EFI Scientific Seminar "Social dimension of forests"
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Rural development and social dimensions of forestry in Mediterranean countries

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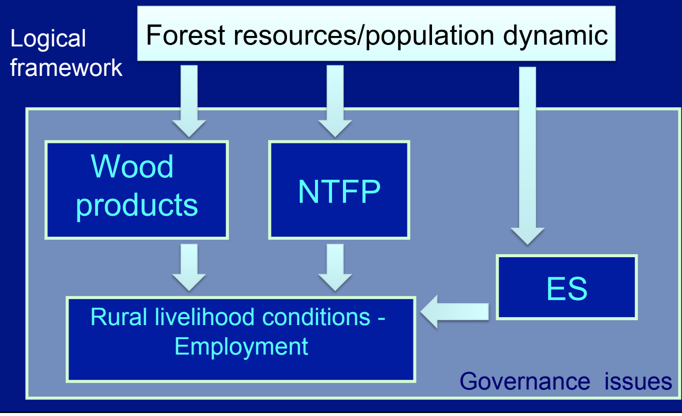
Our objective: To discuss the most relevant social aspects connected with Mediterranean forest management and policies

Logical framework



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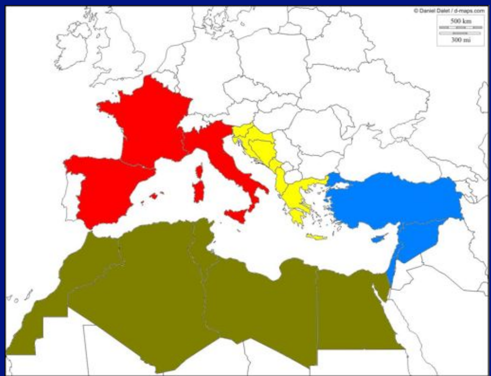
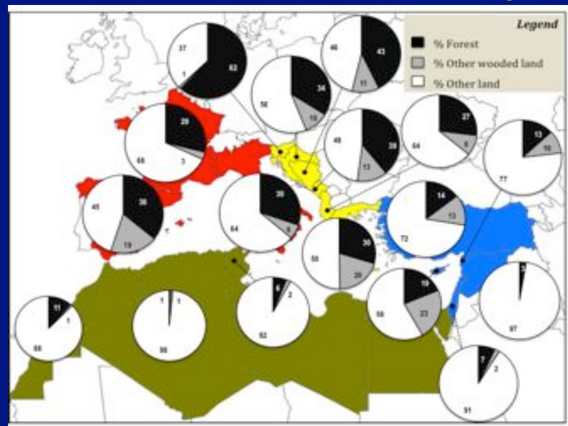
4 Med macro-regions



SM Southern countries
EM Eastern countries
NEM North-Eastern countries
NWM North-Western countries

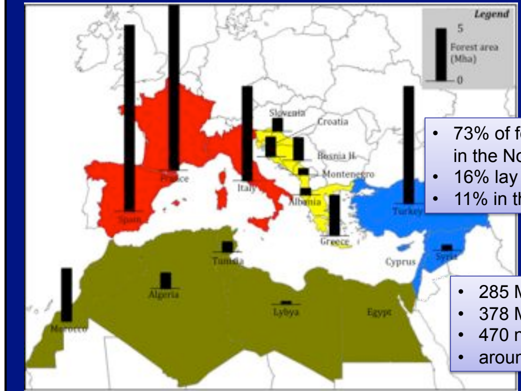
Source: authors' elaboration from FAO FRA 2010

Forest cover in the 4 Med macro-regions



Source: authors' elaboration from FAO FRA 2010

Forest cover in the 4 Med macro-regions: **74 M ha**; uneven distribution



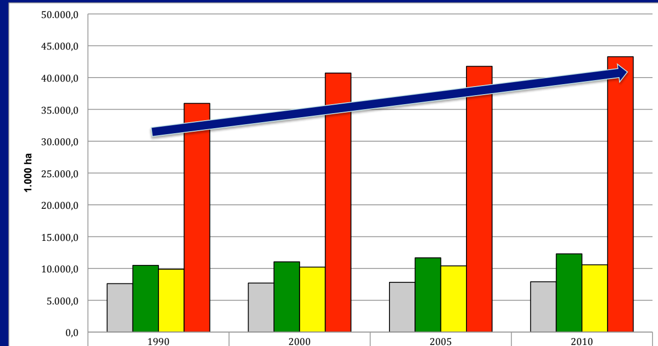
- 73% of forests are concentrated in the Northern sub-regions
- 16% lay in the Eastern region
- 11% in the Southern one.

