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Arben Qerimi

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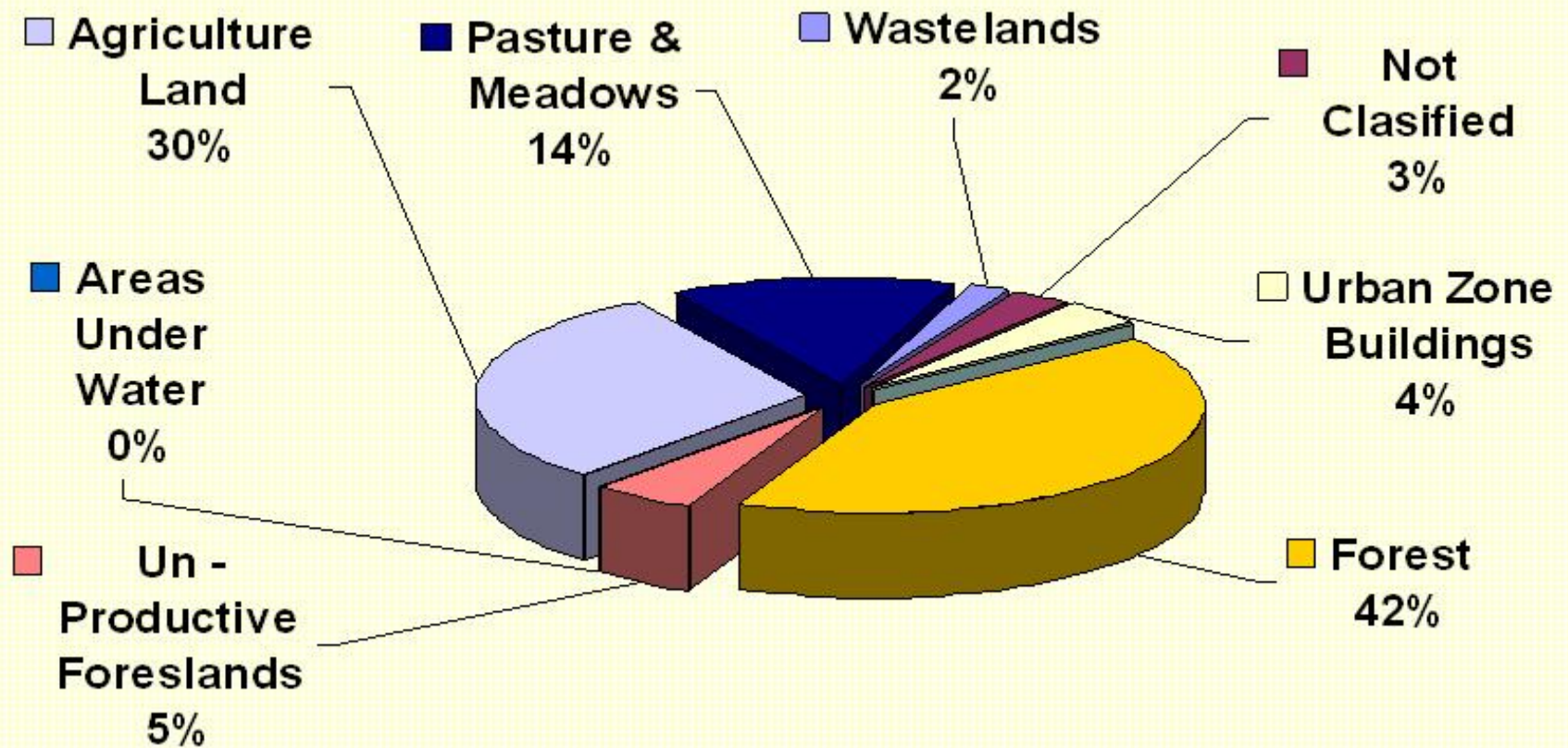
Strategies for Improvement of Kosova's Forest Resources

