COST Action FP1203: European non-wood forest products (NWFPs) network

Working Group 1: Mushroom & Truffles

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Before starting…

Minutes will be needed – Who can volunteer for taking notes?

There is a need of a **vice-leader** decided by the Working Group itself

MC members should nominate WG members from their country. Those names and contact details should be passed to the WG leader, who will then assign them some tasks then those who respond to the tasks accepted as official registered members and will have the opportunity to attend to the meetings. Probably a minimum of four and a maximum of eight per country.

list with the participants in the WG with name, institution, country and email address

General objective of the Cost Action

“To build a multidisciplinary European-wide network of NWFPs researchers and managers in order to increase the European knowledge about NWFP ecology, modelling, management and economics” (MOU)

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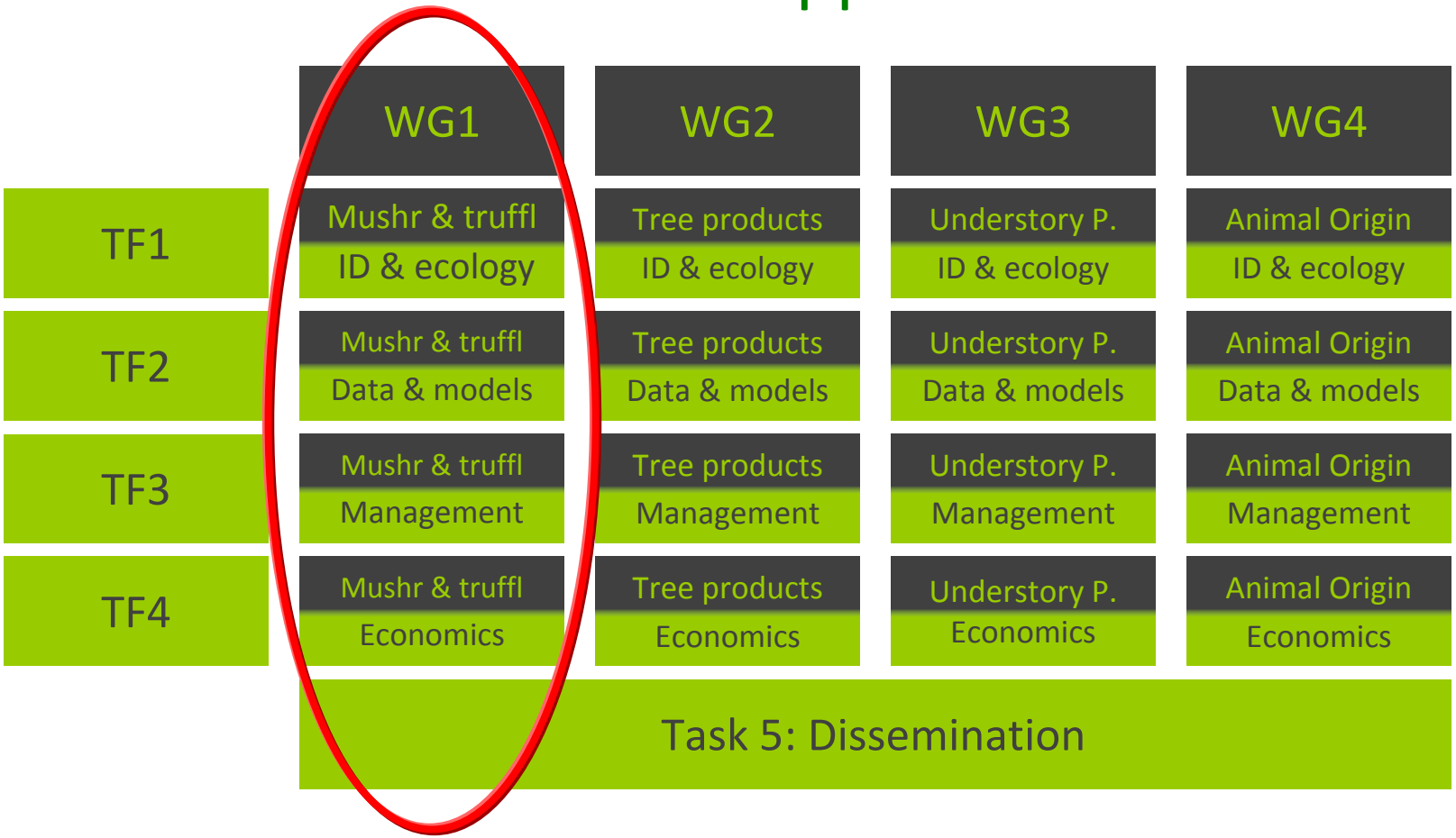
So… Do we need to consider also the empirical info provided by them (Not only science-based approach?)

