



Truffle Management in Forest Ecosystems of Croatia

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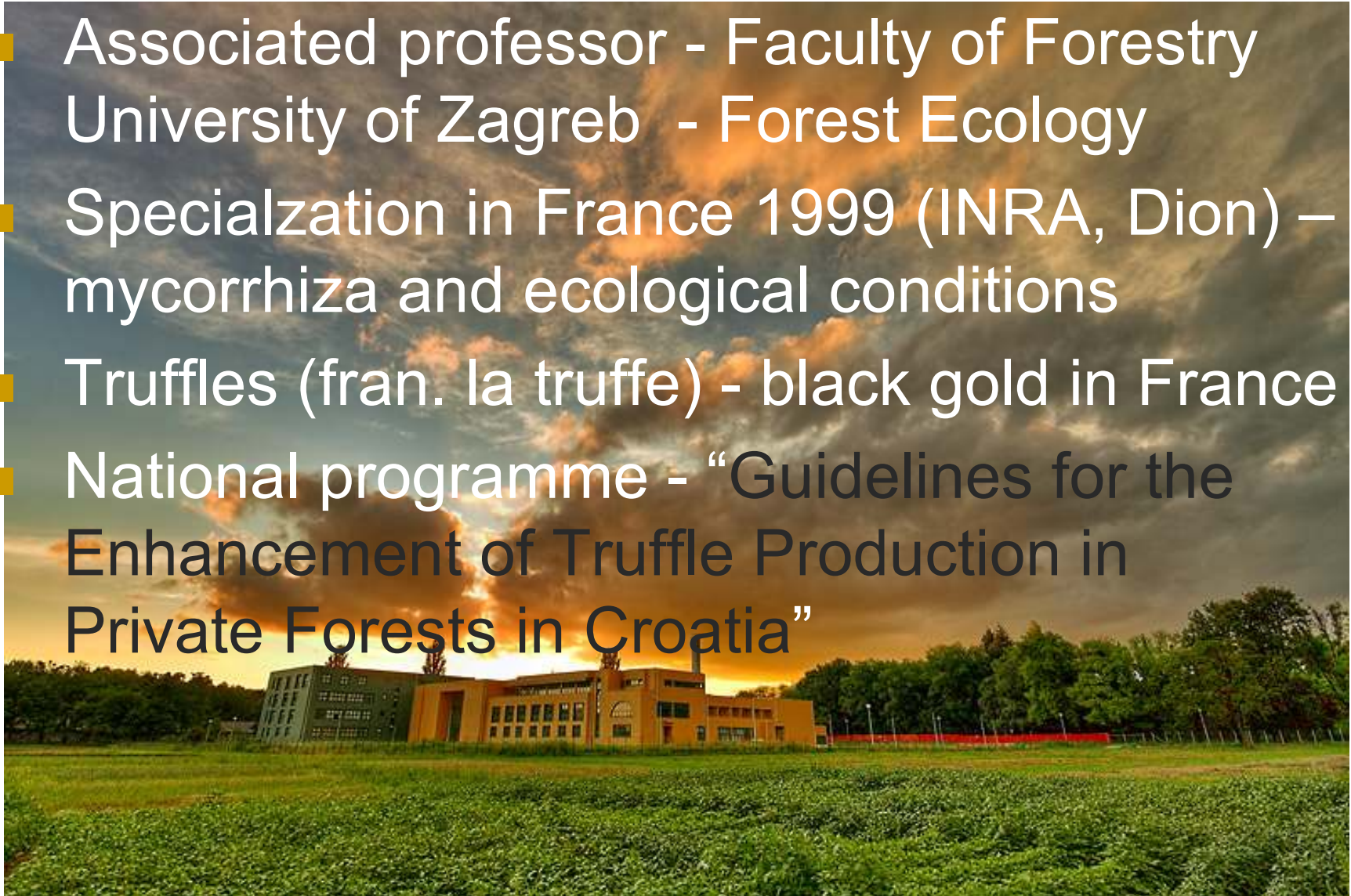


HŠD, Zagreb, 23. 09. 2010.



[Foreword

- Associated professor - Faculty of Forestry University of Zagreb - Forest Ecology
- Specialization in France 1999 (INRA, Dion) – mycorrhiza and ecological conditions
- Truffles (fran. la truffe) - black gold in France
- National programme - “Guidelines for the Enhancement of Truffle Production in Private Forests in Croatia”



[Contents

- Introduction
- Diversity of forests in Croatia
- Tradition of forestry
- Natural regeneration
- Truffles in Croatia
- Ecological problems and truffles
- News in truffle industry
- Conclusion





[Introduction

- What it was specific of Croatian forestry
 - High diversity of forest ecosystems
 - The predominant share of state forests in the total area
 - The long tradition of organized forest management
 - Natural regeneration as a basic principle of forest regeneration
 - Truffles

