



Universität für Bodenkultur Wien
Department für Wald- und Boden-
wissenschaften

Inventory and Marketing of Environmental Forest Services

University of Natural Resources and Applied Life Sciences, Vienna

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Institute of Silviculture

25.04.2008

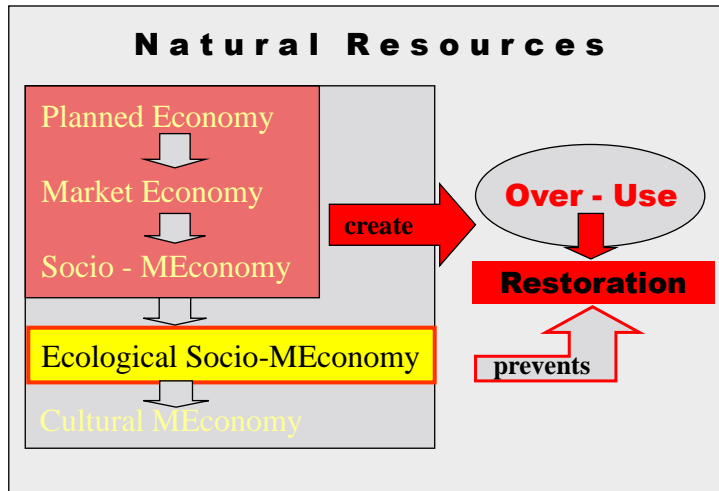
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Content



- **Precondition 1: Ecological and Social based Market Economy**
- **Precondition 2: Multiple Forest Function Inventory**
- **Precondition 3: Forest Certification**
- **Precondition 4: New Technology Tools**

Development of Economic Systems

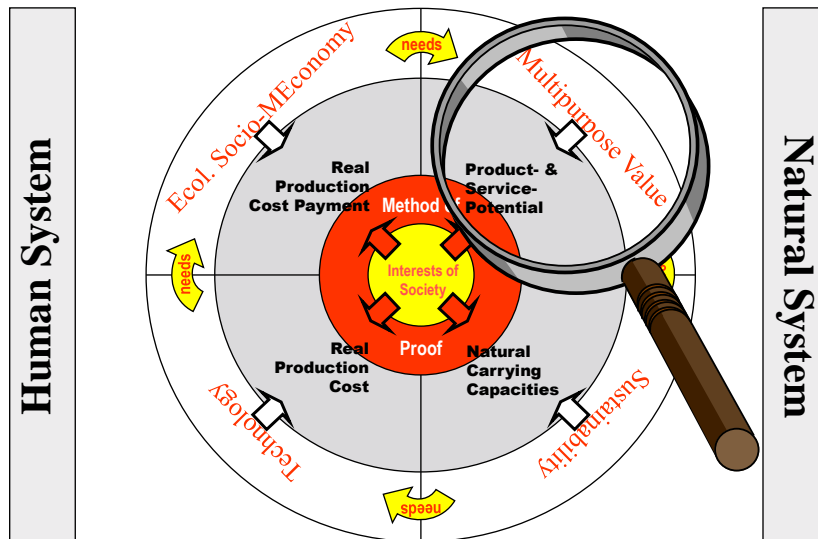


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Ecological-, Social- and Market- based Economy Cycle



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ESME – Basics 1: Multipurpose Land-Use



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ESME – Basics 1: Multipurpose Land-Use



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ESME – Basics 1: Multipurpose Land Use

