



THE ALPINE CONVENTION IS THE FIRST INTERNATIONAL TREATY FOR THE PROTECTION AND PROMOTION OF THE SUSTAINABLE DEVELOPMENT OF A CROSS-BORDER MOUNTAINOUS REGION



Non-Wood Forest Products: product or service of the forest?

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Provincia di Trento

8 giugno 2016



This project has received funding from the European Union's Seventh Programme for research, technological development and demonstration under grant agreement No. 311919

Outline

- “A” NWFP **definitions**
- NWFP & property **rights**? “*Conditio sine qua non*” for the market creation
- NWFP as **product** or **service**?
 - Production of “*products*”
 - Production of “*services*”
- (Forest and NWFP) **planning**
 - Silviculture and NWFP production: a link that matters!
 - Forest and NWFP management

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“All” starts from a definition.

NWFP definition



NWFP (scientific) definition

NWFP are “*all biological materials other than timber which are extracted from forest for human use*” - (De Beer and McDermott 1989)

NWFP are “*products of biological origin other than wood derived from forests, other wooded land and trees outside forests*” - (FAO 1999)

NWFP (legal) definition

“**primary production**” means the production, rearing or growing of primary products including harvesting, milking and farmed animal production prior to slaughter. It also includes hunting and fishing and the **harvesting** of *wild products*. (Art. 3, part 17, Reg. 178/02)

"*wild product*" resulting from "*collection of edible plants and parts thereof, growing naturally in natural areas, forests and agricultural areas*" (Art. 12, comma 2, Reg. 834/07 “organic law”)

Well a definition that should contain...

Agriculture land

Agro-forestry

Forest

Plantation

Wetland Pasture land Dry land

Even in a theoretical scheme, the large number of NWFPs is such, to make difficult a **representation** of the single categories of NWFPs

Focus the attention on single product/specie economy and management is today the most used approach by the **different stakeholders**



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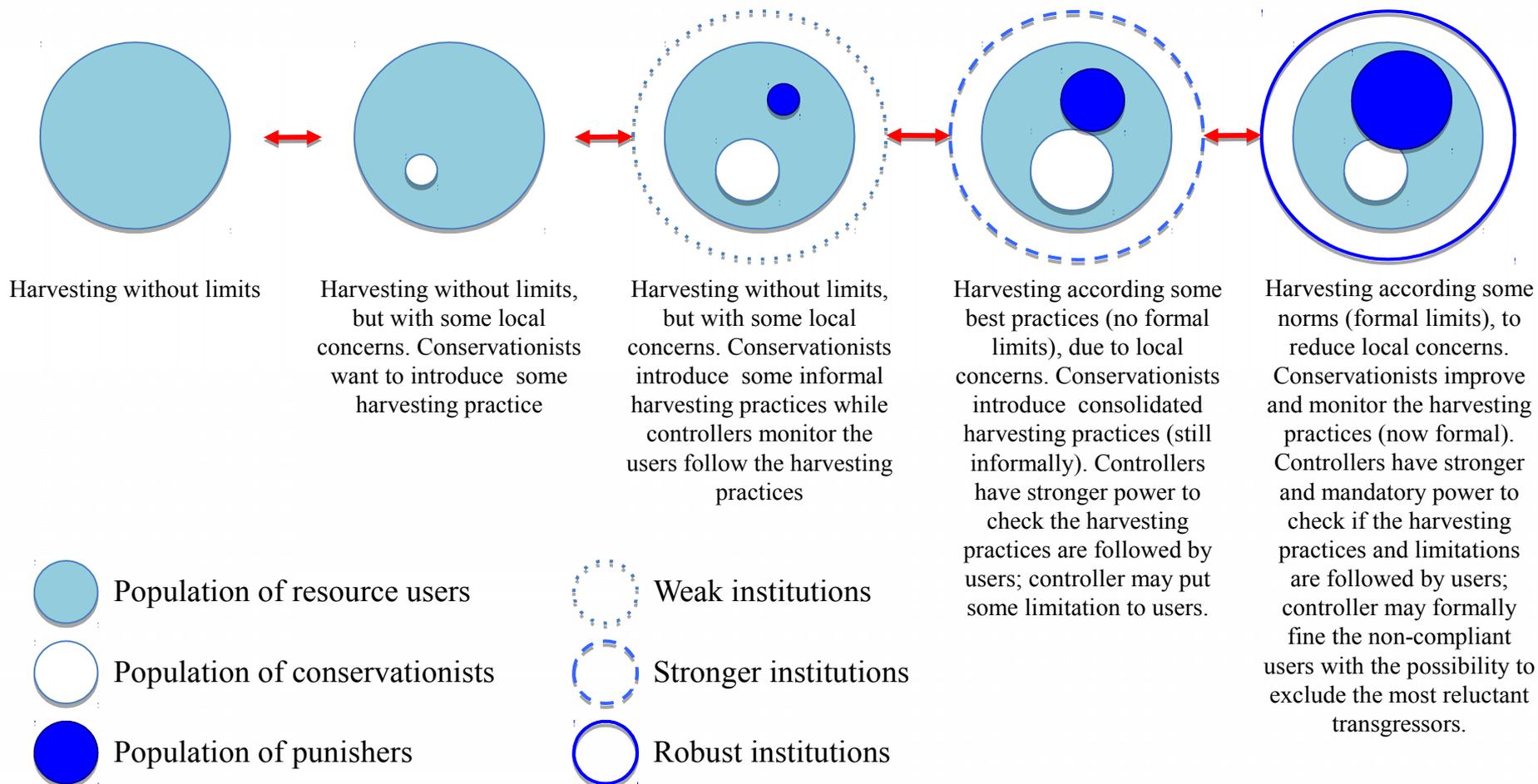
Property rights on NWFP: from *informal* to *formal* institutions

Institutions = “*rules of the game*” in a society (North 1990)

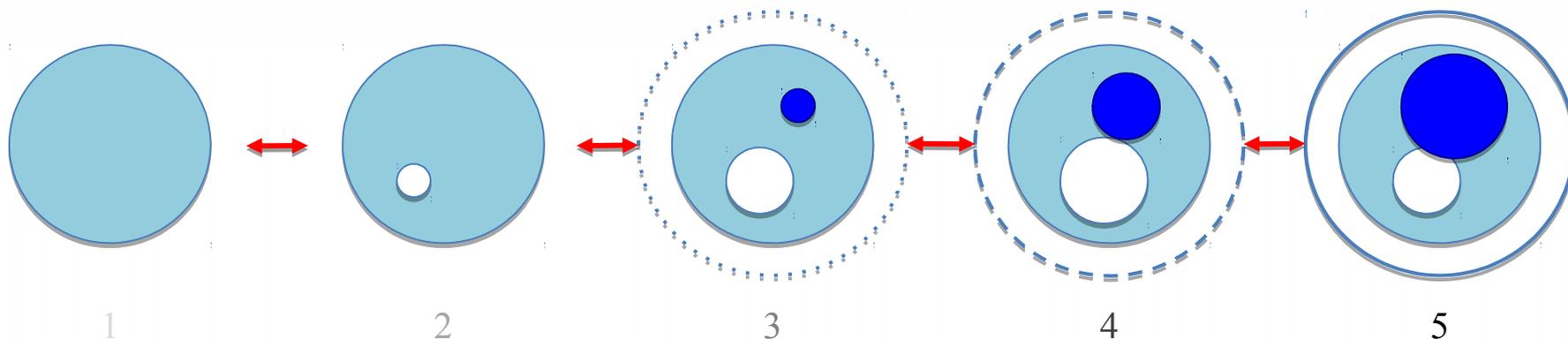
Actors and organizations = “*players*” of the game (North 1990)

- *Formal* institutions
 - Policies and legislation
 - Strategies, action plans
 - Policy instruments and property rights arrangements
- *Informal* institutions
 - Cultural norms, codes of conduct
 - Traditions, conventions, etc.