- 285 M inhabitants in 1970
- 378 M in 1990
- 470 now
- around 520 M in 2020

SM Southern countries | EM Eastern countries | NEM North-Eastern countries | NWM North-Western countries

Source: authors' elaboration from FAO FRA 2010

Forest area in 21 Mediterranean countries, 1000 ha



	1990	2000	2005	2010
SM	7.620,0	7.709,0	7.825,0	7.916,0
EM	10.485,0	11.043,0	11.675,0	12.298,0
NEM	9.879,0	10.216,0	10.408,0	10.580,0
NWM	35.945,0	40.710,0	41.766,0	43.276,0

Source: FAO FRA, 2010

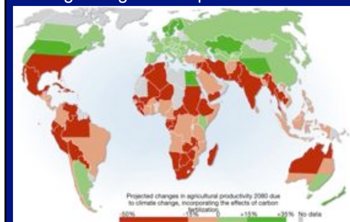
Increasing gap North-South

In 2020 **2/3** of Med people will be located on the southern shores, with probably less than **10%** of all the Med forests

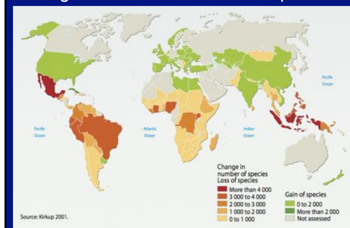
→ Another factor of social conflicts and political instability?

Climate change: a big challenge for MED countries

Change in agriculture production

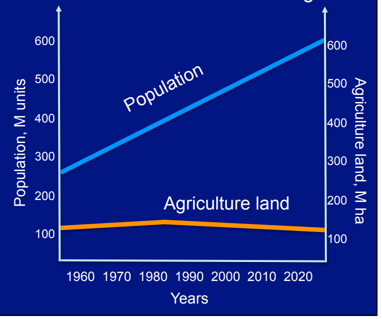


Change in the number of forest species



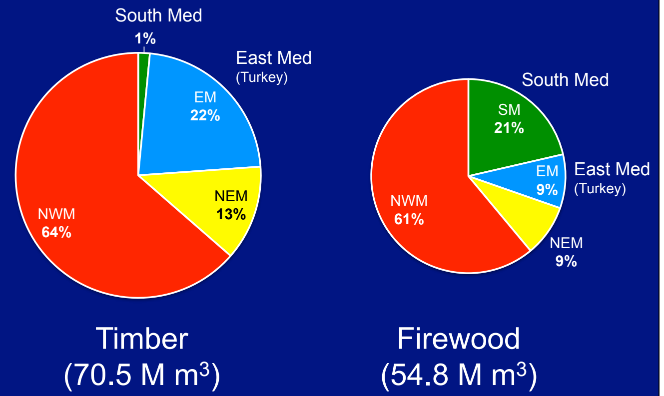
Source: UNEP, 2009

Population and agriculture land trends/ forecasts to 2020 in the MED region

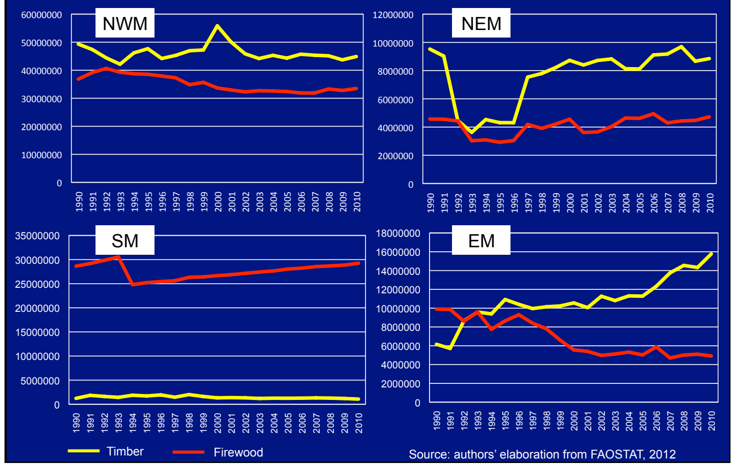


1. Wood Products

Roundwood production in Mediterranean sub-regions (2010)



