INTERREG- ALPTREES Policy Workshop

on

Harmonization of policy processes in the Alpine Space for the sustainable utilization and management of Non-native trees for climate change adaptation

March-16th 2022

NNT management policy In Italy: a no-perceived problem

Davide Pettenella

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Outline

- NNT in Italy
- Our policies
- Developing a transnational strategy on NNT

I acknowledge the support by Thomas Campagnaro in preparing this presentation

Pdf available on the web (search «pettenella»)

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Outline

- **NNT in Italy**
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Main NNT in Italy

- tree of heaven (*Ailanthus altissima* (Mill) Swingle)
- black locust (*Robinia pseudoacia L.*)
- black cherry (*Prunus serotina* Ehrh)
- Douglas fir (*Pseudotsuga menziesii* (Mirbel) Franco)
- acacias (*Acacia* sp.)
- eucalypts (*Eucalyptus* sp.)
- Northern red oak (*Quercus rubra* L.)
- box elder (*Acer negundo* L.)
- white pine (*Pinus strobus* L.)
- paulownia (*Paulownia tomentosa* (Thunb.) Steud.)
- Siberian elm (*Ulmus pumila* L.)
- Chinese palm (*Trachycarpus fortunei* (Hook.)H.Wendl.)

and few others

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Drivers

In the past:

- NNT planted as **ornamental trees**
- NNT planted for **soil consolidation** work
- Forest plantations for **wood production**
  - till the '80s last century: *Pinus radiata*, *Eucalyptus* sp., *Douglas*, *Pinus strobus*, black walnut, *Abies cephalonica* (Greek fir), … almost fully abandoned in the last 30 years
  - In more recent times: *Poplar* sp., *Salix* sp., black locust for SRC-SRF

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Planted NNT

INARBO.IT
inventario arboricoltura da legno in Italia

RETE **RURALE** NAZIONALE mipaaft 2014 2020

Progetto MONPOPLAR FederlegnoArredo – CREA

National data (2017, hectares)

Poplars	46,125
Other broad. highfortests	**41,425** (also with eucalypts)
SRF	4,850 (mainly poplars)
Conifers highforests	**4,350** (also with exotic pines and Douglas)
Total Plantations	**96,750**

Regional data

	Piantagioni specializzate di pioppo ad alto fusto	Piantagioni da legno di altre latifoglie ad alto fusto	Piantagioni specializzate governate a ceduo	Piantagioni da legno di conifere
ABR	75.00	3825.00	50.00	25.00
BAS	25.00	925.00	NA	50.00
CAL	200.00	300.00	NA	NA
CAM	500.00	1325.00	NA	NA
EMR	4700.00	3300.00	200.00	50.00
FVG	3725.00	2050.00	100.00	NA
LAZ	450.00	1050.00	100.00	75.00
LIG	NA	50.00	NA	25.00
LOM	19850.00	5800.00	1250.00	NA
MAR	NA	1125.00	50.00	NA
MOL	NA	475.00	50.00	25.00
PIE	12475.00	4950.00	225.00	50.00
PUG	25.00	300.00	NA	125.00
SAR	NA	3925.00	2350.00	975.00
SIC	25.00	2725.00	100.00	2575.00
TAA	NA	NA	NA	NA
TOS	1350.00	2625.00	25.00	350.00
UMB	75.00	3875.00	25.00	25.00
VAO	NA	NA	NA	NA
VEN	2650.00	2800.00	325.00	NA

45,775 ha
0.5% of the forest cover
    (9 085 186 ha)
0.4% of the forest area
    (11 054 458 ha)

https://www.smartforest.it/inarbo.it/

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Drivers

In the past:

- Use of exotic trees as ornamental trees
- Soil consolidation work
- Forest plantations for wood production
  - till the '80s last century: *Pinus radiata*, *Eucalyptus* sp., *Douglas*, *Pinus strobus*, black walnut, *Abies cephalonica* (Greek fir), … almost fully abandoned in the last 30 years
  - In more recent times: black locust *Salix* sp. and *Acacia saligna*, for SRF: no more allowed in recent times

