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The Gold Standard
Premium quality carbon credits



17-21 mars
march 2013

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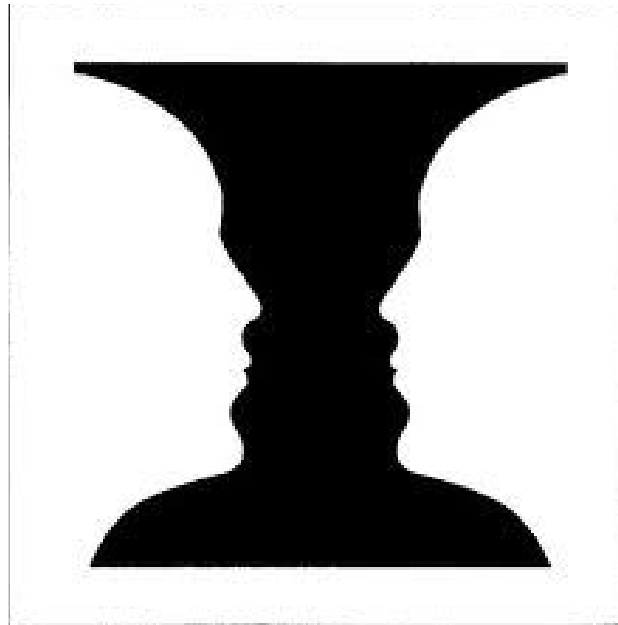
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ENHANCING FOREST GOOD AND SERVICES in TURKEY

**NAMA, MRV, Carbon projects with
a revenue sharing mechanism**

Nuri Özbağdatlı
UNDP Turkey Country Office

Who can see a vase?



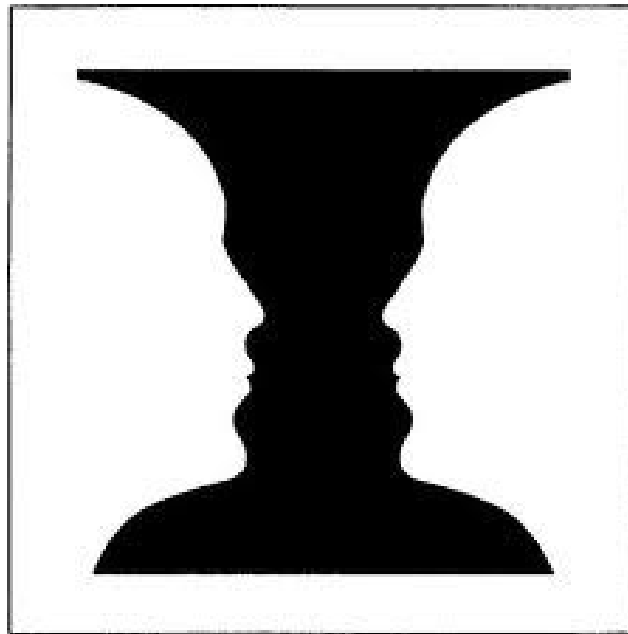
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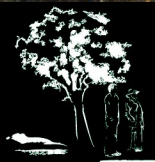
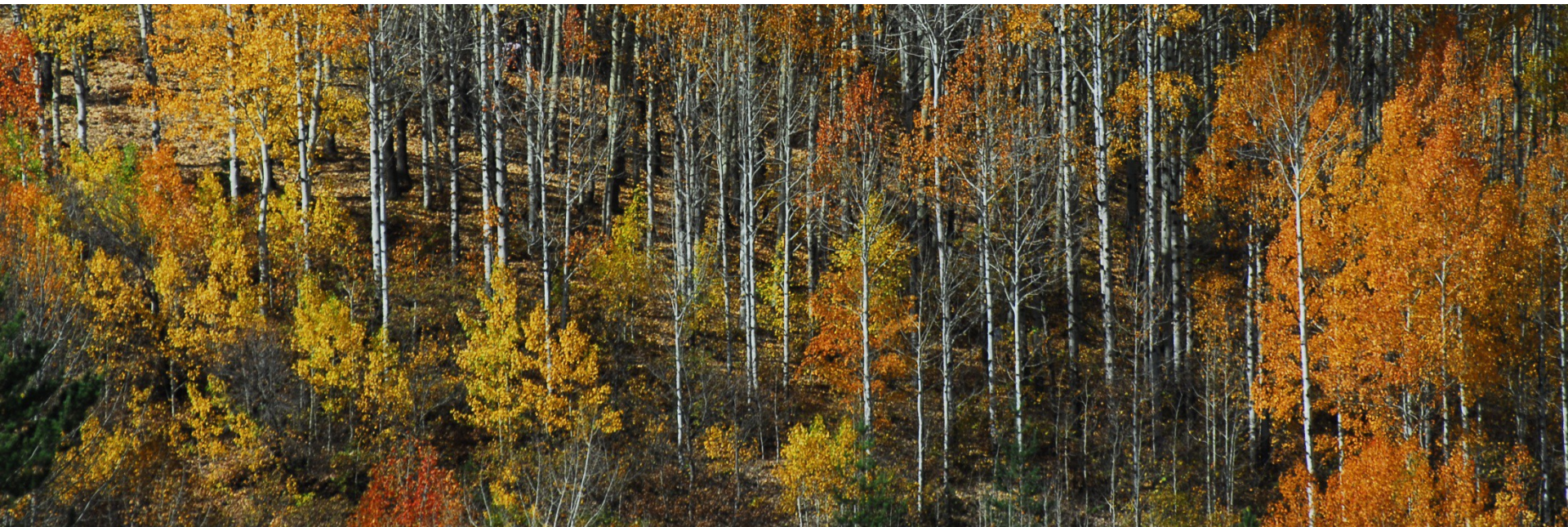
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Who can see a face?



