



## **SUSTAINABLE WILD HARVESTING**

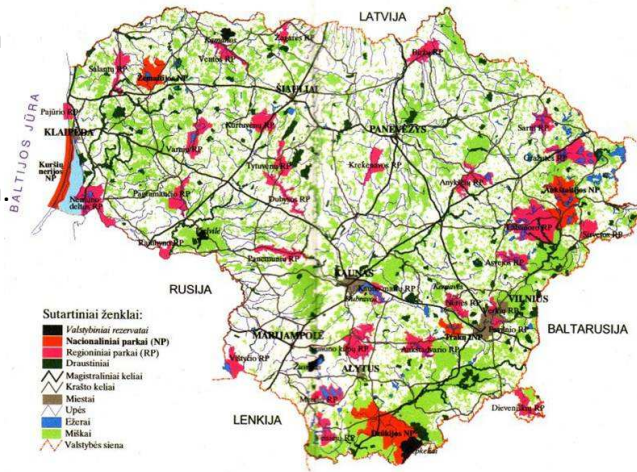
Nature Research Centre  
Institute of Botany  
2012

### **Non-timber resources**

- Over 100 medical plants, about 380 edible mushroom species, and 20 plant species with edible fruit and berries grow in the forests of Lithuania.
- The incomes from non-timber products make up 13% of the total amount earned from forest activities and are very important for rural community in forested areas of south and south-eastern parts of the country.
- Currently, about 70 to 80 percent of mushrooms and berries collected are used to satisfy personal needs and 20 to 30 percent are intended for sale.

# Grundtvig Plant Wild - Sustainable wild harvesting - LITHUANIA

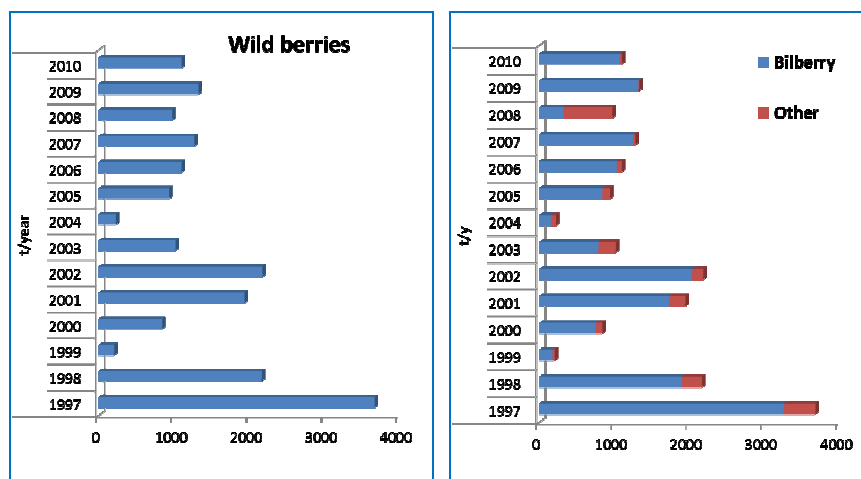
Forests in Lithuania occupy 32.5% of country's territory and 62% of total National Parks area. The most wooded is Dzūkija National Park, in which forests nearly 90%.



Protected areas

## WH berries purchased in 1997-2010

Data from the Statistics Lithuania



### Non-timber resources

Especially significant is the harvest of mushrooms. Their export has increased considerably.

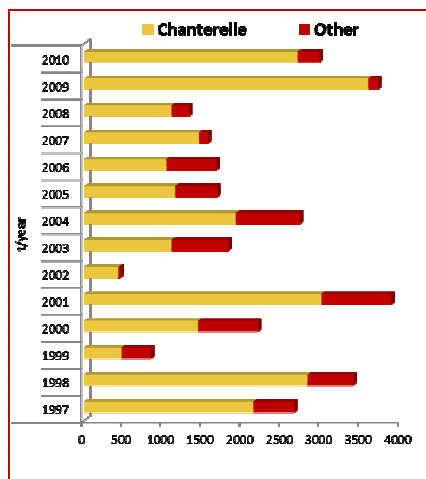
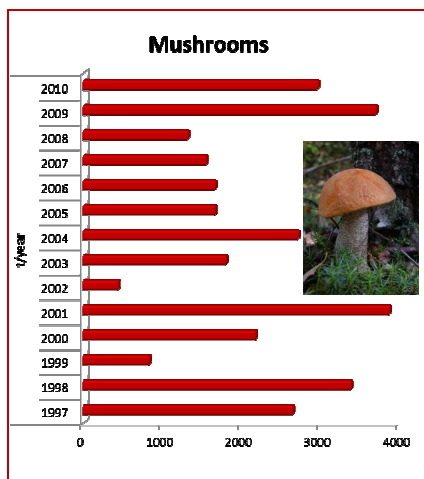
From 1997 to 2010 an average of 1352 tonnes of mushrooms, mostly chanterelles (79 %) and boletus, were sold for processing annually.