More recently:
- Land degradation, forest fires, insects and pest attacks…
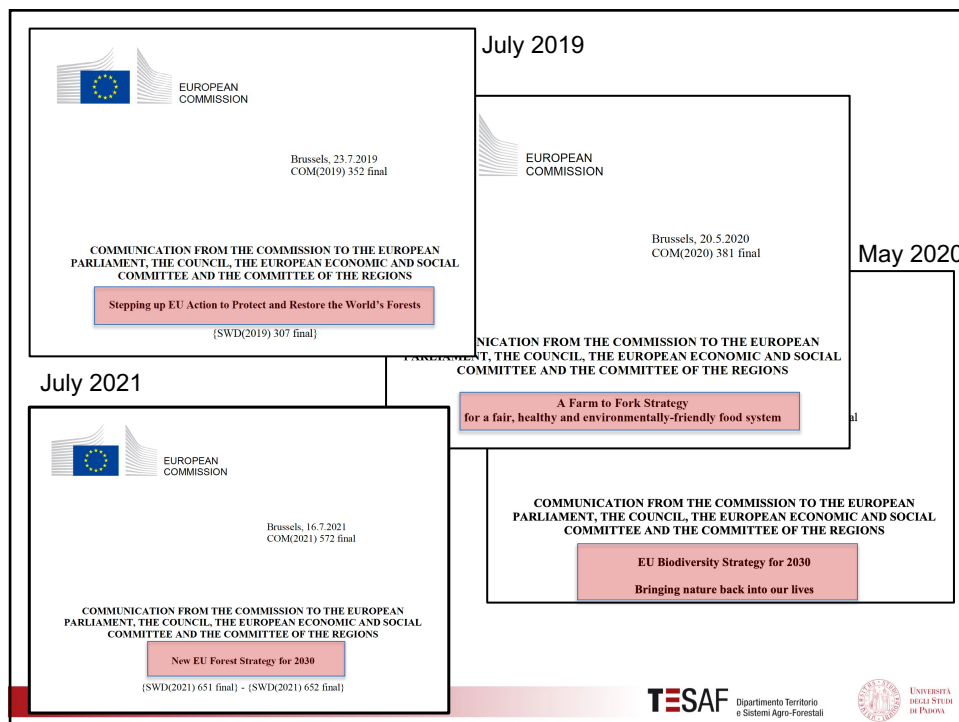- *Paulownia* (2,000 ha?), black walnut and few other plantations

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Drivers

In the past:

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Policy actions to reduce land abandonment

More recently:
- Land degradation, forest fires, insects and pest attacks …
- Paulownia (2,000 ha?), black walnut and few other plantations

Law restrictions (no conditional payments under the AF/RE Measures of the Rural Development Program)

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Outline

- NNT in Italy
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New ideas from recent strategic documents

Biodiversity Strategy (2020)

- At least **30%** of the EU territory **under protection**
- **10%** area under **strict protection**
- Mapping and protecting all EU **primary and old growth forest**
- **3 Billion of trees planted** in 2030

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New ideas from recent strategic documents

EU Forest strategy for 2030 (2021)

- **"Closer-to-nature"** guidelines and voluntary certification scheme → EU quality label for biodiversity friendly management practices (by 2023)

- **Legally binding instrument** for **ecosystem restoration**, including forest ecosystems (by 2021)

- Set **minimum standards for third party certification schemes** to ensure adequate standards of reliability, transparency and independent audit

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The National Forest Strateg
(approuved in February 2022)

Introduction
1. The context
2. Objectives
2.1 International and European context
2.2 The SFN objectives
3. Actions
3.1 Operative actions
3.2 Specific area of policy interventions
3.3 Policy tools and institutions
4. Sources of funding
5. Overall coherence
6. M&V

Strategia
Forestale
Nazionale

RAPPORTO
ANALISI DEI CONTRIBUTI DELLA CONSULTAZIONE PUBBLICA ON LINE DELLA
PROPOSTA DI STRATEGIA FORESTALE NAZIONALE

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The process
Schedule:
- **April 2019**: Technical committee established
- (6 meetings for the first draft)
- **March 2020**: 3rd version of the draft made public
- **Public consultation process** → 296 comments and suggestions
- **June-November 2020**: official answer to comments and proposals (published in January 2021)
- (3 meetings for the 4th final draft)
- **June 2021**: official approval of the the final version
- **July-October 2021**: approval by 3 Ministries (Economy & Finance, Ecological Transition, Cultural Heritage)
- **Before December 2021**: final approval by the Coordination Council State-Regions

Meanwhile:
7 workshops and webinars for presenting and discussing the NFS

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Slide 15

The document with the reply to the comments and suggestions received during the consultation process

RETERURALE NAZIONALE 20142020 — mipaaf

Sommario

Consultazione pubblica per la predisposizione Strategia Forestale Nazionale per le sue filiere

Si è chiusa la fase di consultazione pubblica sulla bozza di Strategia... contributi, che sono stati vagliati dal Gruppo di lavoro che aveva... l'iter istituzionale previsto dal D lgs 34 del 2018. Il Ministero delle... ringrazia tutti coloro che hanno inviato il proprio contributo.