Timber and Firewood production (CUM) Mediterranean sub-regions, 1990-2010



Source: authors' elaboration from FAOSTAT, 2012

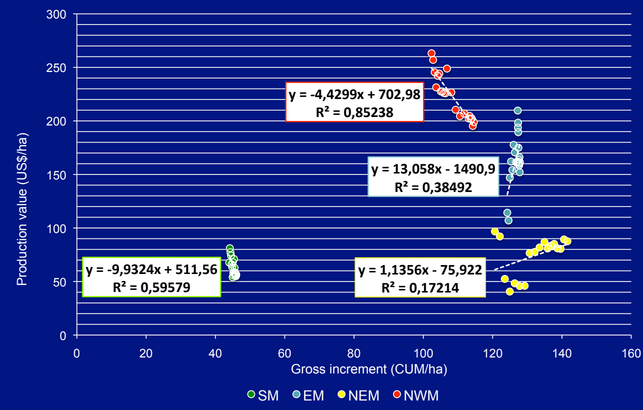
Incidence on GDP

Roundwood production value in Mediterranean sub-regions compared to total and primary sector GDPs (1990, 2000, 2005, 2010)

Sub-regions	1990		2000		2005		2010	
	% on total GDP	*% on primary sector GDP*	*% on total GDP*	*% on primary sector GDP*	*% on total GDP*	*% on primary sector GDP*	*% on total GDP*	*% on primary sector GDP*
SM sub-region	0.3%	2.4%	0.2%	2.1%	0.1%	1.3%	0.1%	1.1%
EM sub-region	0.3%	2.9%	0.3%	3.5%	0.3%	3.4%	0.3%	4.5%
NEM sub-region	1.2%	19.2%	1.0%	17.8%	0.8%	15.3%	0.8%	15.0%
NWM sub-region	0.2%	10.1%	0.2%	10.8%	0.2%	7.6%	0.2%	7.5%
Tot. Mediterranean	**0.3%**	**7.5%**	**0.2%**	**7.8%**	**0.2%**	**5.7%**	**0.2%**	**5.7%**

Source: authors' elaboration from FAOSTAT, 2012 and UN, 2012

Gross increment vs. production value in 4 Mediterranean sub-regions (1990-2010)

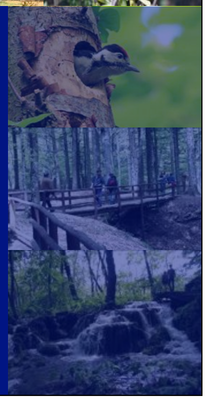


Source: authors' elaboration from FAO, 2010 and FAOSTAT, 2012

Main points for reflection

- A **decreasing role of wood production**, both in absolute and relative terms
- **No** relevant **gains** in terms of **forest cover** and **growing stock**
- Wood trade: increasing **dependence** from abroad
- *Problems of **data quality***

2. Non Timber Forest Products



NWFPs – Marketed plant and mushrooms in Europe (value - 1000 €)

	Christmas trees	Mushrooms and truffles	Fruits, berries, etc.	Cork	Resins	Decorative foliage	Other plant products
North	132 104	12 493	15 107	-	182	58 824	-
Central-West	733 900	14 550	883	775	32	7 202	55231
Central-East	2 830	10 587	28 132	-	1 621	1 802	106
South-West	110 828	124 161	299 574	323 850	2 364	-	7997
South-East	377	11 283	10 296	-	12 476	921	408
Total	**980 039**	**173 075**	**353 993**	**324 625**	**16 675**	**68 749**	**63742**

Source: adapted by L.Fontes (2012) on data from FOREST EUROPE, UNECE and FAO 2011