Property rights on NWFP: from *informal* to *formal* institutions

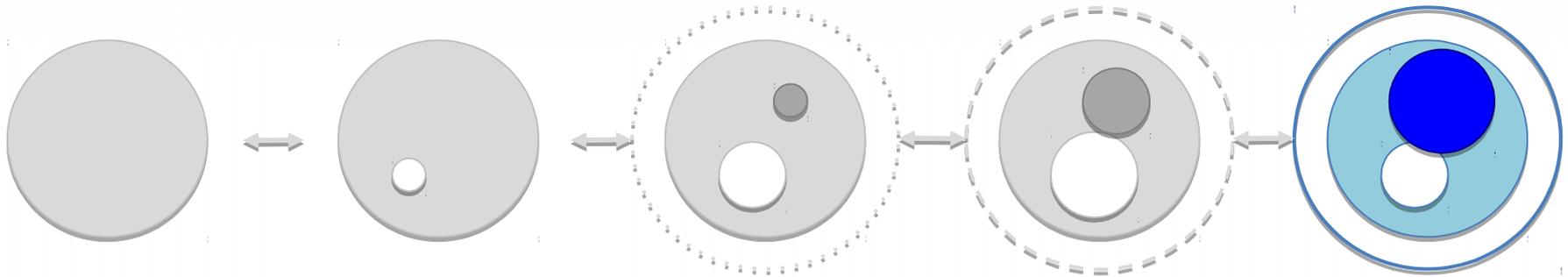


Property rights on NWFP: from *informal* to *formal* institutions



| Harvesting rights | Harvesting limits | Case studies | Positio n |
|--|--|---|--------------|
| Anyone can harvest NWFP independently of the purpose | No limits | Finland | 4 |
| | Quantity limits for mushrooms (2kg/day/person) | Austria (in some forests, harvesting requires the acquisition of permits) | 3 |
| Harvesting for self-consumption allowed to everyone, commercial harvesting requires permits (or forest owners' consent) | No limits | Scotland | 4 |
| | Quantity limits for mushrooms (2kg/day/person) | Slovenia | 3 |
| Harvesting is restricted to permit holders or otherwise authorised persons or to local population | No limits | Serbia | 3 |
| | Limit on the area | Wales | 4 |
| | Quantity limits for mushrooms | Italy, Catalonia, Castilla y León (on certain areas) | 5 |

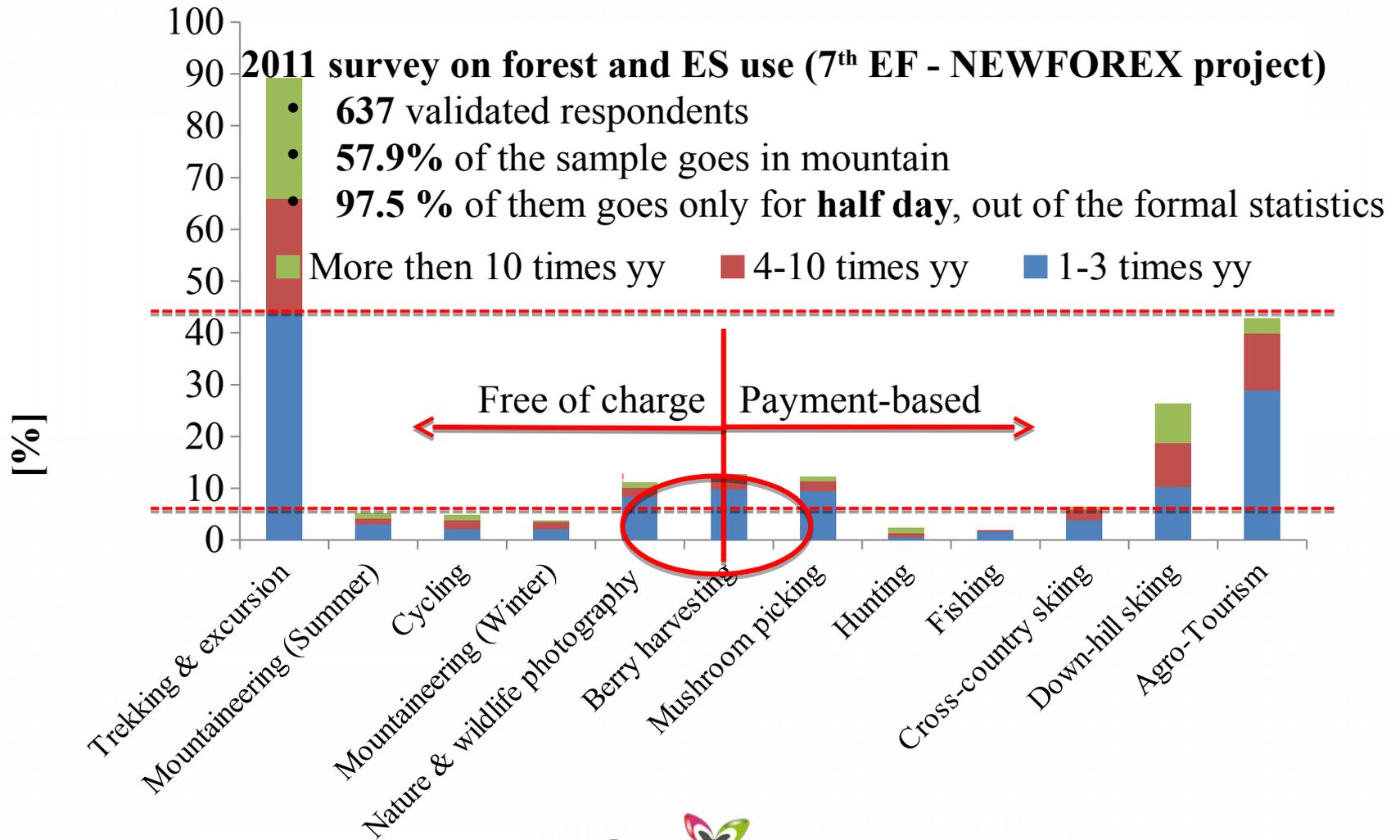
Property rights on NWFP: from *informal* to *formal* institutions



