



First Mediterranean Symposium on
Medicinal and Aromatic Plants
April 17-20, 2013



Considerations on the state of the art and training of medicinal and aromatic plants sustainable wild harvesting

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Background

- **Non wood forests products:** important income.
- **Sustainable economic opportunities:** for preserving the population, the natural heritage, the biodiversity and the natural resources.
- **Aromatic and medicinal plants from wild:** raw material for industry.
- **Wild harvesting activity:** sustainable environmentally and economically.
- **Training:** right implementation of learning tools.



Background

PLANT WILD Grundtvig Learning partnership (2011-2013)

- Forest Sciences Centre of Catalonia, Non-wood Forest Products Department (SPAIN)
- National Institute of Biological Resources, Portuguese Bank of Plant Germplasm (PORTUGAL)
- Nature Research Center, Institute of Botany, Laboratory of Economic Botany (LITHUANIA)
- Kilis 7 Aralik University, Faculty of Arts and Sciences, Department of Biology (TURKEY)



Background

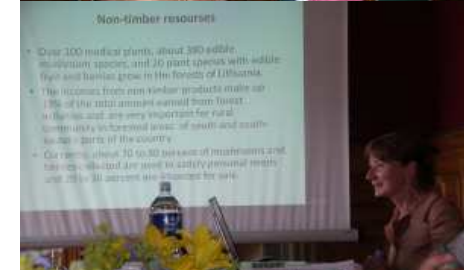
3rd meeting PLANT WILD Grundtvig, Vilnius (Lithuania)

MEDICINAL AND AROMATIC PLANTS

SUSTAINABLE WILD HARVESTING (SWH) TRAINING

Objectives

- Determine the state of the art of wild harvesting of plant resources in each partner country.
- Detect the implementation level of sustainability issues.
- Identify needs on future training.



Objectives



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Methodology

A template was prepared by each partner, in order to gather information of each country on the **state of the art** of:

- wild harvesting of plants for commercial and non-commercial use
- Legal framework regarding wild harvesting
- Guidelines and certification.
- Existing training on wild harvesting.

Methodology

A discussion between partners about **stakeholders needs** on sustainable wild harvesting (SWH) training:

- *Who should be trained to implement SWH?*
- *How should be the training to reach them?*
- *Which ones are interested in promoting / learning about SWH?*
- *Which factors are affecting SWH implementation?*

Lithuania

- Decreasing activity: 80-90 t (90's) to 20 t (2010)
- COM: *Rubus idaeus*, *Urtica dioica*, *Arctostaphylos uva-ursi*, *Thymus* sp., *Hypericum perforatum*, *Cretaria islandica*, *Artemisia absinthium* and *Menyanthes trifoliata*
- non COM: *Thymus pulegioides*, *Thymus serpyllum*, *Origanum vulgare*, *Lycopodium clavatum*, *Convallaria majalis*, *Centaureum erythraea*, *Fragaria vesca*, *Chamerion angustifolium*, *Tilia cordata*, *Filipendula ulmaria*, *Sambucus nigra*, *Carum carvi*, *Potentilla erecta*
- Some species (e.g. *Allium ursinum*) are still collected despite being protected.

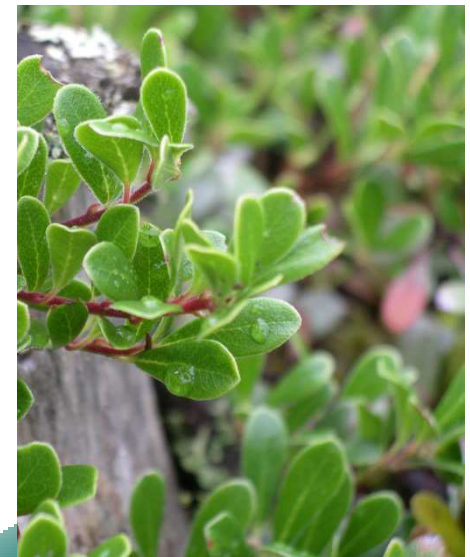
STATE OF THE ART

Commercial / non
commercial WH

Legal framework

Guidelines /
certification

Existing training



Results



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Portugal

- WH MAPs not registered. Study 2010: 97 t.
- COM: *Eucalyptus globulus*, *Pinus pinaster*, *Cistus ladanifer*, *Equisetum telmateia*, *Pterospartum tridentatum*, *Centaurium erythraea*, *Tilia platyphyllos*, *Fraxinus angustifolia*, *Matricaria recutita*, *Malva sylvestris*, *Sambucus nigra*, *Chamaemelum nobile*.
- non COM: *Asparagus acutifolius*, *Mentha cervina*, *Melilithis melissophyllum*, *Hypericum androsaemum*, *Lavandula stoechas*, *L. viridis*, *Origanum virens*, *Thymbra capitata*, *Thymus mastichina*, *Foeniculum vulgare*.
- vulnerable (*Vaccinium myrtillus*, *Thymus caespititius*)