By: Arben Qerimi



Introduction

■ Relative Land Uses in Kosova





Forests Structure

- **Resources**

Public Forests 280,092 ha

Private Forests 166,218 ha

Public & Private Forests 446,310 ha

Barren Forestlands 66,404 ha

Total 510,710 ha



Forests Structure

- Resources - Species Class and Stand Structure





Forests Management Structure

- **Main Identified Actors**
 - Ministry of Agriculture, Forests and Rural Development (MAFRD)
 - Department of Forestry (DoF) and
 - Kosova Forest Agency (KFA)



Forest Areas According to the Form Cultivation

No	Forest	Total (ha)	Public Forests (ha)	Private Forests (ha)	Forests Structure		
					Total %	Public Forests %	Private Forests %
1	High forests	65,778	51,038	14,740	14.7	18.2	8.7
2	Low forests	179,170	115,839	68,331	40.1	41.4	38.2
3	Degraded Forests	81,639	33,954	47,685	18.3	12.1	28.8
4	Shrubs	100,563	64,811	35,752	22.6	23.1	21.5
5	Other	19,160	14,450	4,710	4.3	5.2	2.8
Total		446,310	280,092	166,218	100	100	100



Forestry Important Facts

Degraded & Shrub Forests	182,202 ha
Barren Forestlands	66,404 ha

Comprise about 40.9 % of total forest area

■ **Scope of Forest Degradation**

- Illegal logging
- Conflict of year 1998 – 1999
- Consecutive damage during the period from 1987 – 1999s & 1999 – 2010s
- Forests fires



Forestry Important Facts

■ Wood Volume in Stock

No	Forest	Public & Private (ha)	Wood Volume (m ³ / ha)	Total (m ³)
1	Degraded Forests	81,639	7.452	3,874,000
2	Shrub Forests	100,563	16.894	1,699,000

■ Annual Growth

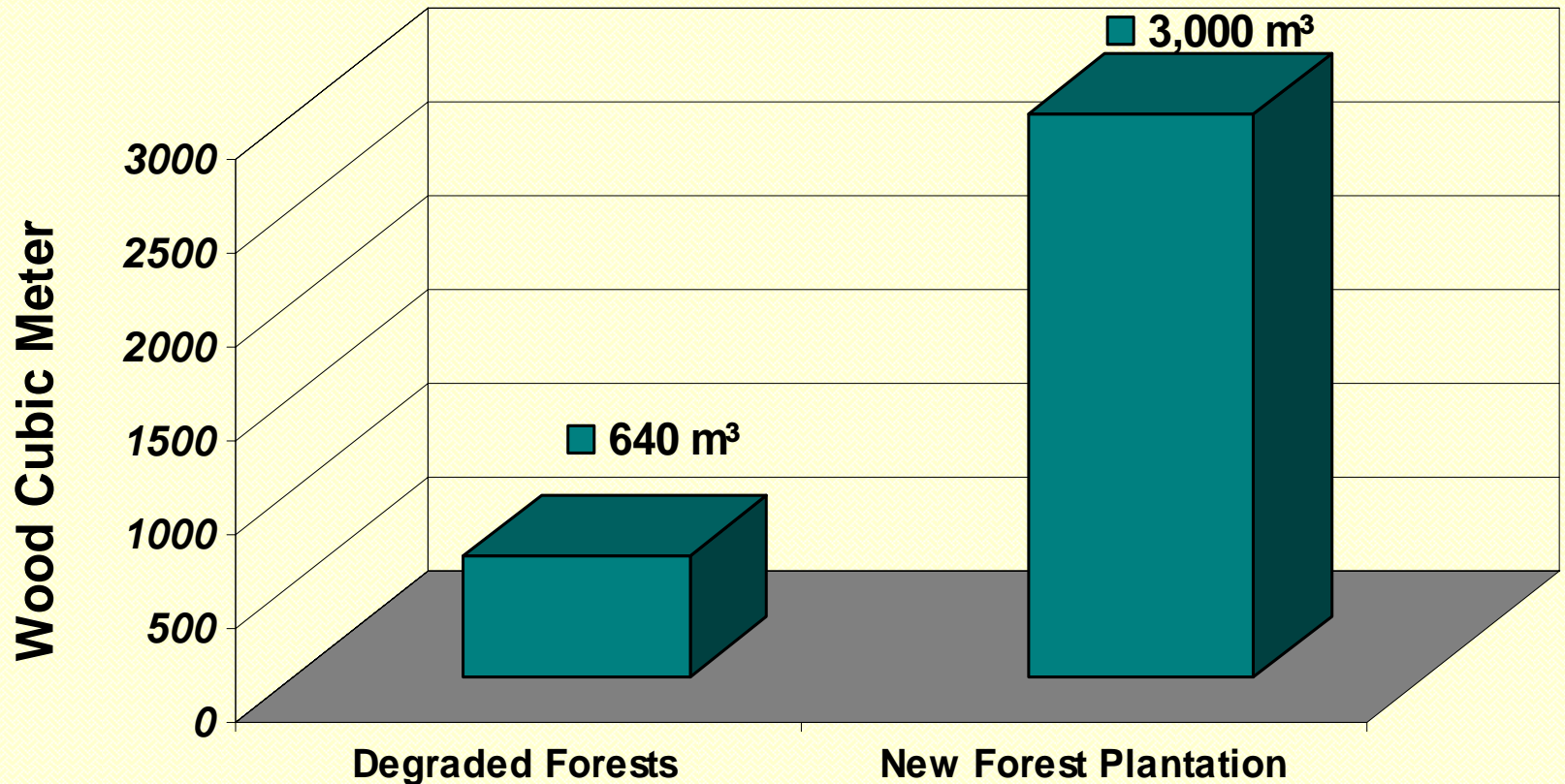
Degraded Forests yield 1.28 m³ / ha / year