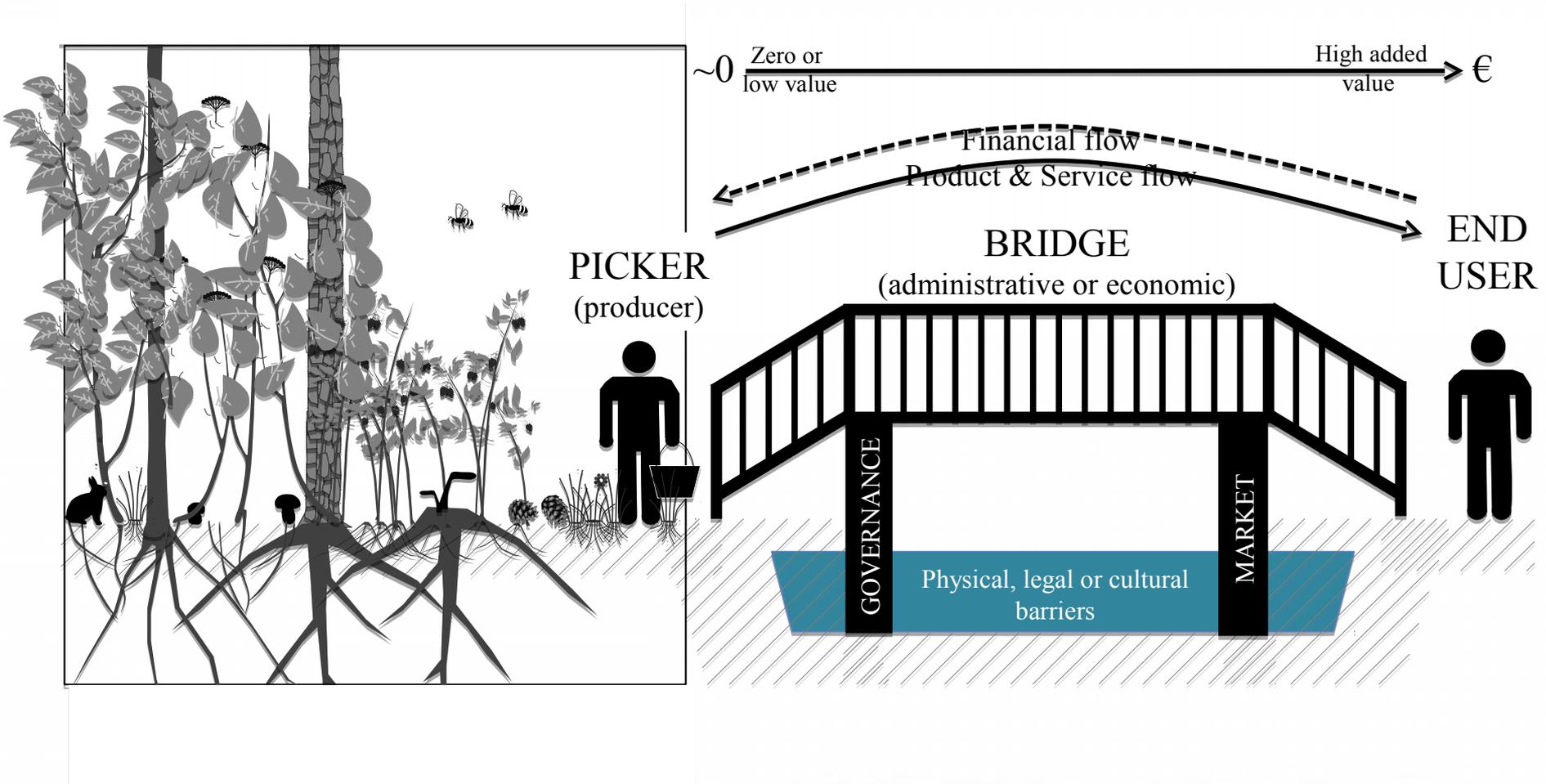
Source of law (some examples):

- Constitution (Art. 42)
- Civil Code:
 - Art. 820 C.C. (legal natural fruits)
 - Art. 821 C.C. (buying “fruits”)
 - Art. 841 C.C. (real estate closure right) + all real rights
- Specific laws:
 - Law n. 352 of the 23rd August 1993 & D.P.R. n. 376 of the 14th July 1995 (wild mushroom law)
 - L.Pr. n. 11 of the 23.5.2007 (Province Law on Forests and Environment Protection)
 - Fiscal law (European Dir. 2006/112/CE or National Law D.P.R. n. 633 of the 26 October 1972)
 - ...[laws on truffles, resins, cork, berries, greeneries, MAPs, ...]

NWFP as product or service? Context



The definition of institution among players is the “*existence condition*” of any market



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NWFP as product or service?



Recreational purpose

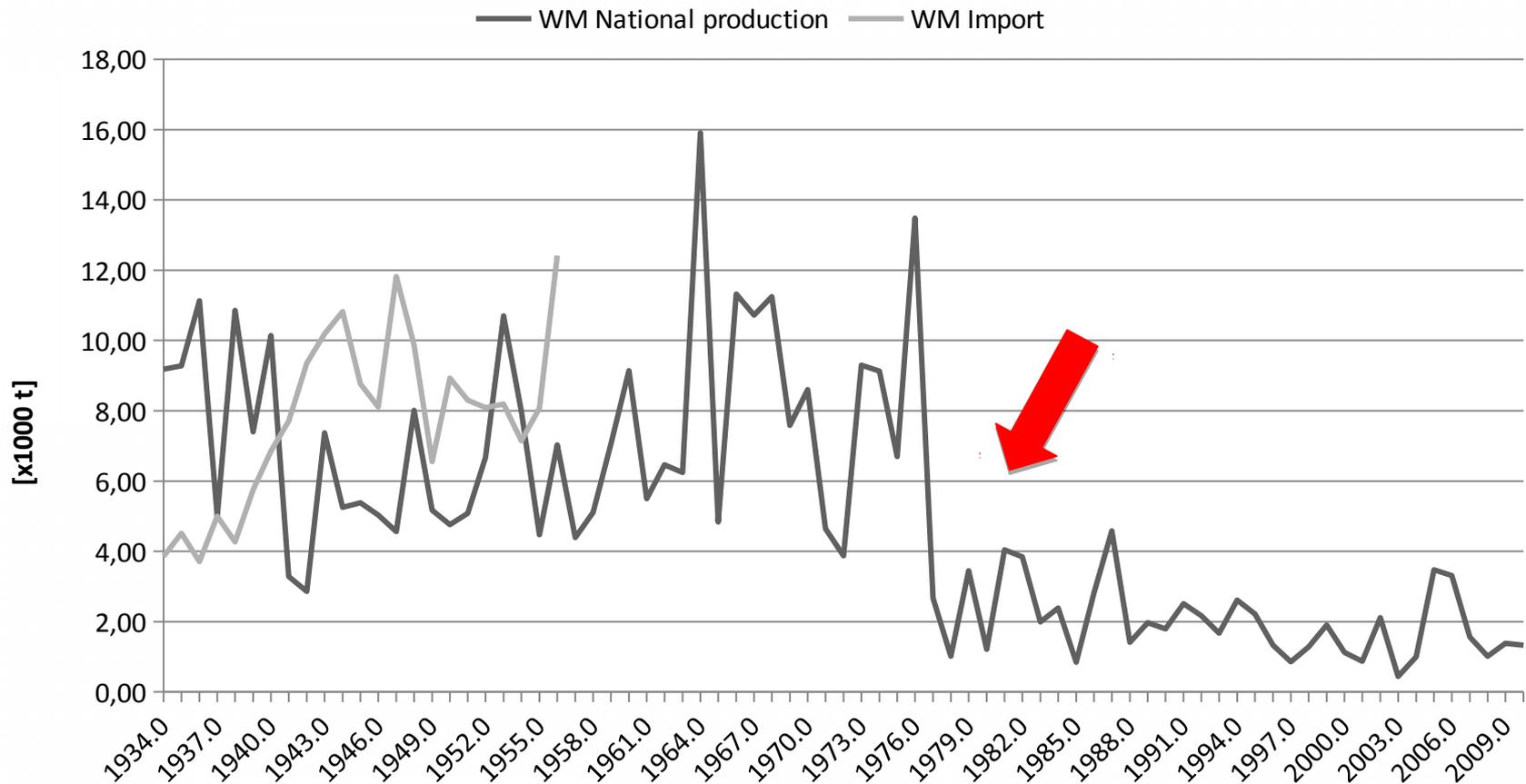


Let's see the institutions around the WM resources



Commercial purpose

NWFP as product or service? (example of WM market context)



NWFP as product or service? (context for service use)

| | HH picking | HH n. | HH n. pickers | selling index |
|--------------|---------------|-------------|---------------|---------------|
| N-O | 17.36% | 3.01 | 2.40 | 0.23 |
| S | 12.93% | 3.60 | 1.89 | 0.22 |
| I | 27.63% | 3.29 | 2.19 | 0.25 |
| N-E | 16.36% | 3.18 | 2.11 | 0.19 |
| C | 17.07% | 3.16 | 2.57 | 0.31 |
| Italy | 17.35% | 3.26 | 2.23 | 0.24 |

| Product | Estimation of the population involved | | | | |
|----------------|--|----------------------------------|-------------------------------------|--------------------------------------|---|
| | Share of pickers of Italian Households [%] | Share of Household that pick [%] | Using ISTAT HH dimension [M people] | Using survey HH dimension [M people] | Using survey av. N. of picker per HH [M people] |
| Greenaries | 6.80% | 39.18% | 3.945 | 5.124 | 3.529 |
| Forest nuts | 12.70% | 73.20% | 7.372 | 9.574 | 6.594 |
| Wild mushrooms | 12.16% | 70.10% | 7.060 | 9.170 | 6.315 |
| Truffles | 2.50% | 14.43% | 1.454 | 1.888 | 1.300 |
| Wild berries | 11.45% | 65.98% | 6.645 | 8.630 | 5.944 |
| MAP | 10.38% | 59.79% | 6.022 | 7.821 | 5.387 |
| Sap&Resins | 1.07% | 6.19% | 0.623 | 0.809 | 0.557 |
| tot | 17.35% | - | 10.071 | 13.080 | 9.009 |

NWFP as product or service?