Content

- UNDP Turkey's projects on sustainable forest management
- Integrated Forest Management Project (2013-2018)
 - NAMA
 - MRV
 - CC Mitigation
 - Carbon projects
 - Revenue sharing mechanism



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UNDP Turkey's projects on SFM

- Forest and Water Project
- Carbon Market for Afforestation/Reforestation Activities (as a partner)
- Memorandum of Understanding with Chamber of Forest Engineers
- New GEF project on integrated forest management



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New initiative – Integrated Forest Management Project

- 2013-2018
- ca. 650,000 ha area
- Forestry NAMA, MRV, LULUCF Database
- Integrated fire and pest management
- Carbon focused silviculture activities
- Micro-credits for solar power
- ca. 80,000 ha protected forest
- Participatory business plans on non-wood forest products and ecotourism
- Revenue sharing mechanism for carbon credits

Organization	Amount (US Dollars)
GEF	7.120.000 grant
General Directorate of Forestry	19.400.000 (17.400.000 in cash+2.000.000 in kind)
UNDP	820.000 (640.000 in cash+ 180.000 in kind)
GIZ	600.000 in cash
WWF Turkey	150.000 in kind
Nature Conservation Center	150.000 in cash
Chamber of Forest Engineers	160.000 (110.000 in cash+50.000 in kind)
The Central Union of Turkish Forestry Cooperatives	50.000 in kind
Gold Standard	100.000 in cash
TOTAL	28.550.000 US Dollars



Turkey's benefits from the project

Policy and institutional framework for integrated forest management within landscape

- **LULUCF Unit:** An adequately staff and funded LULUCF unit with technical capacities to drive forward forest carbon efforts in the country
- **Accounting for multiple benefits of forests:** Detailed SFM criteria and indicators for multiple benefits encourage and support the development of a carbon-oriented approach that takes full account of biodiversity and other co-benefits
- **Monitoring, reporting and verification systems:** Initial development and deployment of a system for MRV of forest carbon changes, together with associated co-benefits, in the Mediterranean region
- **Human capacities for multiple-benefit-based management:** Staff of LULUCF unit and foresters trained on LULUCF, carbon monitoring and related accounting, as well as biodiversity monitoring.
- **Development of a forest sector NAMA:** Turkey has a fully developed NAMA covering 2-4 million ha of Mediterranean forest, with field-tested methodologies and approaches to achieving carbon benefits along with co-benefits and revenue sharing mechanism, along with clear indications of cost effectiveness.



Turkey's benefits from the project

Implementation of forest-based GHG mitigation and carbon sequestration tools within landscape

- **Fire management systems:** Integrated fire management systems have been demonstrated, covering mitigation, prevention, preparedness and fire suppression. Projected carbon losses due to fire at pilot sites = 1,983 tCO₂0/y
- **Carbon-oriented Silvicultural techniques:** Suitable techniques for carbon- and biodiversity-focused silviculture techniques demonstrated, including field-based measurements of growth and cost effectiveness. Projected carbon gains from silviculture at pilot sites = 11,561 tCO₂e/y
- **Fuelwood removals:** 1,100 families have received solar hot water heaters and / or related solar equipment, leading to declines in emissions due to projected fuelwood removals at project demonstration sites of 13,038 tCO₂e/y
- **Pest management:** Two well equipped laboratories, together with well trained staff. Projected carbon losses due to pests at project sites is 15,094 tCO₂e/y
- **Site-level carbon stock and flux measurements:** Turkey has experience with taking carbon stock and flux measurements, including methods related to remote sensing and satellite imagery, with results used to strengthen and validate its MRV



Turkey's benefits from the project

Protection of high conservation value forests in Mediterranean landscape

- **Protection of high nature value forests:** Use of regulatory tool for protection of high nature value forest is demonstrated at multiple locations within the five demonstration sites, totaling 79,960 ha. New areas, together with existing PAs, see important increases in management effectiveness
- **Embedding protected areas and protected forests within landscape:** Sustainability of newly protected forests, as well as two existing PAs, is enhanced by biodiversity-friendly planning and management, including establishment of buffer zones and corridors within FEDs
- **Ecotourism and nwfp development in Mediterranean forests:** Expanded development of ecotourism and NWFPs increases incomes among some forest-dependent people, while providing useful demonstration of market-oriented approaches to multiple forest use.



