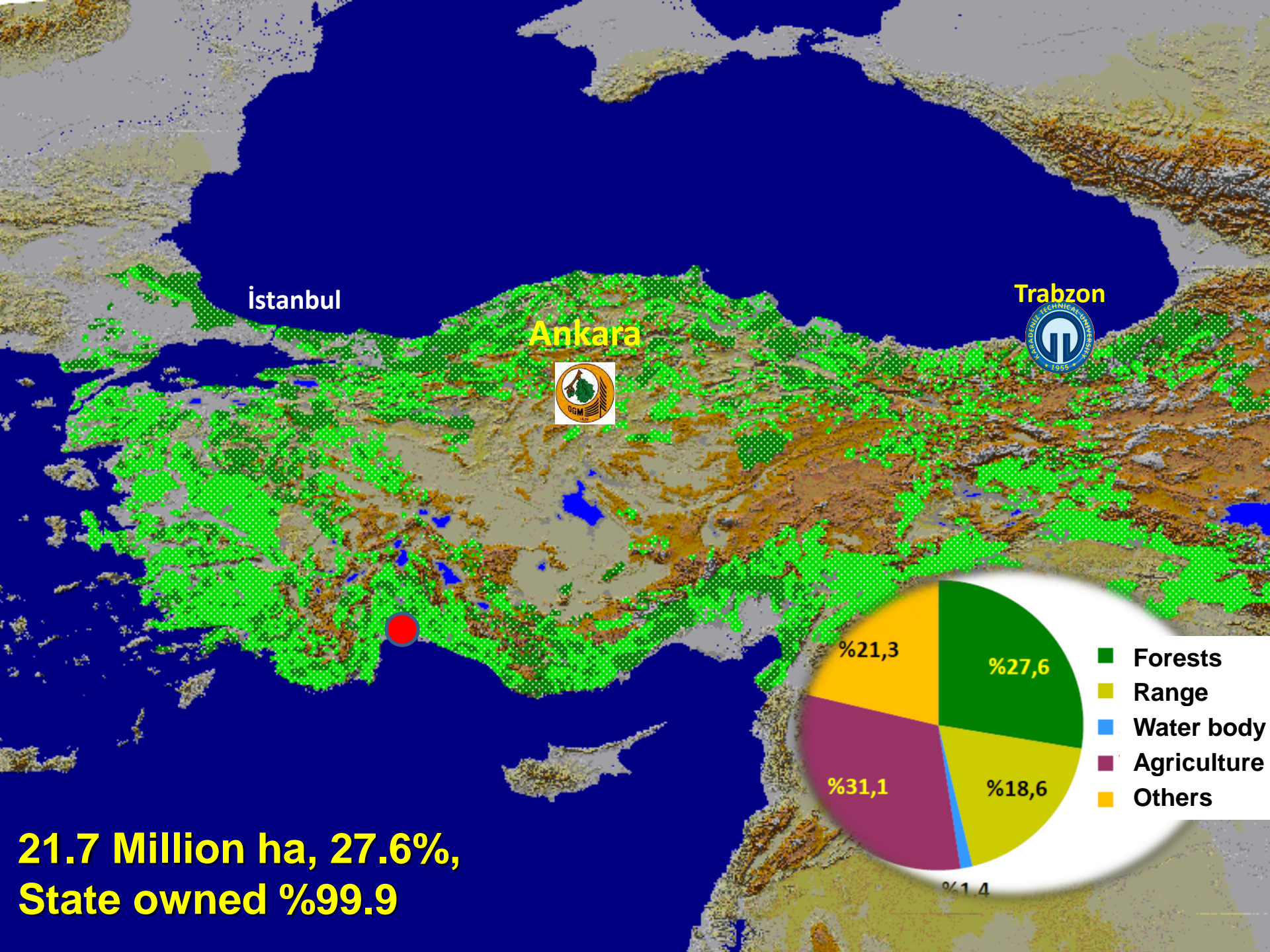




Management of NWFP in Turkey: An Overview

Emin Zeki BAŞKENT, KTÜ
İsa SERTKAYA, OGM
Turkey

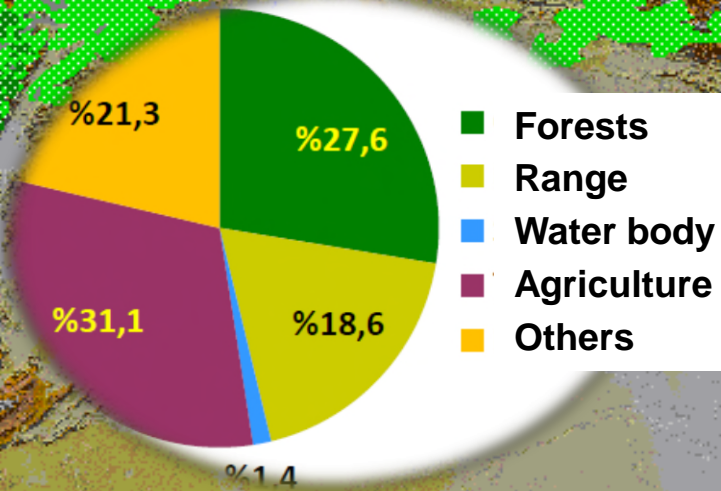




Istanbul

Ankara

Trabzon



21.7 Million ha, 27.6%,
State owned %99.9

Forest Resources (2012)

Area Distribution

Forest Type	Normal	Degraded	Total Area (ha)	%
High Forest	10,281,728	6,978,864	17,260,592	79.6
Coppice	1,276,940	3,140,602	4,417,542	20.4
Total	11,558,668 (54)	10,119,466 (%46)	21,678,134	100

Forest Resources (2012)

Growing Stock (m3)

Forest Type	Normal	Degraded	Volume (m3)	%
High Forest	1.365.186.239	59.319.695	1.424.505.934	95
Coppice	52.296.445	17.652.159	69.948.604	5
Total	1.417.482.684 (95)	76.971.854 (%5)	1.494.454.538	100

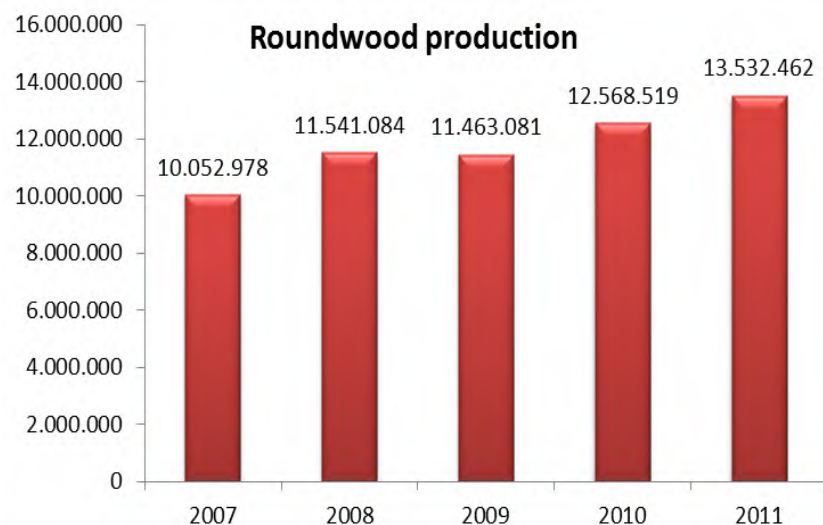
46.3 m³/ha → 68.8 m³/ha

Forest Resources (2012)