The case of “*Fungo di Borgotaro*”



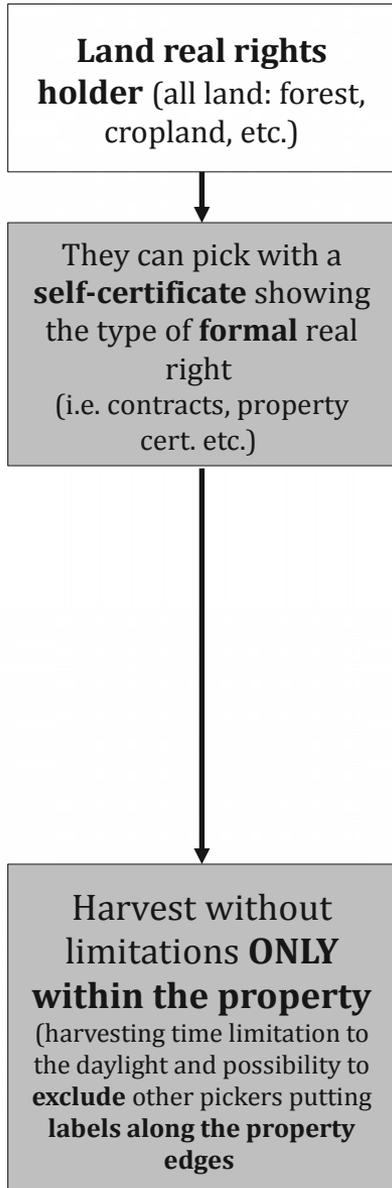
Recreational service



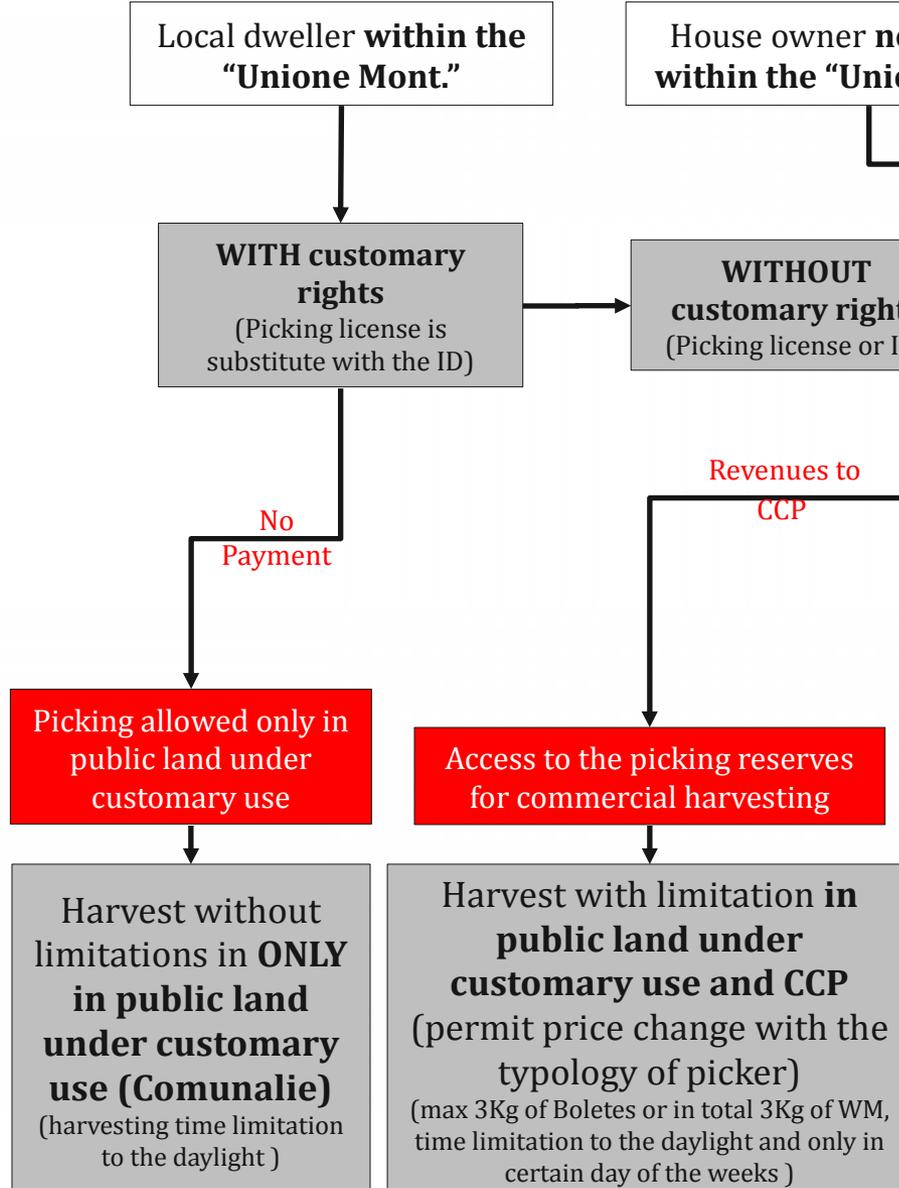
Product for Niche Market (IT-IT)

...let's see how the “*institutions*” are set up!

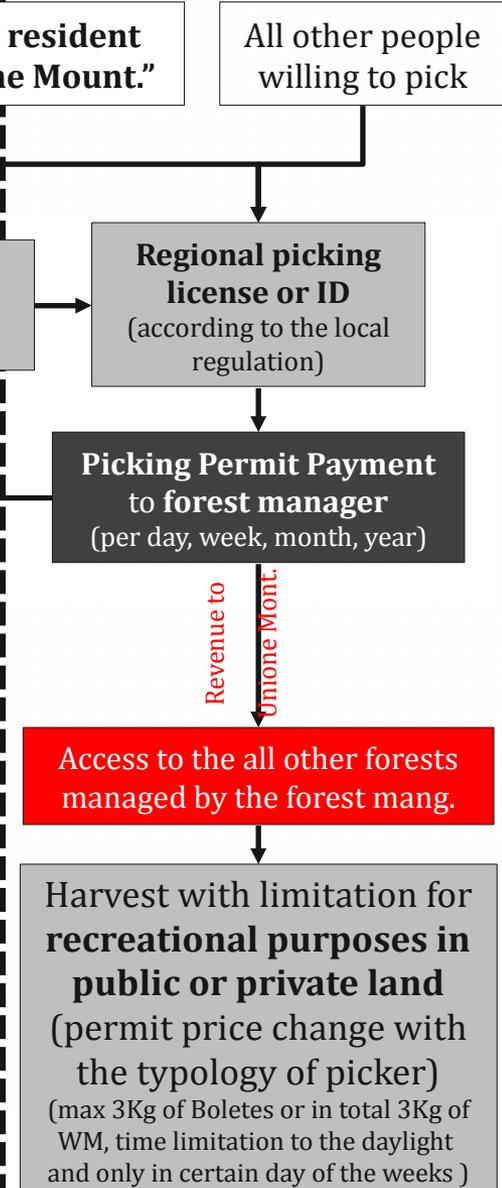
Private Land



Consortium Comunalie



Other land (in mountain area)



NWFP as product or service?