Matrix approach



But…When we talk about mushroom & truffles, we talk about…

Organism group	Species number in Europe	Reference
Fungi	> 75 000	estimate in this report
Macrofungi	> 15 000	estimate in this report
Vascular plants	12 500	Planta Europa
Mosses	1 753	Porley et al. 2007. Proceedings to the World Conference on Bryology 2007 in press
Butterflies	8 470	Karsholt O & Razowski J.1996 The Lepidoptera of Europe, A distributional checklist. Apollo books, Stenstrup
Birds	524	www.birdlife.org
Mammals	226	http://ec.europa.eu/environment/nature/conservation/species/ema/index.htm

SENN-IRLET, B.; HEILMANN-CLAUSEN, J.; DAHLBERG, A. 2007. Guidance for conservation of fungi in Europe. Prepared for the Convention of the Conservation of European and natural habitats. European Council. Document T-PVS (2007)13 (rev). Strasbourg 17 Oct 2007.

Fortunately…

“The WG will select the ones where the work to be carried out taking into account their importance in the European context”

Fortunately…

"The WG will select the ones where the work to be carried out taking into account their importance in the European context"

- **Economical importance:** Value of 173.075.000 € (UNECE and FAO, 2011)

Underestimated…
Estimation of 65 milion €
only in Castilla y Leon region, Spain

Fortunately…

"The WG will select the ones where the work to be carried out taking into account their importance in the European context"

- **Economical importance:**
- **Ecological importance:** Clemmensen et al. (2013):

" **we show that 50 to 70% of stored carbon in a chronosequence of boreal forested islands derives from roots and root-associated microorganisms…"** (Science, 339, 1615)

Fortunately…

"The WG will select the ones where the work to be carried out taking into account their importance in the European context"

- **Economical importance:**
- **Ecological importance:**
- **Social and recreational importance: In Catalonian region, 2 milion people picks mushrooms (30% of the total population)**

Fortunately…

"The WG will select the ones where the work to be carried out taking into account their importance in the European context"

- **Economical importance:**
- **Ecological importance:**
- **Social and recreational importance:**
- **Combination of all those**

In Castille region:

- **20% picking**
- **40% manufacturing**
- **40% tourism**

So… we need to decide which groups/ species should be considered

Criteria:

*** Distribution**
- **Regional distribution?**
- **European-wide distribution?**

*** Uses**
- **Marketed species**
- **Edible but (not yet) marketed?**

*** Markets**
- **Those usually traded?**
- **Those picked as food but not necessarily traded?**

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* **Markets**
  - **Those usually traded?**
  - **Those picked as food but not necessarily traded?**

Should be considered more simple criteria?:

Available data?

… but …we need to identify gaps of knowledge too

Taking into consideration…

Objectives of the COST action (pag. 16-MOU)

i) Identify and describe existing NWFPs for the major types of forest ecosystems in Europe
ii) Review knowledge on NWFPs ecology and potential threats
iii) To compile existing data and models, identifying gaps
iv) To conceptualize NWFPs production systems, discussing the management
v) to address the economics, social/cultural, tenure rights and legal frameworks
vi) to highlight existing innovation and their production systems

Taking into consideration…

Expected outcomes of the COST action (pag. 16-MOU)

i) a database of European NWFPs
ii) a database of European NWFPs stakeholders
iii) proceedings of an international conference
iv) a book on "Sustainable management of European NWFP"