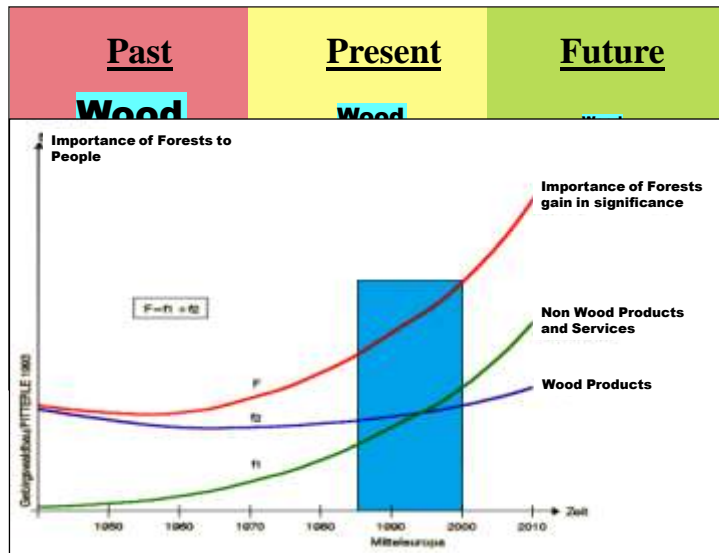


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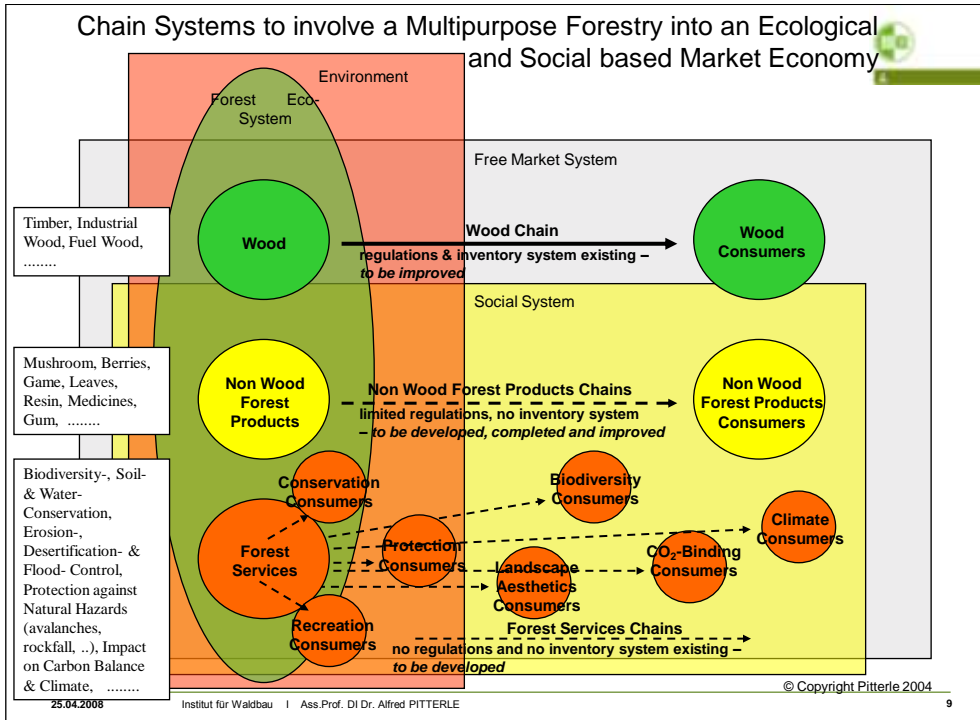
Importance of Forests to People