NWFPs - Marketed animal products in Europe (value - 1000 €)

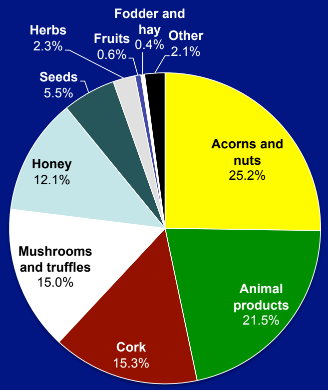
	Game meat	Living animals	Skins, trophies, etc.	Wild honey	Materials for medicine	Other products
North	5 791	-	346	-	-	-
Central-West	217 505	-	6 738	25 616	-	1 340
Central-East	15 117	1 221	2 136	-	1 115	2 461
South-West	149 537	-	-	101 088	-	-
South-East	4 266	-	8 439	3 660	-	-
Total	**392 217**	**1 221**	**17 659**	**130 364**	**1 115**	**3 801**

Source: adapted by L.Fontes (2012) on data from FOREST EUROPE, UNECE and FAO 2011

NTFPs production value in the MED area per NTFP type

Total production value: **1,098 M US$**

Southern Mediterranean countries: **23 M US$**



Source: authors' elaboration from FAO, 2010

Different roles of NTFPs in the rural economy

Source: K.Kusters and B.Belcher. Forest products, livelihoods and conservation. Case studies of Non-Timber Forest products Systems

3 cases of NTFP enterprises:

- **Coping**: self-consumption and subsistence use; low integration into the cash economy: poorest among the poor. Often it brings to un-sustainability
- **Diversified income strategy**: a cash economy (products are sold), but with a limited contribution to HHs incomes (multiple incomes). Often a safety net: important in hard times
- **Specialized**: harvester is an entrepreneur, specialized, full time; high degree of resource dependency; innovator, often looking for domestication

Totally different roles of NTFPs in rural economy

- NWM: **specialized enterprises**
  - industrial raw material (cork)
  - niche products for integrated local development

NTFPs as instruments for networking local actors and marketing a territory (**imago product)**

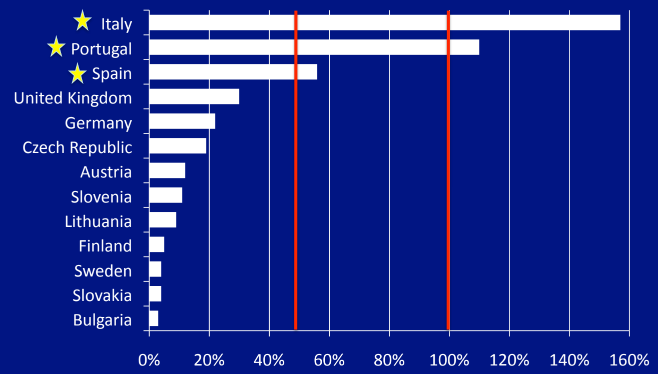
- Traditional local products
- “Green” products
- “Slow food” culture

Road, trail, path… the tools for connecting different economic actors

Google search		hits
Strada della castagna	*Chestnut road*	35,200
Strada del tartufo	*Truffle road*	361,000
Strada del fungo	*Mushroom road*	265,000
Strada del porcino	*Porcino road*	58,900
Strada del marrone	*Marron road*	78,400

Value of NTFP production in relation to industrial roundwood production

(★: Med countries)



Source: Forest Europe 2011, mod. (2007)

Totally different roles of NTFPs in rural economy

- NWM: **specialized enterprises**
  - industrial raw material (cork)
  - niche products for integrated local development
- SM: many enterprises with Coping strategies, but also **Diversified income strategy** and **Specialized enterprises,** with:
  - Domestication
  - Differentiation
  - … but also with problems of increased competition and substitution