General purpose of the meeting

Working toward objectives:

1) concentrate efforts for the main outputs: book and the two databases.
2) we need to have the state of the art. Each WG and TF needs to decide what is needed
3) thinking about the book chapter
4) “product” database, WG and TF need to decide in what the databases should contain
5) “stakeholder” database, WG and TF need to decide in what the databases should contain

Gathering information for WG/TFs

it would be interesting if the countries can assign a permanent (pr almost) assistant for each WG/TF (in this case there are four WG to be covered by the 2 MC and the third assistant). This facilitates the survey of information at national level, etc. If all the assistants coming from the same country are assigned to the same WG there will be surely some information missed.

Let's discuss cell by cell

	WG1	WG2	WG3	WG4
TF1	Mushr & truffl ID & ecology	Tree products ID & ecology	Understory P. ID & ecology	Animal Origin ID & ecology
TF2	Mushr & truffl Data & models	Tree products Data & models	Understory P. Data & models	Animal Origin Data & models
TF3	Mushr & truffl Management	Tree products Management	Understory P. Management	Animal Origin Management
TF4	Mushr & truffl Economics	Tree products Economics	Understory P. Economics	Animal Origin Economics
	Task 5: Dissemination			

Mushroom & Truffles identification and ecology

Task 1 is divided in 3 different subtasks

- **1.1. Identifying and describing existing NWFP (Create a list of commercial NWFP)**
- **1.2. Reviewing NWFP ecology (Highlight knowledge gaps)**
- **1.3. Establishing a data base**

Non commercial NWFP with identified potential to be marketed will be included too?

DECISSION:

Request representatives by country and not limit the typology of species. Only remark the criteria of "importance"

Mushroom & Truffles identification and ecology

Wide range of factors should influence fruit-body emergence. These factors can be grouped in three main groups (Martínez-Peña et al. 2012)

- **local site characteristics (e.g. altitude, slope, aspect, soil variables);**
- **stand structure (e.g. tree species, stand density, stand age);**
- **climatic variables (e.g. precipitation, temperature)**

Do you agree…?

Let's discuss cell by cell

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Mushroom & Truffles models

Task 2 is divided in 3 different subtasks

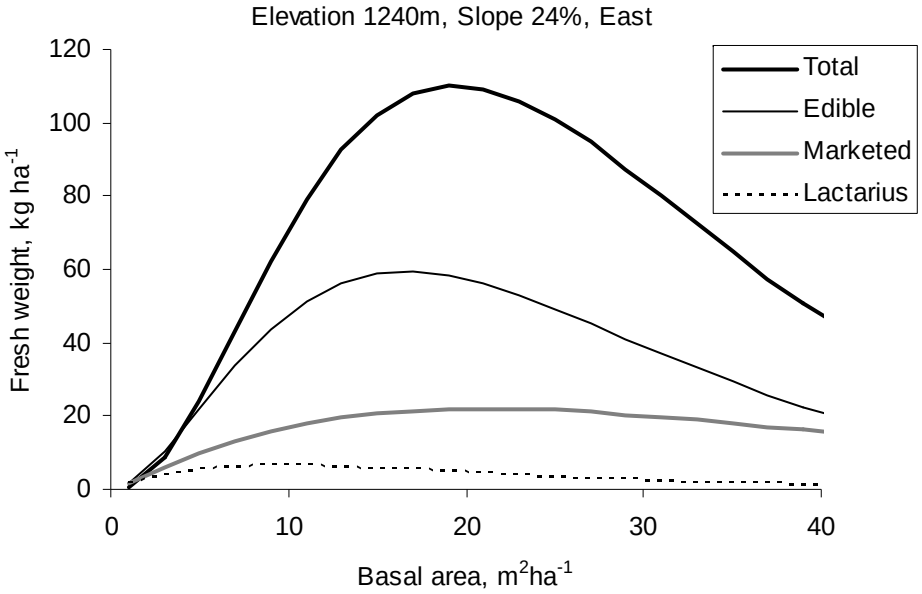
- **2.1. Reviewing NWFPs data and models**
- **2.2. Reviewing NWFP modelling methodology**
- **2.3. Identifying data & models needs**

From the point of view of WG1, we'll focus on subtask 1.1.?

