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Suceava

Facultatea de
SILVICULTURĂ

5th International Conference “Integrated Management of Environmental Resources”
October 29, 2021 - Forestry Faculty of Suceava

Bioeconomy development: the Italian experience related to the forestry sector

Davide Pettenella and Giorgia Bottaro

1222·2022
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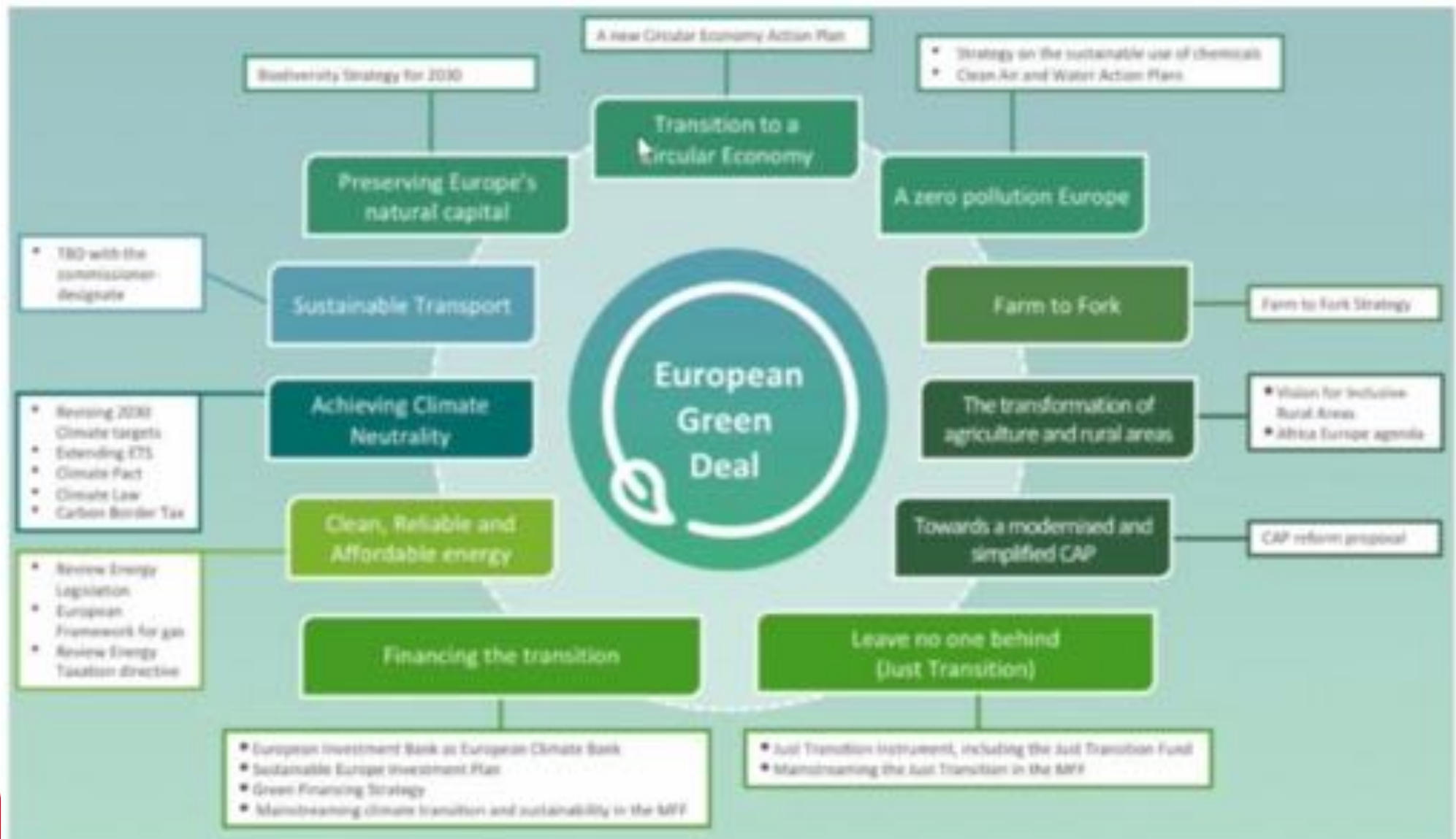