STATE OF THE ART

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Spain

- WH MAPs, unrealistic and inconsistent data.
- COM: *Gentiana lutea* (2011: 20 t/year), *Arctostaphylos uva-ursi* (25 t/year), *Cistus ladanifer*, *Thymbra capitata*, *Thymus mastichina*, *T.vulgaris*, *T.hyemalis*, *T.zygis*, *Salvia lavandulifolia*, *Sideritis sp.*, *Rosmarinus officinalis*, *Satureja fruticosa*.
- Harvesting rates for *Gentiana lutea* and *Arctostaphylos uva-ursi* in some regions.
- Decreasing activity (elder harvesters): *Jasonia glutinosa*, *Lavandula latifolia*, *Arnica montana*, *Tilia platyphyllos*.
- non COM: high social value (cultural heritage), few quantities (household, local markets, herbalists).

STATE OF THE ART

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Turkey

- WH MAPs, more than 46 t/year are marketed.
- COM and non COM: *Origanum onites*, *Thymbra spicata*, *Laurus nobilis*, *Ceratonia siliqua*, *Salvia triloba*, *Capparis spinosa*, *C.ovata*, *Rhus coriaria*, *Glycyrrhiza glabra*, *Rosmarinus officinalis*, *Tilia rubra*, *T.argentea*, *Prunus mahaleb*.
- Conservation problems: *Laurus nobilis*, *Salvia triloba*, *Rhus coriaria*, *Glycyrrhiza glabra*, *Rosmarinus officinalis*, *Prunus mahaleb*.

STATE OF THE ART

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Commercial and non-commercial wild harvesting

- **Strong tradition** on MAPs harvesting and other NWFP (mushrooms, berries..) in Lithuania, Portugal, Spain and Turkey.
- It is difficult to establish the line between **commercial and non-commercial species**.
- Some species are **collected in very few quantities** for local markets, so quantities are not registered in official statistics.
- Statistical register of annual volumes of marketed MAPs follows different pattern in each country, being **difficult to compare WH data**.

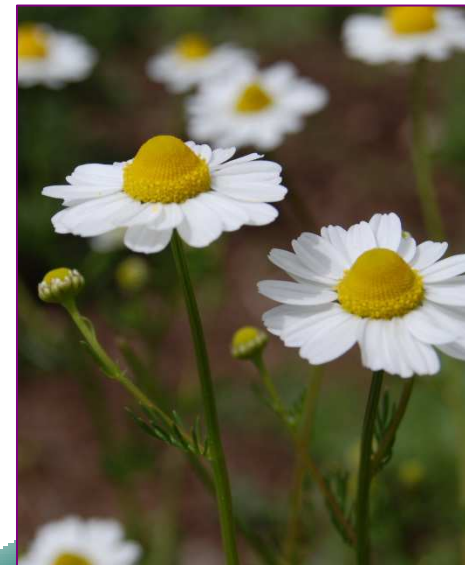
STATE OF THE ART

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Lithuania

- 2 national laws and red data book for species protection (e.g. *Allium ursinum*).
- Harvesting rates and return periods are established by law in Lithuania: *Law on wild vegetation* (1999).
- Guidelines: 3 different permissions of MAPs WH issued by the government.
- Organic certification (government permissions).
- Most of the normative is adopted by harvesters, but some of them are not yet well known or are partly left.

STATE OF THE ART

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Results



Portugal

- WH of some species are forbidden by different normatives: *Ilex aquifolium* (national level), *Prunus lusitanica* ssp. *azorica* (Directive 92/43 EEC), *Cistus ladanifer* ssp. *sulcatus* (regional level).
- WH management measures (Directive 92/43 EEC) : *Arnica montana*, *Gentiana lutea* and *Ruscus aculeatus*.
- Organic certification, provided only by ECOCERT Portugal.
- The real application of these norms is uncertain.