Mushroom & Truffles models

- **2.1. Reviewing NWFPs data and models**

Calama, R., Tomé, M., Sánchez-González, M., Miina, J., Spanos, K., **Palahi, M.** 2010. ***Modelling Non-Wood Forest Products in Europe: a review.*** Forest systems 19(SI): 69-85.

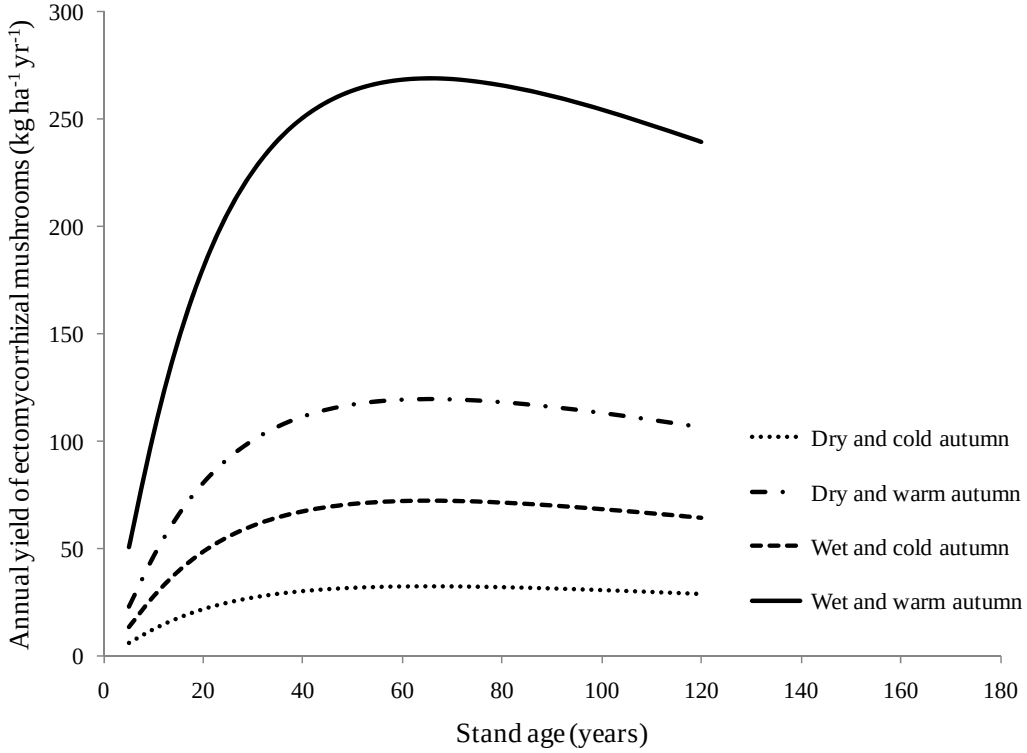


Bonet et al. 2008

Mushroom & Truffles models

➢ 2.1. Reviewing NWFPs data and models

Since then, new models appeared… or are nearly to appear (Finland, Croatia, Turkey…)