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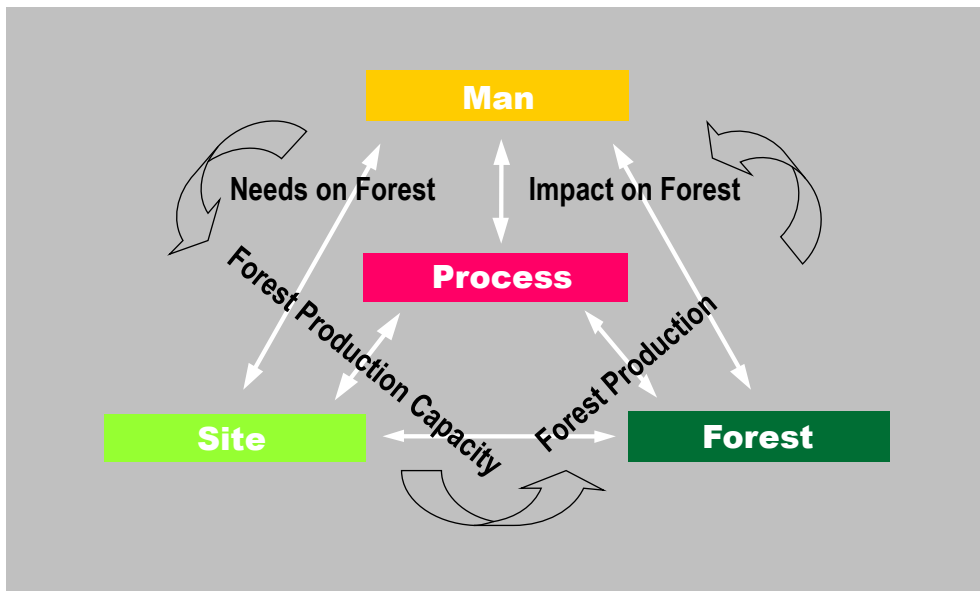
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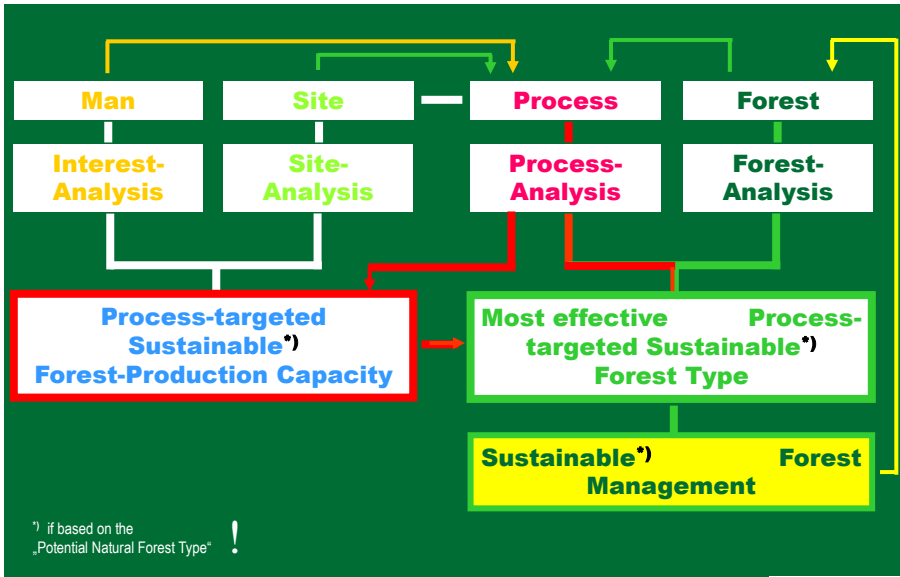
FOMUMIIS® - Method: Basics I

System - Relations of Natural Resources / Forest & Forest Management



FOMUMIIS® - Method: Basics II

System - Analyses for Natural Resources / Forest & Forest Management



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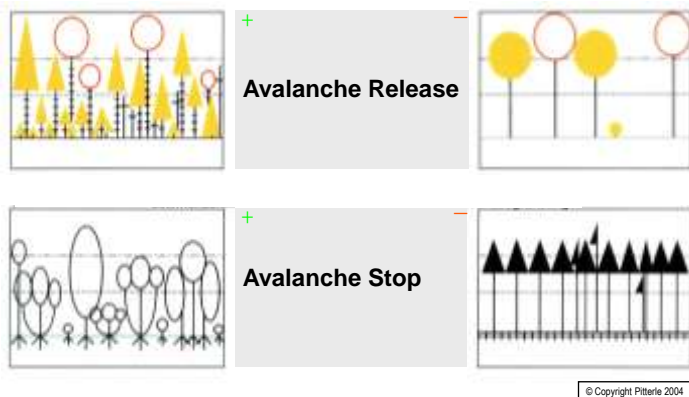
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Forest Design according Forest Functions