New Forests Plantation yield 6 m³ / ha / year



Degraded Forests vs. New Forest Plantation

- Annual Growth m^3 – 500 ha / Year





Forests Structure Improvement

- **Goals set out**

- **Reforestation**

Degraded Forests & Shrubs	182,202 ha
	<u>60 % or 100,000 ha</u>

- **Afforestation**

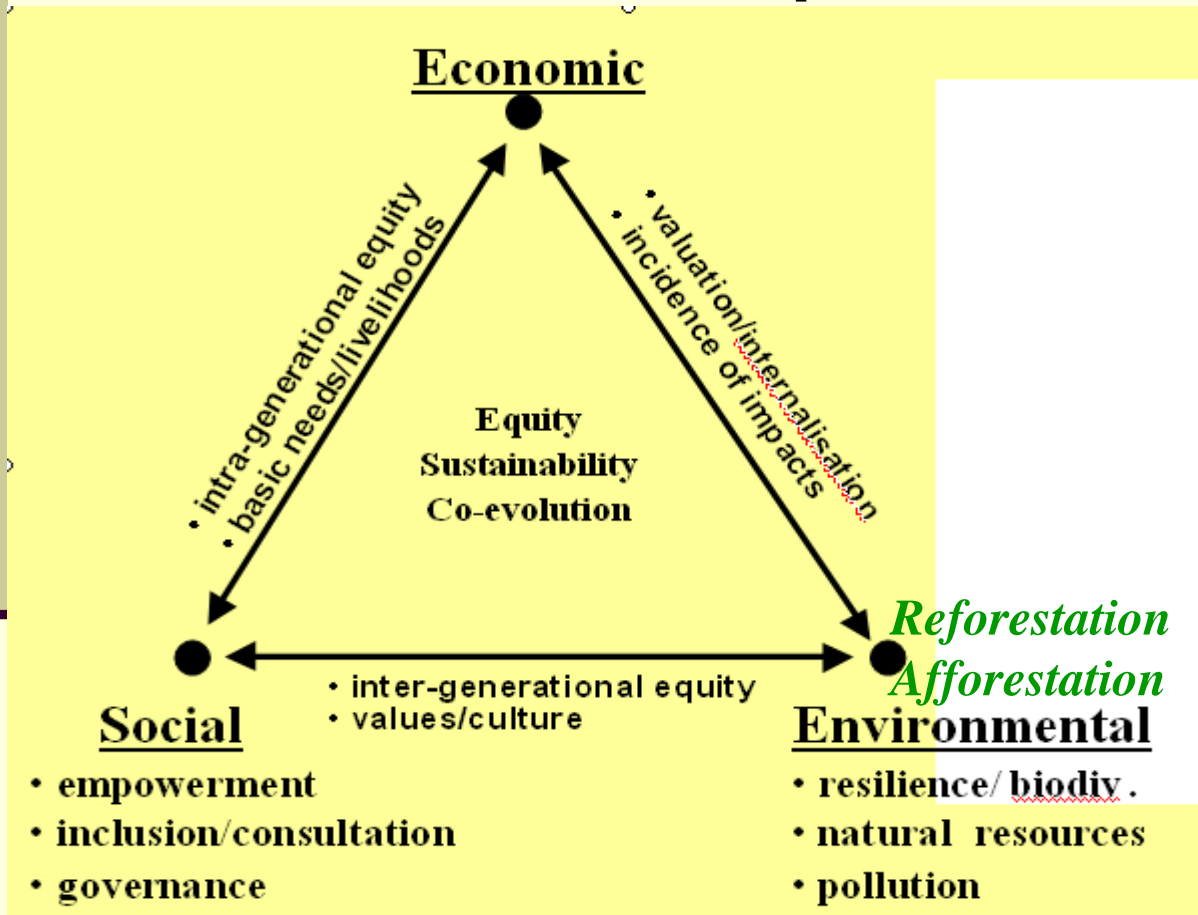
Barren Forestlands	66,404 ha
	<u>40 % or 40,000 ha</u>