[Diversity of forests

- Lowland forests – black alder, lowland ash, pedunculate oak



[Diversity of forests

Hilly and Mountainous forests – european beech and silver fir





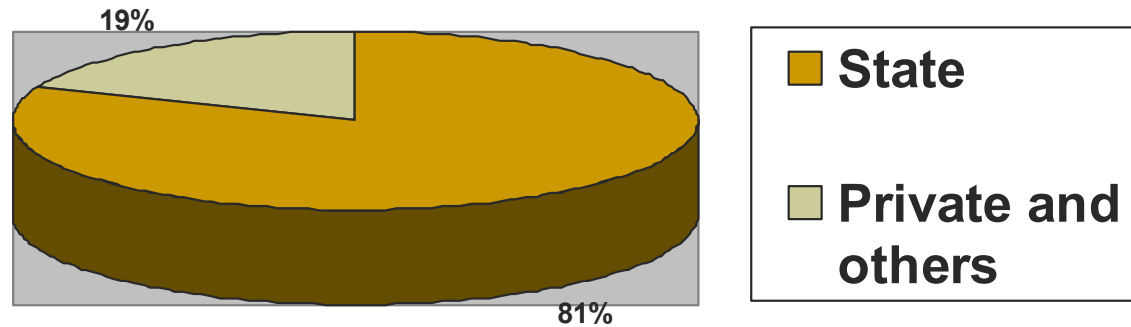
[Diversity of forests

Submediterranean
and
Mediterranean
forests – Black
pine, Aleppo pine
and Turkish oak





[Long tradition of management



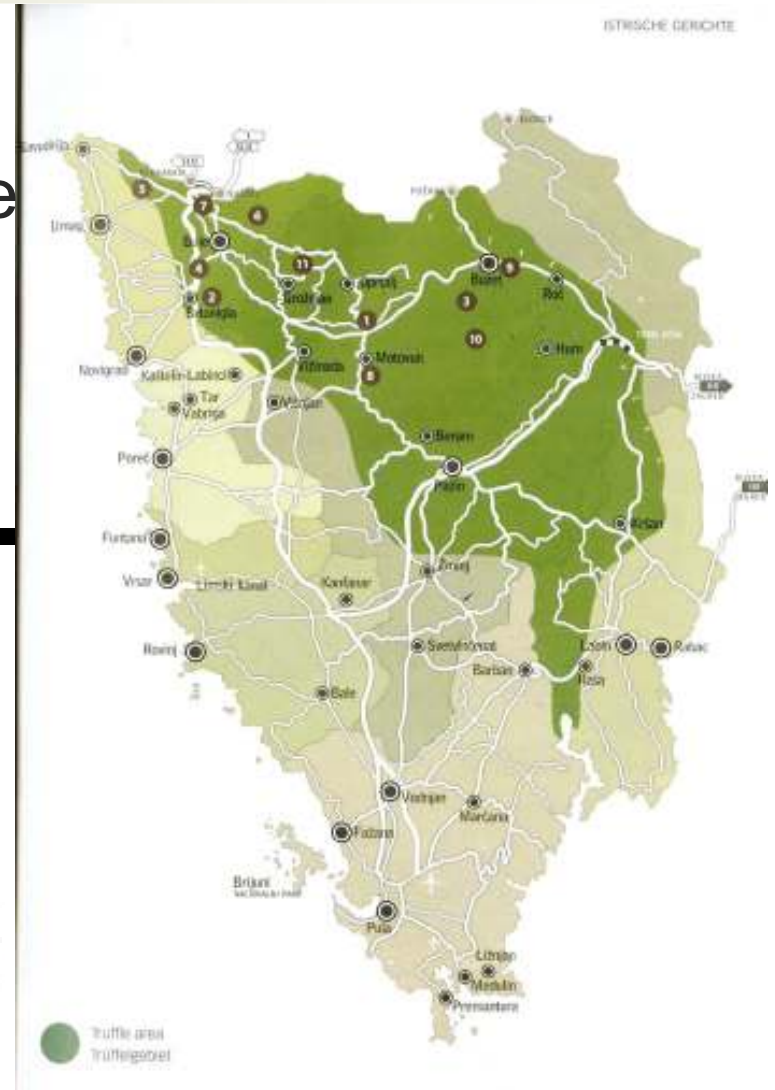
[Natural regeneration





[Truffles

In 2000 a specimen of white truffle (1,3 kg) from Croatia (Istria) was listed in the Guinness Book of Records as the biggest in the world.