Protection against Avalanche



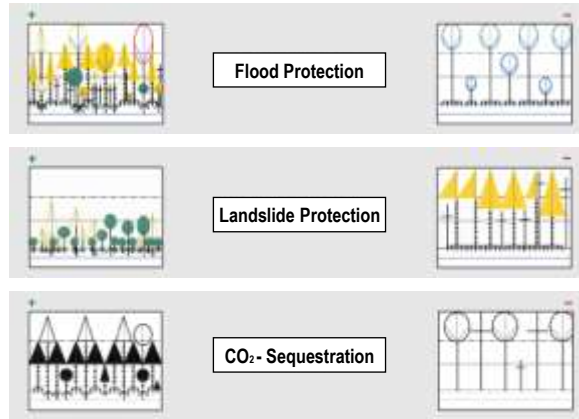
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Forest Design according Forest Functions



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Forest Design according Forest Functions



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FOMUMIIS® - Relation of Intensity Potential & real Performance of Forest Functions and Priority of Measures

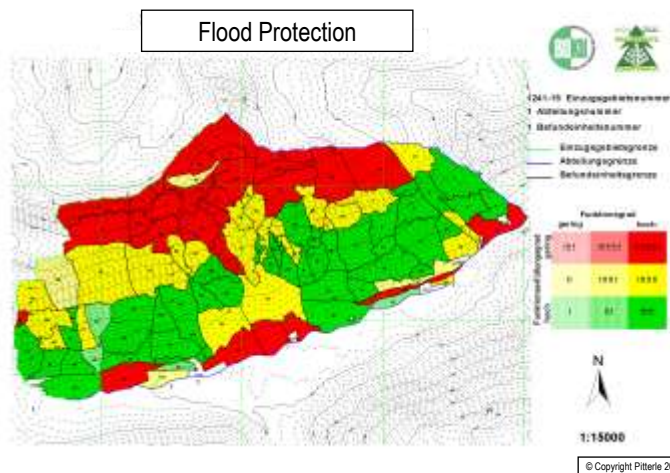


		Matrix der Beziehung zwischen Funktionsstufe und Erfüllungsstufe									Maßnahmen						
		← Funktionsstufe →									pot. Wald	pot. Kampfbäume	pot. Freiland				
Funktionserfüllungsstufe ↑ gering ↓ hoch	gering	0	1	2	3	4	5	6	7	8	9	technische Maßnahmen	technische Maßnahmen	technische Maßnahmen			
	1	0	1	2	3	4	5	6	7	8	9				technische Maßnahmen	technische Maßnahmen	technische Maßnahmen
	2	0	0,5	1	1,5	2	2,5	3	3,5	4	4,5						
	3	0	0,3 3	0,6 7	1	1,3 3	1,6 7	2	2,3 3	2,6 7	3						
	4	0	0,2 5	0,5	0,7 5	1	1,2 5	1,5	1,7 5	2	2,2 5				technische und wiederholliche Maßnahmen	technische Maßnahmen	technische Maßnahme
	5	0	0,2	0,4	0,6	0,8	1	1,2	1,4	1,6	1,8						
	6	0	0,1 7	0,3 3	0,5	0,6 7	0,8 3	1	1,1 6	1,3 3	1,5						
	7	0	0,1 4	0,2 9	0,4 3	0,5 7	0,7 1	0,8 6	1	1,1 4	1,2 9				technische und wiederholliche Maßnahmen	technische Maßnahmen	technische Maßnahme
	8	0	0,1 3	0,2 5	0,3 8	0,5	0,6 3	0,7 5	0,8 8	1	1,1 3						
	9	0	0,1 1	0,2 2	0,3 3	0,4	0,5 6	0,6 7	0,7 8	0,8 8	1						