Esito della Consultazione pubblica – Analisi dei contributi [10...]

Strategia Forestale Nazionale

3 main sources *of conflicts*:
- Active management (sustainable intensification)
- Biomass for energy (coppices, wood cascade approach)
- Actions to deal with the issues of land fragmentation and abandonment

https://www.politicheagricole.it/flex/cm/pages/ServeBLOB.php/L/IT/IDPagina/15339

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Slide 16

On other topics, much more general consensus

- Maintenance of more 30% of forest under a protection regime
- Old-growth forests ("*boschi vetusti*"): strict protection
- **Natural regeneration; continuous cover forestry**
- Focus on fire prevention (mo...
- Important role of wild forest p...
- Cultural services: forest and f...
- **Investments in forest monit... communication**
- Simplification of administrativ...
- **The ban in the use exotic tree species**

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An extensive application of Regulation 1143/2014 on TNN in Italy

ANNALI DI BOTANICA
Ann. Bot. (Roma), 2020, 10: 1–12
Journal homepage: http://annalidibotanica.uniroma1.it

MANAGING PLANT INVASIONS USING LEGISLATION TOOLS:
AN ANALYSIS OF THE NATIONAL AND REGIONAL REGULATIONS
FOR NON-NATIVE PLANTS IN ITALY

Brundu G.[1], Armeli Minicante S.[2], Barni E.[3], Bolpagni R.[4], Caddeo A.[5],
Celesti-Grapow L.[6,*], Cogoni A.[5], Galasso G.[7], Iiriti G.[8], Lazzaro L.[9], Loi M.C.[5], Lozano V.[1],
Marignani M.[5], Montagnani C.[10], Siniscalco C.[3]

https://rosa.uniroma1.it/rosa04/annali_di_botanica/article/view/16508/16262

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An effective networking initiative by the central authorities

SPECIEINVASIVE.IT

HOME   SPECIE ESOTICHE INVASIVE   NORMATIVA INTERNAZIONALE   NORMATIVA NAZIONALE   SPECIE DI RILEVANZA UNIONALE   DOCUMENTI UTILI   LINK UTILI

RANA TORO AMERICANA

Lithobates catesbeianus

È la specie della famiglia Ranidae di maggi... presenti in
Europa. Gli adulti nel loro ambiente natura... cm, mentre
in Europa sono noti individui lunghi fino a ... che può arrivare a
800 gr.

VAI ALLA SCHEDA

DOCUMENTI UTILI

PUBBLICAZIONI DIVULGATIVE
PUBBLICAZIONI SCIENTIFICHE
LINEE GUIDA E PIANI D'AZIONE
PIANI DI GESTIONE
CODICI DI CONDOTTA E BUONE PRATICHE
MODULI

ISPRA
Istituto Superiore per la Protezione e la Ricerca Ambientale

Sistema Nazionale per la Protezione dell'Ambiente

MINISTERO DELLA TRANSIZIONE ECOLOGICA

Programma di lavoro a supporto dell'implementazione del regolamento 1143/2014 sulle specie esotiche invasive in favore di ISPRA sede di Ozzano dell'Emilia (BO).

https://www.specieinvasive.it/

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Some Regions (e.g.: Piedmont) with a model policy. Good information materials

https://www.regione.piemonte.it/web/sites/default/files/media/documenti/2019-03/le_specie_forestali_arboree_esotiche.pdf

https://lifeasap.eu/images/guidab5/B5_GuidaTecnica_AppendicePiante_DEF.pdf

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Outline

- NNT in Italy
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Conventional policies to contrast NNT

- Command & control instruments: legislative tools, included those for nursery production and plantations (forbidden use of some species, buffer zones, …)

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Forestry *An International Journal of Forest Research*