Climate benefits of the project

to be submitted as a carbon project

	CO2-eq/y reduced or avoided			
	Reduced fuel-wood removal	reduced impact of pests	reduced fires	TOTAL
KÖYCEGİZ	539.51	3,212.76	81.94	3,834.21
ANDIRIN	6,714.98	1,774.05	21.00	8,510.04
GÜLNAR	268.38	17,822.27	1,465.71	19,556.35
GAZIPASA	915.01	4,958.90	46.27	5,920.18
POS	4,599.95	2,419.73	31.00	7,050.68
TOTAL	13,037.83	30,187.71	1,645.92	44,871.46

	Carbon (CO2-eq/y) sequestered
	improved silviculture
KÖYCEGİZ	3,368.87
ANDIRIN	2,846.08
GÜLNAR	1,455.27
GAZIPASA	2,202.65
POS	1,688.17
TOTAL	11,561.04



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Demonstration sites

Muğla Regional Directorate-Köyceğiz FED

Antalya Regional Directorate-Gazipaşa FED

Mersin Regional Directorate-Gülnar FED

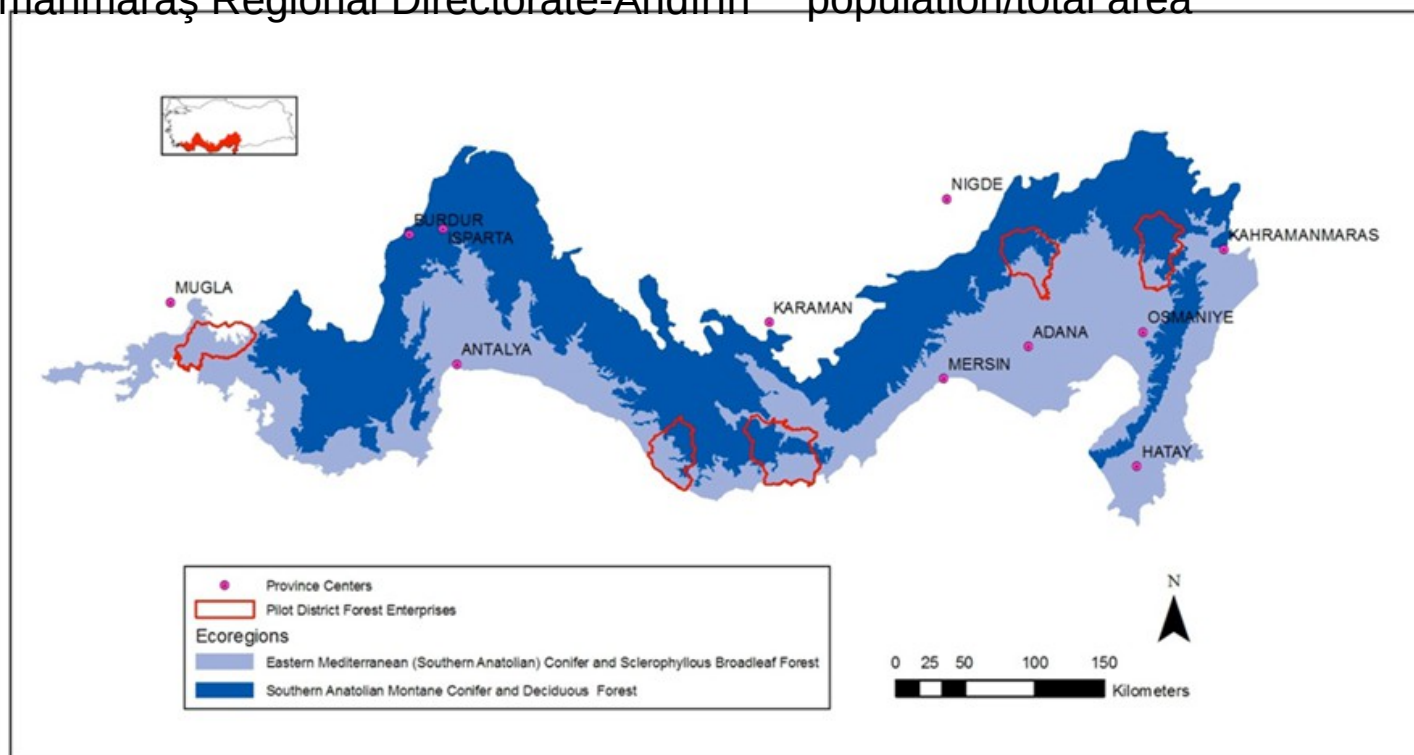
Adana Regional Directorate-Pos FED

Kahramanmaraş Regional Directorate-Andırın