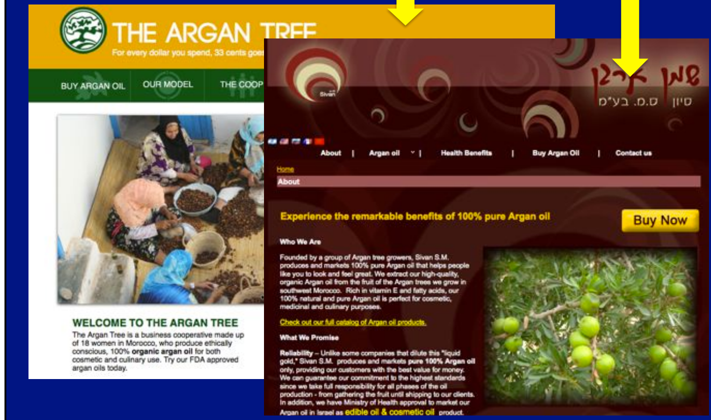
The problems of Argan market development

(…) "*market-based mechanisms offer no magic bullet, that the benefits of commercialization need to flow to people who have secure rights in the resource and who then have an incentive to conserve it in both the short and long-term. In southwestern Morocco, argan oil commercialization appears to have motivated greater local protection of mature trees, but there are fundamental biological and institutional barriers to market-induced reforestation (…)*

Likewise, insecure tenure, including incursion from large herds from outside the region without protection from the state, threaten the trees and the ecosystem that depends on them, undermining incentives to invest in maintaining the forest" (Lybbert et al., forthcoming)

www.theargantree.com

Differentiation and substitution



http://www.arganoil.co.il

Main points for reflection

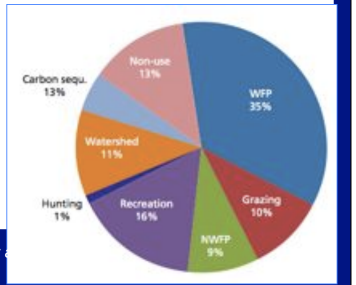
- NTFPs: **an increasing role** in Med forest economy in absolute terms and in relation to wood
- Also in the case of income generation policies based on NWFPs the role of **added value services** tends to be **more important** than the rough material production
- SM: NTFPs still important in **poverty alleviation** and as limited **cash source** in HHs economics
- When demand grows, new marketing instruments are needed, and Southern countries are not always able to face **hard competition** and to cope with new trends and advanced consumers' preferences
- *Problems of **data quality** (informal economy)*

3. Forest-based Environmental services (ES)

Studies on forest externalities values

Mean average value of the services provided by Med forests (€/ha/year)

	Wood	NWFP	Grazing	Recreation	Hunting	Total	TEV
- South	12	4	32	n.a.	-	46	67
- East	22	5	10				
- North	67	16	10				
Mediter. (total)	**47**	**12**	**13**				
%	49.5	12.6	13.7				
%	35.3	9.0	9.8				



Source: Merlo and Croitoru, 2005 (p.52); Palahi *et*

Studies on forest externalities values

Average biodiversity and recreational values in European Forests (**TEEB**, 2009)

(Values per hectare – methodology: value transfer)

	Mediterranean EU Latitude 45-65	Northern and Central-Northern EU Latitude 65-71	Scandinavian EU Latitude 35-45
Range US$ (2000)	356-615	123-182	123-255
Average $ (2000)	485.5	152.5	189.0
€ (2000)	379,3	119,1	147.7
€ (2008)	467.1	146.7	181.9

Source: TEEB Report; CLIBIO project cit. in Den Brink et al. (2009)

Studies on forest externalities values

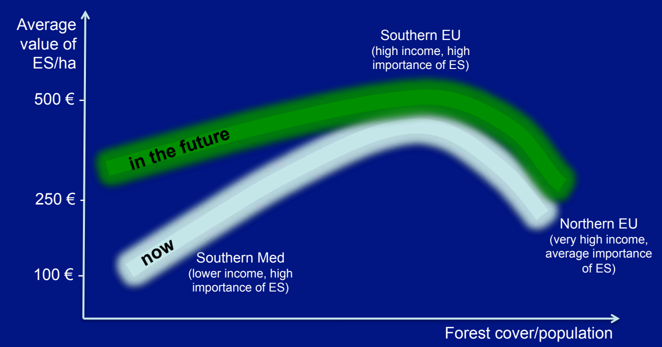
Total Economic Value of Italian forests

(Contingent Valuation; Tempesta and Marangon, 2008)

