



Forestry and Climate Change

20-22 September 2011

Cairo



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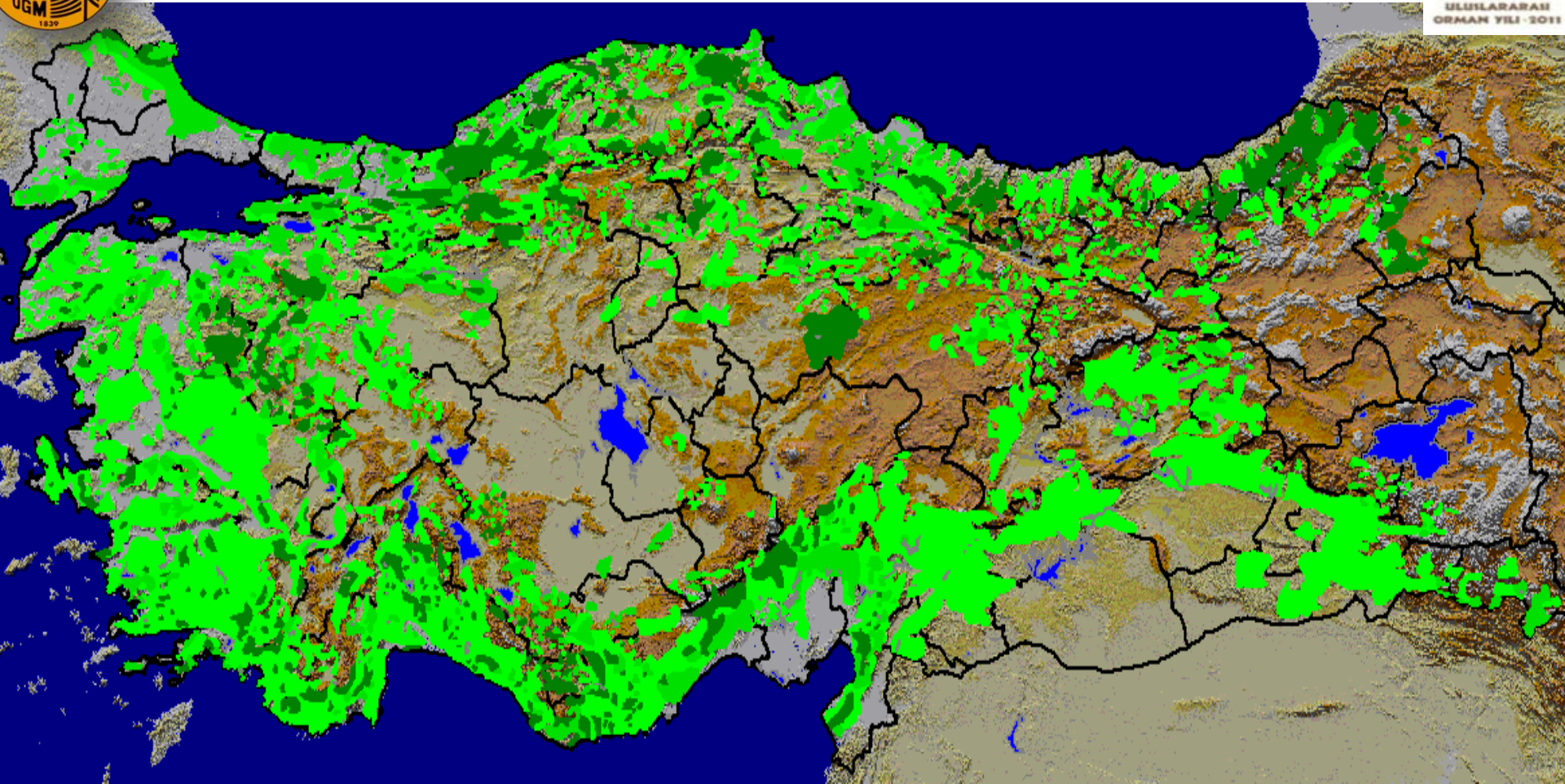
About Turkey



Turkey, is located in the northern hemisphere where the two continents, Europe and Asia meet. **The population** of Turkey is approximately **73** million.