FED

Total Area: 651,922 ha

Total Forest Area: 264,619 ha

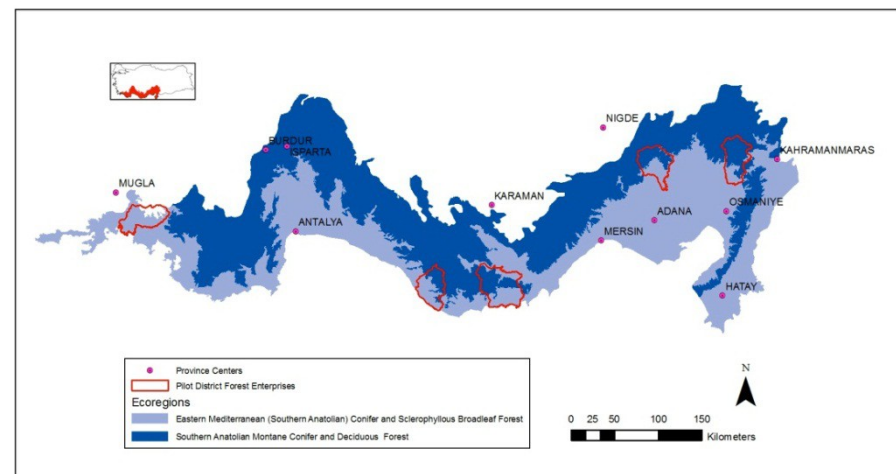
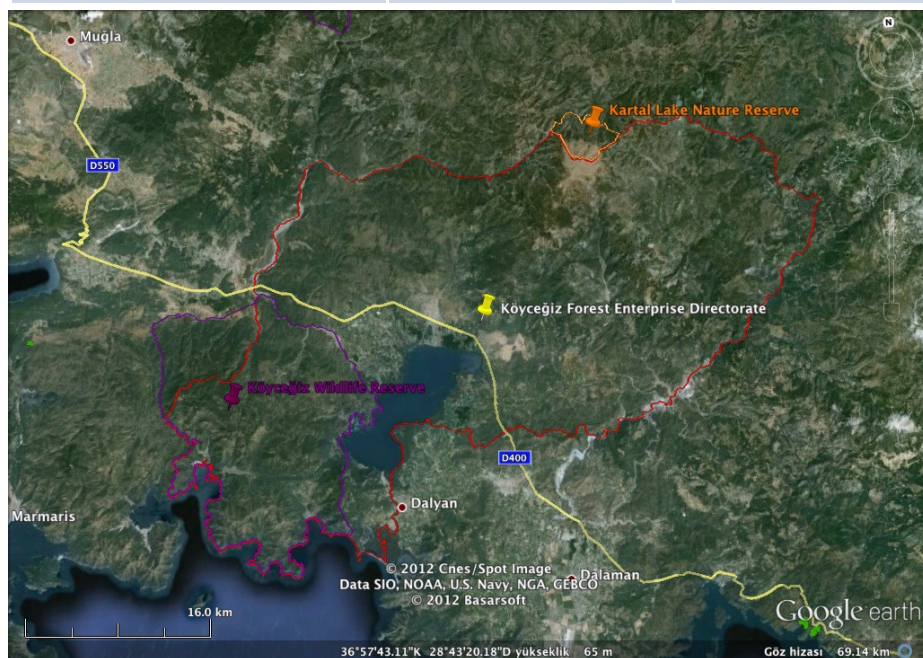
Human population density: 0,20
population/total area



Koycegiz Forest Enterprise Directorate

Name of the forest district	KÖYCEĞİZ*	Average age of stands	80 years for coniferous, 60 years for deciduous
Size of the district, ha	119,077.5	% of degraded forests out of the total area of forests (crown density between 10-15%)	There are 19,122.5 ha area having crown density between 11-40%. 1/6 of these area approximately 3,187.08 ha is 10-15%
Area of forests within the district, ha	68,709	Human population density within the district, persons/ha	23,929*/ 119,077.5= 0.201 *Rural population TUIK 2011 (www.tuik.gov.tr)
% of forests out of the total area of district	57.70 %	Who owns and who manages the forests	STATE (GDF)