STATE OF THE ART

Commercial / non commercial WH

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Results



Spain

- WH management measures (Directive 92/43 EEC) :
Arnica montana, *Gentiana lutea* and *Arctostaphylos uva-ursi*.
- At National scale, Law 42/2007 of Natural Heritage and Biodiversity define the general legal framework on conservation and use of wild species and resources.
- 17 Regional lists of threatened species and Licenses for harvesting certain MAP species are required in 5 regions.
- Organic certification, by public and private bodies.
- Framework for the sustainable use of wild resources, still not very well-known and not totally implemented.

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Turkey

- Only 1 normative at national level, regarding the protection of some bulbous species and establishment of the limits and quotas for the gathering of non-protected bulbous species.
- Neither legal protection nor monitoring program of wild populations exists.

STATE OF THE ART

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Results

Legal framework, guidelines and certification

- WH is seen as a **threatening activity** due to some cases of overexploitation, with high visual impact on habitat and real damage in the species conservation.
- Existing laws are addressed mainly to **conservation issues** of the most endangered species, not always of commercial interest.
- WH of not-protected plant resources sometimes falls into illegality, since **WH legal framework is weak and not clear**.
- The most common certification of wild-crafted products is the **organic certification**.

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Period 2007-2012

Lithuania

- 2 universities: courses on biodiversity and sustainable use or economic botany within their education plans.
- 4 different voluntary trainings regarding wild harvesting and processing of MAP species (LEADER project *Pagegiu Krastas*).

Portugal

- 2010-2011, 1 training adult course regarding wild harvesting.

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Period 2007-2012

Spain

- 1 course on wild harvesting of *Gentiana lutea*,
- 7 lectures of MAPs WH in Natural Resources Management courses.

Turkey

- 1 voluntary seminar related to wild harvesting of *Thymbra spicata*

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Existing training on wild harvesting

- **Very few adult regular training activities** had been done in last 5 years.
- Lack of available data on ecology, distribution and conservation status of species probably **difficult the implementation of high technical training.**
- **Training activities are not enough** for raising society awareness on SWH.

STATE OF THE ART

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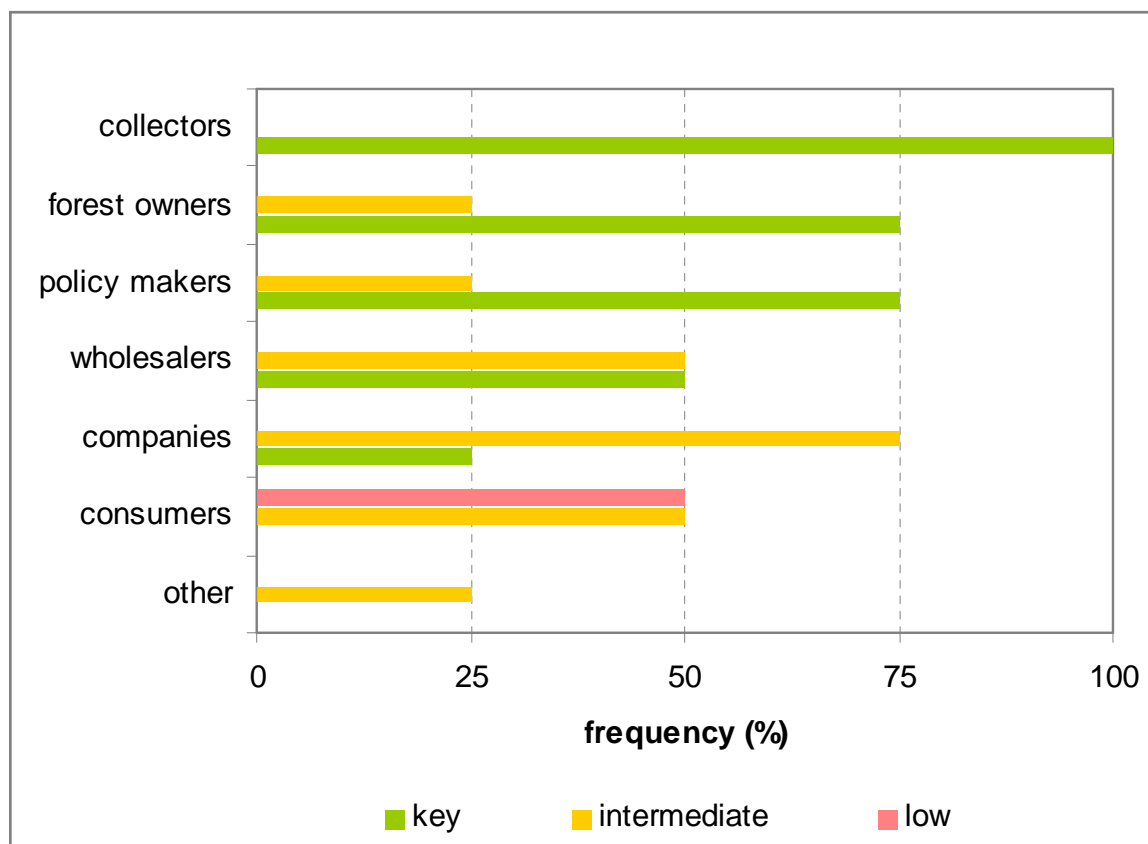
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NEEDS OF SWH TRAINING: target stakeholders