Forest Resources in Turkey



- Turkey is a mountainous country with regional climatic differences.
- Totally 21 million hectares forest land and this comprises 27% of national territory.
- Over 99 % of the forests are state-owned.
- Forest land is composed of 60% coniferous and 40% of broadleaved tree species.

The predominant species are

Pinus brutia, *Pinus nigra*, *Pinus silvestris*, *Abies* spp. (*A. cilicica*, *A. nordmannia*, *A. equi-trojani* are unique), *Picea orientalis*, *Cedrus libani*, *Juniperus* spp., *Pinus pinea*, *Cupressus sempervirens*, *Pinus halepensis*, *Fagus orientalis*, *Quercus* spp., *Alnus* spp., *Castanea sativa*, *Carpinus betulus*.



Turkey is a rich country in terms of plant diversity. While there are nearly 12 000 plant species in the whole European continent, Turkey has 9 000 species of which almost 3 000 are endemic.





Forestry Policy



National Development Plan highlights ecosystem approach for forestry under five principles which are;

- 1) Sustainability
- 2) Multi-use
- 3) Participation
- 4) Protection of biodiversity
- 5) Contribution to the development and stabilization of community





CLIMATE CHANGE EFFECTS



Climate Change Effects

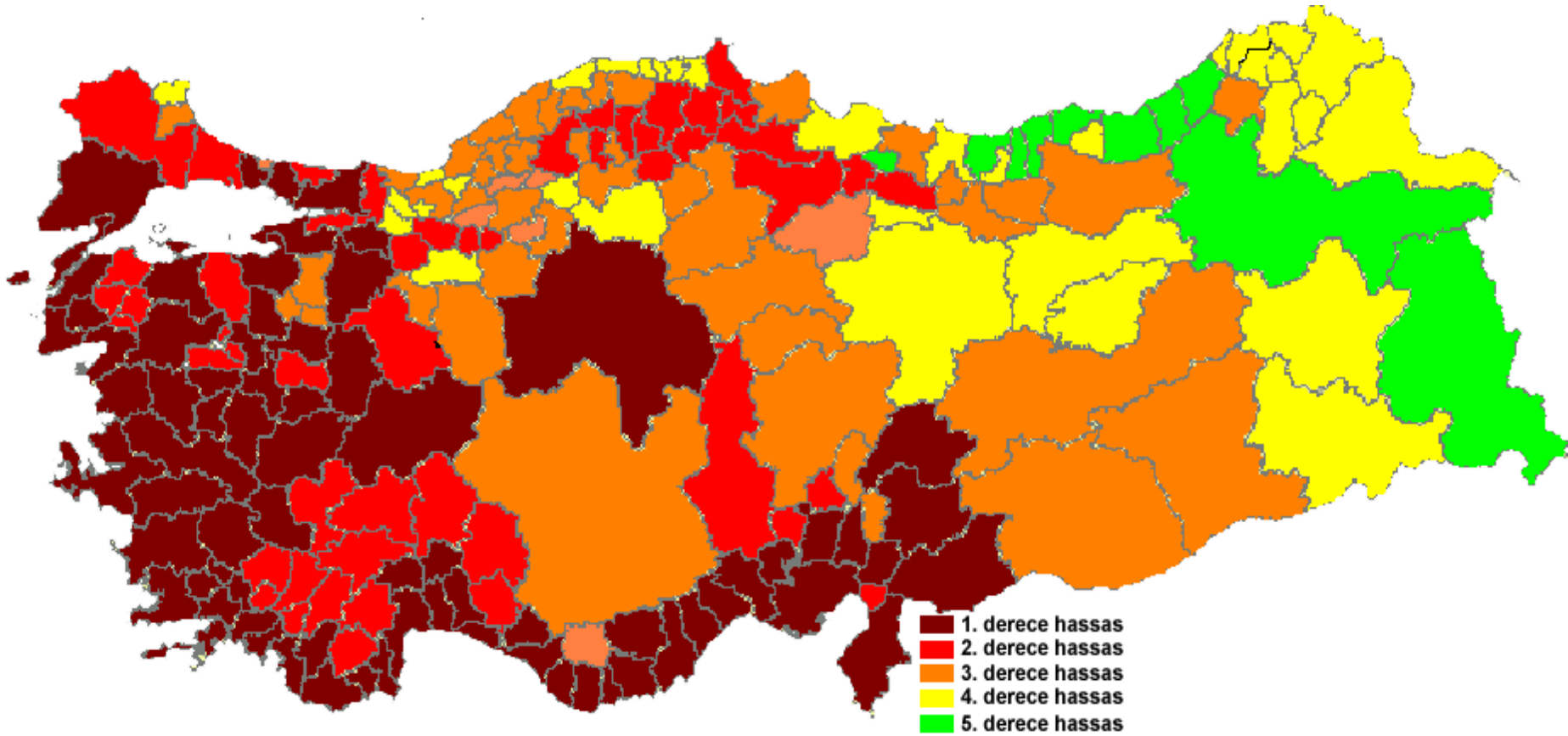
- 4th. Assesment Report of IPCC states, Turkey is located in the Mediterranean Basin, an area which will be affected most severely by climate change.
- Climate change had an additional impact on our existing problems of desertification and water scarcity.
- Fire season comes earlier and lasts longer,
- Fires are more destructive,
- The warmer winters affect water supplies,
- The droughty forest soil makes trees more vulnerable to fire and insects.