Values of Forest Environmental Services:
- WTP: 209 € per household/year
- WTP: 4,507 M €/year for all forest area
- **WTP: 666 €/year/ha**

Including the value of market products (according to Nat.Statistics): **TEV = 723 €/hectare**

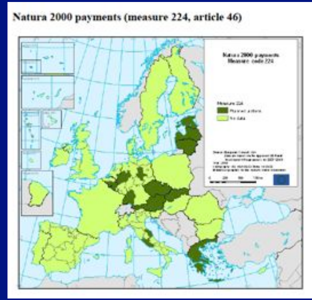
A gradient in forest ES values

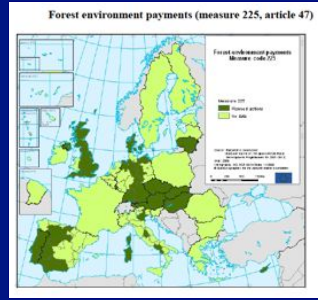


Main points for reflection

- **Mechanisms of payment or compensation still to be developed** in the region (more delay than in other regions), not withstanding the strategic role of water, biodiversity and landscape (tourism along the coast)

Few payments for ES with the RDP





Source: DG AGRI, 2009. Report on implementation of forestry measures under the rural development regulation 1698/2005 for the period 2007-2013

Water related PES

Table 2: Summary of Transaction Data for 2008 and Historically

	Programs Identified	Active Programs	Transactions 2008 (US$ Million)	Hectares Protected 2008 (million ha)	Historical Transactions through 2008 (US$ Million)	Hectares Protected Historically
Latin America	101	36	31	2.3	177.6	NA
Asia	33	9	1.8	0.1	91	0.2
China	47	47	7,800	270	40,800	270
Europe	5	1	NA	NA	30	0.03
Africa	20	10	62.7	0.2	570	0.4
United States	10	10	1,350	16.4	8,355	2,970
Total PWS	216	113	9,245	289	50,048	3,240
Water Quality Trading	72	14	10.8	NA	52	NA
Totals	288	127	9,256	289	50,100	3,240

Stanton, Tracy; Echavarria, Marta; Hamilton, Katherine; and Ott, Caroline. 2010. State of Watershed Payments: An Emerging Marketplace. Ecosystem Marketplace. http://www.foresttrends.org

Water related PES

Carbon PES

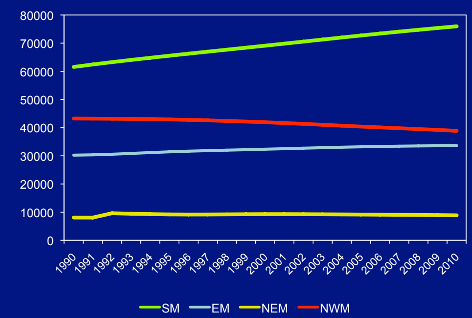
Main points for reflection

- **Mechanisms of payment or compensation still to be developed** in the region (more delay than in other regions), not withstanding the strategic role of water, biodiversity and landscape (tourism along the coast)
- If there is a problem of **market failure** and a **need for internalizing** non market forest services, this is **a Med issue**, more than a Central-Northern Europe one
- *Problems of data availability*

4. Rural livelihood conditions - Employment

Rural population trend in Mediterranean sub-regions

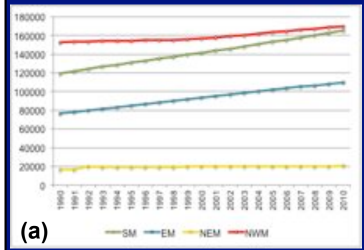
(1,000 units; 1990 - 2010)

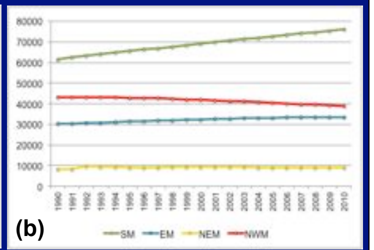


Source: authors' elaboration from FAO, 2012

Demographic trends (1/2)