STATE OF THE ART

Commercial / non commercial WH

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TRAINING NEEDS

Target stakeholders / ways of training

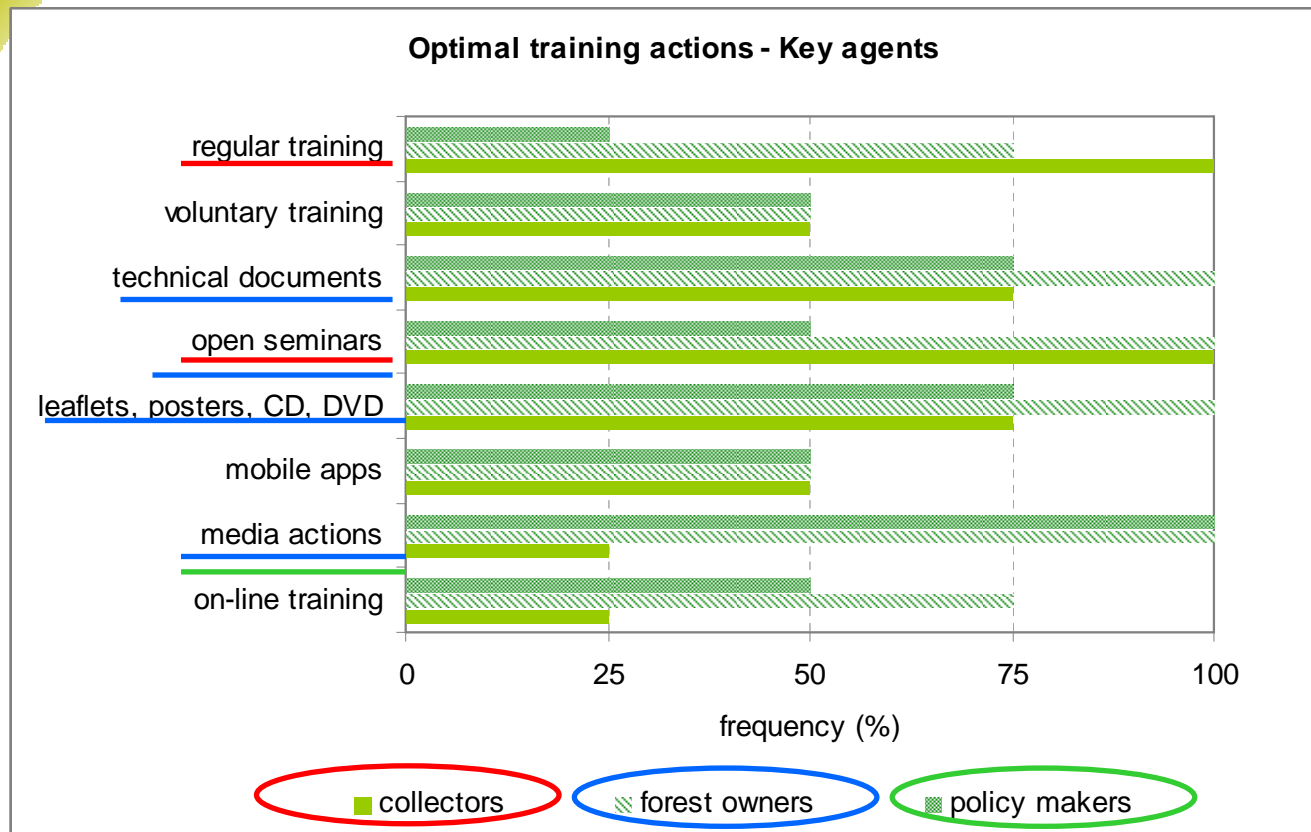
Interest in promoting and learning SWH

Main factors affecting the SWH implementation

Results



NEEDS OF SWH TRAINING: ways of training



STATE OF THE ART

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Target stakeholders / ways of training