Measures to Mitigate Climate Change



Twelve million hectares (approximately 60%) of Turkey forests are located in fire sensitive areas





Early Warning System -I



Early-warning system was set up with the cooperation of GDF, Bilkent University and The Scientific and Technological Research Council of Turkey.

It is a software integrated with cameras that can rotate 360 degrees and have the viewshed of 15-20 km. This software can detect the smog in 10-25 seconds and sends alarm to the fire fighting team.



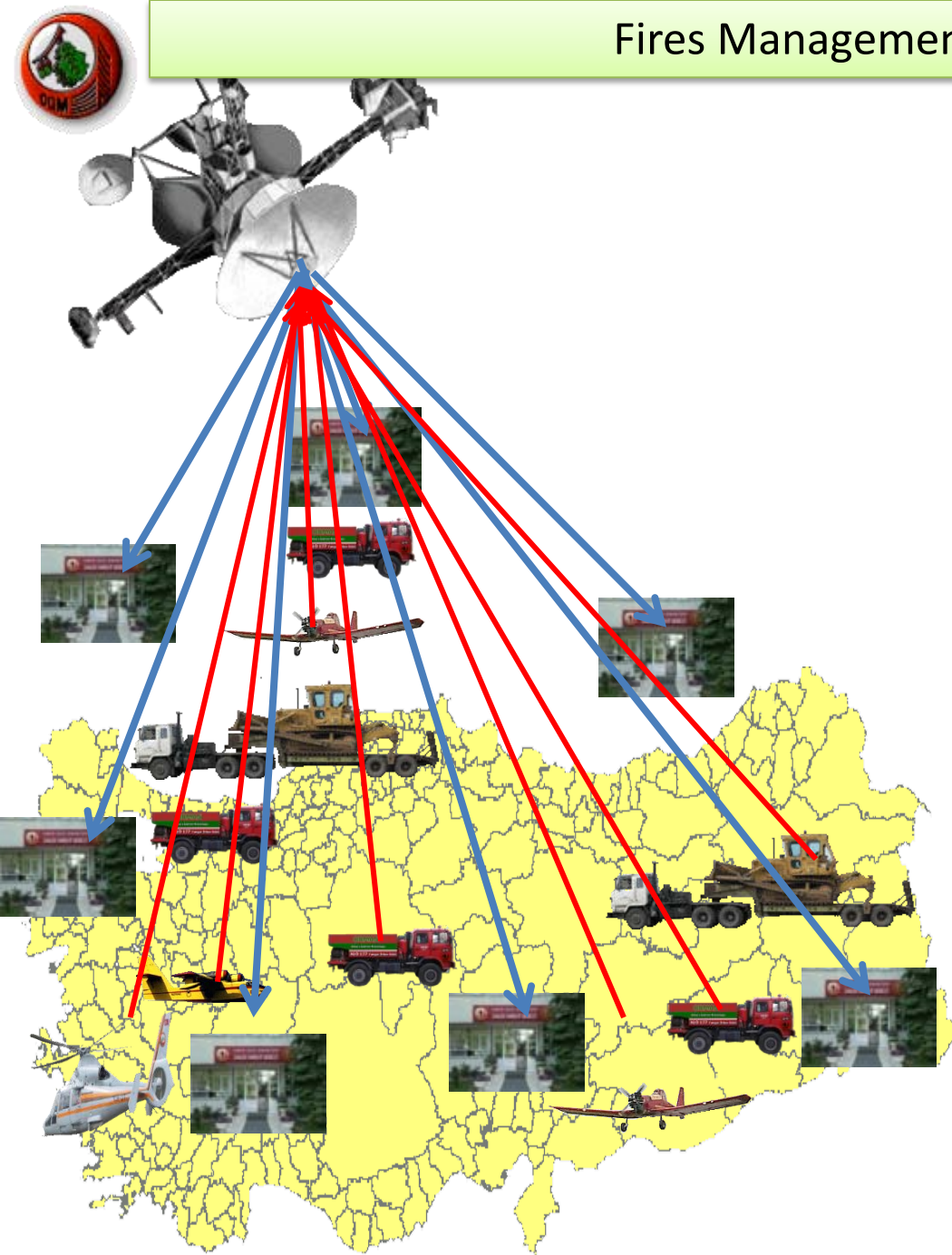
A snapshot of a typical wildfire smoke captured by a look-out tower camera from a distance of 5 Km.