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Mushroom & Truffles models

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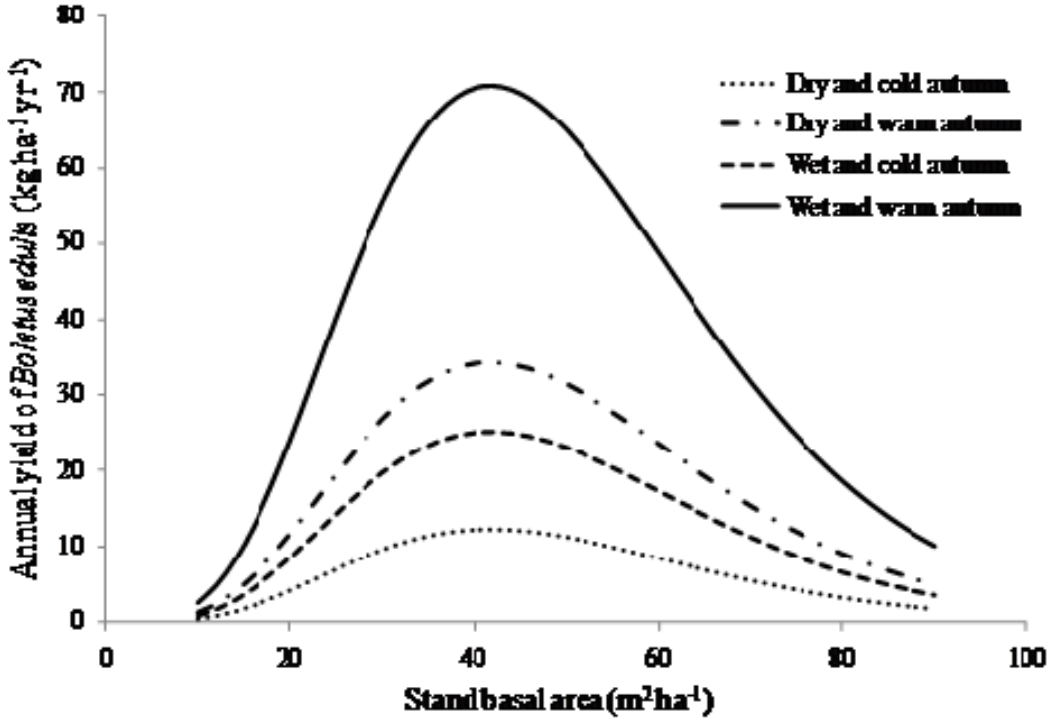

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Mushroom & Truffles models

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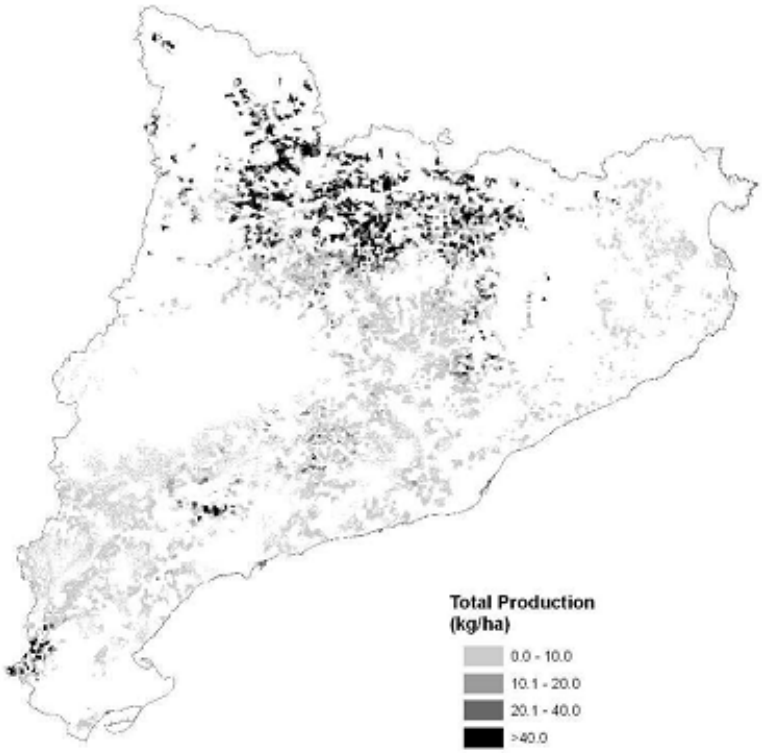

Maps

Forest scenarios

Bonet et al. In review

Mushroom & Truffles models

➢ 2.1. Reviewing NWFPs data and models (Spanish example)