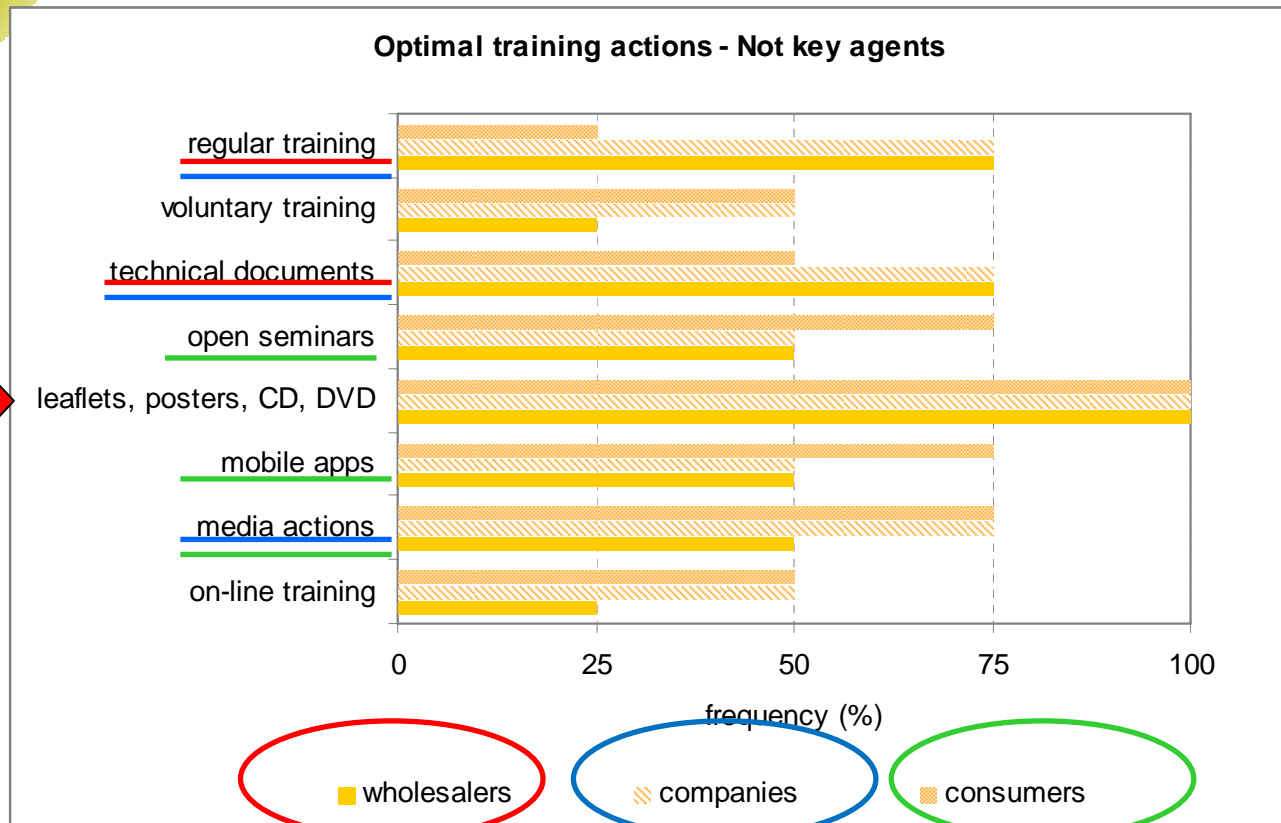
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NEEDS OF SWH TRAINING: ways of training