Total (a) and rural (b) population trends in Mediterranean sub-regions 1.000 units (1990 - 2010)





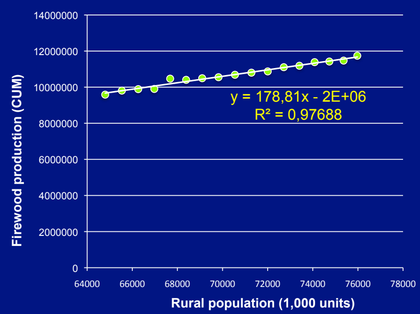
Source: authors' elaboration from FAO, 2012

Demographic trends (2/2)

- **Positive trend** (peaks in SM and EM)
- **2020**: 2/3 Mediterranean people will be located on the Southern shore
- Rural pop.: 34%
- Maghreb and the Near East: highest rates of urban growth
- Mediterranean country-side not in demographic decline (except NWM)

Demographic trends and forestry production (1/2)

Simple linear regression model for SM region
(Firewood production x Rural population)

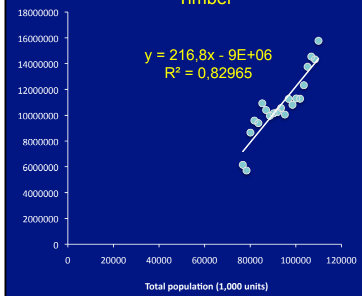


Rural population expansion likely to affect forests (deforestation/ degradation) = increased firewood demand

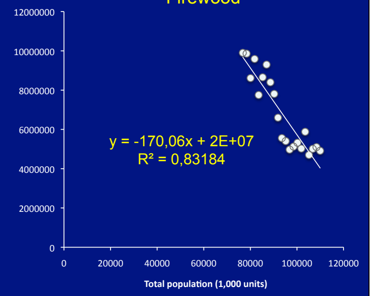
Demographic trends and forestry production (2/2)

Simple linear regression model for EM region
(Firewood & Timber production x Total population)

Timber



Firewood



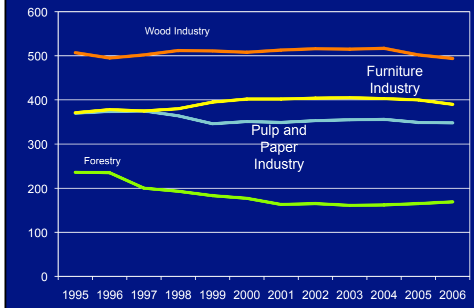
Indigenous people in the Mediterranean region

Country	Indigenous people (IP) 1,000	Total population (2010) (TP) 1,000	IP/TP %
Algeria[a]	10,000	35,468	28.2%
Egypt[b]	666 – 1,166	81,121	0.8-1.4%
Morocco[a]	6,946 – 22,366	31,951	22-70%
Tunisia[a]	527	10,481	5%
Israel[a]	190	7,418	2.6%
Occupied Palestinian Territories[c]	13	4,039	0.3%

Source: [a] IWGIA, 2011; [b] ILO and ACHPR, 2009; [c] IWGA and ACHPR, 2005

Employment in forestry (1/2)

Employment in the forestry sector in the Mediterranean region (1,000 units)



Category	'95 -'06 variation
Wood industry (ISIC 20)	-2%
Furniture (ISIC 3610)	+5%
Pulp and paper (ISIC 21)	-6%
Forestry (ISIC 02)	-28%

Source: Authors' elaboration from FAO, 2009

Employment in forestry (2/2)

Employment in the forestry sector in Mediterranean sub-regions (% variation '95-'06)

MED sub-regions	1995 – 2006 % variation				
	Forestry	Wood Ind.	Pulp & paper	Furniture	TOTAL
SM	-28	+6.7	-28.9	-17.6	-20.7
EM	-43.7	+72.2	+41	+31	+15.7
NEM	-33.3	-6.7	-6.2	+52.6	-3.6
NWM	-18.8	-9.6	-17.3	-1.1	-10.3
TOTAL	-28.4	-2.6	-6.0	+5.1	