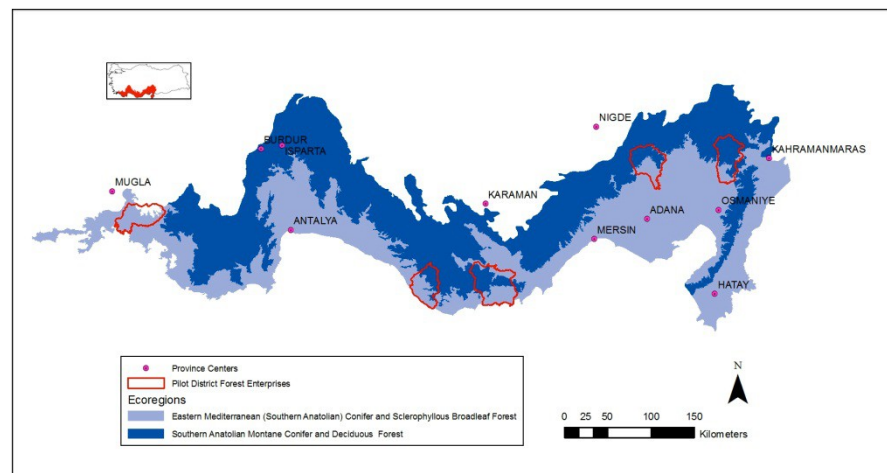
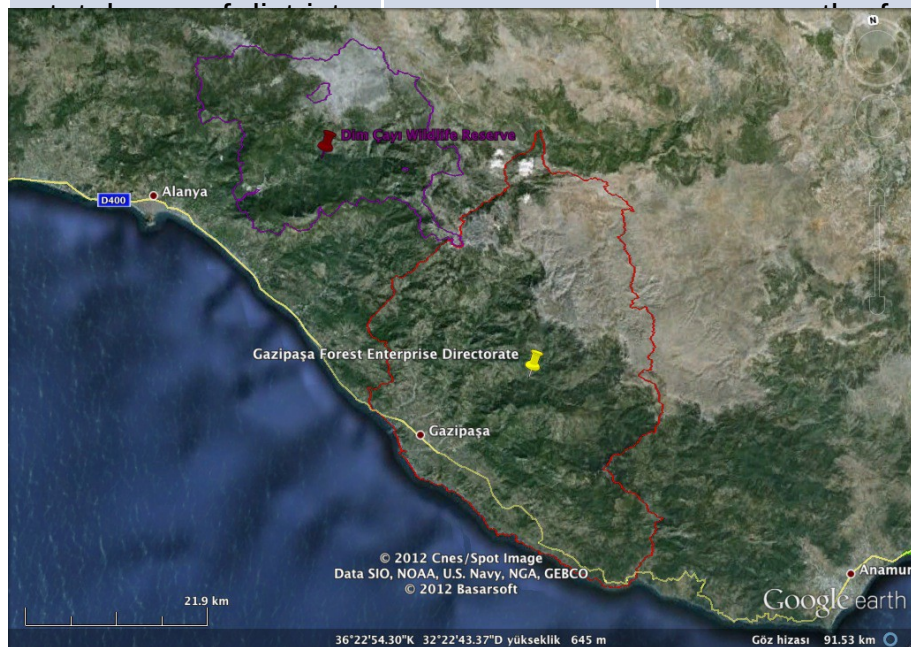
Source: ENVANIS database for 2009



Gazipaşa Forest Enterprise Directorate

Name of the forest district	GAZİPAŞA*	Average age of stands	50
Size of the district, ha	107,376.3	% of degraded forests out of the total area of forests (crown density between 10-15%)	There are 7,223.1 ha area having crown density between 11-40%. 1/6 of these area approximately 1,203.83 ha is 10-15%
Area of forests within the district, ha (Crown closure 11 + %)	34,187.1	Human population density within the district, persons/ha	2,7550* / 100,834 = 0,273 *Rural population TUIK 2011 (www.tuik.gov.tr)
% of forests out of the	31,84 %	Who owns and who manages	STATE (GDF)

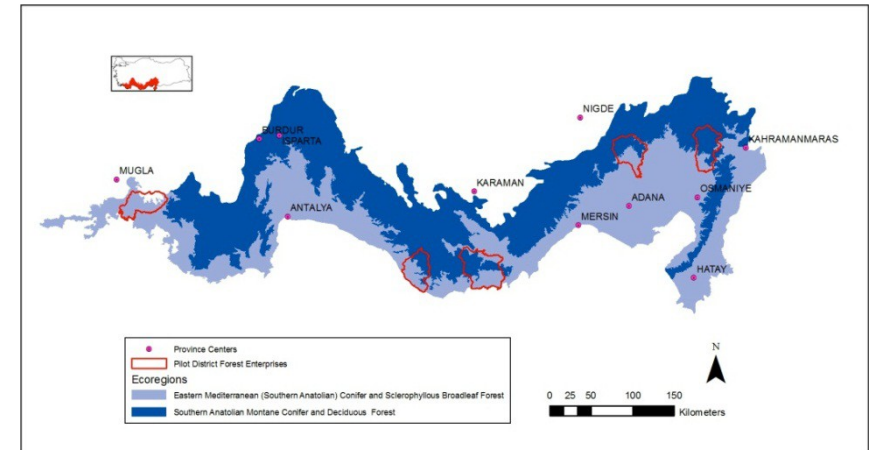
Source: ENVANIS database for 2009



Gülnar Forest Enterprise Directorate

Name of the forest district	GÜLNAR*	Average age of stands	80
Size of the district, ha	183,208	% of degraded forests out of the total area of forests (crown density between 10-15%)	There are 29,968 ha area having crown density between 11-40%. 1/6 of these area approximately 4,994.7 ha is 10-15%
Area of forests within the district, ha	56,413	Human population density within the district, persons/ha	22,762* / 183,208 = 0.124 *Rural population TUIK 2011 (www.tuik.gov.tr)
% of forests out of the total area of district	30.79%	Who owns and who manages the forests	STATE (GDF)

