

## Challenges for Sustainable Forest Management in an alpine country the case of Austria

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#### **Overview:**

- 1. Introduction: forestry in Austria
- 2. Dynamics: economic developments
- 3. Challenges: opportunities, threats & strategic options
- 4. Reality: significance of non-timber revenues and auxiliary services
- 5. Vision: marketing of public goods





#### The economic paradox of forestry:

- Forestry a dwindling dwarf in terms of value added production & income (share on GDP ~ 0.4%, share on jobs ~ 0.5%)
- Forestry a growing giant in terms of Total Economic Value & social welfare (significance of forest services; even magnitudes of values unknown)

#### ♥ What you see depends on how you look at it!



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## Mostly private property



Source: Ministry of Life 2013

## Small scale forestry prevailing

Size categories of forest enterprises by wooded areas<sup>1)</sup>



Source: Statistics Austria 2013 / Agricultural Structure Survey 2010

## Diversity of forest owners (Hogl et al. 2003)

#### **Types of forest owners**



#### Average structure of harvest (2006 - 2012)



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#### Different rates of utilization $\rightarrow$ challenges in terms of management of the forests, mobilization of timber & sustainability



#### Competitive disadvantages of alpine forestry alpine results given in % of the others (enterprises > 500 ha, $\emptyset$ 2003-2012)



## Multiplicity of public interests

#### Forest Development Plan



#### Indications of multiple use forestry in Austria

- Almost half of the total area is classified as forest
- 100% associated with hunting rights
- 94% accessible for informal recreation
- 87% available for wood supply
- 23% protected to conserve the landscape (MCPFE Class 2)
- 17% classified as protective for soil, water and other forest ecosystem functions (*MCPFE Class 3*)
- 8% used for grazing or subject to grazing rights
- 7% classified as protective for infrastructure and managed natural resources
- 3% protected to conserve biodiversity (MCPFE Classes 1.2 & 1.3)
- 1% with recreational purposes as main management goal

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### Specific problems and conflicts (examples)

- 71% of the forest biotope types worth protection are endangered
- 41% of the protection forests are in need of regeneration
- Cycling on forest roads (extension of everyman's rights, 100000 km)
- Compensation for restricted management on NATURA 2000 sites
- Conflicts and opportunities associated with the dynamic development of the tourism and leisure industry
- Legal status of ground and spring water as private or public



## From output to income: Developments according to the Economic Accounts for Forestry (real values deflated for 2012)



#### Employment in forest enterprises

(numbers given in percent of 1970; BMLFUW 2012)



## Net increment: an additional item of gross production according to the National Accounts (real values deflated for 2012)



#### Natural resource accounting: increase in volume but decline in value



#### Decline of real unit values in the long run

(forest enterprises > 500 ha; values deflated for 2012)



#### **Economic sustainability of timber production?**



#### Wood required for energy production in Austria



Source: AEA (Austrian Energy Agency), Statistics Austria, Chamber of Agriculture of Lower Austria 2013

#### Major challenges (indicative examples)

#### A. Timber

- Mobilization of timber
- Further rationalization (e.g. by means of co-operation)
- Intensification (e.g. genetic improvements)
- Increasing risk of growing timber (damage by wind, snow, game, bark beetles; climate change)
- Migration of industrial capacities for timber processing

#### **B. Multiple use**

- Increasing conflicts between stakeholders' interests
- Equitable allocation and safeguarding of property rights
- Safeguarding of protective functions
- Claims for nature conservation (e.g. NATURA 2000, wilderness areas)
- Diversification
- Marketing of hitherto public goods

#### Significance of non-timber revenues

forest enterprises > 500 ha, averages 2007-2012, values deflated for 2012

Category	Earnings [€/ha]	Share on total earnings [%]
Minor forest products	1.67	0.30
Charges	13.44	2.41
Reimbursements	24.98	4.46
Subsidies	14.52	2.60
Total non-timber	54.61	9.77

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#### Significance of auxiliary activities

(forest enterprises > 500 ha; averages 1997 – 2011, figures in %; TP = timber production)

Type of activity	Documenting enterprises	Costs related to TP	Earnings related to TP
Hunting	97.5	9.9	6.8
Agriculture	79.1	1.6	2.0
Fishing	76.9	1.5	2.6
Provision of services	47.4	4.1	3.1
Renting of buildings	39.1	6.3	3.9
Renting of landed estate	33.9	0.3	1.1
Water	33.2	0.0	0.2
Gravel and sand	24.4	1.0	2.4
Recreation and tourism	13.8	4.7	3.6
Christmas trees	11.7	1.2	0.9
Forest nursery	6.5	3.4	2.9

## Strategy of diversification:

business areas of the Austrian National Forests (ÖBf AG) and respective share of total turnover in 2012

- Forest & timber (74.9 %)
  - Wood supply (incl. trade)
  - ✤ Hunting
  - Fishing
- Real estate (16.2 %)
  - Tourism, letting & leasing
  - Quarrying (materials)
  - Water

- Services (8.0 %)
  - Forest engineering
  - Nature management
  - Consulting
  - Forest Services
- Renewable energy (0.5 %)
  - Hydropower
  - Wind power & photovoltaic plants

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## Tentative SWOT-analysis of value added production based on forest services

- Strength: potentials of multiple-use forestry
- Weakness: lack of knowledge
- Opportunity: rising interest
- Threat: further shift of property rights

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#### Case studies indicate potentials



# Choosing the right level for individual engagement

			Start-up of a specialized	
			business (pro-active; few)	
Transaction cost	st Late		eral diversification within the	
Investment	enterprise (active; some)			
Risk	Market penetration by means of additional			
	offers (reactive or active; several)			
Permissions / allowances e.g. based on model				
contracts (reactive; many)				



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### **Conclusions:**

- 1. Especially in an alpine setting, profitability and competitiveness of timber production are at stake, the possibilities for further rationalization being limited.
- 2. The still rising interest in forest services is associated with strategic challenges, a substantial public funding for the provision of public goods being unrealistic.
- 3. Entrepreneurial forest owners may sustain their income by means of diversification.
- 4. The overall significance of the sector in terms of jobs and income is likely to decline further.



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# Thank you very much for your attention and interest!



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