Institute of Chartered Foresters

Mapping the patchy legislative landscape of non-native tree species in Europe

Elisabeth Pötzelsberger[1,*], Katharina Lapin[2], Giuseppe Brundu[3], Tim Adriaens[4], Vlatko Andonovski[5], Siniša Andrašev[6], Jean-Charles Bastien[7], Robert Brus[8], Milić Ćurović[9], Željka Čurović[10], Branislav Cvjetković[11], Martina Đodan[12], Juan M. Domingo-Santos[13], Anna Gazda[14], Jean-Marc Henin[15], Cornelia Hernea[16], Bo Karlsson[17], Ljiljana Keča[18], Srđan Keren[14,11], Zsolt Keserű[19], Thomai Konstantara[20], Johan Kroon[17,21], Nicola La Porta[22], Vasyl Lavnyy[23], Dagnija Lazdina[24], Aljona Lukjanova[25], Tiit Maaten[26], Palle Madsen[27], Dejan Mandjukovski[28], Francisco J. Marín Pageo[13], Vitas Marozas[29], Antonin Martinik[30], William L. Mason[31], Frits Mohren[32], Maria Cristina Monteverdi[33], Charalambos Neophytou[1], Pat Neville[34], Valeriu-Norocel Nicolescu[35], Per Holm Nygaard[36], Christophe Orazio[37,38], Taras Parpan[39], Sanja Perić[12], Krasimira Petkova[40], Emil Borissov Popov[41], Mick Power[34], Károly Rédei[42], Matti Rousi[43], Joaquim S. Silva[44,45], Ahmet Sivacioğlu[46], Michalis Socratous[47], Lina Straigytė[29], Josef Urban[30,48], Kris Vandekerkhove[49], Radosław Wąsik[14], Marjana Westergren[50], Thomas Wohlgemuth[51], Tiina Ylioja[43] and Hubert Hasenauer[1]

https://academic.oup.com/forestry/article-pdf/93/4/567/33556583/cpaa009.pdf

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Conventional policies to contrast NNT

- Command & control instruments: legislative tools, included those for nursery production and plantations (forbidden use of some species, buffer zones, …)
- Incentives
  - Forest management (no large clear cut, ageing, plantations with competitive native species: poplar, maple, hornbeam, hazelnut, …)
  - Manual and/or mechanical eradication: girdling/ring-barking, chemical treatments, fire weeding (prescribed burning)
- Information: monitoring, DBs, list of species of concern, guidelines, technical assistance, R&D, …

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Information on NTT

Riunioni scientifiche dei Gruppi di Lavoro e delle Sezioni Regionali della Società Botanica Italiana onlus

Mini lavori della Riunione scientifica del Gruppo di Lavoro per le Specie Alloctone

"Valutazione e classificazione degli impatti e distribuzione delle specie alloctone in Italia"

(a cura di S. Armeli Minicante, L. Celesti-Grapow, G. Galasso, L. Lazzaro, C. Montagnani, G. Brundu)

4 febbraio 2022, Milano, Museo di Storia Naturale di Milano, Corso Venezia 55

http://notiziario.societabotanicaitaliana.it/wp-content/uploads/2022/02/Atti-33_Alloctone-2022.pdf

Review Article

NeoBiota 61: 65-116
https://doi.org/10.3897/neobiota.61.58380 (08 Oct 2020)

Global guidelines for the sustainable use of non-native trees to prevent tree invasions and mitigate their negative impacts

Giuseppe Brundu, Aníbal Pauchard, Petr Pyšek, Jan Pergl, Anja M. Bindewald, Antonio Brunori, Susan Canavan, Thomas Campagnaro, Laura Celesti-Grapow, Michele de Sá Dechoum, Jean-Marc Dufour-Dror, Franz Essl, S. Luke Flory, Piero Genovesi, Francesco Guarino, Liu Guangzhe, Philip E. Hulme, Heinke Jäger, Christopher J. Kettle, Frank Krumm, Barbara Langdon, Katharina Lapin, Vanessa Lozano, Johannes J. Le Roux, Ana Novoa, Martín A. Nuñez, Annabel J. Porté, Joaquim S. Silva, Urs Schaffner, Tommaso Sitzia, Rob Tanner, Ntakadzeni Tshidada, Michaela Vítková, Marjana Westergren, John R. U. Wilson, David M. Richardson

https://neobiota.pensoft.net/article/58380/

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New market-based instruments to contrast NNT

- Payments for Environmental Services (**PES**) schemes
- NNT wood **harvesting "liberalization":** no request for wood harvesting (not on slopes), root extraction included
- we are introducing a new Regulation for **"Deforestation (and forest degradation) free" products** (meat, wood, palm oil, soja, coffee, cacao); why not a piece of regulation on **"NTT free" territory/products**?
- **Market creation** for NNT