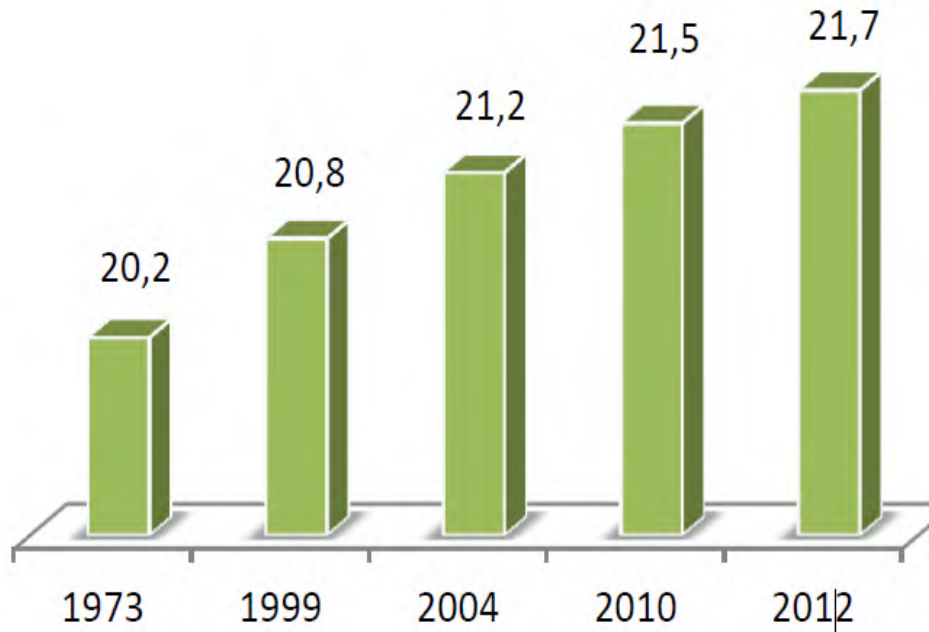
Total Increment and AAC (m³)

Forest Type	Normal	Degraded	Increment(m ³)	%	AAC
High Forest	37.300.713	1.411.640	38.712.353	92	13.269.618
Coppice	2.719.466	747.296	3.466.762	8	3.725.583
Total	40.020.179 (95)	2.158.936 (%5)	42.179.115	100	16.995.201