Fires Management System

“ Fire Management System” was established to coordinate forest fires economically, effectively and rapidly.

All fire fighting vehicles (helicopters, trucks, motorcycles..) are being monitored by satellite.

This system facilitates management of fire fighting activities and reduces costs.





Fire Pools and Ponds



- For taking rapid and early action against forest fire where the water sources aren't sufficient; fire pools and ponds are being constructed.
- These pools are used not only for fighting against forest fires but also for agricultural irrigation by local people.
- These pools contribute to micro climate positively .
- There are 600 pools and ponds.





Action Plan

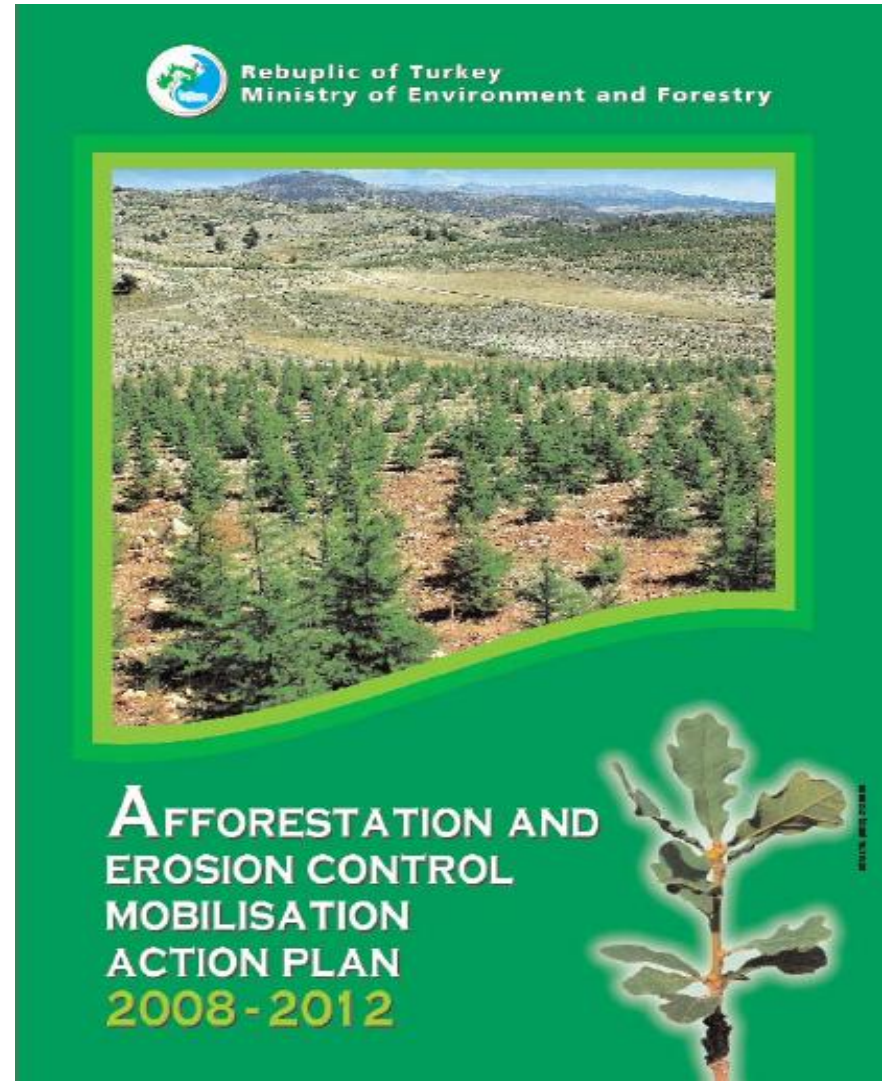


Our policy regarding unproductive forests is to rehabilitate these areas and convert to productive forests. Therefore we prepare an action plan regarding these areas, which called "Afforestation And Erosion Control Mobilization Action Plan 2008-2012". According to this plan 2,3 million hectar area will be rehabilitated and forested.