Source: Authors' elaboration from FAO, 2009

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Conclusions

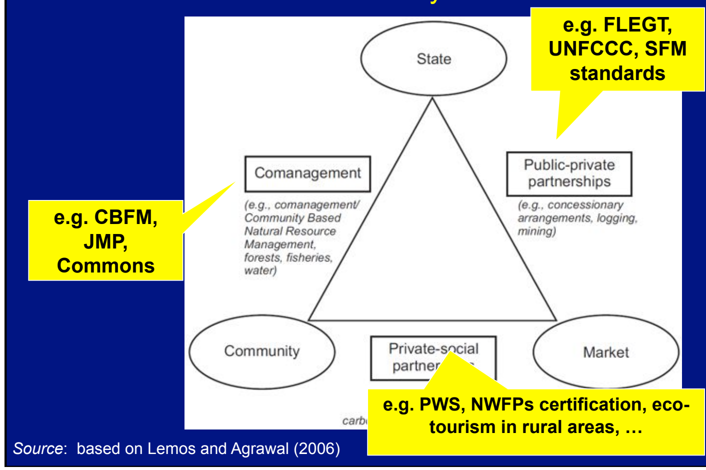
Some reflections on governance issues of Mediterranean forests

Governance: the way of governing

i.e. hierarchical- vs. networked-based distribution of power/authority in policy making; plurality of actors and levels, need of vertical and horizontal coordination.

- **Multi-level governance** (vertical dimension: from global forest regime to local forest management practices; from general policy ideas to specific requirements)
- **Multi-actor governance** (horizontal dimension: from one public (forest) policy maker to several, diversified actors within a geographically or administratively defined area)
- **Multi-sector governance** (cross-sectoral policies: rural development, economy, energy, tourism, welfare, labour)

Changing relationships among actors: new modes of GVC in Mediterranean forestry



Source: based on Lemos and Agrawal (2006)

Main governance issues in Med forestry nowadays

- **Wood:** global market influencing local FM trends; lack in multi-level coordination and capacity of adaptation to changes; main problems of illegality (illegal timber, corruption); need to find instruments and agreements for improved transparency.
- **NWFPs:** need to plan how to integrate governance for both domestication and wild harvesting (actors and mechanisms vary); need of networks and territorial marketing (avoid fragmented, isolated initiatives); need of reforms of tenure rights on lands and products; equity in benefits/costs distribution.
- **ES:** multiple stakeholders, also from urban areas, are involved; private-private and public-private partnerships (PES); reforms of institutional frameworks and property rights are needed; equity in costs/benefits distribution; accountability needed.

Main challenges in governance and social issues in Med forestry

New governance mechanisms have the potentials to strengthen rural self-determination if:

- the new governance principles (participation, transparency, legality, accountability, social justice and equity, etc.) are systematically integrated into the “green economy” (mainly based so far only on the “old” principle of environmental sustainability)
- accountability of local and customary leaders is assured;
- vertical and horizontal coordination among actors and institutions are provided;
- proper values of ES and fair prices of NWFPs are calculated and used in negotiation processes.

Two paradoxes in the governance of the (Mediterranean) forestry

A paradox connected to the **targets** of policy action:

•The increasing importance of the **non-market component** of the forestry economy (from an economy based on wood and other commodities to a an economy based on services)

•The key-idea of of **nature-based economy** (“Bio-economy”*) and “green economy”, where forestry, producing **raw materials** together with agriculture, fishery, food and biotechnology should be the engine of the growth

(*) Innovating for Sustainable Growth: A Bioeconomy for Europe. Brussels, 13.2.2012 COM(2012) 60 final.

A paradox connected to the **instruments** of policy action (“stick” vs. “carrots” and “sermons”):

•we stress the need to enhance the use of **voluntary, market-based mechanisms**, also to actively involve civil society in the management of natural resources …

•… but we tend to increase the use of **regulative policy tools** both for the forest resources (VPA licence, DD of the EU-TR, legally binding convention, …) and for people (immigration quota, police control of illegal emigration, …)

The real innovative and crucial aspects of the governance towards a **green economy** for the Med forestry sector are related to **equity, social inclusiveness, tenure security, income generation**, i.e. to social and political issues, more than on technological ones.

Sağ olun!