- Target:** recreational service of WM
Service: selling recreation based on WM collection
Costs for the recreational pickers:
- Daily picking permits 6-20 €/day
 - Seasonal 75-200 €/year



- Target:** high quality WM for Niche Market (IT-IT)
Product: fresh boletes
Supply chain prices:
- picker price 1st cl. 5-23 €/kg
 - L retail price 1st & 2nd cl. 9-28 €/kg
 - C retail price 1st & 2nd cl. 20-45 €/kg

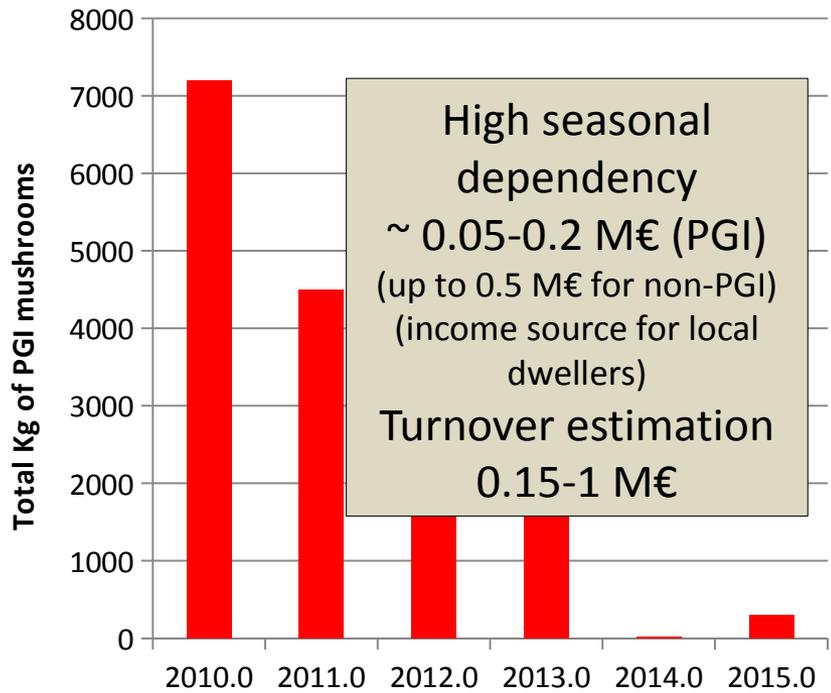
NWFP as product or service?



L.R. 8/98 - INCASSI 2012

| ZONE CONVENZIONATE | | ZONE BIANCHE | |
|----------------------------|-------------------|------------------------------|------------------|
| ALBARETO | | COMUNE DI ALBARETO | 30,00 |
| COMUNALIA DI ALBARETO | 143.487,00 | COMUNE DI BARDI | 10,00 |
| CONSORZIO LA ROCCHETTA | 60.384,00 | COMUNE DI BEDONIA | 1.307,00 |
| COMUNALIA DI BOSCHETTO | 59.012,00 | COMUNE DI BERCETO | 3.831,00 |
| COMUNALIA DI GROPPIO | 28.340,00 | COMUNE DI BORGOTARO | 3.562,00 |
| COMUNALIA DI MONTEROPPO | 96.995,00 | COMUNE DI COMPIANO | 744,00 |
| COMUNALIA DI GOTTRA | 14.318,00 | COMUNE DI FORNOVO T. | 2.957,00 |
| COMUNALIA DI BUZZO' | 13.919,00 | COMUNE DI PELLEGRINO | 2.134,00 |
| CONSORZIO MONTE SCHEGGIA | 19.256,00 | COMUNE DI TORNOLO | 136,00 |
| TOTALE | 425.671,00 | COMUNE DI VALMOZZOLA | 1.889,00 |
| | | COMUNE DI VARENO DE MELEGARI | 861,00 |
| BEDONIA | | COMUNE DI VARI | 1.454,00 |
| COMUNALIA DI CASALPORINO | 2.940,00 | TOTALE | 18.935,00 |
| COMUNALIA DI SELVOLA | 14.586,00 | | |
| COMUNALIA DI LIVEGLIA | 240,00 | | |
| COMUNALIA DI CASAMURATA | 0 | | |
| COMUNALIA DI CORNOLO | 0 | | |
| TOTALE | 16.968,00 | | |
| BARDI | | | |
| COMUNALIA DI GRANERE | 34.755,00 | | |
| COMUNALIA DI TIGLIO | 90,00 | | |
| COMUNALIA DI FAGGIO | 215,00 | | |
| TOTALE | 35.025,00 | | |
| TORNOLO | | | |
| CONSORZIO M. DI TORNOLO | 22.940,00 | | |
| COMUNALIA DI TARSOGNO | 21.300,00 | | |
| CONSORZIO CASALE | 7.820,00 | | |
| TOTALE | 52.060,00 | | |
| BARDI | | | |
| CONSORZIO VAL NOVEGLIA | 19.220,00 | | |
| VARI | | | |
| CONSORZIO BARRIGAZZO | 6.470,00 | | |
| BERCETO | | | |
| CONSORZIO BERGOTTO | 4.350,00 | | |
| CONSORZIO LA VECCHIA | 640,00 | | |
| BORGIO VAL DI TARO | | | |
| MONTI CROCE DI FERRO | 279.085,00 | | |
| PENNA | | | |
| FORESTA M. PENNA | | | |
| CONSORZIO ALTO TARO-TAROLA | | | |
| COMUNALIA CODORSO-GIUNCAR | 52.156,00 | | |
| BEDONIA - PENNA | | | |
| COMUNALIA DI SETTERONE | | | |
| COMUNALIA DI STREPETO | | | |
| CONSORZIO ALPIE | | | |
| CONSORZIO SPORA | | | |
| CONSORZIO ROMEZZANO | | | |
| CONSORZIO M. CROCCO | | | |
| TOTALE | 30.100,00 | | |
| TOTALE | 921.725,00 | | |

Quite good economic performance
 ~ 0.6-1.2 M€ to the forest manager on 13000 (+20000) ha (~0.1 M of pickers)



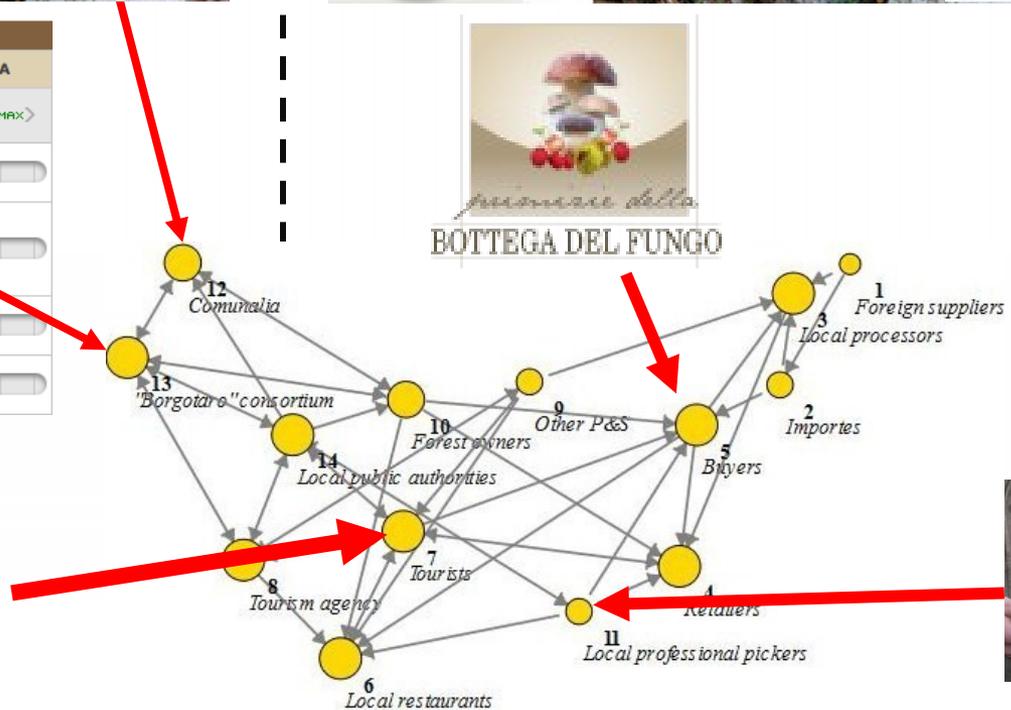
High seasonal dependency
 ~ 0.05-0.2 M€ (PGI)
 (up to 0.5 M€ for non-PGI)
 (income source for local dwellers)
 Turnover estimation
 0.15-1 M€

NWFP as product or service?

