



MINISTERSTVO ZEMĚDĚLSTVÍ

# **Forests and Climate Change How to take responsibility?**

**FORUM 2000**

**Tomáš Krejzar**

Ministry of Agriculture of the Czech Republic

Prague, 18<sup>th</sup> October 2016



# Forests and Climate Change

## Legal and Conceptual Framework for Forest Management in the Czech Republic

- ✓ Forest Act,
- ✓ Nature and Landscape Protection Act,
- ✓ Act on the Trading in Forest Reproductive Material,
- ✓ National Forest Programme,
- ✓ Strategy of Ministry of Agriculture with the outlook to 2030.

### **SUSTAINABLE AND MULTIFUNCTIONAL FOREST MANAGEMENT**

(As defined by FOREST EUROPE and EU Forest Strategy)

## Role of forests and of forest sector with respect to climate change

- ✓ Climate change mitigation
- ✓ Climate change adaptation

Forest – Forest Management – Forest-based Industries

BIODIVERSITY AND BIOECONOMY

**Both THREAT and OPPORTUNITY**



MINISTERSTVO ZEMĚDĚLSTVÍ

# National Forest Programme II

## Key action 6

### **Alleviate impacts of expected global climate change and extreme meteorological phenomena**

- ✓ Grow diversified forest stands with the greatest possible employment of natural processes, variegated species composition, natural regeneration and variability of silvicultural procedures.
- ✓ Promote forest species and ecotypes resistant to climate changes.
- ✓ Optimize carbon cycling in soil horizons, standing growing stock and wood products.
- ✓ Apply measures maintaining high and stable wood production.
- ✓ Extend legal time limits for the afforestation and establishment of stands in line with the natural forest regeneration.
- ✓ Within forest typology to assess possible changes of forest altitudinal vegetation zones.
- ✓ Focus the public aids on the support of adaptive measures mitigating the impacts of climate change.
- ✓ Foster the environment-friendly afforestation of farmlands.
- ✓ Shorten the rotation period in woody species most jeopardized by climate change.
- ✓ Provide for the management of low forest and coppice-with-standards.



# Preparation of the implementation of measures for alleviating negative impacts of drought and water scarcity

- ✓ Resolution of the Government No. 620 of 29. 7. 2015
- ✓ Intra-ministerial group Water – Drought established.
- ✓ 3 main tasks concerning forests and forestry:

Identify risk areas of drought and financially support early regeneration of the forest stands damaged by drought, their reconstruction (conversion to a more suitable tree species composition more resistant to drought), or their conversion from the „high“ forest to the „low“ forest.

Renew the Aerial Forest Fire Service, as an important tool for identification and extinguishing forest fires in the periods of long-term drought and ensure sustainability of its financing.

Propose recommended silvicultural measures for water retention and restoration of water cycle in the landscape and making more effective subsidies to the forest management.

# Strategy of Ministry of Agriculture of the Czech Republic with the outlook to the year 2030

- ✓ Principles of Sustainable Forest Management
- ✓ Ensure continuous provision of forest ecosystem services in the conditions of changing climate
- ✓ **Foster transition to low-carbon economy**

Create enabling conditions for higher domestic use and consumption of timber and timber products.

Eliminate unjustified obstacles, coming from legislation and technical norms, that hamper broader use of wood.

Consider change of tax and other laws that would encourage use of wood for construction.

Create enabling environment for investments that would lead to the production of forest products with higher added value.

Strive for diminishing exports of rough timber.

Support research and innovations towards more efficient use of wood and search for new wood-based products.



**Strategy of adaptation to climate change  
in the conditions of the Czech Republic**

**+**

**National adaptation plan**



MINISTERSTVO ZEMĚDĚLSTVÍ

# WHAT TOOLS DO WE HAVE?



MINISTERSTVO ZEMĚDĚLSTVÍ

# Research

## Financed by Ministry of Agriculture via National Agency for Agricultural Research

Assessment of expected changes in the growth and mortality of forest stands, impacts on production function of forests in the Czech Republic and proposal of adaptation strategy  
(2012 – 2016, Czech University of Life Sciences)

Differentiated silvicultural techniques for withering spruce forest stands in 4<sup>th</sup> and 5<sup>th</sup> forest altitudinal zones  
(Municipal forests Olomouc, Forest and Game Management Research Institute)

Providing high-quality gene resources with respect to requirements of the society and climate change  
(Czech University of Life Sciences, Forests of the Czech Republic, s. e.)

Methods of assessment of drought in forest stands  
(Forest and Game Management Research Institute).