1.4 m³/ha/year → 2 m³/ha/year



Trends in Forest Resources

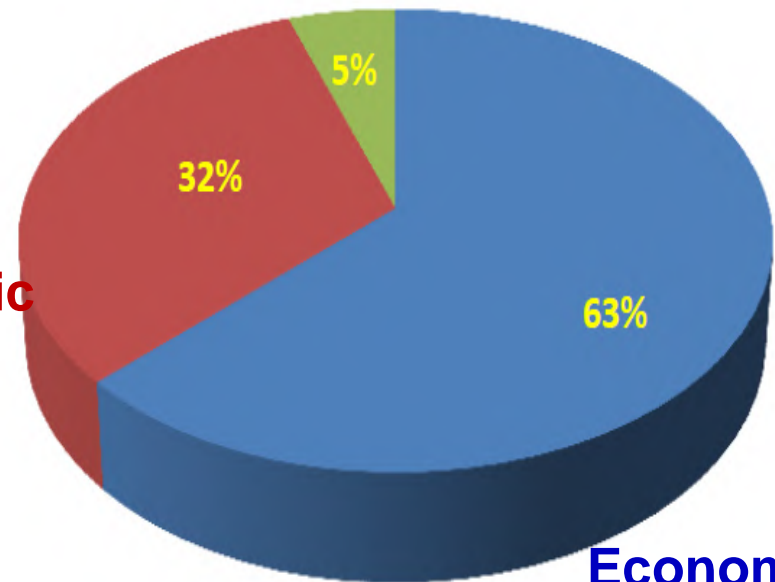


Socio-cultural

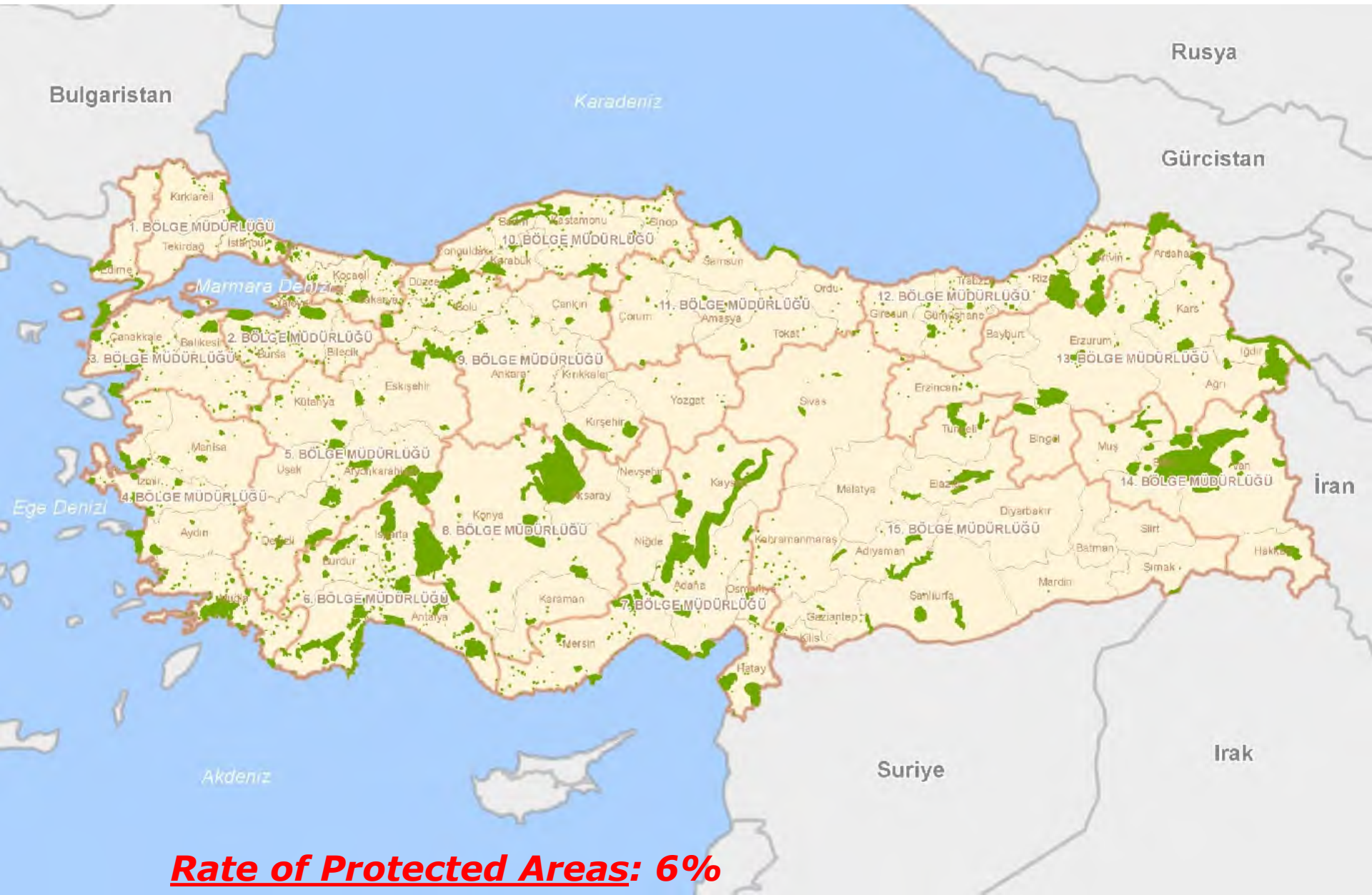
Ecologic

63%

Economic



Protected Areas (GDF and GDNPNP)

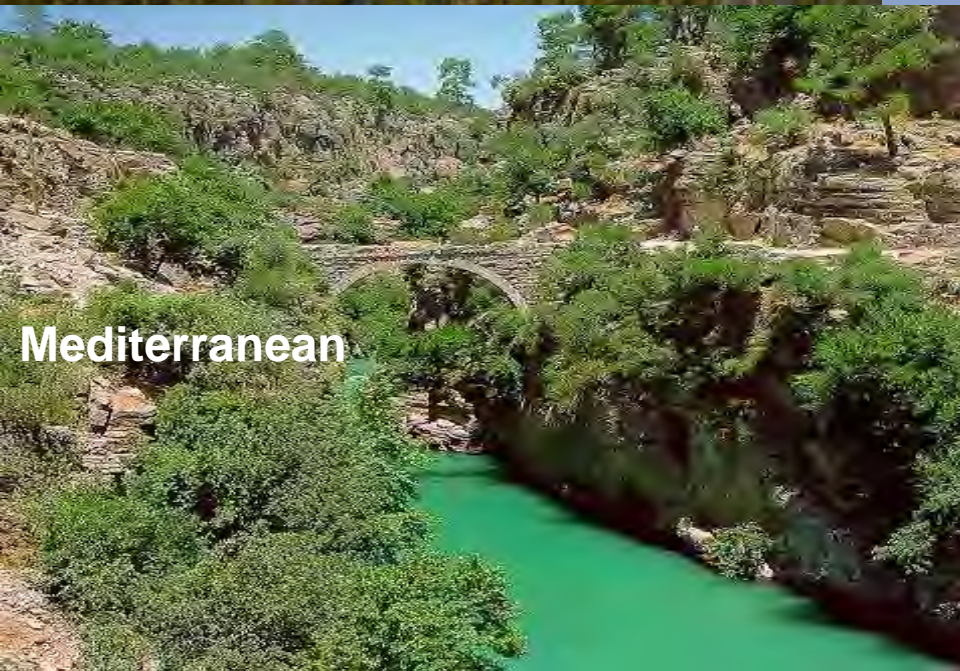


Various ecosystems...