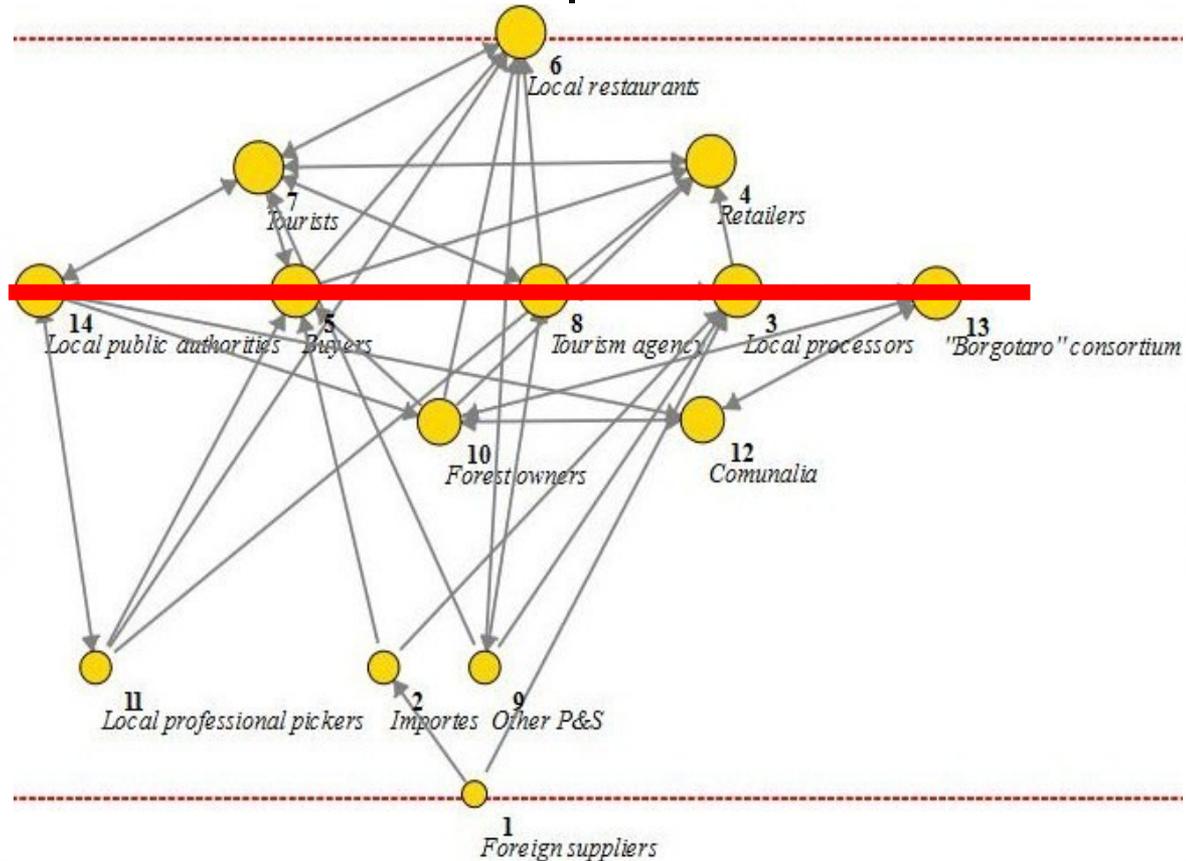


Ultimo aggiornamento: 17-9-2014

| COMUNE | ZONA | TESSERINO | CRESCITA |
|---|--|--|---------------|
| | Clicca la zona per vedere la cartina | Clicca sul colore per il prezzo relativo | < MIN MAX > |
| Albareto (I.G.P.) Giovedì riserva chiusa | Comunale di Groppo, Tombeto e Boschetto, zona Monte Gottero | Verde | N/D |
| Albareto (I.G.P.) Giovedì riserva chiusa | Comunale di Gotra e Buzzò, Consorzio La Rocchetta e Consorzio Monte Scheggia, zona Passo del Due Santi | Verde | N/D |
| Borgo Val di Taro (I.G.P.) | Comunale di Baselica, Pontolo (zona di Monte Molinatico) | Blu | |
| Borgo Val di Taro (I.G.P.) | Comunale di San Vincenzo e Valdena (zona di Val Tarodine) | Blu | |



NWFP as product or service?



NWFP as product or service? Other example



micocyl.es
Castilla y León Micología



Permisos Diarios

Son válidos únicamente para un día o dos consecutivos. Para obtener este tipo de permisos no se necesita de registro previo pero si se registra se podrá beneficiar de sus ventajas como la posibilidad de recuperar el permiso en caso de extravío. Si se quiere registrar lo puede hacer desde [aquí](#).

[Ver Tarifas y Modalidades de Permiso](#)

[Solicitar Permiso](#)

Unidad de Gestión - Demanda-San Millán (Burgos)

Periodo de validez: Diario

| Lugar de residencia | Recreativo | Comercial |
|---------------------|------------|-----------|
| Foráneo | 10 | - |

Periodo de validez: Dos días

| Lugar de residencia | Recreativo | Comercial |
|---------------------|------------|-----------|
| Foráneo | 15 | - |

Periodo de validez: Temporada

| Lugar de residencia | Recreativo | Comercial |
|---------------------|------------|-----------|
| Local | 5 | 20 |
| Vinculado | 25 | 300 |
| Foráneo | 60 | 300 |

Solicitud del Permiso de Recolección

Rellene todos los campos marcados con asterisco (*) y pulse el botón ACEPTAR. Tenga en cuenta que desde aquí sólo podrá obtener permisos para **UNO o DOS DÍAS** (consecutivos). Si desea un permiso para toda la temporada deberá hacerlo desde su **zona privada** previo registro como usuario.

NIF / Pasaporte (*)

NIF / Pasaporte del titular del permiso. El NIF / Pasaporte no debe llevar puntos de separación ni guión entre los dígitos y la letra. Por ejemplo: 12345678Z

Nombre (*)

Nombre del titular del permiso.

Apellidos (*)

Apellidos del titular del permiso.

Teléfono Móvil

Teléfono móvil de contacto. Si se indica un teléfono móvil recibirá el permiso a través de un sms. Debe corresponder a un contrato de un operador español.

Código Postal (*)

Indicar SIEMPRE el Código Postal del MUNICIPIO DE EMPADRONAMIENTO del titular del permiso sea cual sea la modalidad del permiso solicitado.

Si el código indicado pertenece a varias localidades habrá que indicarlo en el desplegable anterior. Si el titular del permiso está empadronado fuera de España se debe indicar el código postal 99999 e indicar en el desplegable anterior el país de empadronamiento.

Área Regulada (*)

Área Regulada donde se desea recolectar.

Tipo de Permiso (*)

Para saber qué tipo de permiso es el más apropiado revise las [modalidades y tarifas](#) de permisos en cada Área Micológica Regulada.

Fecha Recolección

Casilla válida únicamente para permisos de uno o de dos días (consecutivos). Para permisos de un día indicar la fecha de recolección y para permisos de dos días indicar la fecha del primer día a recolectar. Para permisos de temporada la fecha de recolección coincide con la de emisión del permiso.

Aceptación de las condiciones

El titular del permiso declara haber leído y acepta las condiciones [generales](#) y [específicas](#) de la recolección establecidas.

Donación

Si deseo donar un euro adicional para la Investigación del recurso micológico en Castilla y León.