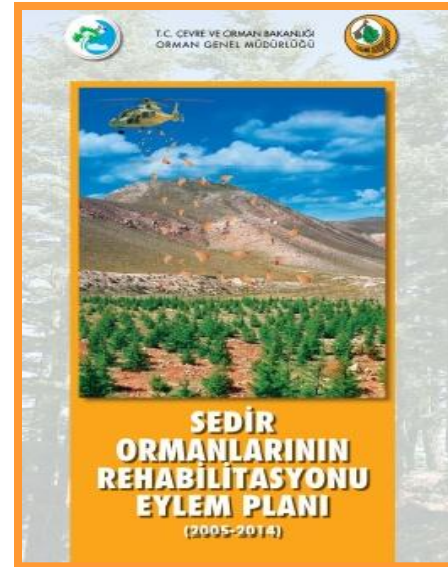
This plan based on:

- 1-Rehabilitation- 1.5 million ha
- 2-Afforestation -250.000 ha
- 3- Erosion Control- 400 000 ha
- 4- Rangeland Rehabilitation- 150.000 ha.

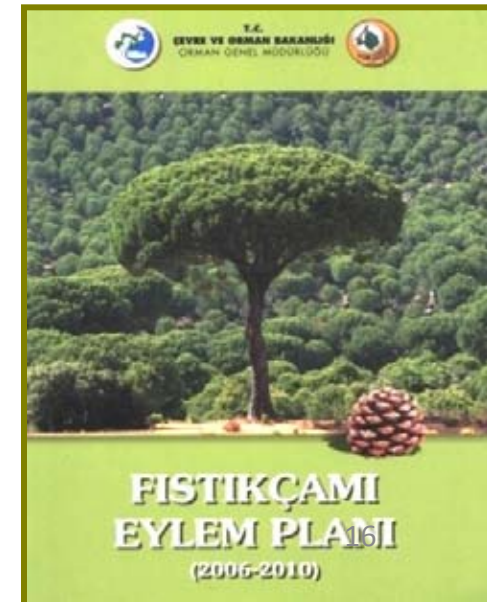
This study covers the rehabilitation greatly.



GD of Forestry have prepared rehabilitation plans for tree species.



- REHABILITATION PLANS;
- Umbrella Pine,
- Cedar ,
- Juniper ,
- Oak rehabilitation,
- Carob bean,





YARDOP PROJECT

(The Project on Rehabilitation of Burned Areas and Establishment of Forest with Fire Resistant Species)



In 2008, nearly 15.000 hectares areas were destroyed by forest fires in Antalya which is located in Mediterranean Region of Turkey



Burned Area





According to Turkish Constitution forest areas destroyed by fires can not be subjected to different uses other than forestry.