Western Subtemperate



Blacksea quasi boreal



Anatolian



NWFP Potential in Turkey

✓	Plants	11.700
✓	Animals	1.500
✓	Macrofungi	1.600



17-19 February '15, Antalya, ©EZB-IS

Cultivating NWFP in Private land

Walnut



Almond



Pistachio



Chestnut



Laurel



Pine nuts



Carob

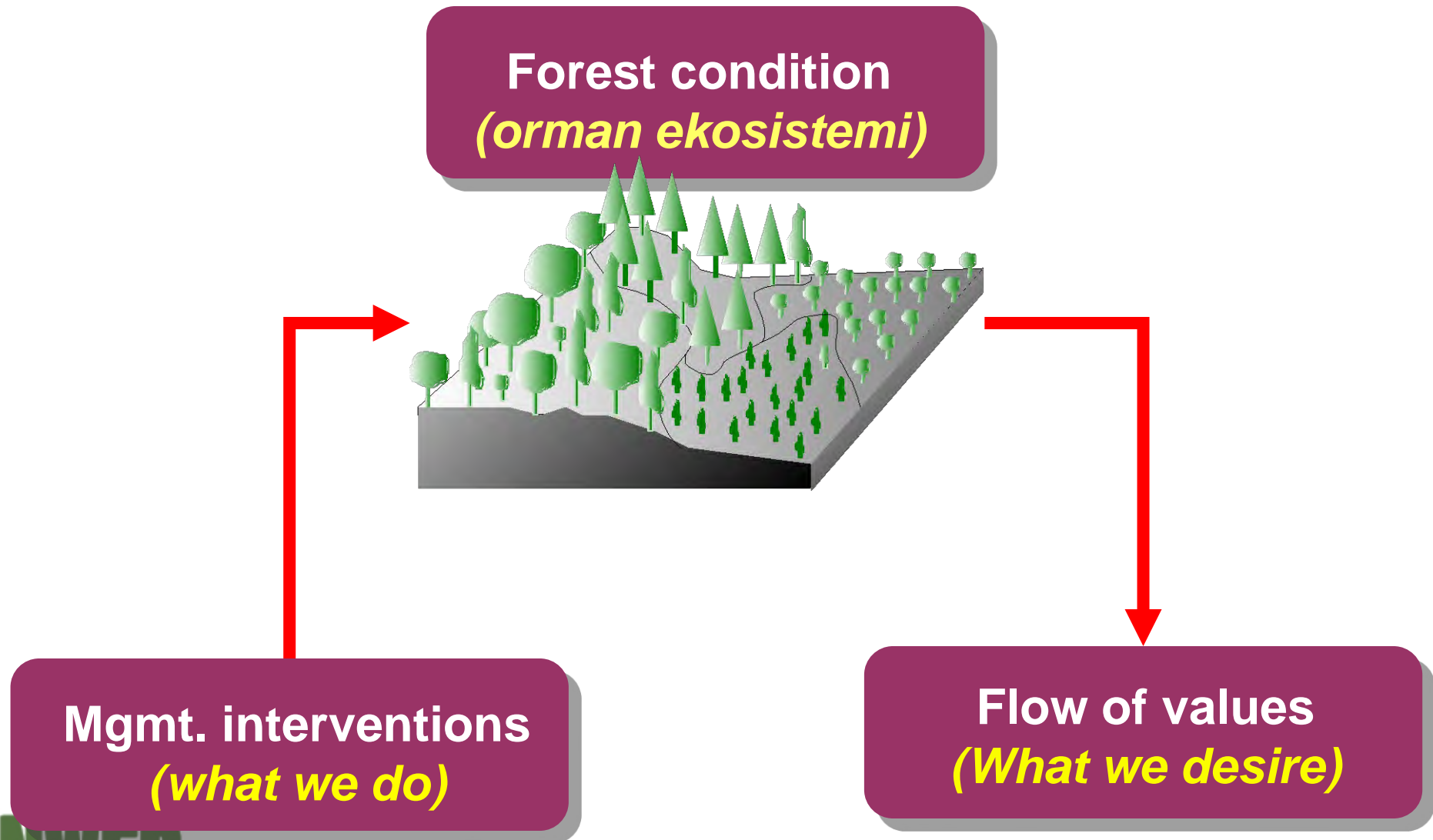


Rosehip



Special grants and credits are allocated on economically feasible species

Forest management



ECOSYSTEM BASED MULTIPLE USE PLANNING PROCESS



PLANNING TARGETS

... FOREST POLICY ...

MANAGEMENT OBJECTIVES



ECOSYSTEM INVENTORY



STRATIFICATION



FUNCTIONAL RELATIONSHIP



PLANNING POLICIES

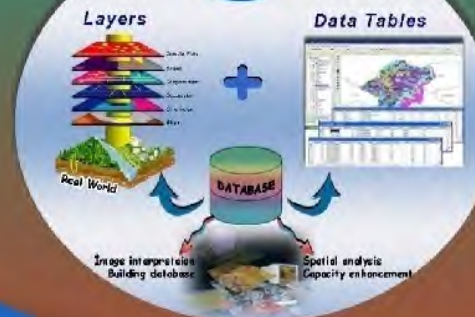
- National and international planning policies
- Sustainable forest management criteria and indicators
- Protected areas and habitats
- Large age classes, long rotation ages
- Target species
- Multiple use planning

ACTIONS

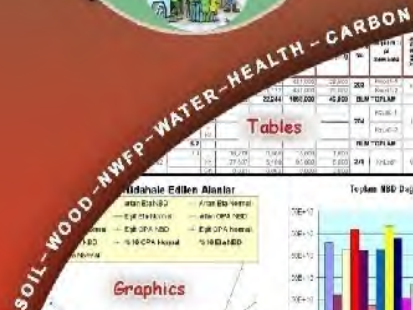
- PRODUCTION BASED INTERVENTIONS**
- Regeneration / Forestation
 - Completion
 - Pre commercial thinning
 - Pruning
 - Thinning
 - Shelterwood cutting
 - Reviving cutting
 - Rehabilitation
- CONSERVATION BASED INTERVENTIONS**
- Corridors
 - Sustainable Forest
 - Bird observation roads
 - Thinning parts
 - Fire secureness strips

SPATIAL DATABASE

GIS

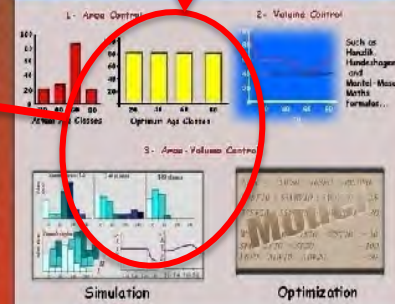


PLANNING OUTPUTS



PLANNING ALTERNATIVES

PLANNING TECHNIQUES

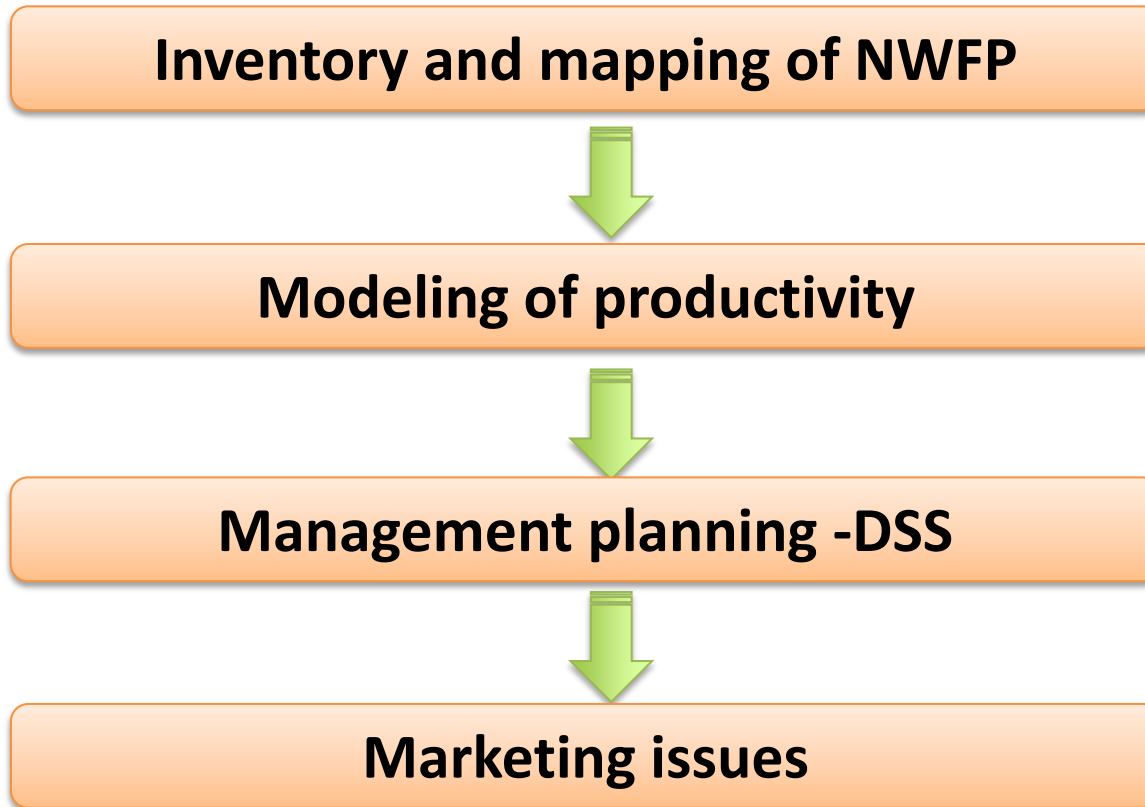




Decision Making...



The concept...