Source: ENVANIS database for 2009



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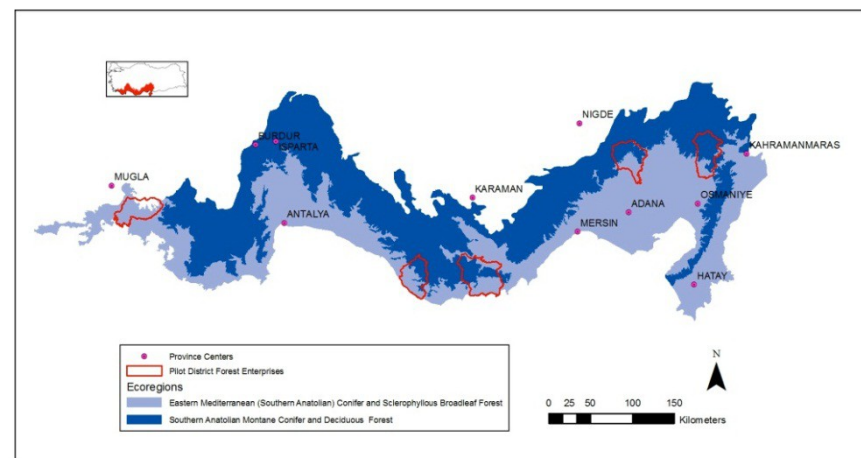
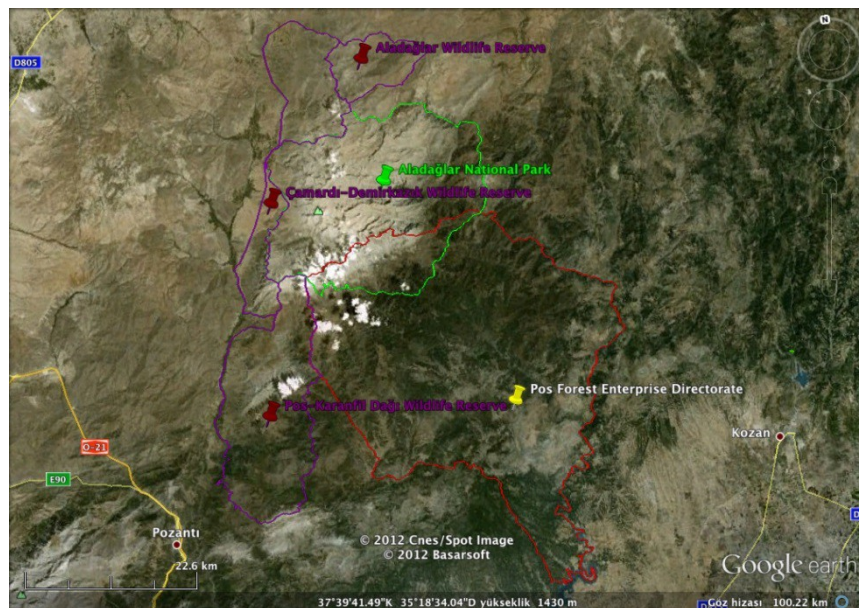
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Pos Forest Enterprise Directorate

Name of the forest district	POS*	Average age of stands	80
Size of the district, ha	120,052.5	% of degraded forests out of the total area of forests (crown density between 10-15%)	There are 21,753 ha area having crown density between 11-40%. 1/6 of these area approximately 3,625.5 ha is 10-15%
Area of forests within the district, ha	65,554.5	Human population density within the district, persons/ha	13,568* / 120,052.5 = 0.11 *Rural population TUIK 2011 (www.tuik.gov.tr)
% of forests out of the total area of district	54.60 %	Who owns and who manages the forests	STATE (GDF)