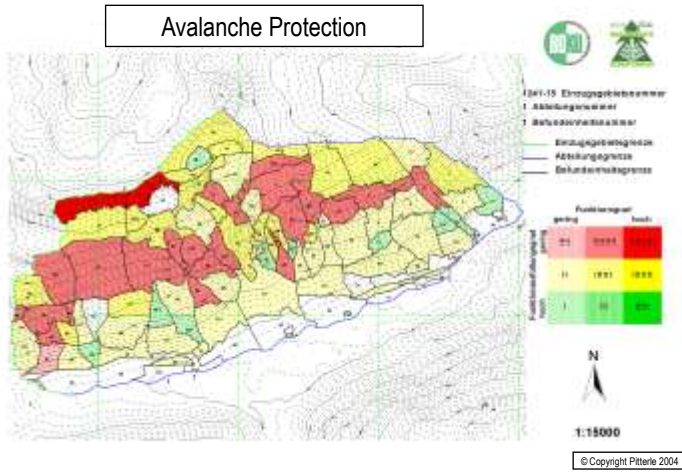
		Matrix der Dringlichkeit		
		← Funktionsstufe →		
Funktionserfüllungsstufe ↑ hoch ↓ gering	gering	4	8	9
	2	2	6	7
	1	1	3	5

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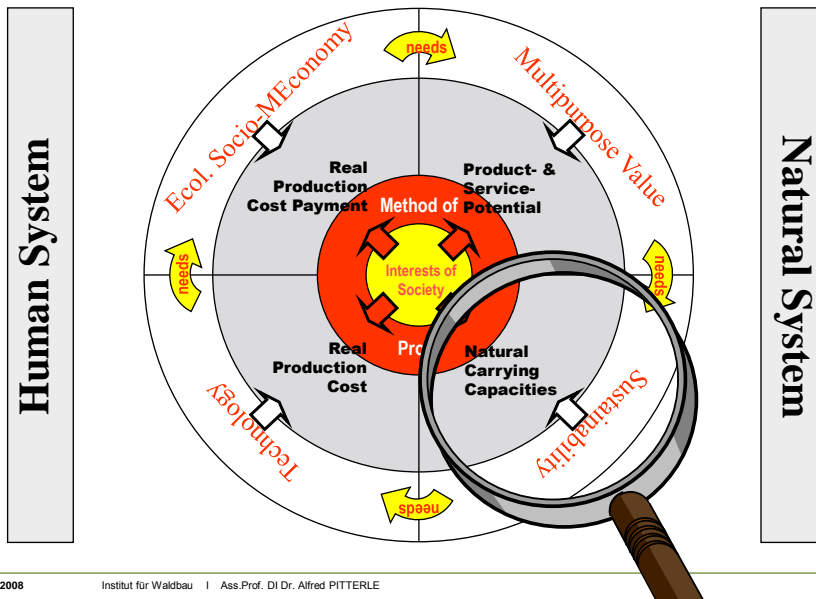
FOMUMIIS® -Result: Intensity of Forest-Function & Stand-Fulfillment