The Strategic Targets

1. Conservation of biodiversity and gene resources (\$ Valuation)
2. Protection of forests against fires and other pathogens
3. Promoting sustainable management of multiple uses
4. Plantations, renewal, tending, afforestation, rehabilitation
5. Capacity building, R&D, ORBIS, training and awareness of society
6. Managing NWFP & services (ecotourism, local products and recreational activities in rural areas through e-businness)

Turkish Forest Service -1839



- General Directorate of Forest

40,000 employees



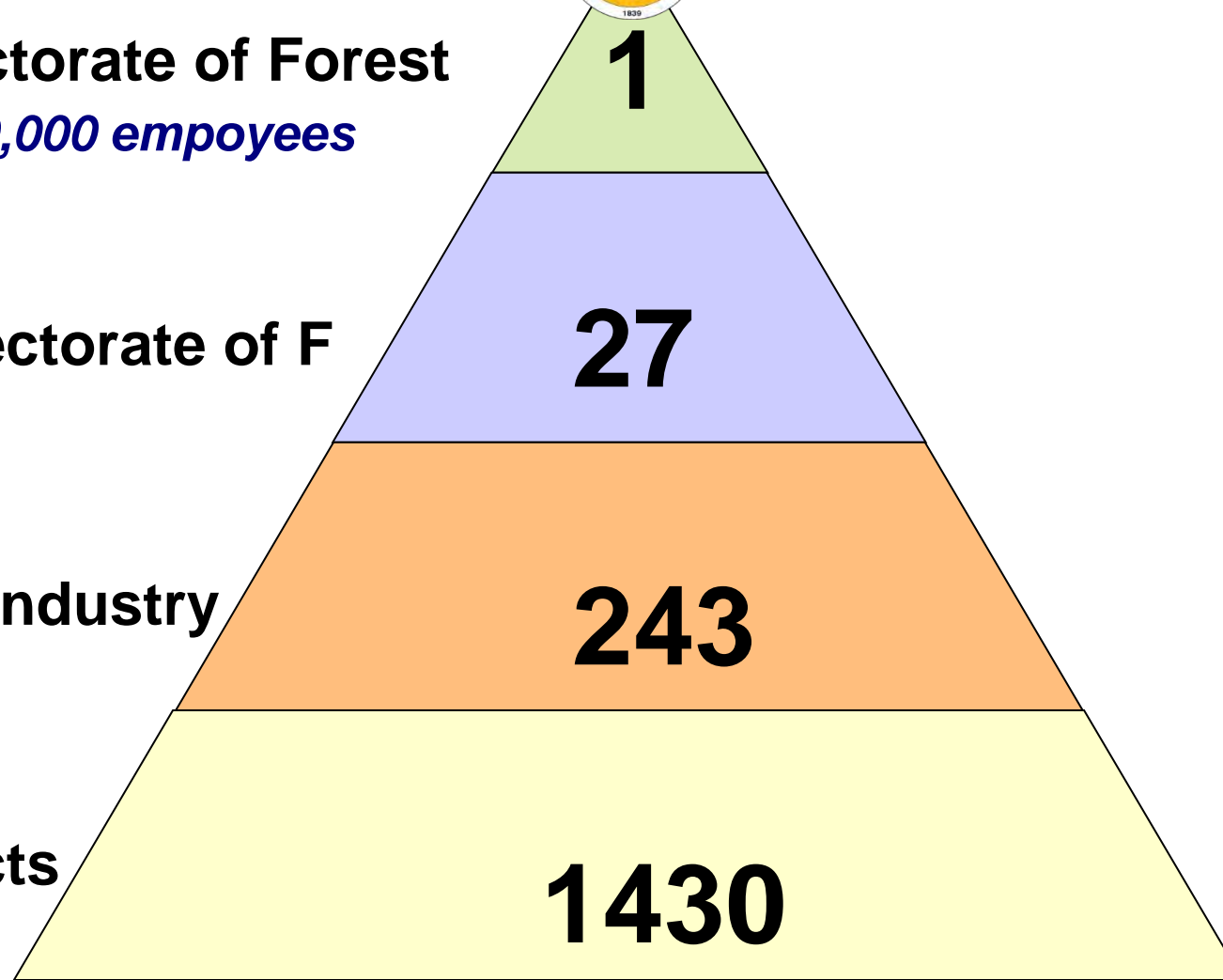
- Regional Directorate of F



- State Forest Industry



- Forest Districts



28 Nursery directorates, 156 other chief eng

Department of NWFP & Services

The Working Groups



BİYOD dbase developed

Plant identification, picture, video, location, habitat types, land specification, chemical substances, food status, harvesting time, piking type, production method



BIYOD dbase indicates...

The database results by the 8th of January, 2015

NWFP	Species	Recorded Instances
Plants	2.454	12.848
Mushroom	249	840
Wild animals	99	247
Total	2.802	13.935

NWFP Inventory

The inventory focuses on:

- ✓ The species
- ✓ Location
- ✓ Amount
- ✓ Coverage/extent



The ultimate target is to prepare management plans for sustainable use of NWFP



BIYOD dbase used

For awareness and warning for people for poisonous mushroom and their distribution



ETS-Inventory monitoring systems



ORMAN GENEL MÜDÜRLÜĞÜ
OGM
1839

İstanbul Orman Bölge Müdürlüğü

Odun Dışı Ürün ve Hizmetler
Envanter Takip Sistemi(ODÜH ETS)

Kullanıcı Adı :

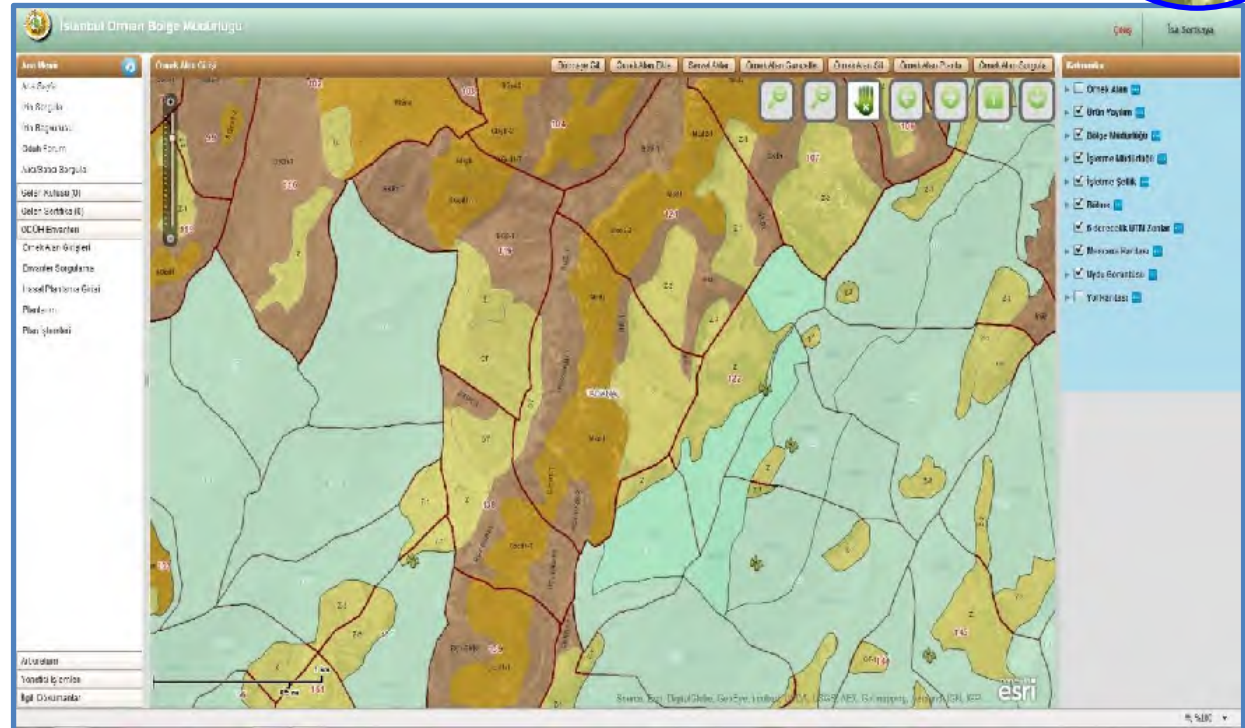
Parola :