Source: ENVANIS database for 2009



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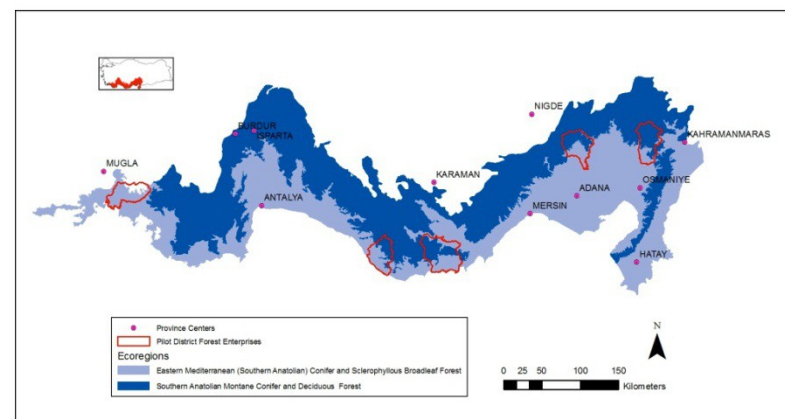
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Andırın Forest Enterprise Directorate

Name of the forest district	ANDIRIN*	Average age of stands	80
Size of the district, ha	122,208	% of degraded forests out of the total area of forests (crown density between 10-15%)	There are 6,999 ha area having crown density between 11-40%. 1/6 of these area approximately 1,166.5 ha is 10-15%
Area of forests within the district, ha	39,756	Human population density within the district, persons/ha	$3,2889^* / 122,208 = 0.269$ *Rural population TUIK 2011 (www.tuik.gov.tr)
% of forests out of the total area of district	35.53 %	Who owns and who manages the forests	STATE (GDF)

Source: ENVANIS database for 200



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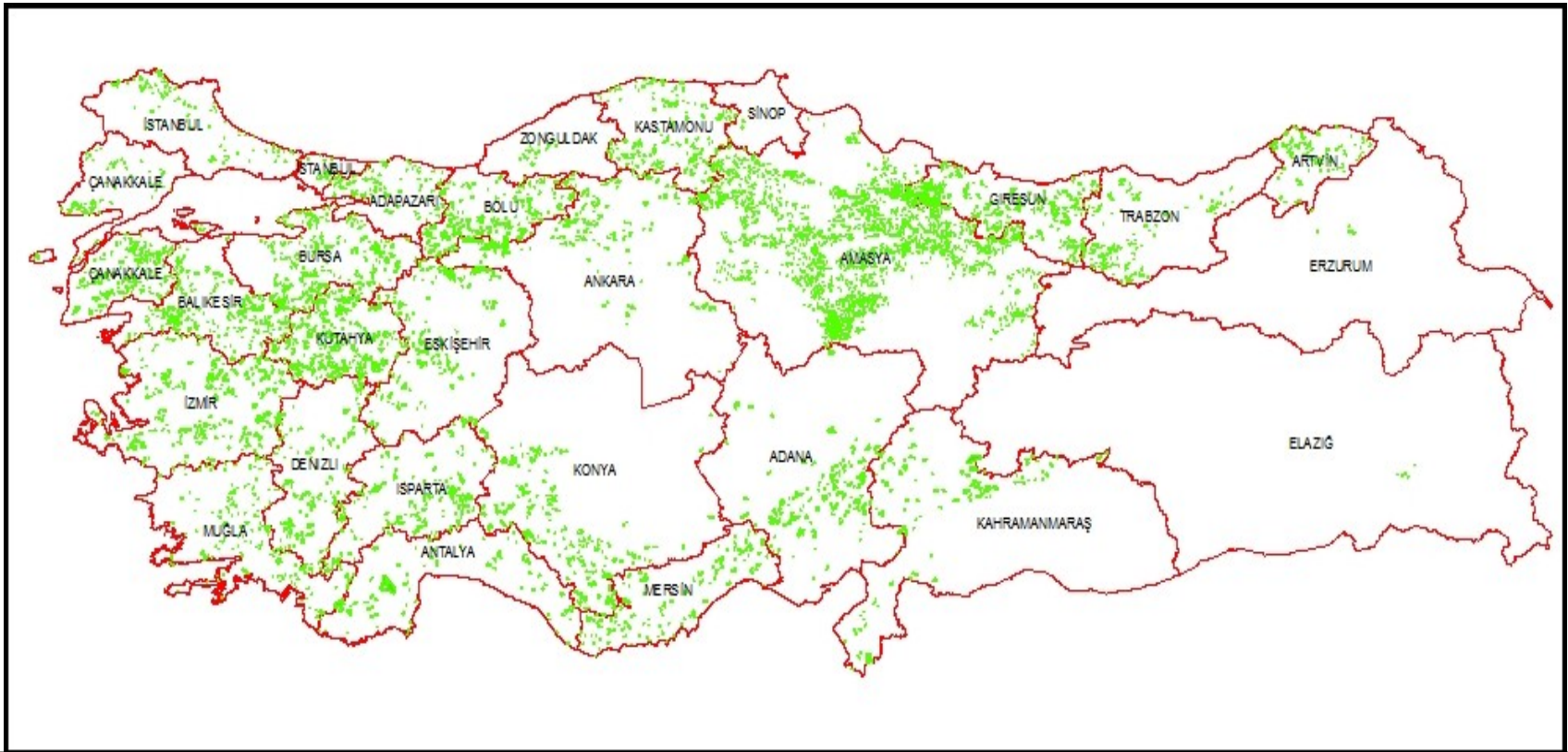
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Turkey is not eligible for REDD