[Truffles in the world

- In 2008, a white truffle of 1.6 kg found in Italy became **the most expensive white truffle specimen** in the world (330,000 US\$)

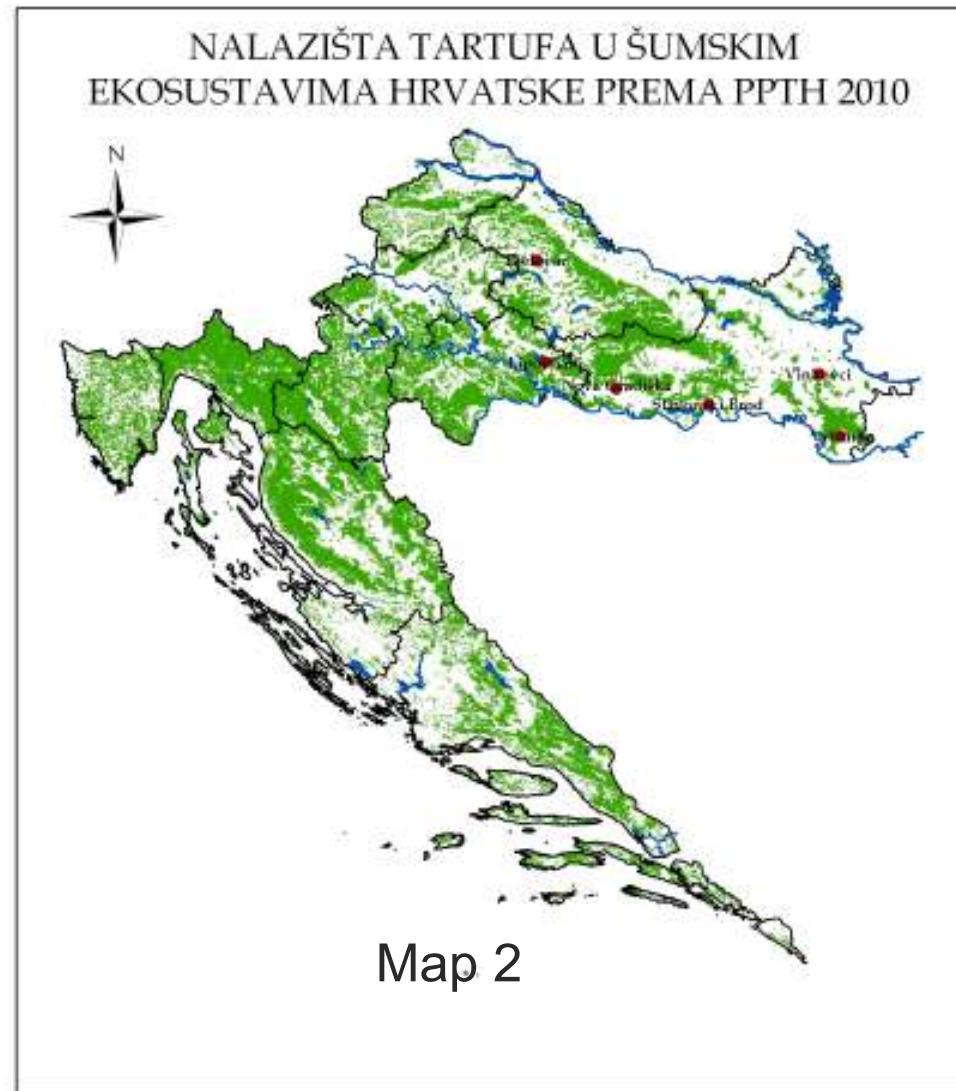
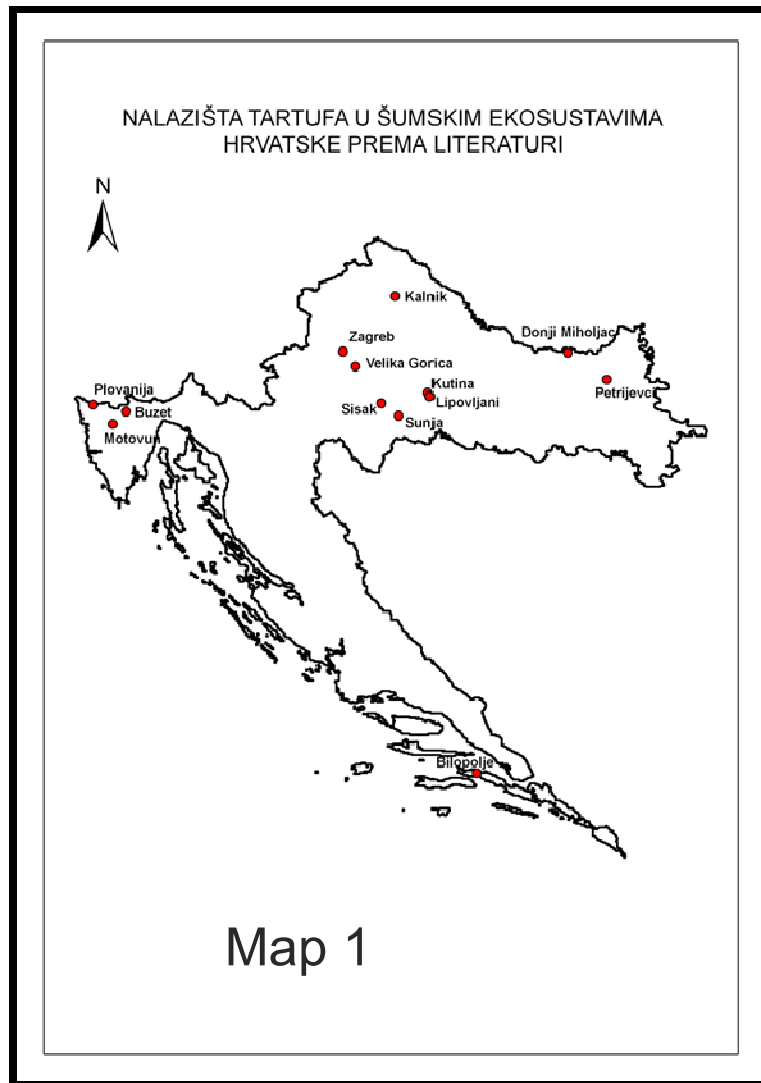