Para más información sobre el destino de esta donación pulse [AQUÍ](#)

ACEPTAR

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Planning

“An issue that can
NOT
be CLEARLY
measured
will be difficult
to improve”

(unknown, because too obvious)

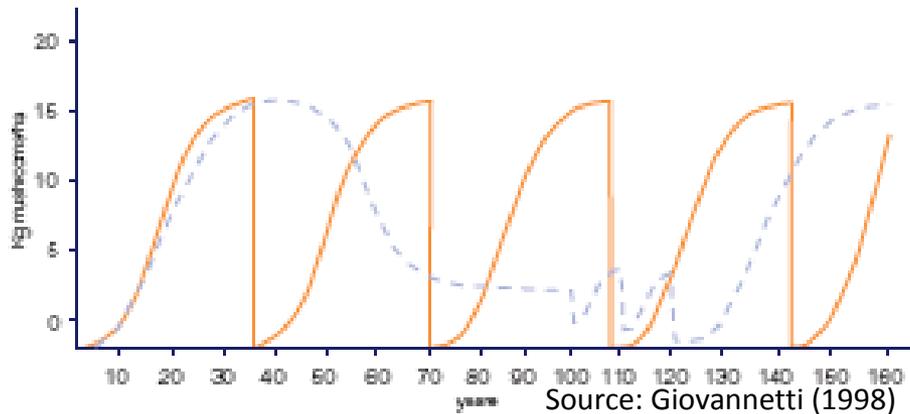
No data?!? Ai ai ai!



Planning

- It is quite hard to get statistically significant data to develop of robust **model** for enhancing NWFP productivity in the forest
 - Long time response of NWFP growth to the cut
 - High costs for research
 - High variability of forest condition
 - High variability of the weather
- Fragmented **interests** of SME dealing with NWFP
- Enormous **number of species** within NWFP concept

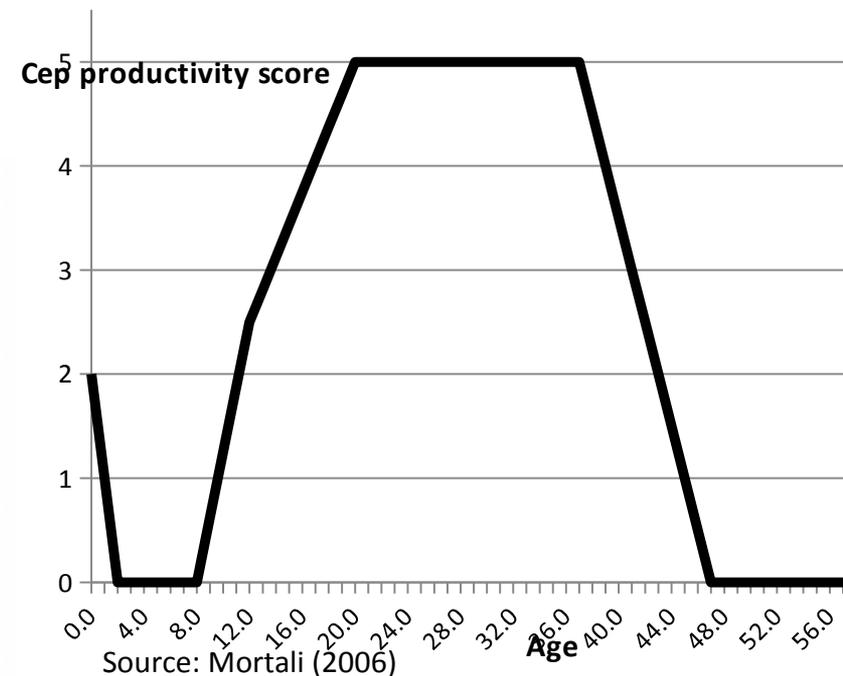
Planning



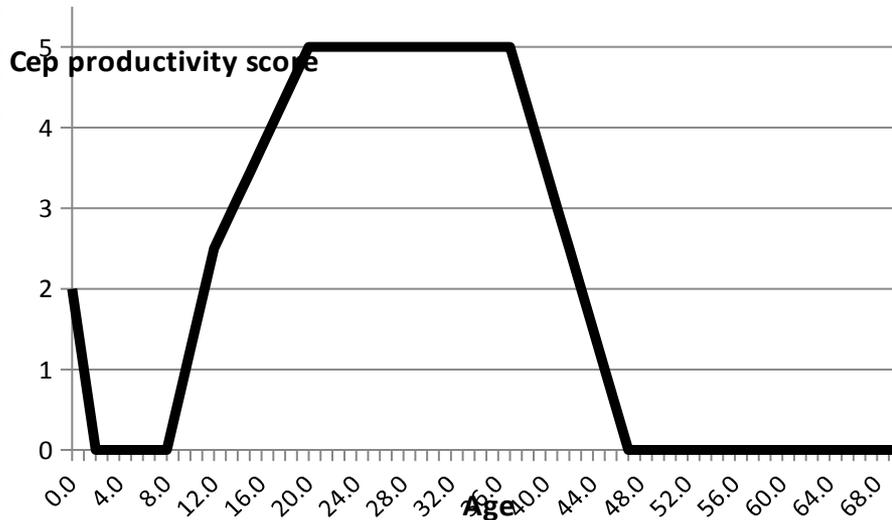
There are some theoretical models, but:

- **Theory** might be hard to test
- They are often **not applicable** due to the forest law (coppice vs stand forest)
- The forest manager **focus on timber** than other forest product or service
- High **variability** of the production on certain NWFP

Some models start to appear in literature, but we need a **fast techniques** to get also qualitative info



(Why) Planning (?)



(Institution and) **NWFP models** are fundamental but not sufficient alone:

- The implementation of a **governance** strategy is very important on the economic performances
- The commercialization of service require even more effort on stakeholder **involvement**