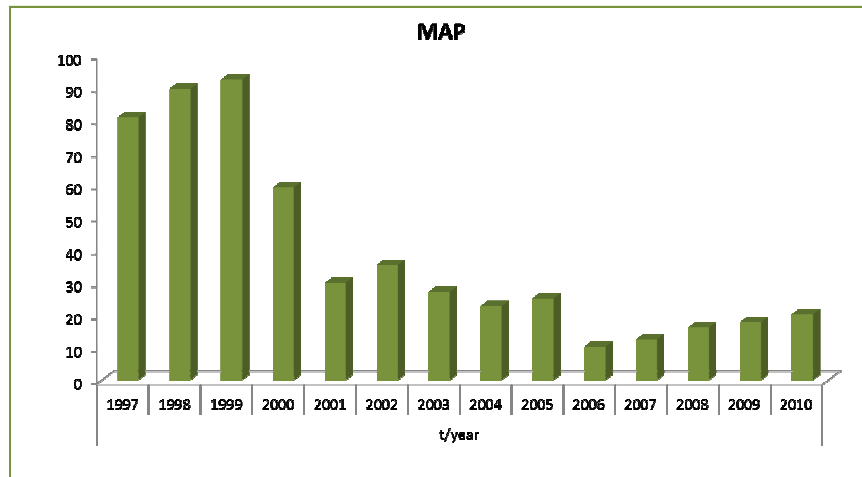
Successful hunting



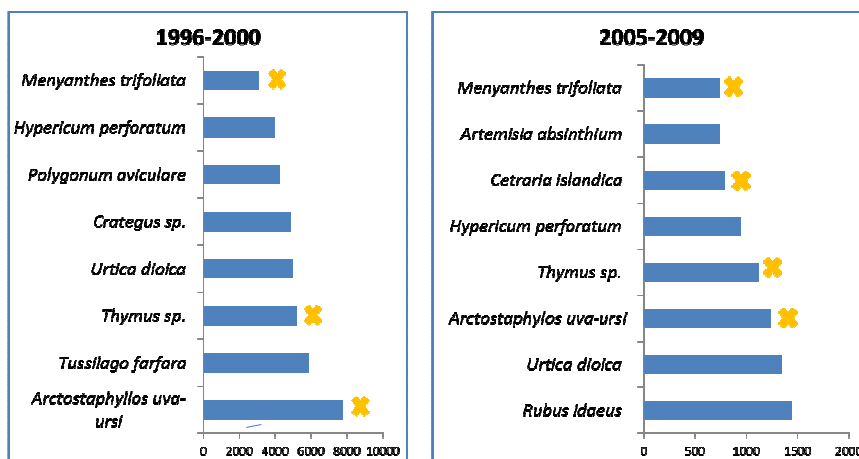
### WH mushrooms purchased in 1997-2010



### WH MAP material purchased in 1997-2010



### Species of highest demand of WH material purchased in 1998-2009



## Grouping of WH MAP according to the sources of raw material

### Species with sufficient sources of raw material



*Achillea millefolium*

*Artemisia absinthium*

*Calluna vulgaris*

*Crataegus* sp.