Permanent plots data

NFI data…

RESEARCH GROUP	FOREST ECOSYSTEM	FOREST TIPOLOGY	LOCATION	YEARS OF INVENTORY	PERIOD OF INVENTORY	NUMBER OF INVENTORIED PLOTS
CTFC	*P. sylvestris*	Even-aged	Pyrenees, Prepyr, Central Catalonia	9	1997-2001 2007-2010	19
CTFC	*P. pinaster*	Even-aged	Tarragona-Prades	3	2008-2010	15 + 15
CTFC	*P. sylvestris-P.nigra*	Even-aged	Pyrenees, Prepyr, Central Catalonia	4	2007-2010	7
DIEF-Valonsadero	*P. sylvestris*	Even-aged	Pinar Grande, Soria	15	1995-2010	18
DIEF-Valonsadero	*P. pinaster*	Even-aged	Area of Almazán, Soria	13	1997-2010	21
Univ. Valladolid	*P. sylvestris*	Even-aged	High plateau Palencia	8	2003-2010	3
Univ. Valladolid	*P. pinaster*	Even-aged	High plateau Palencia	8	2003-2010	3
Univ. Valladolid	*P. pinaster*	Even-aged	High plateau Valladolid	5	2006-2010	3
Univ. Valladolid	*P. pinaster*	Even-aged	Sandy area of Valladolid	5	2006-2010	3

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	Task 5: Dissemination			

Mushroom & Truffles management models

Task 3 is divided in 3 different subtasks

- **3.1. Reviewing current NWFPs management**
- **3.2. Managing NWFPs with other products**
- **3.3. Guidelines for NWFPs management**

Mushroom & Truffles management models

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Relatively well established in the case of cultivated species as *Tuber melanosporum*… Not yet in the case of wild mushrooms

Mushroom & Truffles management models

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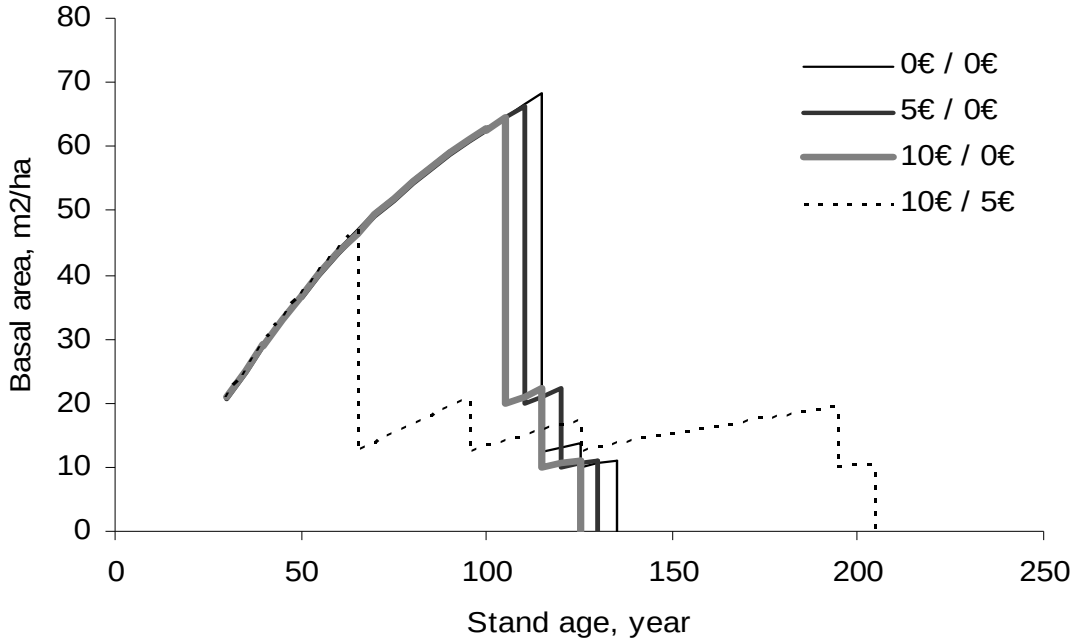

Palahi et al. (2009)