☐ Beni Hatırla

Ekolojik Denge İçin
Biyçeşitliliğimizi Sürdürelim
İSTKA/2011/KCE – 18
İstanbul Kalkınma Ajansı
Taraflından Desteklenmektedir
Versiyon 1.00

İSTANBUL BÖLGE MÜDÜRLÜĞÜ
İSTKA

TÜRKİYE CUMHURİYETİ
KALKINMA BAKANLIĞI



Inventory & production plans prepared for

- ✓ 207 species
- ✓ in 1.351.580 ha area
- ✓ with 1.247.090 tons



Target and realization of Inventory (2015)

	Area (Ha)	Amount (ton)
Target	500.000	500.000
Realization	290.601	212.272

Customers meet in web site...

Web based facilities for customer use

- Data exchange
- Querying inventory data & management plans
- Training materials w/ video and animation
- Certificate awarded for the successful users



Awareness activities: twitter

Tweets...



Monitoring...



Lütfi Akca @lutfiakca

Orman ve Su İşleri Bakanlığı Müsteşarı



FAO Newsroom @FAOnews

News & info from the Food & Agriculture Organization of the United Nations (FAO, aka #UNFAO), the UN agency that leads



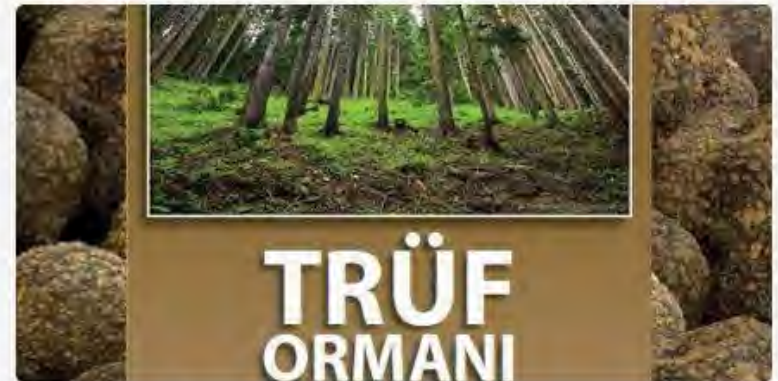
Veysel Eroğlu @VeyselEroglu

30 Ekim

"Trüf Ormanı Eylem Planı" ile dünya pazarlarının aranan mantar türü trüf mantarını ülke ekonomisine kazandıracağız...

pic.twitter.com/fcs6fLwtFM

Biyolojik Çeşitlilik tarafından retweetlendi



Aç

Yanıtla

Retweetlendi

Favorilere ekle

Daha fazla



Biyolojik Çeşitlilik @Biyocesitlilik

6 Kasım

@Biyocesitlilik Prof. Dr. Eyüp Bağcı'nın yapmış olduğu tespitler ve önerileri neticesinde 7 türümüzün taşınması için görüş birliğine varıldı.

Sohbeti göster

Yanıtla

Retweetlendi

Favorilere ekle

Daha fazla

Legal basis established

T.C.
ORMAN VE SU İŞLERİ BAKANLIĞI
ORMAN GENEL MÜDÜRLÜĞÜ
Odun Dışı Ürün ve Hizmetler Dairesi Başkanlığı