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A new opportunity to control NNT:
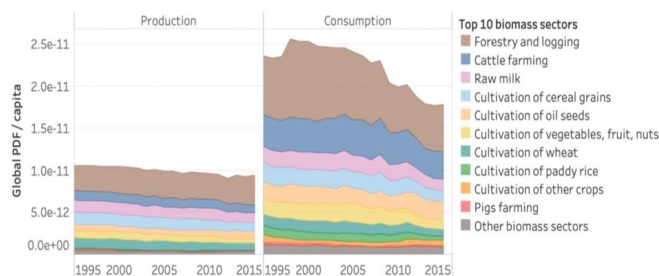**the decarbonization of the EU economy →
new markets for NNT biomass**

- -55% GHG emission below 1990 levels by 2030
  (7 years and 9 months ahead)
- Zero GHG emissions in 2050

Decarbonization: substitution of
- fossil fuels with renewable energy
- raw materials based on petrol, using biomass
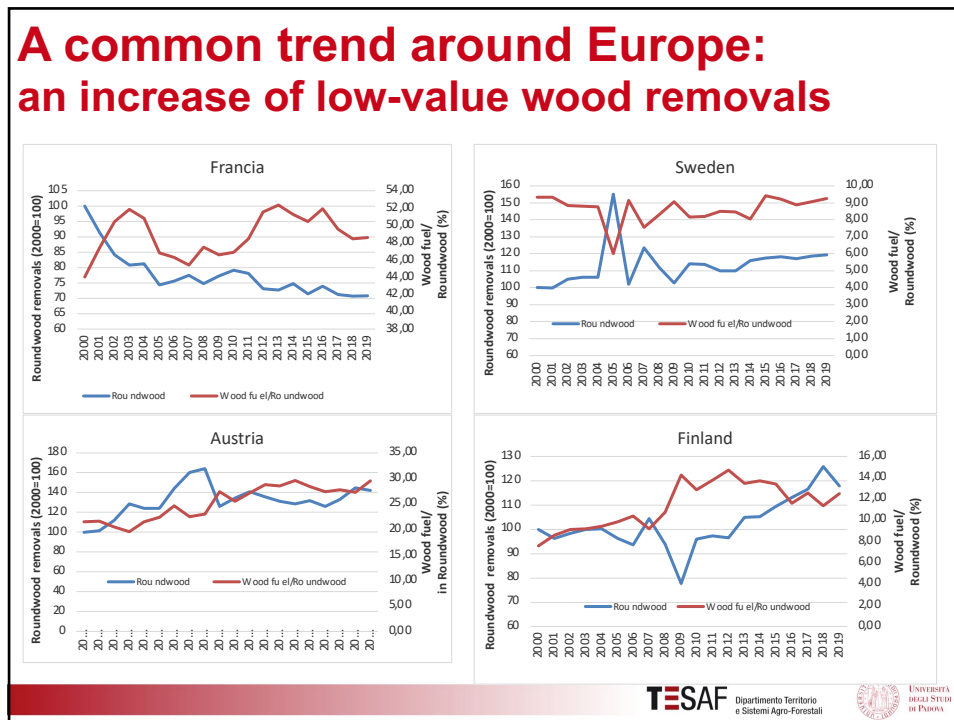- energy intense materials (e.g., cement, steel) with biomass

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Bioeconomy made in?

Domestic and total land-use related biodiversity loss implied by the EU biomass production, consumption, and imports (excluding land use by households)

Source: own elaboration supported by L. Cabernard based on methods from Cabernard, Pfister & Hellweg (2019); data from Exiobase v3.4 (https://www.exiobase.eu); PDF = potentially disappeared fraction of species; note that In Exiobase, land use data show a decreasing trend (particularly after 2011), while other studies show an increasing trend (Di Fulvio et al. 2019)

More than 1/3 of biomass inputs for the EU bioeconomy are sourced and **imported from extra-UE areas**

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A common trend around Europe:
an increase of low-value wood removals

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Take-home messages

- **Some mistakes made in the past in Italy related to NNT** due to an inadequate policy framework

- Thanks to the EU regulations and their implementation in Italy, **the NNT issue is not a priority issue in the national political agenda**

- **Active management of Italian forests** is a priority objective of forest policy, reducing forest land abandonment and degradation, the damages by fire, insects and extreme climate events and thus **preventing the spreading of NNT**.

- To face NTT problem a **balanced set of "sticks, carrots, sermons"** are needed, associated to **new Market-based tools**

- The increasing **demand for low-quality biomass** connected to the process of decarbonization represent **an opportunity** to control NNT

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Thanks for your attention!

**Ukraine is Europe.
I stand for Ukraine**

Slova Ukraine

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