*Filipendula ulmaria*

*Frangula alnus*

*Equisetum arvense*

*Hypericum perforatum*

*Ledum palustre*

*Tussilago farfara*

**Widespread species with limited sources of raw material though can be or are cultivated**



*Angelica archangelica*

*Bidens tripartita*

*Oenothera biennis*

*Origanum vulgare*

*Plantago arenaria*

*Primula veris*

*Thymus sp.*

*Valeriana officinalis*

*Viola tricolor*

**Species with low sources and narrow ecological adaptation, which are difficult to introduce into**

**culture**



*Acorus calamus*

*Arctostaphylos uva-ursi* ✘

*Centaurium erythraea*

*Helichrysum arenarium*

*Menyanthes trifoliata* ✘

*Cetraria islandica* ✘

*Drosera anglica*

*Gnaphalium uliginosum*

*Polygonum bistorta*

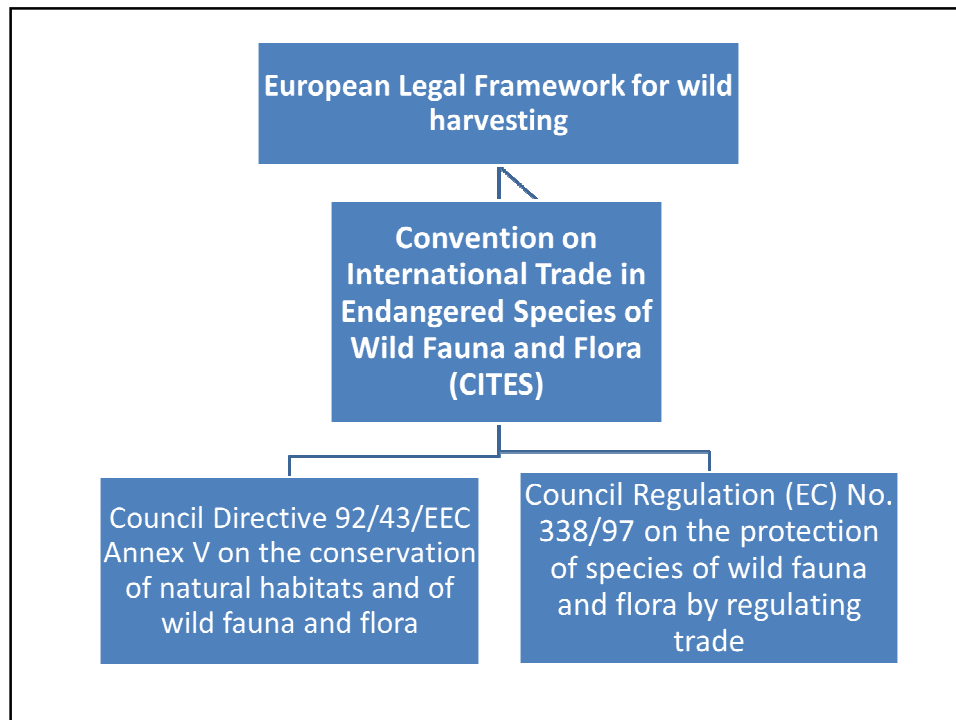
The protected areas are the zones where the sustainable WH is most controlled by responsible authorities from MoE

- Areas of conservational priority (strict reserves, reserves and objects of heritage) and integrated protected areas (state parks and biosphere monitoring areas) occupy 15.3 % of the country's territory.
- There are 5 National Parks, 30 Regional Parks, 4 strict Nature Reserves and 290 reserves of different types representing the most valuable landscapes and natural ecosystems of the country.

### **Legal Framework for wild harvesting**

**European Legal Framework for wild harvesting**

**National Legal Framework for wild harvesting**



### European Legal Framework for wild harvesting

- CITES Convention is an intergovernmental agreement ratified by 189 nations (ratification of Lithuania 2001) under the international union of the conservation natural recourses which compiles a list of threatened species that should not be traded.
- Species prohibited to trade in wild flora according provisions of CITES Convention and to requirements of additional resolutions of the conventions are following:
  - *Arnica montana*
  - *Arctostaphylos uva-ursi* ✘
  - *Lycopodium clavatum*
  - *Menyanthes trifoliata* ✘
  - *Cetraria islandica* ✘



**CITES Convention**



*Arctostaphylos uva-ursi* and *Arnica montana*



*Menyanthes trifoliata*



*Lycopodium clavatum*



*Cetraria islandica*



**CITES Convention**

Traditionally *Lycopodium* and *Cetraria* plants are collected, and used for Palm Sunday and Easter decorations, sold in markets.



Vilnius palms

## Control

- State Environmental Protection Inspection (subordinate institution of the Ministry of Environment) is responsible for issuing CITES permits.
- The control is performed by Regional Environmental Protection Departments, their city or district agencies, the Customs of the Republic of Lithuania within their respective competences.

### National Legal Framework for wild harvesting based on:

**Law on Environmental Protection** (1992, amended in 1996 and 2001). Legal basis of all laws and regulations on the use of natural resources and protection of various components of the environment.