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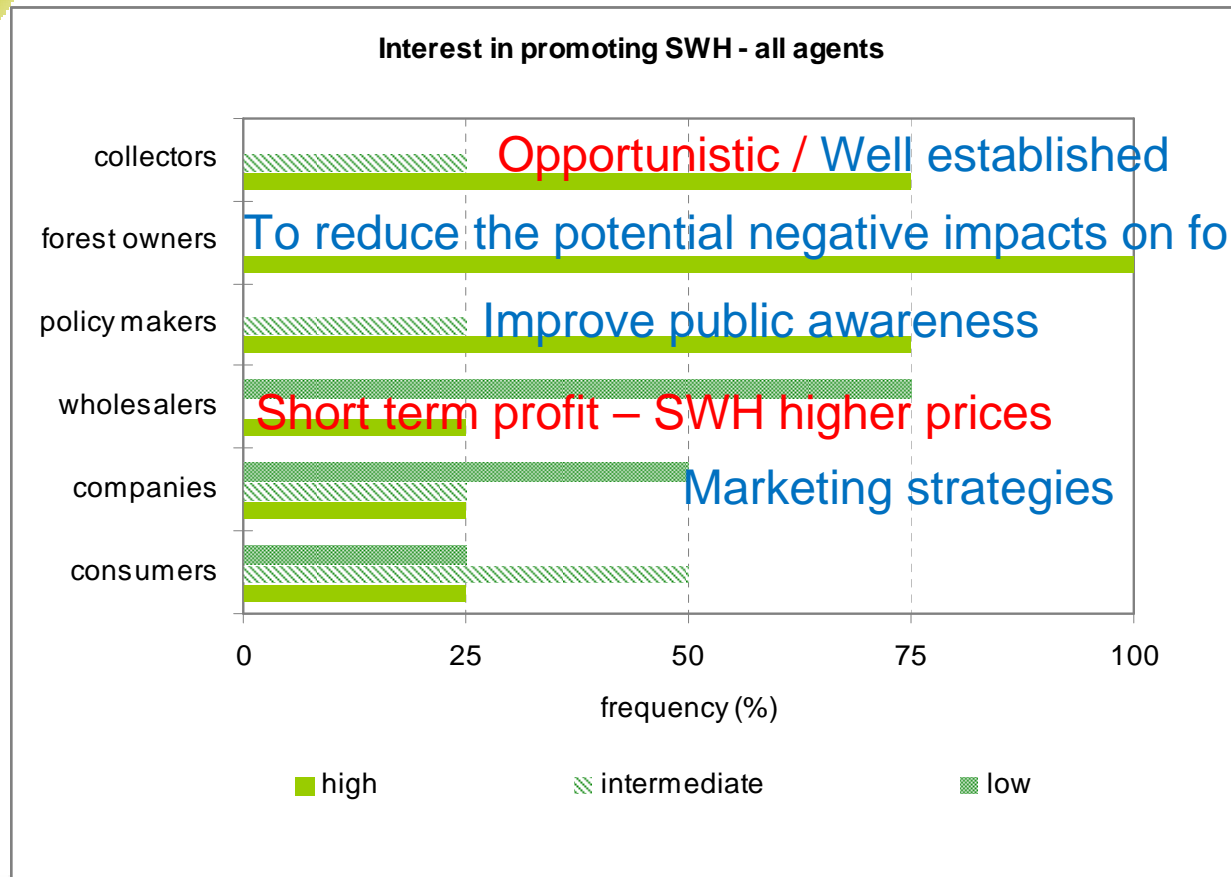
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NEEDS OF SWH TRAINING: interest in promoting