FOMUMIIS® -Result: Intensity of Forest-Function & Stand-Fulfillment



Ecological-, Social- and Market- based Economy Cycle

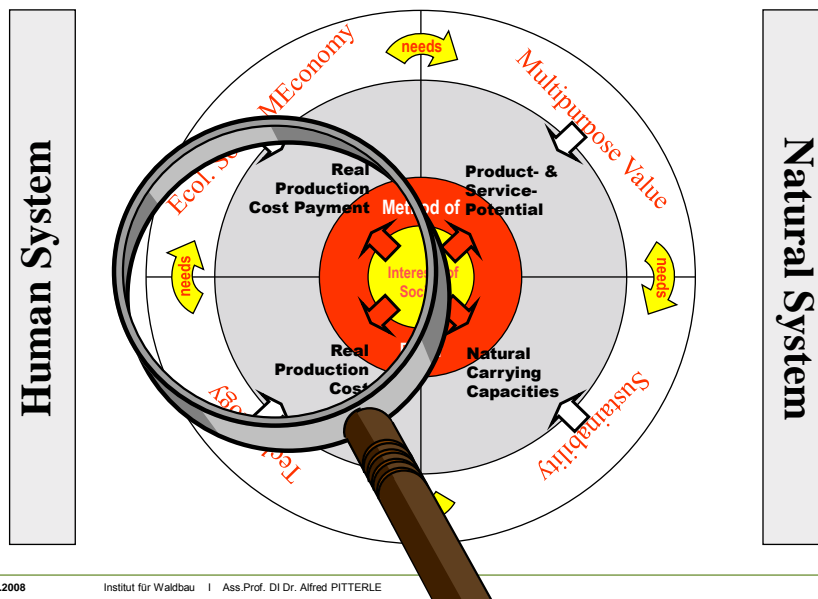


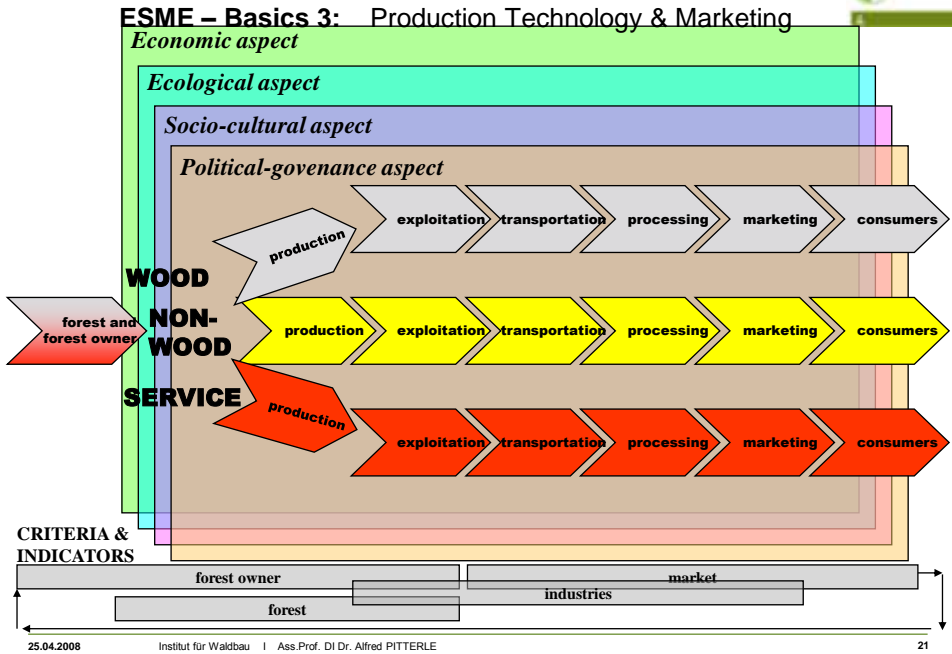


Land-Use Principles:

- each land offers multiple but different land-use/production capacities (Multiple Inventory necessary !).
- each land shows different natural carrying capacities for different land-use/production types (Natural Carrying Capacities are an Indicator for Sustainability !).
- use the potential natural vegetation as basis for land-use and as indicator for sustainable carrying capacities.
- protect eco-systems and do not change them towards beyond their natural carrying capacity.
- protect biodiversity or increase it towards a natural level.