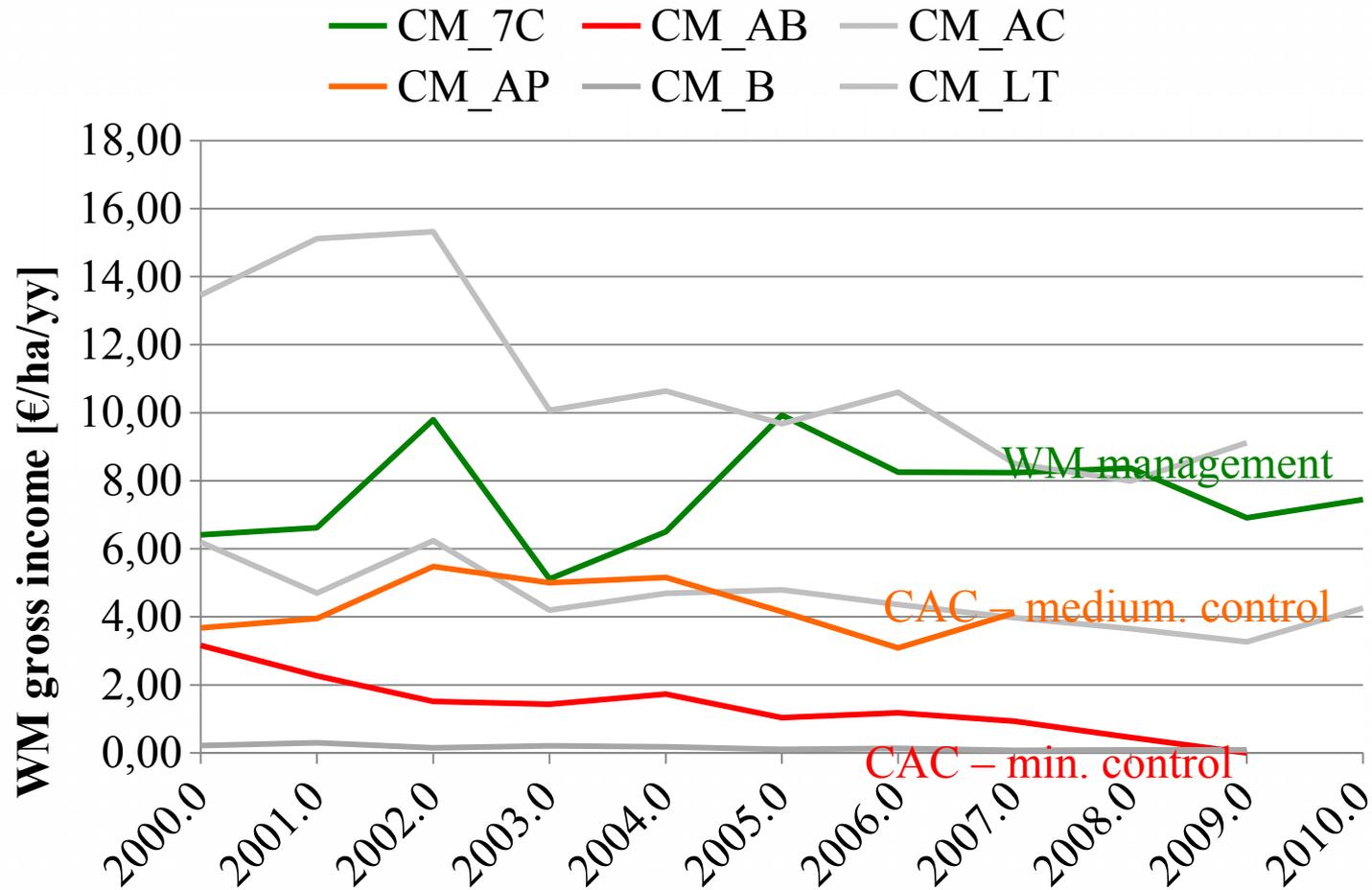
| Variables | Coefficient | Standard Error | LCL | UCL | Stat-T | p-value | H0 (5%) |
|---|--------------------|-----------------------|----------------|----------------|---------------|----------------|-----------------------|
| Intercept | -11972.2 | 16529.0 | -45494.5 | 21550.1 | -0.72 | 0.473 | <i>accepted</i> |
| Forest Surface | 2.1 | 2.5 | -3.1 | 7.2 | 0.81 | 0.418 | <i>accepted</i> |
| Forest with PGI [1,0] | 54294.5 | 15954.1 | 21938.0 | 86651.0 | 3.40 | 0.001 | <i>refused</i> |
| Presence of FMP [1,0] | 20667.0 | 22940.5 | -25858.6 | 67192.6 | 0.90 | 0.373 | <i>accepted</i> |
| Forest under CCP [1,0] | 9600.0 | 21711.0 | -34432.1 | 53632.0 | 0.44 | 0.661 | <i>accepted</i> |
| Model → Euro = - 11,972.2 + 2.1 * Surf. + 54,294.5 * IGP + 20,667.0 * FMP + 9,6000.1 * CCP | | | | | | | |
| R: 0.56 R ² : 0.31 R ² -adj: 0.24 N: 41 df: 4 Regr. p-value: 0.007 | | | | | | | |

(WM) Planning

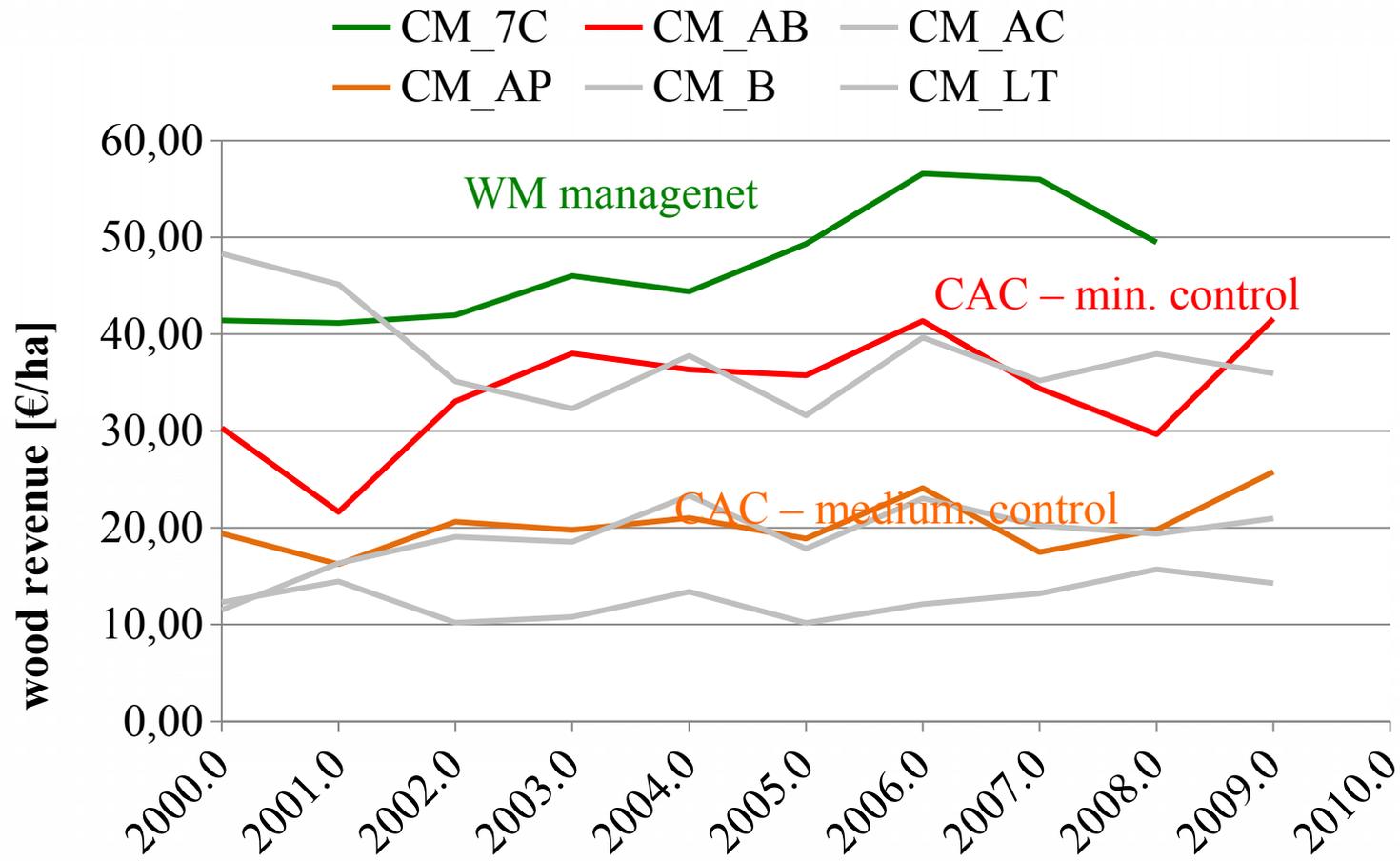
If we have data, we can design (properly) the a new idea of multi-purpose forest. Here an example from the Southern Alps, base on three economic performance of WM management:

- Command and control (**CAC**) → **minimal control**
- **CAC** → **medium control**
- **PES-like** → direct linkage between **WM manag.** and WM collection demand
 - Picking permit price based on the annual demand and forest WM provision
 - Need of demand and supply assessment

(WM) Planning



(WM) Planning



...getting to the end

- There is enough challenges in the near future of the forest sector: wild forest product (WFP) may enhance the capability of forest to create economic and social value (**need of new competences?**)
- Clear need to create **model** for WFP in forest
- New (and large) space for “*alternative*” **professional foresters**
- Well, as any product or service it must be inserted in the **accountability and fiscal system**
- Well, let’s start to remove a “N” from “NWFP”: **marketing and communication** to rise awareness!

Berries



Aromatic plants



Mushrooms



Tree leaves, flowers and foliage



Forest nuts



Bark



Resin and sap



Tannins