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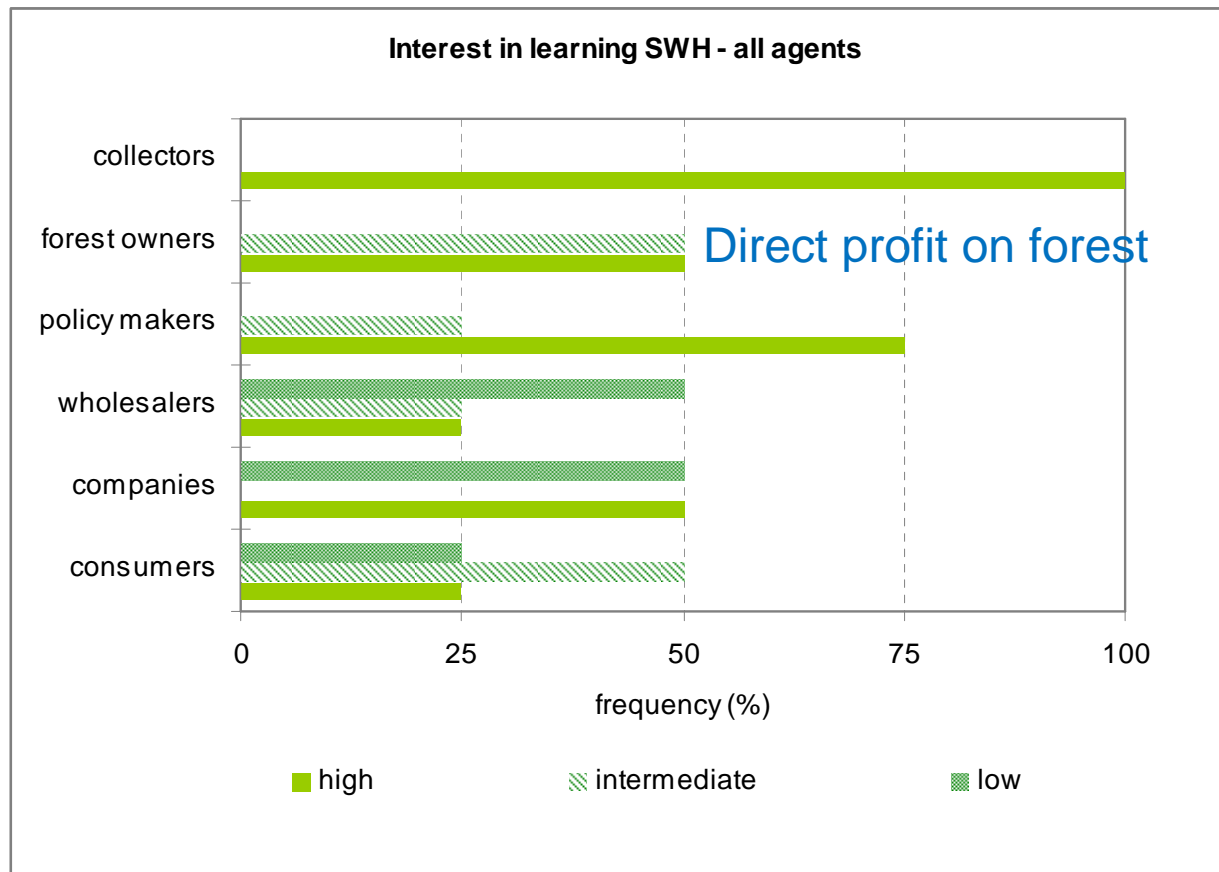
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NEEDS OF SWH TRAINING: interest in learning



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Target stakeholders / ways of training

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Main factors affecting the SWH implementation

Results



Main factors affecting SWH implementation

% of agreement	Advantage	Disadvantage
Conservation	100%	-
Economics	100%	25%
Social perception	100%	50%
Other: traditions	-	25%

- Higher cost of SWH only compensated by quality certification and added value to final products
- Wild harvesting is seen as a damaging activity
- Traditional techniques vs SWH techniques

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CONCLUSIONS

- Cultural tradition, socio-economics issues and anthropogenic impact on the environment determines the **way of understanding the WH activity** and their monitoring, regulation and control.
- **Sustainable WH** could contribute to maintain, even improve, the species conservation in the long term.
- For assuring the sustainability of the commercial activity, **WH should be managed by local communities** (the most interested in conserving their own habitats and species in long term).



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Conclusions

CONCLUSIONS

- **All stakeholders are important** to be trained or, at least, informed on WH.
- **Key agents for SWH:** collectors, forest owners, policy makers.
- **Training actions for collectors and forest owners:** face-to-face courses, workshops and technical documents.
- **Training actions for policy makers:** media actions, technical and divulgation documents.
- Besides awareness on SWH other measures could improve conservation of wild plant resources: ***ex-situ* and *on-farm* conservation.**

FUTURE

- Economic activities based on sustainable wild harvesting (SWH) are a **real opportunity?**

YES if there is **promotion and training among all stakeholders.**

- Sustainability is **not still implemented in the current wild harvesting (WH) sector** in any of the partners countries

To go forward in the SWH implementation: **training and transfer.**

- NEXT GRUNDTVIG PLANT WILD MEETING:

Kilis (Turkey) 9-10th May 2013

Business needs in relation to WH training

Future



Thank you for your attention !

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