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Comparing profitability and governance for recreational wild mushroom picking in forest and timber production

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Outline

1. The context: Italy

2. Wild Mushroom Picking as recreational environmental service (source of income)

3. Timber production vs. Wild Mushroom Picking in 4 case studies: governance mechanisms and profitability

4. Conclusions
1. The Italian forestry context: an overview

- Italy: rich of poor forest (95% in mountain-hills)

- Forest area increasing:
  5.5 M ha in 1950
  10.4 M ha in 2000
  (2-3 M in natural conversion)

- Forestland ownership:
  60% private (former farmers): 3 ha/firm
  40% public (local municipalities, community-forests)

*Pink areas = mountain*  
*Black spots = land under conversion*
1. The Italian timber production: an overview

- **Industrial roundwood**: mainly in the North (high forests) (and plantations)
- **Firewood**: main timber output in the Central-South Italy (coppices)
- **Low productivity**
1. Macro-areas: GMP

- Centre and South: constant trend → fuelwood
- **NW-NE-I: decrease** → globalization of roundwood market

• Reduction of high quality (high value) timber

• Lack of a NFP (but 21 local forest programs)

Data available since 1950, but focus on the last 10-15 years
1. Macro-areas: productivity [€/ha]

![Graph showing productivity trends in different macro-areas from 1950 to 2007. The graph highlights the Energy crisis period from 1973 to 1974.]
2. The key-point

- In a market where timber supply is becoming less profitable, can payments for NWFPs be an instrument for enhancing the forest value and providing income for local population?

NEWFOREX project (2010-2012) (7th FP)
2. Wild Mushroom Picking: recreational activity as a source of income from the forest

1. The most **extensive** forest activity in the Alps

2. Directly linked to the forest output

3. Activity **involving** thousands of people

4. Possibility to have a **direct transaction** between the user (picker) and the provider (forest owner).
2. Wild Mushroom property rights regulation

**Private land**
- Real rights leaseholder as picker
- Forest owner as picker:
  - Private owner
  - Community forests
- Self-certification (picking badge function)
- No harvest limitation (within their own property)
- Payment of their own permit (day, week, month, year)
- Harvest with limitation in Regole’s forests (max 1Kg of Boletes in total 2Kg of WEF, time limitation to the daylight)

**Public land**
- Pickers living in plain area
  - Request of picking badge (to province)
  - Approbation
  - Pickers with badge
  - Harvest with limitation in plain (max 1Kg of Boletes in total 2Kg of WEF, time limitation to the daylight)
- Pickers living in mountain areas
  - Living outside municipality of harvesting
  - Payment of picking permit (day, week, month, year)
  - Harvest with limitation in public mountain areas (max 1Kg of Boletes in total 2Kg of WEF, time limitation to the daylight)
  - Customary rights
  - Harvesting rights ID-based (within the municipality boundaries)

*Regole = common private land owned by few local families*
3. Three governance mechanisms based on 4 Wild Mushroom Picking case-studies

Pre-Alpine mountains (2 cases)
a. Rent use without re-investment

Asiago plateau
b. Limited internal re-investment

Borgotaro
c. Network-based WEF supply
a. Rent use without re-investment

2 Mountain Authorities (municipalities’ associations):
Case-study a.1 = “Astico-Brenta” (10,800 ha)
Case-study a.2 = “Astico-Posina” (23,400 ha)

• Appr. 3,500 - 4,000 picker badges
• Lack of control
• Low investment on WEF res.
  Permit cost: daily 6€; monthly 17€ - 30€; annually 32€-77 €

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<th>Year</th>
<th>Permit income [€x1000]</th>
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<th>Year</th>
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<td>2008</td>
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<td>2009</td>
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b. Limited internal re-investment

One Community Forest: “Spettabile reggenza”
49,000 ha

- Appr. 10,000 picker badges
- > 20,000 permits/yy
- Limited investment on WEF
- Some external WEF buyers

- Presence of other recreational forest activities
- Fist approach on territorial marketing:
  - WEF among the local specialty products (i.e. Asiago cheese)
  - Link to the local handcraft shops
  - Picking tourism

Permit cost: daily 6€; monthly 32€; annually 77€
Enterprises: 62 (in 2008)
15  Agro-tourisms/ Farm businesses
12  Hotels/Guest quarters
 8  Bed&Breakfasts/Inns/Hostels
 9  Cheese, sausage and wine growing and producing factories
 2  Didactic farms
 3  Museums/Private collections
30  Restaurants/Porterhouses
26  Typical products sellers

Imago product: PGI Borgotaro Boletus

c. Network-based WEF supply
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WEF are much more than a commodity or recreational service ➔ the key-component (imago product) of a larger network (Human and Provan, 1997 – mod) based on the concept of “territory”

- a consistent portfolio of products and services
- coordinated marketing efforts

- 420,000 € per year from WEF permits selling on 33,000 ha of forest
- 2.8 M€ total income (estimated) from Wild Mushroom tourism (in 2006)
### 3. Profitability: timber vs. WEF

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<thead>
<tr>
<th>Case study</th>
<th>Timber</th>
<th>WEF</th>
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<tbody>
<tr>
<td>One authority, no control, re-investments (a.1, a.2)</td>
<td><strong>7.8 €/ha</strong> (2000-2008)</td>
<td><strong>1.1 €/ha</strong> (2000-2008)</td>
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<td>Few actors, limited control, low re-investments (b)</td>
<td><strong>47.3 €/ha</strong> (2000-2009)</td>
<td><strong>6.6 €/ha</strong> (2000-2009)</td>
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<td>Network, high control, significant re-investments (c)</td>
<td>n.a.</td>
<td><strong>12.7 €/ha</strong> by permits selling (but considering all the WEF-based activities) (2006)</td>
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* Firewood for self consumption by the members of the Consortium
4. Conclusions

• **Profitability from NWFPs is comparable** (or higher) to that from traditional timber production

• **Property rights** regulations are important for pickers & forest owners, but more important is the chance of **entrepreneurial innovation**

• **Profitability levels depend on the form of governance** (bottom-up/voluntary/market-based initiatives reduce control costs and make it more effective + directly increase forest output ← investments on special silviculture measures)
4. Conclusions

The most advanced level of profitability from NWFPs marketing are reached through networks models, based on 2 key-components:

- **(contractual) coordination** of economical stakeholders for the supply of products and services to increase profit and/or stability

- **mutual trust**

  \[\text{input} = \text{social capital}\]

  \[\text{output} = \text{not only market products are supplied but also “relational goods”}\]
Thank you!

PPT available on-line at:

www.tesaf.unipd.it/pettenella/