Benefits

■ Sustainable Development

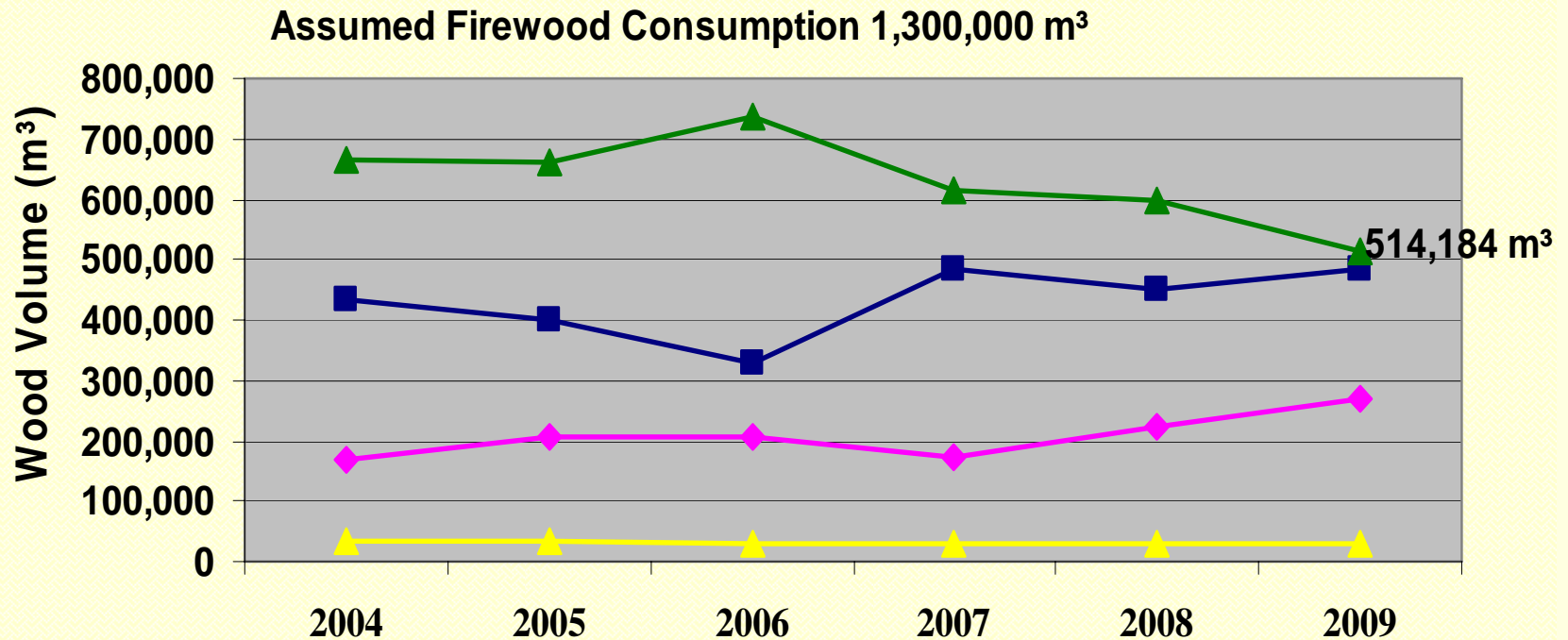
- **ECONOMIC**
 - Timber Products
 - Wood Productivity
 - Diversify Local Economy
- **ENVIRONMENTAL**
 - Carbon Sequestration
 - Production of Oxygen
 - Stabilization of Soil
 - Watershed Protection
 - Landscape / Biodiversity
 - Restoration
- **SOCIAL**
 - Employment; Recreation
 - Fuel Wood; Income.