# Subsidies

## Rural Development Programme (sub-measures)

- ✓ Restoration of forestry potential after natural disasters
- ✓ Restoration of damage caused by floods and introduction of preventive actions
- ✓ Investments in the protection of soil improving and stabilizing tree species (new)
- ✓ Conservation of a particular forest stand management
- ✓ Conservation and reproduction of the forest gene pool (new)
- ✓ Afforestation of agricultural lands

## Financial contributions to forest owners

- ✓ Regeneration (both natural and artificial) of forest stands, with emphasis on soil-improving and stabilizing species, tending of forest stands under 40 years of age

## Subsidies for conservation and reproduction of the gene pool of forest tree species

- ✓ Support to high-quality sources of reproductive material; gene bases
- ✓ National bank of seeds and explants of forest tree species



## Other tools

### Regional Plans of Forest Development

- ✓ Tool for regionally differentiated application of the state forestry policy
- ✓ Approved by the Ministry of Agriculture
- ✓ Framework management guidelines
  - Recommendation for forest management planning

### ADVISORY SERVICES

- ✓ seminars
- ✓ certified advisors

### NETWORK OF DEMONSTRATION FOREST STANDS





We are discussing a new approach to forest management in the context of climate change.

**But isn't there need to change the approach to nature protection as well?**



MINISTERSTVO ZEMĚDĚLSTVÍ

# Rationale

## Situation in the Czech Republic

**726 000 ha, i.e. 27 % of all forests** included in specially protected areas (both large-scale and small-scale)

**256 617 ha, i.e. 10 % of forest stands** included in the sites of Community interest (NATURA 2000)

**550 000 ha, i.e. 45 % of forests managed by Forests of the Czech Republic, S.E.**, under a specific regime of nature protection.

In spite of these figures - ongoing discussion about the establishment of new protected areas, including national parks.

Over the last years - complicated relations between forestry sector and nature protection authorities. Difficult reconciliation of conflicting interests.

New approaches – **such as „wilderness“** aim at **segregation** of areas assigned to nature protection and resign on active management



# Strategic Dialog between the Czech Republic and Federal Republic of Germany

## Working Group 9 – Contribution in the field of Forestry

### Strategic objective

In the framework of the EU Forestry Strategy promote pragmatic and efficient integration of nature protection in sustainable forest management in commercially used forests

### Actors

Ministry of Agriculture of the Czech Republic/Federal Ministry of Food and Agriculture of Germany, **European Forest Institute (Integrate+)**, German Laender, scientific and research institutes (Czech University of Life Sciences), forest owners (Forests of the Czech Republic, state enterprise; Bayerische Staatsforsten), Czech Forest Management Institute

### Planned activities and schedule:

- Establish one or more demonstration sites in typical forest types (2015)
- Prepare relevant documentation (2015-16)
- Promote exchange of experts and lessons learnt (2016)
- Apply and test mobile training software (2016)
- Prepare a joint presentation for the Standing Forestry Committee and Forestry Directors Meeting of the EU (2016 and 2017)



# Integration as a solution

**Innovative approach – integration** of nature/biodiversity conservation in sustainable forest management; make use of advantages which provide **forest management** measures

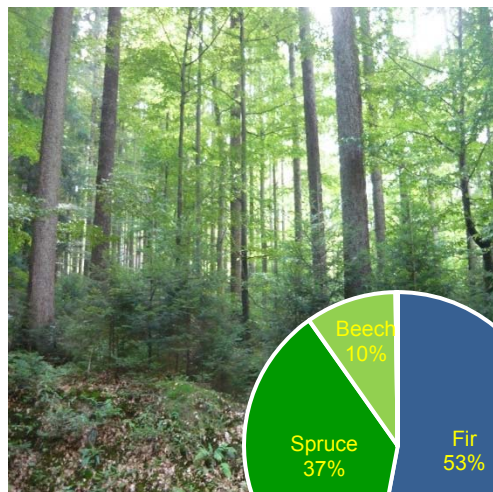
Maintaining and enhancing forest-related biological diversity with respect to the historical, multifunctional and professionally managed forests of Europe

## Advantages:

- ✓ win-win solution (supporting both bioeconomy and biodiversity)
- ✓ cost-efficiency and low impact on public budgets
- ✓ areal coverage (possibility of a large-scale application)
- ✓ respect to local economies
- ✓ making use of traditional forestry techniques