**Law on Protected Animal, Plant and Fungi Species and Communities** (about 2000 sp.) (1997, amended in 2001 and 2010). Covers species listed in Council Directive 92/43/EEC and Red Data Book of Lithuania. Use of protected species are allowed with a permit issued by the Ministry of Environment.

**The Red Data Book of Lithuania.** First was published in 1981, revised second and third editions in 1992 and 2007. Every year a special commission revises a list of species and makes recommendations for amendments of list.

**Law of Wild Vegetation** (1999)

**MAP species from the Red Data Book of Lithuania**

strictly protected from any usage and harvesting

Includes about 50 species considered as MAP:

- *Arctium nemorosum*,
- *Allium ursinum*,
- *Arnica montana*,
- *Gentiana cruciata*,
- *Hedera helix*,
- *Hypericum hirsutum*,
- *Hypericum montanum*,
- *Mentha longifolia*,
- *Polemonium coeruleum*,
- *Pulmonaria angustifolia*,
- *Salvia pratensis*

Strict normative of protection are adopted by collectors because of :

- low sources of raw material;
- species are not purchased;
- people have some knowledge about protection of corresponding species.

**Red Data Book of Lithuania**

*Salvia pratensis* in valley of river Nemunas.



### Red Data Book of Lithuania



*Arnica montana* forest population



*Palemonium ceruleum* in wild



*Allium ursinum* forest population



*Mentha longifolia*



*Gentiana cruciata*

### Law on Wild Vegetation (1999)

General provision of legal acts and legislative measures on sustainable WH of non-timber products

#### **Regulations on the use of resource of wild flora (2000).**

Regulations are securing system of licenses and limits on WH of MAP, mushrooms, wild berries and fruits issued to protect and restore non-timber forest products by ensuring rational use, by preparing and implementing a programme for resource restoration.

The permissions for WH of MAP are required to all legal persons using WH resources in their trade.

Permits for 1 year period are issued by staff inspectors of local agencies of Regional Environmental Protection Department or Administration of Protected Areas.

- 2011 m. - 31,
- 2010 m. - 28,
- 2009 m. - 28,
- 2008 m. - 24,
- 2007 m. -26.

### Regulations on the use of resource of wild flora

The harvesting and trading is limited and available only with special permit for following MAP species:

- Centaurium pulchellum*,
- Centaurium erythraea*
- Chimaphila umbellata*,
- Hierochloe australis*,
- Hierochloe odorata*.



*Centaurium erythraea*



*Chimaphila umbellata*

### **Regulations on the use of resource of wild flora**

WH of leaves and flowers is forbidden for collection (not for medicinal purposes) of:

- *Convallaria majalis*
- *Primula veris*
- *Digitalis grandiflora*
- Gathering of cranberries are allowed in two Strict Nature Reserves only for very short period and only for local people with special permissions (it is regulated by individual regulations of the Strict Nature Reserves).

### **Methods of Wild Plant Recourses Accounting of MAP (2000)**

The accounting methods for sustainable WH were created by researchers of the Institute of Botany and should be used for the control of populations of the most important wild MAP:

- *Thymus serpyllum*
- *Thymus pulegioides*
- *Urtica dioica*
- *Ledum palustre*
- *Hypericum perforatum*
- *Hypericum maculatum*
- *Juniperus communis*
- *Cetraria islandica*
- *Convallaria majalis*
- *Lycopodium annotinum*
- *Menyanthes trifoliata*
- *Helichrysum arenarium*
- *Calluna vulgaris*

### **Sustainable Wild Harvesting Training**

Lithuanian universities are providing education programmes:

- Vilnius Gediminas Technical University and Vilnius University have training course on biodiversity and sustainable use of biological resources.
- Vilnius University (Nature Science faculty) first year masters have a course of Economic Botany where they are learning for MAP SWH.

### **Sustainable Wild Harvesting Training**

- Rural community “Pagėgių Kraštas” participate in the Project ,LEADER’ (,Links between Actions for the Development of Rural Economy’) supported by EC, which axis is to improve and encouragement of rural partnership development.
- The activity of corresponding community involved training of the WH of MAP together with growing and processing.

### **Sustainable Wild Harvesting Training**

- Botanical Garden of Vytautas Magnus University participate in social projects and organized voluntary seminars for MAP WH, processing and use.
- Institute of Botany organized the seminars for local community on SWH of MAP.
- Publicated the populiar information on harvesting, processing of MAP.