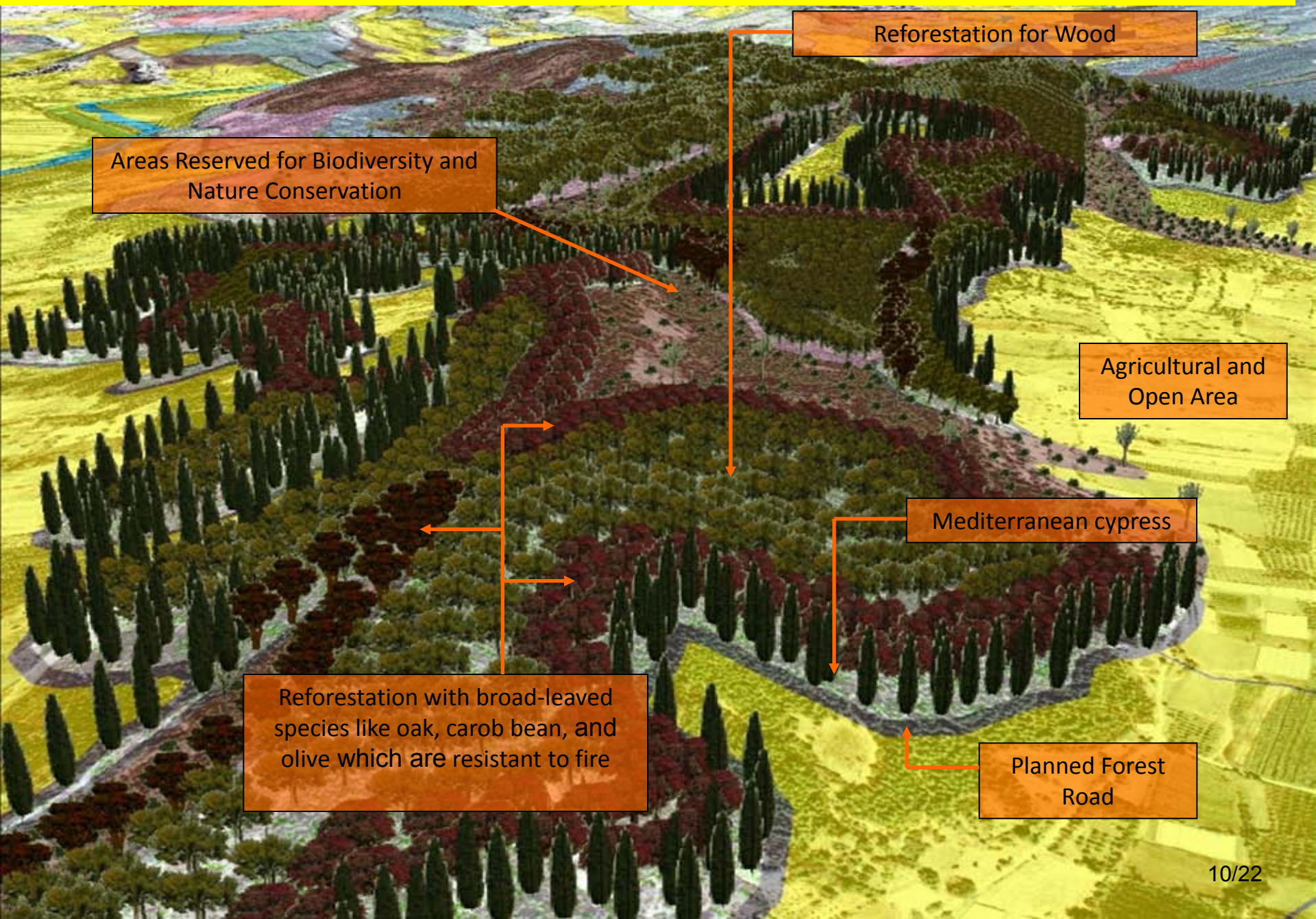


It was decided to prepare a project to make reforestation and rehabilitation activities with local species like oak, carob bean and olive tree.