[Ecological problems



Truffles in Croatia

Since 1929 truffles were harvested in Istria



[Truffles area 2010

- Natural truffle habitat in Croatia



[Mycorrhizal symbiosis



[Truffle dogs



Lagotto romagnolo



[Truffle species

- White truffles (*T. asa*, *T. borchii*, *T. maculatum*, *T. magnatum*)





[Truffle species

- Black truffles (*T. aestivum*, *T. brumale*, *T. hiemalbum*, *T. macrosporum*)





[Truffle species

- Black truffles (*T. melanconii*, *T. melanosporum*, *T. mesentericum*, *T. uncinatum*)



[Truffles from Croatia





[Truffles from Croatia



[Truffles from Croatia



A photograph showing several pieces of dark, irregularly shaped, and textured material, likely truffles or fungi, arranged on a white paper napkin. The pieces vary in size and shape, some showing a marbled internal pattern. The background is a green and white checkered surface.

Truffles from Croatia

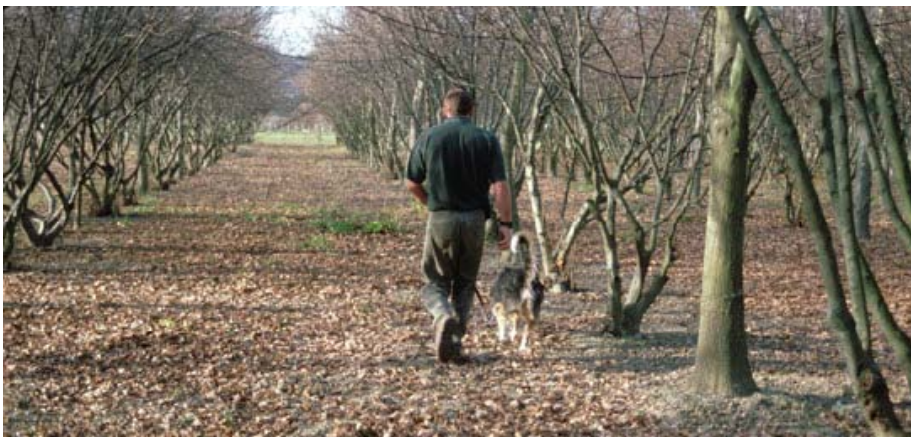


[Truffles from Croatia



[News in Truffle industry

- Truffle farms (plantations)





[Conclusion

- In the ecological and biological sense, there are **no truffles without vital forest trees**, without **optimal site conditions**.
- The **quality of the truffle** depends on the quality of the forest habitat and the condition of forest trees.
- The importance of **ecological problems** for sustainable forest management, need issuing **regulations** to ensure **better quality management** with forest sites and ecosystems (**forest ecosystem management**) and enhancing of NMFGS.

[Conclusion

- Issuing **regulations** related **to truffle management in forest** ecosystems of Croatia and monitoring their implementation.
- **Game** as the constituent part of the forest ecosystem, directly **affect the development** and distribution **of truffles**, as well as truffle quantities available for harvesting. Excessive number of wild pigs may reduce truffle yields.



[Conclusion

- There are **well known truffle sites** in Croatia (Istria, Motovun Forest).
- The **potential** of Croatian truffle habitats is superb, **habitat preservation** is excellent and the **naturalness** of forests is almost optimal.
- The development of **new fields in forestry**, especially in areas in which wood mass production does not constitute the primary forestry goal, the development of rural areas.
- The **forestry** sector (private or public) is currently **completely outside the system of truffle production** and use in the economic sense, and it can be changed.

[Thank you for your attention.]



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