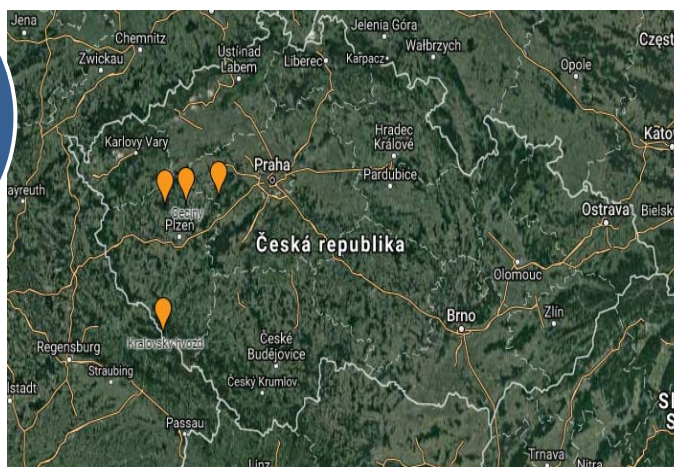
**LAND SHARING INSTEAD OF LAND SPARING**

Královský hvozd – Spruce

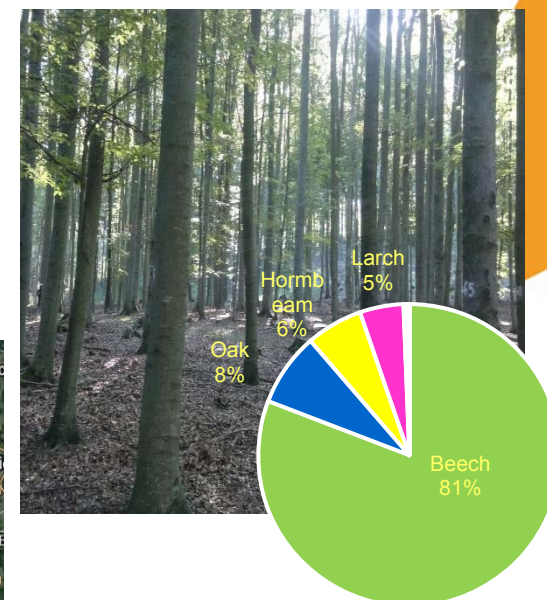


## Summary of Integrate+ demonstration sites in the Czech Republic

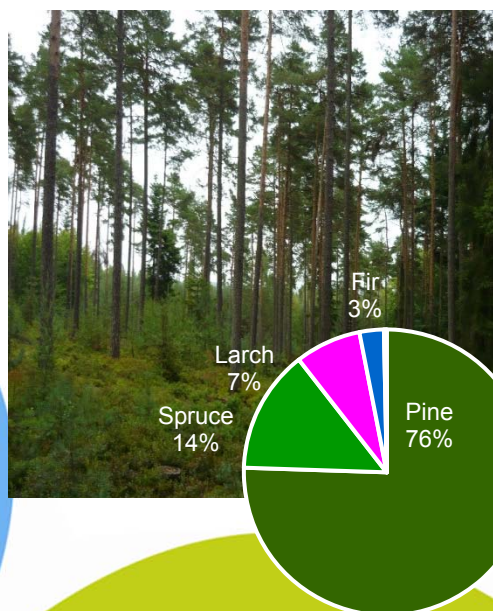
- production forest
- easy availability
- basic economic species