Estimated Firewood Consumption

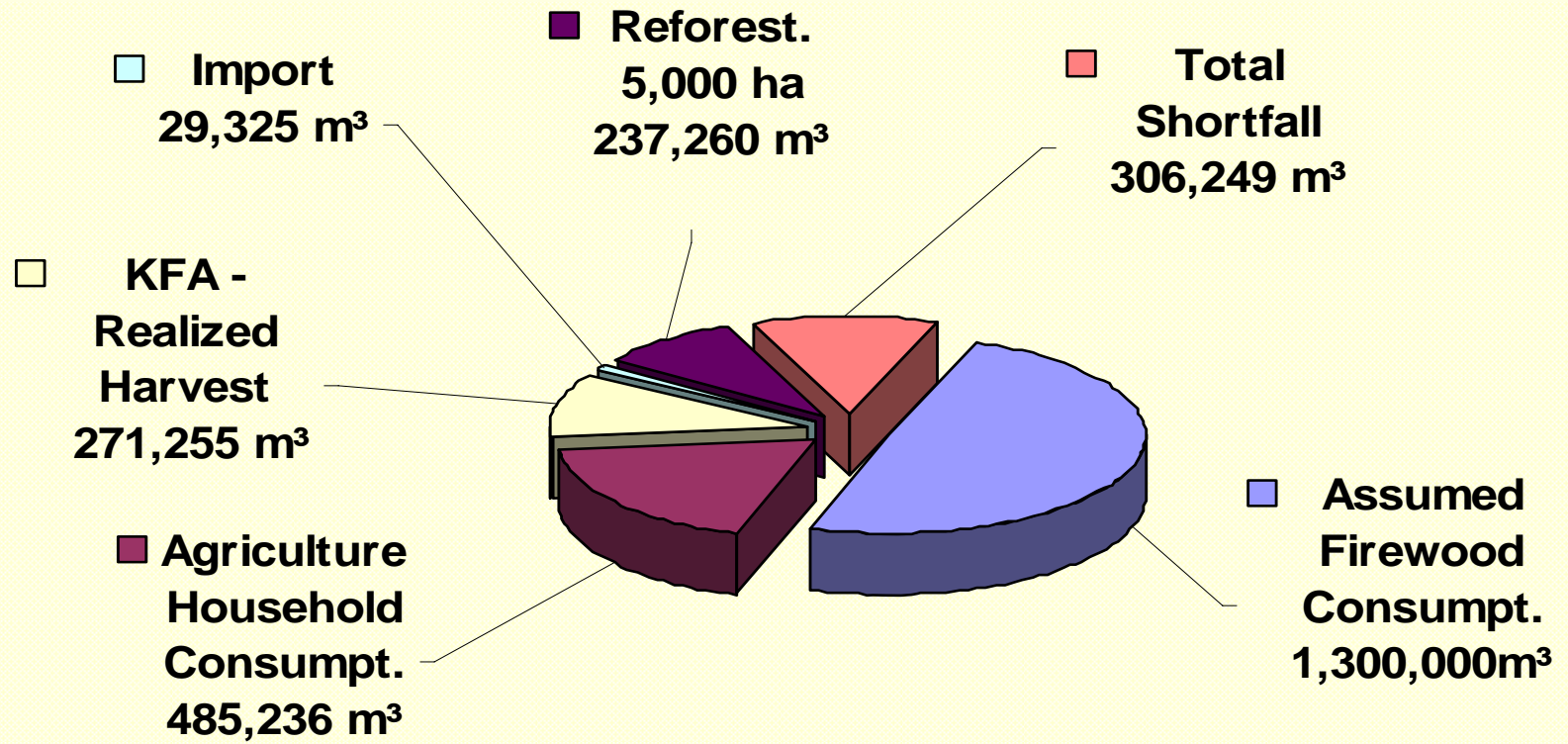
- Agriculture Households Consumption
- ◆ KFA - Realized Harvesting
- ▲ Import
- ▲ Total Shortfall (m³)





