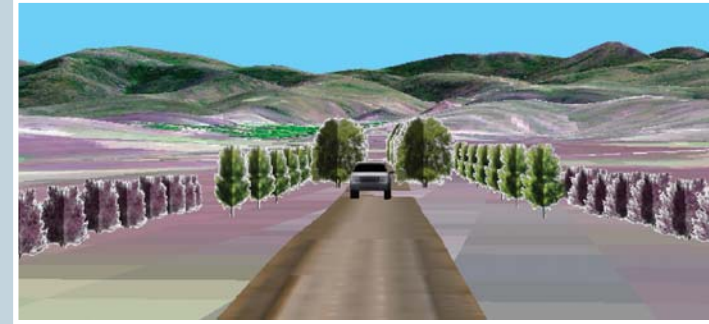


Wind curtains on the pasture area should be installed with 350 m intervals.





They are installed as per the width of the areas nearby the roads.



By the installation of windbreaks,

erosion is decreased, water economy of the soil is regulated, water saving is provided, animal production is increased, pests are controlled in agricultural areas, grass growth in rangelands are increased, and human health is affected positively.



Sand Dune Stabilization Activities

Sand dunes in Turkey are moved by human effects and harm their environments. The main reason of the dune movement is degradation of vegetation on sand dunes, over grazing, incorrect land use etc.

In Turkey, there are shore dune and inner (land) dune movements.

Activities for fighting shore dunes

Stopping movement of front dunes

For this; bush fences or thick bushes are formed as cord perpendicular to the dominant wind direction.

Permanent Stabilization (Afforestation)

Activities for stopping front dune movements are made to provide suitable environment to afforestation activities so that permanent stabilization is provided. Unless dune area is covered with vegetation and continuity is provided, dune movement starts again.

Activities for fighting inner dunes

fighting inner dunes is generally made by covering dune with live or inorganic material or through afforestation.



Use of the local Species is deemed as important in the Activities for combating wind erosion in Turkey.

For the afforestation works made for sand dune identification on regions having water deficit , drip irrigation systems are used. In the activities for sand dune identification to stop sand dune movements; perennial herbaceous used as animal feed.

Before Work



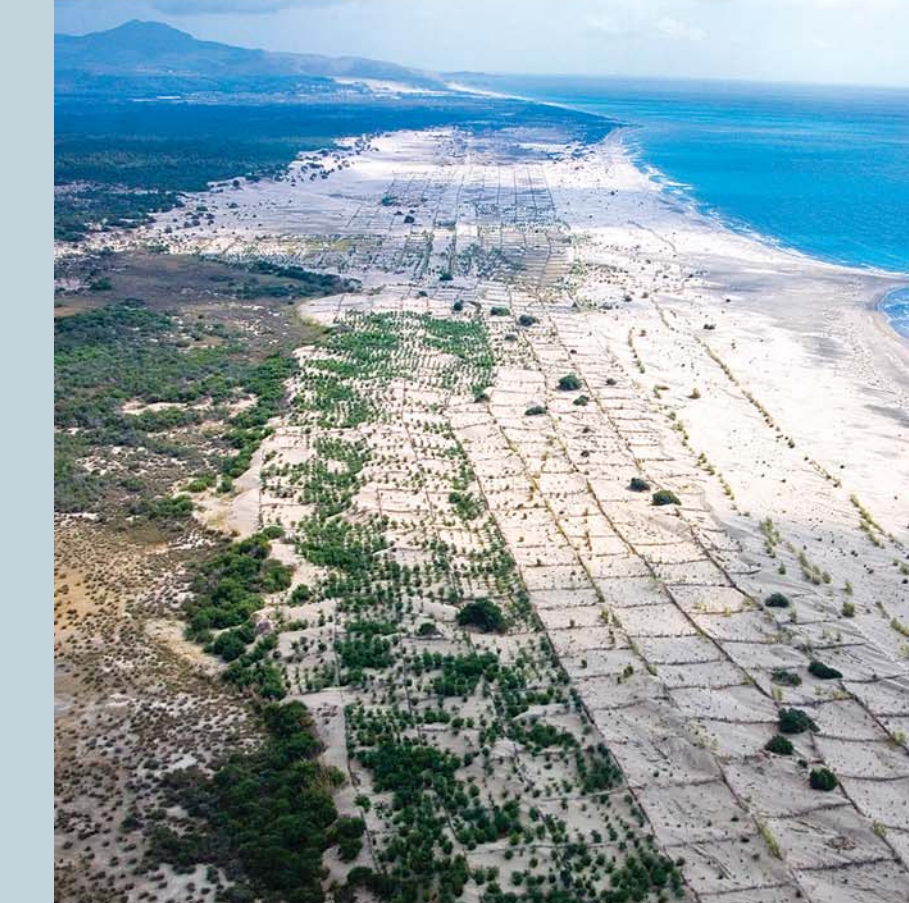
After Work



For the purpose of providing additional income for the local people, bearer species like stone pine are used in activities for combating wind erosion in Turkey.



As a result of the activities performed, agricultural areas and rangelands unused due to the effect of the wind erosion are becoming useful again.



ACTIVITIES FOR COMBATING WIND EROSION IN TURKEY



REPUBLIC OF TURKEY
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