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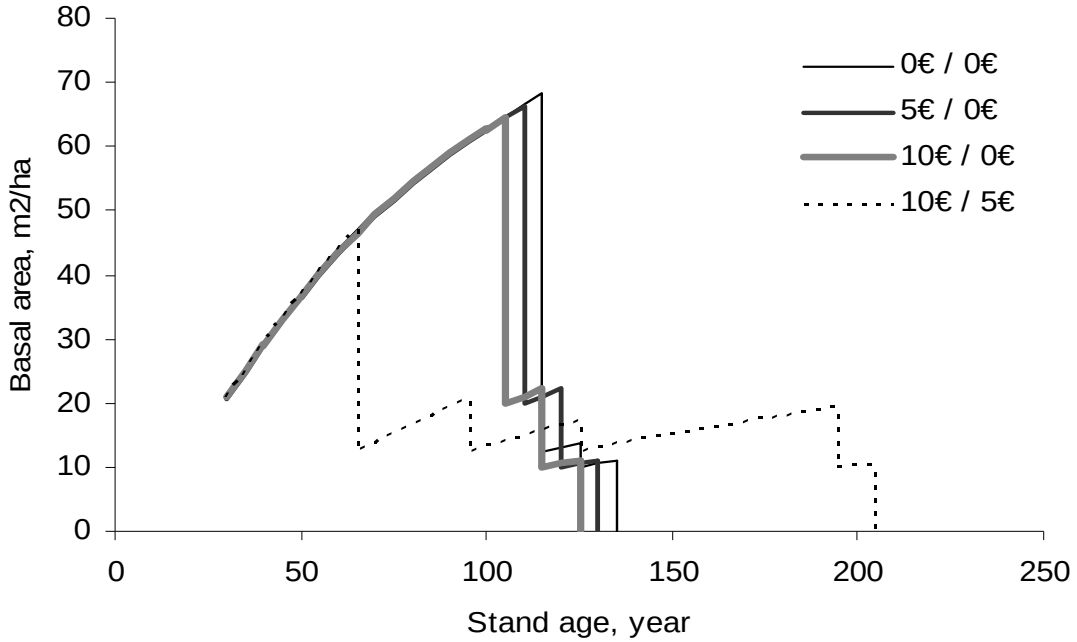

So.. Do we consider also practical recommendations provided by the managers, forest-owners in addition to the sound-science?

Palahi et al. (2009)

Mushroom & Truffles management models

- **3.1. Reviewing current NWFPs management**
- **3.2. Managing NWFPs with other products**
- **3.3. Guidelines for NWFPs management**

Do we include "Best practices" (Not necessarily science sound-based)?

Do we ask country representatives or we'll focus on the literature review or expert opinion?

Do we consider other languages different to english?

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Mushroom & Truffles management models

Task 4 is divided in 2 different subtasks

- **4.1. Reviewing NWFPS economics & marketing**
- **4.2. Reviewing NWFPs tenure & Governance**

Analysis of market environment:

* Nature of the product (private, club, common…)
* Involved supply chain actors
* Added value creation
* Employment effects and distribution
* Co-benefits and costs associated with value chain
* General market structure
* Transaction costs
* Main element of marketing strategies

Mushroom & Truffles management models

Do we consider mushrooms as a single group?

Task 4 is divided in 2 different subtasks

- **4.1. Reviewing NWFPS economics & marketing**
- **4.2. Reviewing NWFPs tenure & Governance**

How do we will proceed?

Analysis of market environment:

* Nature of the product (private, club, common…)
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* General market structure
* Transaction costs
* Main element of marketing strategies

Mushroom & Truffles management models

Task 4 is divided in 2 different subtasks

- **4.1. Reviewing NWFPS economics & marketing**
- **4.2. Reviewing NWFPs tenure & Governance**

How do we will proceed?

Stakeholder data-base…

Governance structures
* Public policies
* Institutional actors

Comparative analysis of governance structures
Policy recommendations

Other things to be discussed…

- to propose STSM to be announced in the call, something appealing but orientated to the objectives of the WG.