Benefits

■ Reforestation Impact





Costs & Benefits

- **Costs of Reforestation** - preparation of land area, planting, stock, labor and care of forests.

$$\underline{500 \text{ ha} * €2,141 = €1,070,625}$$

- **Wood Mass & Expected Profit**

$$\underline{126,000 \text{ m}^3 * €100 = €12,600,000}$$

- **Market Price**

- Industrial Wood - €100 per m³
- Wood for Burning - €30 per m³



Costs & Benefits

Profit Value $C_1 = € 12,600,000$

Discount Rate $r = 8 \%$

$$\underline{PV = (1 / (1 + r)) * C_1}$$

$$PV = (1 / 1.08) * € 12,600,000 = € 11,666,666$$

$$\underline{NPV = C^0 * (C_1 / (1 + r))}$$

$$NPV = - € 1,070,625 * (€ 11,666,666 / 1.08) =$$
$$= \underline{\underline{€ 9,731,844}}$$



Recommendations

- **Reforestation / afforestation law**
- **Forest restoration fund**
- **Select sites to be reforested / afforested**
- **Establishment of new nurseries**
- **Preservation of forest after seedling**
- **Support private sector**



Recommendations

- **Reforestation / afforestation law**

MAFRD shall promulgate a law in accordance with the goals and standards that specifies the methods and principles of Reforestation / Afforestation.

- **Forest restoration fund**

Providing a reforestation / afforestation activity is necessary to be established.

- € 1 million – 3 million for 2012
- € 2 million per year



Recommendations

- **Identify sites to be reforested / afforested**
 - 100,000 ha of degraded and shrub forests
 - 40,000 ha of barren forestlands

- **Establishment of new nurseries**

Government should support the establishment of new nurseries in the country.

- 2 (two) Nurseries



Recommendations

- **Preservation of forest after seedling**
Government shall establish a program of cooperation and coordination with the governing bodies of localities to assist in preservation of the reforested / afforested areas.
- **Support private sector**
Promote the establishment of associations that represent the interests of private forests owners and work on forests state improvement of privately-owned



Discussion

- **47 % Forest & Forestlands**
 - 40.9 % Degraded Forests & Shrubs
 - Low Wood Mass Productivity
- **Reforestation / Afforestation Programs**
 - Supply of wood and other wood products
 - Reduction of land degradation & increase biodiversity



Thank You

Questions!!!????