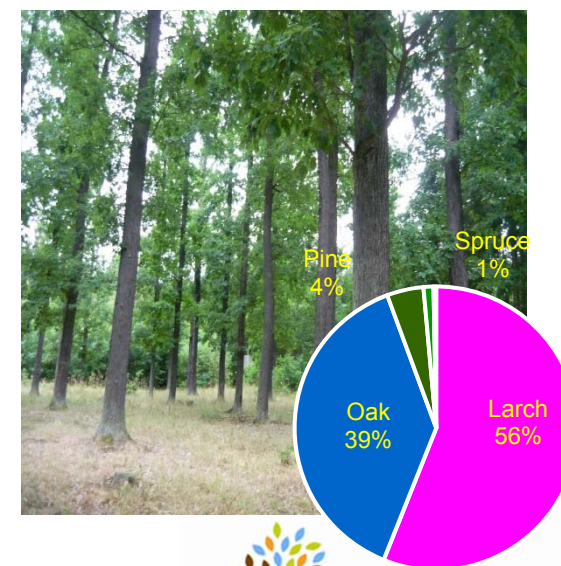
Křivoklát – Beech



Manětínská vrchovina – Pine



Čečiny – Oak



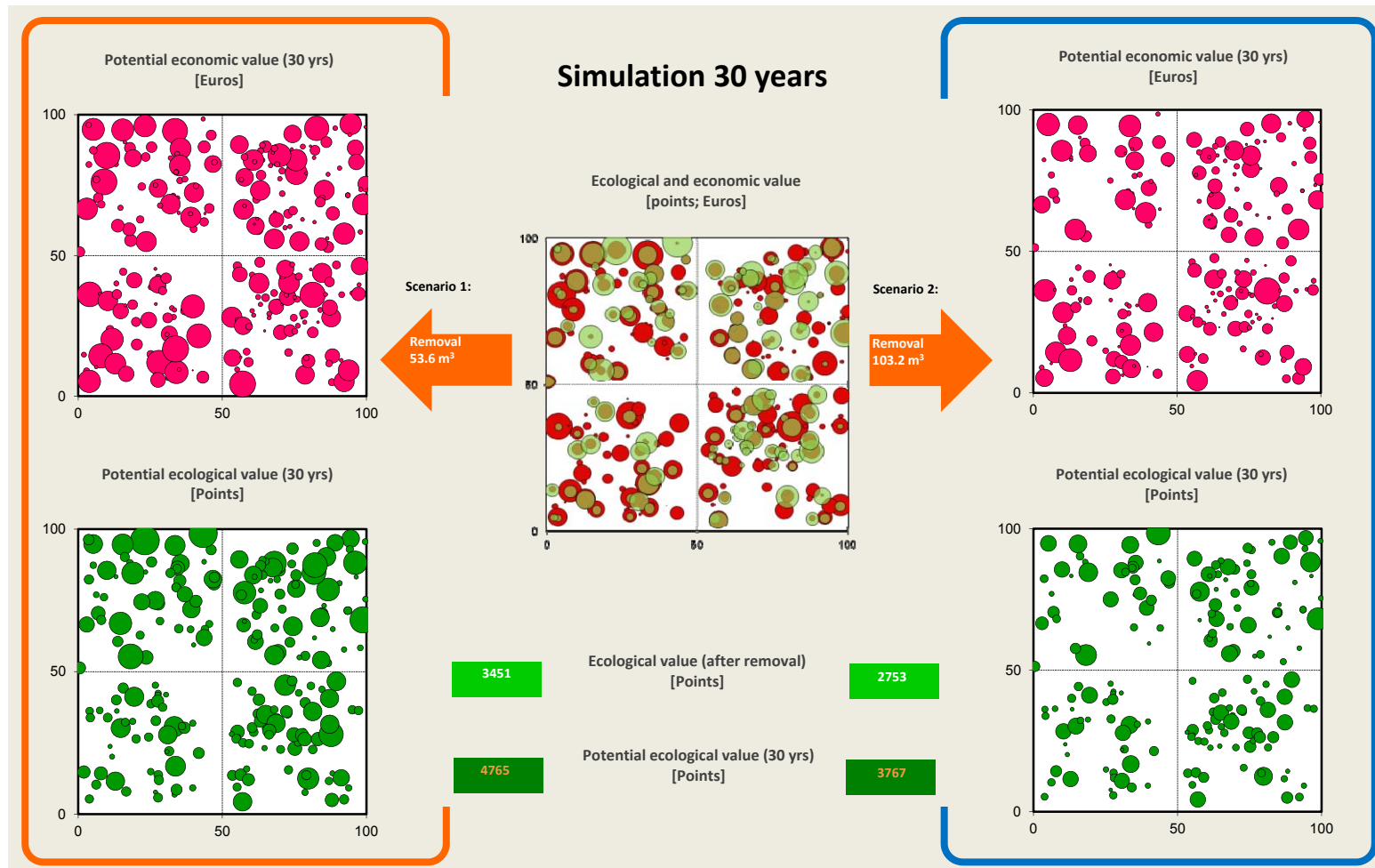
Name	Volume [m <sup>3</sup> ]	Basal area [m <sup>2</sup> ]	Number of trees	Habitat points
Čečiny	480,1	38,1	387	1361
Královský hvozd	328,7	28,7	448	1092
Křivoklát	435,6	34,2	523	1952
Manětínská vrchovina	156,6	19,3	316	926



MINISTERSTVO ZEMĚDĚLSTVÍ



# Simulations using modern software tools



Kraus, Daniel (2016)



# International conference “Integration of Biodiversity Enhancement into Sustainable Forest Management in the framework of the EU Forest Strategy”

Prague, 6 – 7 October 2016

The conference presented ongoing cross-boundary work in the important field of integrating biodiversity enhancement in forest management.

Experience with various stakeholders and among countries within and beyond Integrate project was shared.

Further steps at all levels (pan-European, EU, European Forest Institute, national) were discussed.



MINISTERSTVO ZEMĚDĚLSTVÍ



**Thank you for your attention.**

Tomáš Krejzar  
[tomas.krejzar@mze.cz](mailto:tomas.krejzar@mze.cz)



MINISTERSTVO ZEMĚDĚLSTVÍ