Name of The Project is “Rehabilitation of burned areas and establishment forest with fire resistant species”

<http://www.yardop.ogm.gov.tr/>

Setting up forest with resistant species



Reforestation for Wood

Areas Reserved for Biodiversity and Nature Conservation

Agricultural and Open Area

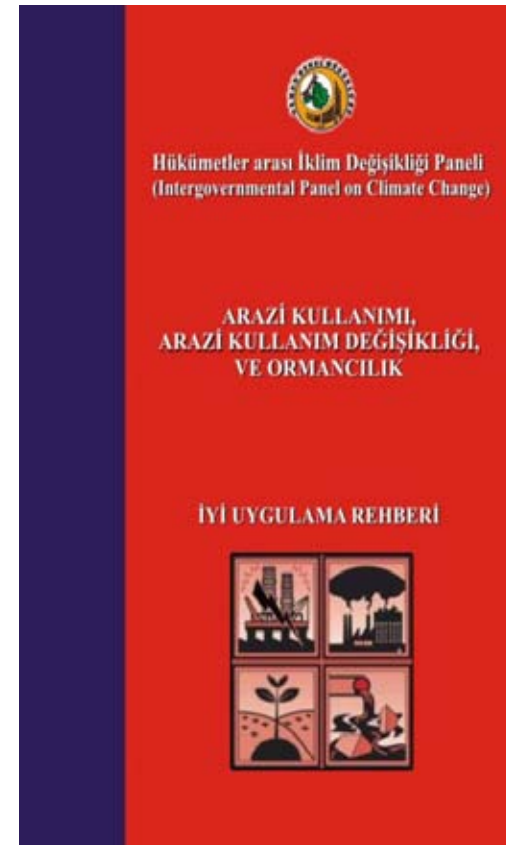
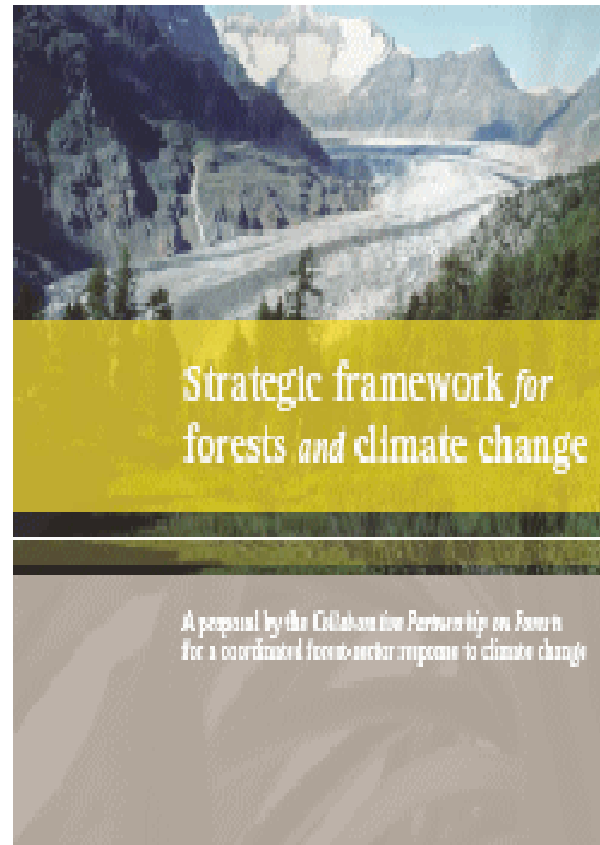
Mediterranean cypress

Reforestation with broad-leaved species like oak, carob bean, and olive which are resistant to fire

Planned Forest Road



- Climate Change working group was established in the GD of Forestry.
- CCWG web site was established <http://www.ogm.gov.tr/iklim/index.htm>.
- we could share all information and improvements regarding climate change through this web site.
- FAO's publication & IPCC Good Practice Guidance were translated to Turkish and published this web site.