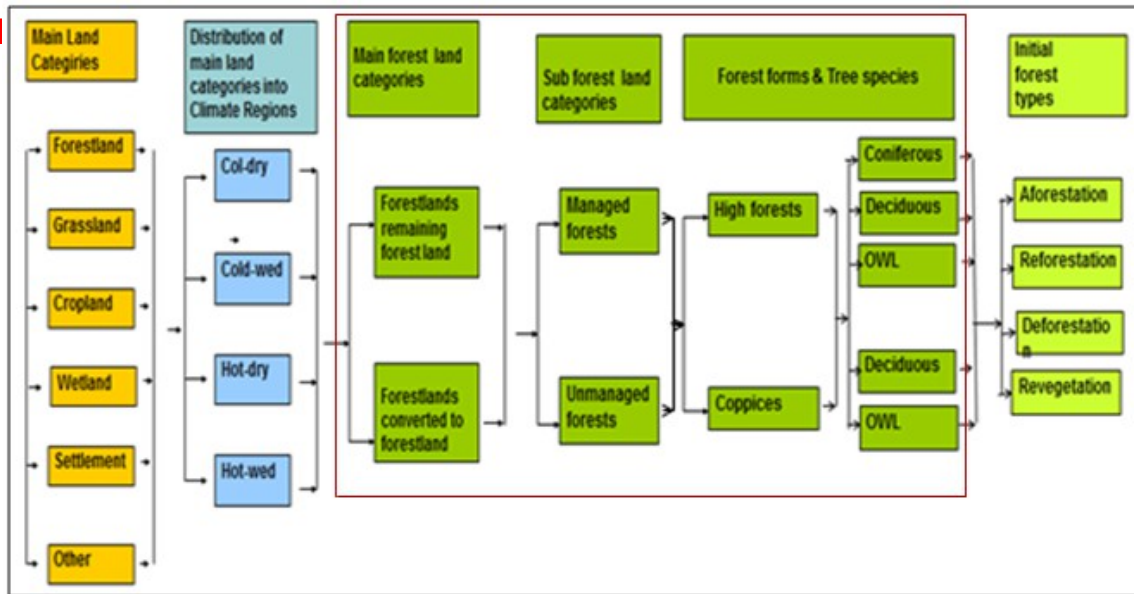
- Nationally Appropriate Action Plan (**NAMA**)
- MRV
- Voluntary Carbon Markets
- New Standards for Forest Carbon Projects
- Tentative map below showing the suitable areas for forest carbon projects in Turkey – ca. 4.2 million hectares



For a successful **NAMA**

- an effective carbon assessment methodology (MRV system),
- climate change mitigation function integrated into National SFM C&I
- data-base (LULUCF database integrated into National Forest Information System),
- institutional capacities (LULUCF Unit in the General Directorate of Forestry)
- nationally applicable and internationally acceptable standard
- demonstration activities (in Mediterranean Region ca. 650,000 ha)
- replication strategies
- links with voluntary and compliance carbon markets

revenu



Revenue sharing mechanism for carbon projects

- Requires careful calculation about what proportion of offsets belongs to forest villagers
- The legal entity of each forest village should be recognized as a party to be involved
- Involvement of forest communities could further be more effective and meaningful if cooperatives for forest villages (FORCOOP's) are recognized and directly involved
- Magnitude of the expected revenue - it might be socio-economically wiser to allocate a village of 100 households 5,000 dollars a year rather than allocating

Forest Village (by Article 31 and 32 of the Forest Law)	Num. (2009)	Pop. (2009)
POS	26	13435
GAZİPAŞA	41	24142
ANDIRIN	53	29962
GÜLNAR	22	6196
KÖYCEĞİZ	17	14250
Total	159	87985



How can project support Strategic Framework?

Objectives	Strategic lines	Project Outputs
Developing and promoting forest goods and services	Improve sustainable production of goods and services by Med forests	1.2., 2.3., 3.2., 3.3.
	Enhance the role of Med forests in rural development	3.3.
	Promote forest governance and land tenure reform at a landscape level	1.2., 3.3.
Promoting resilience under global changes	Promote wildfire prevention in the context of global changes	2.1.
	Manage Forest Genetic Resources and biodiversity to enhance adaptation of Med forests to climate change	2.4., 3.1., 3.2., 3.3.
	Restore degraded Med forests landscapes	2.2.
Enhancing capacities and mobilizing serources	Develop knowledge, training and communication on Med forests	1.1., 1.4.
	Reinforce international cooperation	1.4.
	Adapt existing financing schemes and develop innovative mechanisms to support implementation of forest policies and programmes	1.3., 1.5., 2.3., 2.5., 3.3.





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Thank you very much for your attention

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