- Thinking about topics for training schools related with WG

List of Decisions

GENERAL ISSUES

- Selected WG1 vice-chair : Dr. Tine Grebenc (Slovenia)
- Raporteur: Mr. Zeljko Zgrablic (Croatia)
- The list of participants in the WG1 is included in a separate file. Additionally, from those countries not represented in the WG1, MC will nominate at least one contact person
- The list of decisions will be prepared by chairman, vice-chairman and raporteur. List will be send to all participants for their consideration

- TF1: on mushrooms and truffles identification & ecology next conclusions are made:
  - -1.1. Identifying and describing existing NWFP
    - Species number of macrofungi in Europe represents more than 15.000 species. We'll select only those considered as important. The country representatives will provide a "country based" most important species list as recognized in scientific papers, trading data, specialist's opinions, etc…

- TF1: on mushrooms and truffles identification & ecology next conclusions are made:
  - -1.1. Identifying and describing existing NWFP
    - Data will be collected in forms they are available in each country and then filtered through the database obtaining a final list of important mushroom & truffles (We expect that 80-90% of the species will be similar between countries)*

* "The bringing data to a common line" will probably have to done by STSM applicant or by designated person within the WP

- TF1: on mushrooms and truffles identification & ecology next conclusions are made:
  - -1.2. Reviewing NWFP ecology
    - Next factors will be considered when review mushroom & truffles ecology:
      - Local site characteristics (altitude, slope, aspect, soil variables)
      - Stand structure (tree species, stand density, stand age)
      - Climatic data (precipitation, temperature)
      - Soil disturbance
      - Man made activities, including nitrogen input, etc…

- TF1: on mushrooms and truffles identification & ecology next conclusions are made:

  -1.2. Reviewing NWFP ecology

  - Factors that could be changed in future are to be identified

  -1.3. Establishing a data-base

  - Subtask need to be conducted by TF1

- TF2: on mushrooms and truffles data & modeling next conclusions are made:

  -2.1. Reviewing NWFPs data and models

  - Publication of Calama et al. (2010) recorded available models. Since the publication, new models arises and consequently, update is needed
  - Request to country representatives for available data, encouraging persons for gathering data to give/estimate/predict the confidence level of data for each country/species/…

- TF2: on mushrooms and truffles data & modeling next conclusions are made:

  -2.1. Reviewing NWFPs data and models

  - Scientific data is preferred, but also empirical data (with a minimum level of confidence) will be considered*
  - We shall prefer quantitative data to qualitative (described as good, regular or bad production)
  - Red-lists references could be collected too

* Data means references (papers, databases), or contact information of any data provider (with permission)

- TF2: on mushrooms and truffles data & modeling next conclusions are made:
  - Data will be gathered and then filtered to the data-base

-2.2. Reviewing mush& truff modelling methodology
  - To be realized by TF2

-2.3. Identifying data & model needs
  - To be realized by TF2

- TF3: on mushrooms and truffles management next conclusions are made:
  - -3.1. Reviewing current mush& truff management
  - -3.2. Managing mush& truff with other products
  - -3.3. Guidelines for mush& truff management
    - Request to the country representatives
    - scientific and empirical data will be considered
    - 'best-practice', leaflets and expert guide books are to be considered
    - non English literature will also be included in data collection
    - Similarly, data will be filtered through data-base

•TF4: on mushrooms and truffles economics next conclusions are made:

-4.1. Reviewing NWFPs economics & marketing

-4.2. Reviewing NWFPs tenure & governance

- questionaire will be prepared for country representatives
- data on legislation, companies involved in harvesting and processing and costs of tenure, marketing and governance are to be collected
- stake-holders data will be included

OTHER ISSUES:

- WG1 participants considers the option to open the scope of the STSMs (not only focused on WG1 current work, which is more related to designing and managing questionnaires (with not added value if the applicant will visit other country groups)). If the SC committee prefers to fix the scope of the WG1 STSMs, work will be focused on data processing
- STSM students will be encouraged to apply
- training school topics are to be set after first data collection

Thank you!