How Much Carbon Sequestered Annually in Our Forests

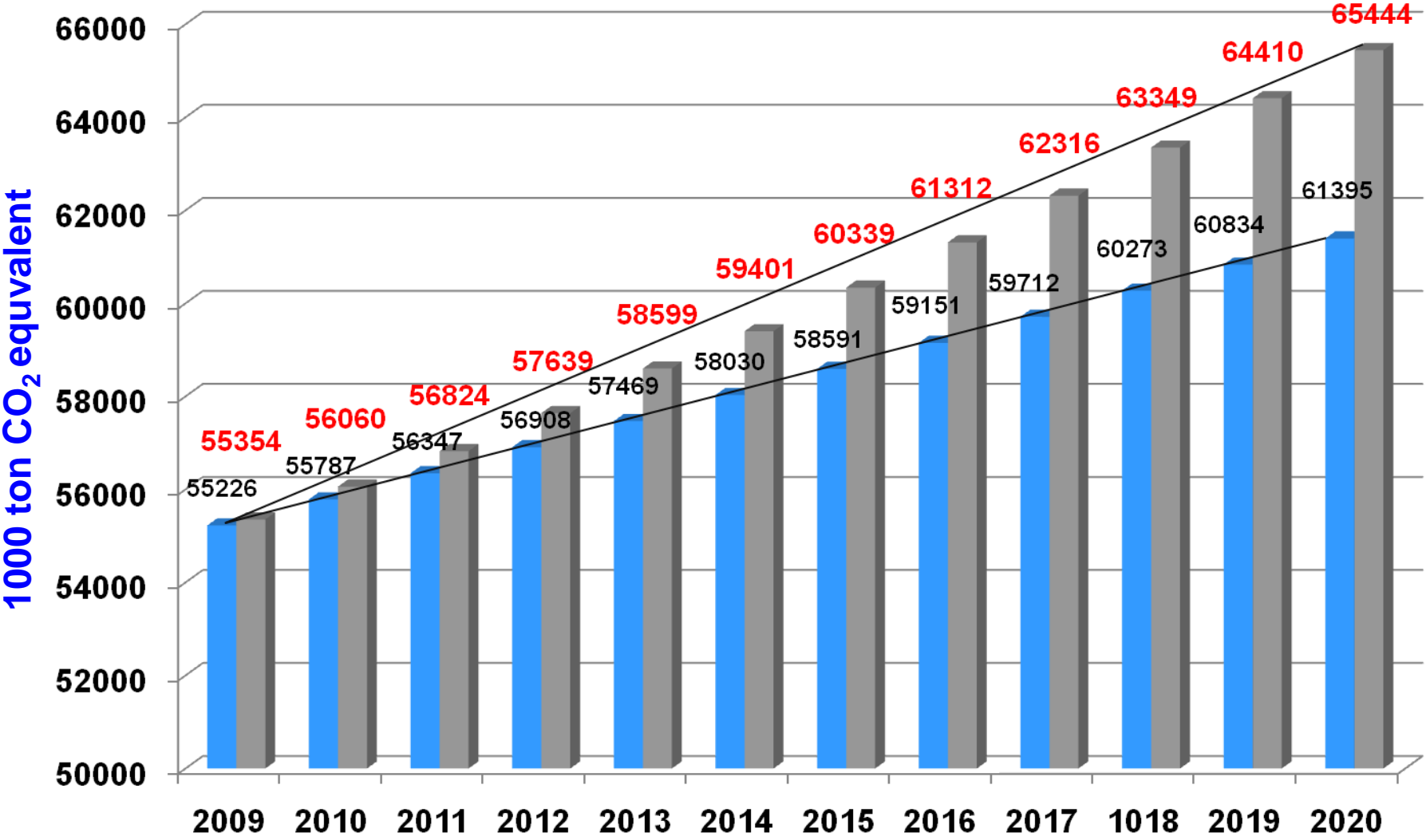


GHG Emmission CO2 equavelent	2003	2004	2005	2006	2007
Total GHG Emission	286.282,49	296.601,93	312.420,27	331.763,40	372.637,00
Removals from LULUCF	-65.753,65	-73.244,63	-69.493,89	-76.165,79	-76.274,00
Removals From Forestry	-52.480,97	-52.257,62	-51.225,66	-53.858,22	-51.384,43

According to Turkey's GHG inventory datas, Forestry sector removes about 72 % of the total removals from LULUCF



Sink Potential From Forestry





SHIP STRANDED IN WHAT WAS THE ARAL SEA



Image: William C. Tumley, 1990

ARAL SEA - DRY SANDS

Thank You

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F3 Tornado Damage



Wildfire in Bitterroot National Forest - Montana USA