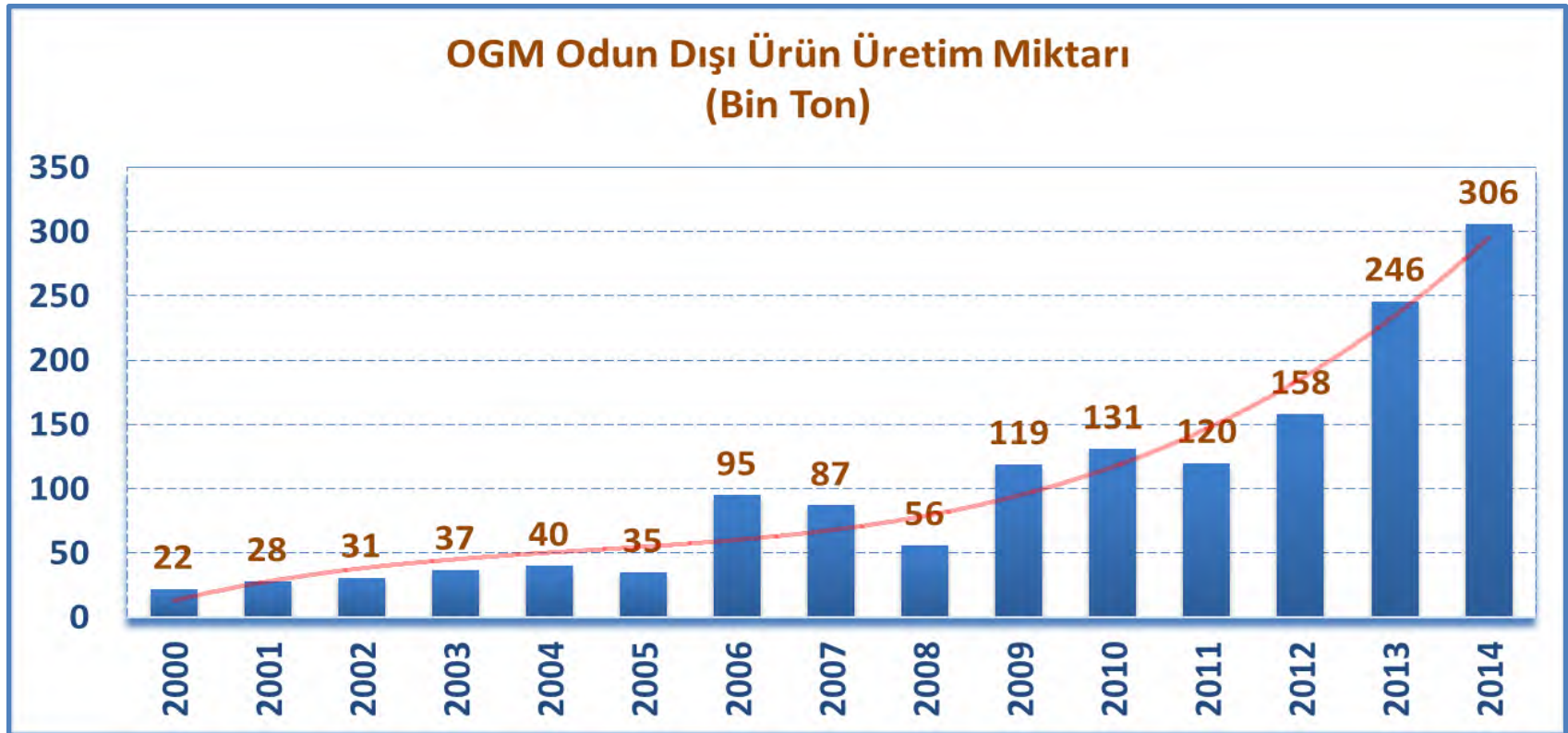
TEBLİĞ NO: 297

ODUN DIŞI ORMAN ÜRÜNLERİNİN
ENVANTER VE PLANLAMASI
İLE
ÜRETİM ve SATIŞ ESASLARI

ANKARA
2013

A new legal guidelines (no: 297) for inventory, management and marketing NWFP in effect (2013)

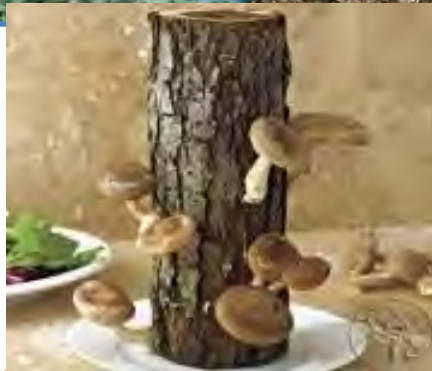
Production of NWFP



Target production: 300,000 tons yet 350,000 produced (2015)

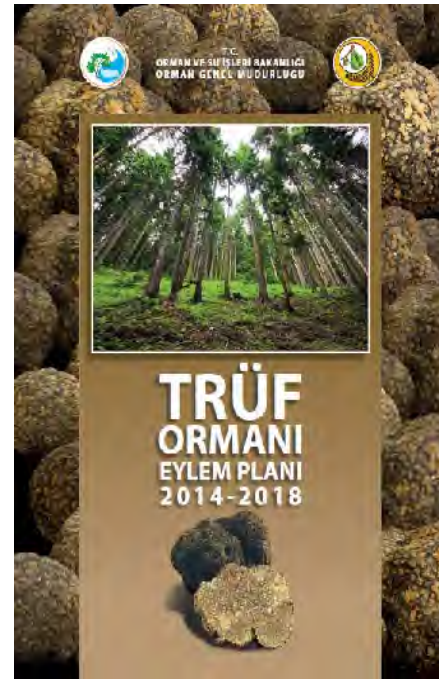
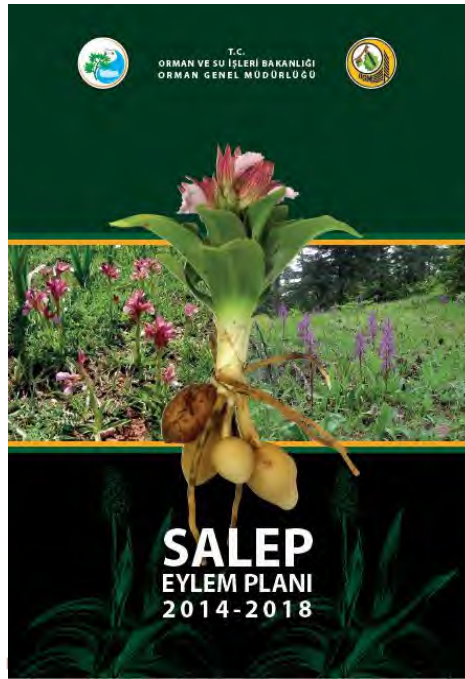
Rural development

Forest villages earned 195 milyon TL in 2015



Action plans...

- Economically viable species havevested
- Others are treated in an aciton plan to utilize rationally
- 4 actions plans (Pistacio-gum, Salep, truffle, blue berries) prepared



Pistacio (Mastic) action plan...

2014-2018

- ✓ Inventory of gum forests
- ✓ Gum production forests
- ✓ Re-initiation of gum production
- ✓ Gum seedlings to villagers for gum gardens
- ✓ Contribute to rural developments



Truffle action plan...

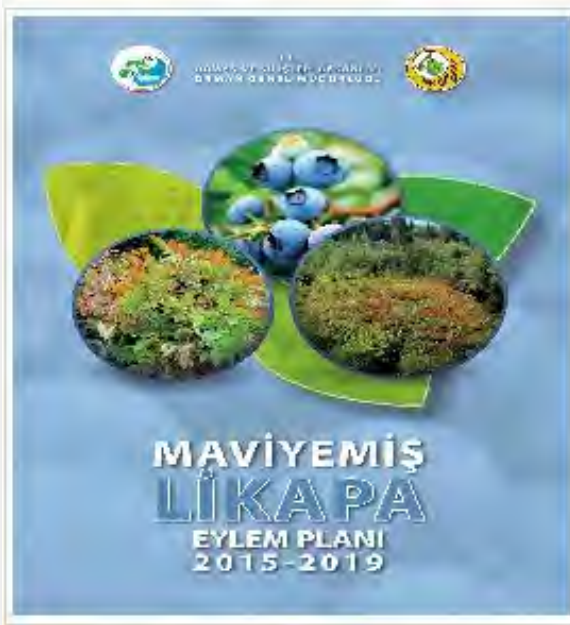
2014-2018



- Determine natural/artificial truffles
- Establish natural/artificial truffle forests
- Create awareness about truffles
- Generate income to the rural people