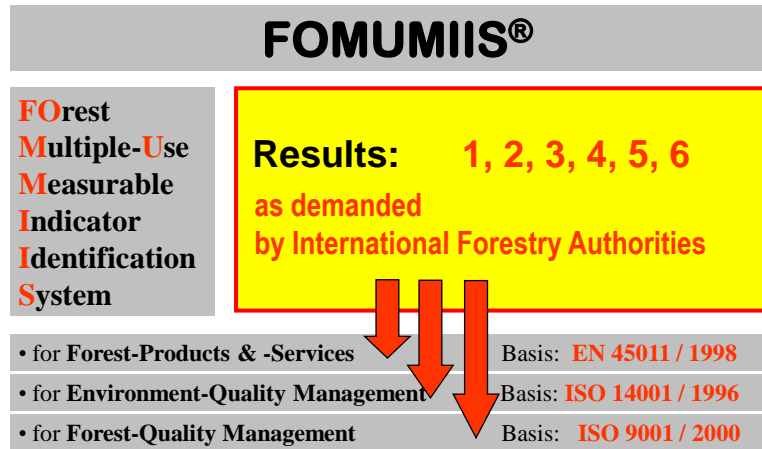
Ecological-, Social- and Market- based Economy Cycle





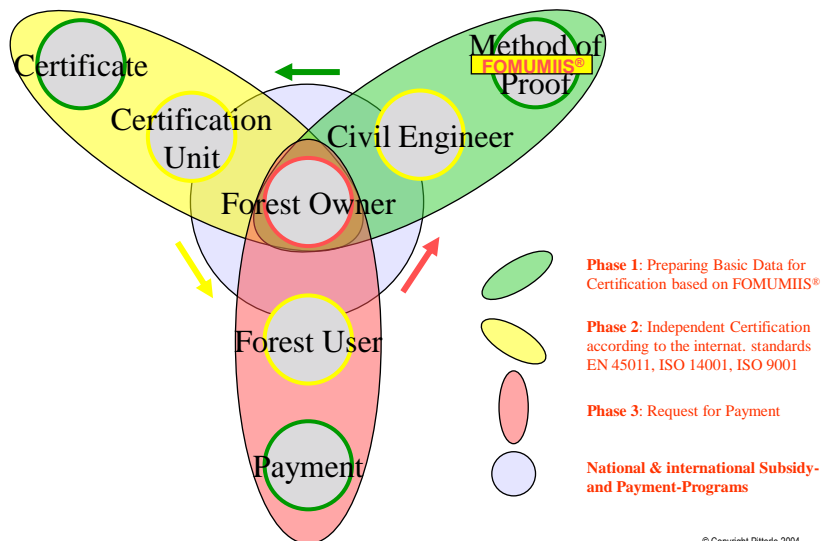
Demands of International Forestry Authorities

- Demand (1): **Protection of Forests / Biodiversity** (Minist.Conf.PFE STRASSBURG 1990, HELSINKI 1993, LISBOA 1997, VIENNA 2003, FLEGT-EU 2004)
- Demand (2): **Sustainable Forestry** (RIO 1992)
- Demand (3): **Multi-Purpose Forestry** (JOHANNESBURG 2002)
- Demand (4): **Economic Benefit** as Basic Target of Sustainable Multi-purpose Forestry (UN-Forum on Forest GENEVA 2003)
- Demand (5): **Public Awareness/Information of Public Society and Training of Forest Owners/Managers** on Possibilities of Forest-Use (**Forest Potentials**) and natural **Carrying Capacities** of Forest Management as a Basis of mutual Understanding (FAO/ECE/ILO GENEVA 2003)
- Demand (6): for **measurable, reliable, quantitative Criteria and Indicators** of Forestry as Basis for Decision Makers of Policy and Economy (UN-Forum on Forests GENEVA 2003; FAO/ECE/ILO GENEVA 2003; EU 2003)



FOMUMIIS® – Method: developed by Alfred Pitterle 1994-2003; patented since 2003; Label protected since 2001.

ESME – Basics 3: Production Technology & Marketing





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