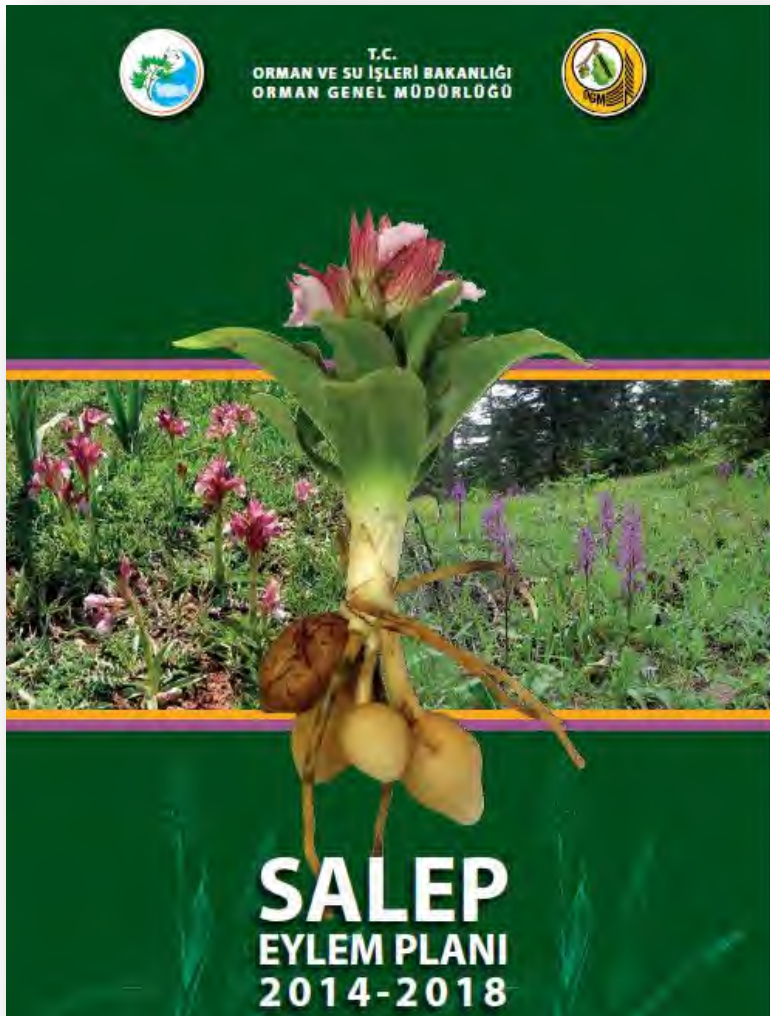
Blue berry action plan...



- Production of seedlings for cultivation
- Determine the natural distribution
- Investigate the leave and seed production



Salep action plan...



- Inventory of Salep in forests
- Conservation plan with precautions against threats of endangered taxa



Infrastructure

Species under research

Kurdele çiçeği (*Chlorophytum comosum*),
Fesleğen (*Ocimum basilicum* var.),
Reyhan (*Ocimum basilicum*),
Çuha çiçeği (*Primula* L.),
Tütün (*Nicotina*),
Hint yağı ağacı (*Ricinus communis* L.),
Ekinezya (*Echinacea angustifolia*),
Barış çiçeği (*Spathiphyllum*),
Şeker otu (*Stevia*),
Deve tabanı (*Monstera deliciosa*),
Okaliptüs (*Eucalyptus* sp.),
Kana (*Canna*),
Japon gülü (*Hibiscus rosa-sinensis*),
Nolina (*Beaucarnea recurvata*),
Kentia (*Howea forsteriana*),
Hanımeli (*Lonicera*),
Kekik (*Thymus vulgare*),
Rezene (*Foeniculum vulgare*),
Pepino (*Solanum muricatum*),
Melek kanadı (*Caladium* spp.),
Tıbbi Lavanta (*Lavandula angustifolia*)

Afyon medicinal and aromatic plants center



Other NWFPs...

Volatile oil extracted from *Cistus laurifolius* L.

Volatile oil productivity = % 0,1-0,2 (a/h) (ml/g)

Main components	Rate in oil %	Rate in literature (%)
Borneol	10,7	6,1
α - pinene	10,7	0,1
Geranyl-p-cymene	7,8	---
Terpinen-4-ol	4,5	1,3
t-pinokarveol	4,1	1,6
Nanocosane	---	2,8

Other NWFPs...

Volatile oil from Spruce and Fir needles

Main components	Rate in oil %
Camphene	11,53
Limonene	16,93
Bornyl acetate	27,82

Other NWFPs...



Bees....

- Bees are key in pollination (85%)
- They contribute 15 times more than the value of honey!
- Bee keepers station and produce honey (85%) in forest openings
- Pine honey (*from **Marchalina hellenica** sacking the sap of pine- honeydew*) with chestnut, lime, acacia, range and thyme honey) exported is totally produced from forests



Honey forest action plan...

2013-2017



Target:

8 100 ha will be allocated

270 will be established

Actual:

34 430 ha allocated

249 established

Orman Emvali İhaleleri
Güncel Fidan Stoklarımız



Wild products action plan...

38,690,586 wild plants **targeted** for
plantation over 5 years for;

- ✓ Conservation of biodiversity
- ✓ Supply of food for wild animals

Realized:

10.200.000 planted in 18.684 ha



Other services

Codes and guidelines developed for recreational use for people for social awareness and stewardship towards forestry



Other services

- 122 Type A camping areas (accommodation)
- 173 Type B high capacity daily use
- 1016 Type C low capacity daily use
- 133 urban forests

1444 sites provide recreational services



Other services

Various ongoing ecotourism activities



Other services

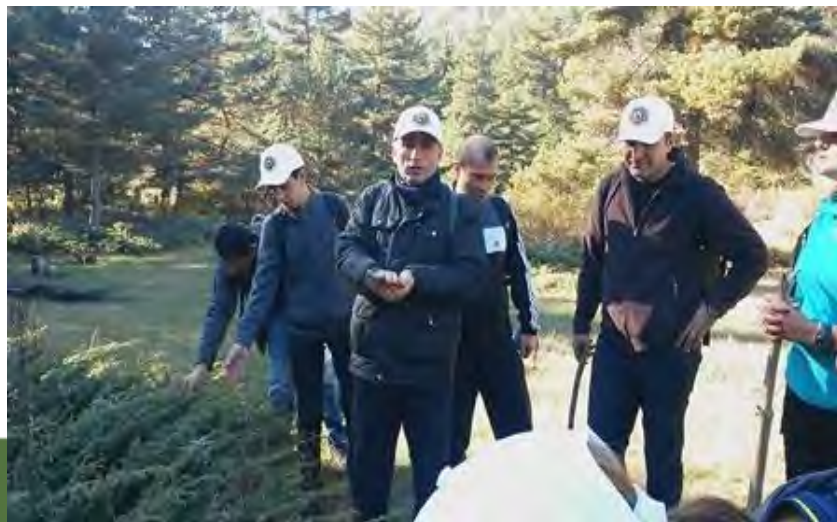


Handcrafts



Other services

Trekking



17-19 February '15, Antalya, ©EZB-İS

Major problems encountered

- ✓ Lack of coordination among organizations,
- ✓ Insufficient basic R&D activities related to NWFP
- ✓ Lack of protection, support and mgmt policies for sustainable use of NWFP
- ✓ Poor infrastructure for faster process of activities fmr collection to the marketing
- ✓ Fewer private initiatives for the management of NWFP
- ✓ Production just based on annual demand from state forest (no production plan)
- ✓ Slow process of field inventory of NWFP
- ✓ Insufficient number of experts and gaps in legal documents
- ✓ Export of raw and semi-raw products to the international trade

Challenges to overcome

- **Field survey for inventory/ productivity needed**
- **R&D required for innovative products and processes**
- **Intergrated plans prepared for long term sustainability**
- **Silvicultural/ renewal strategies worked for production plan**
- **Various experts raised for better utilization of NWFP**
- **Rural pickers/ producers need training for marketing strategies**





Thanks...