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TESAF Dipartimento Terzo
e Sistemi Agro-Forestali

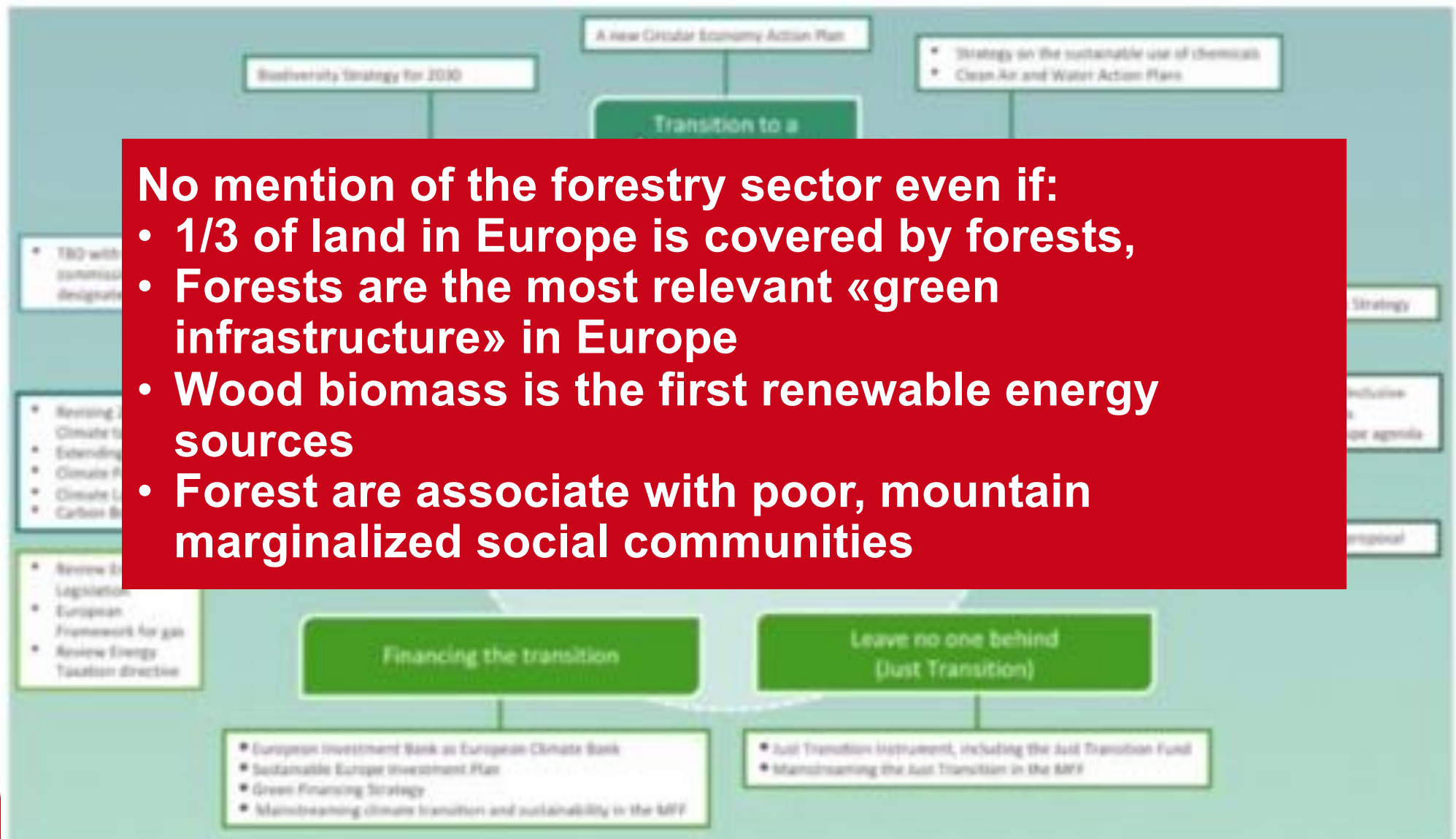


Forestry sector: a weak, marginal area of policy making



No mention of the forestry sector even if:

- 1/3 of land in Europe is covered by forests,
- Forests are the most relevant «green infrastructure» in Europe
- Wood biomass is the first renewable energy sources
- Forest are associate with poor, mountain marginalized social communities

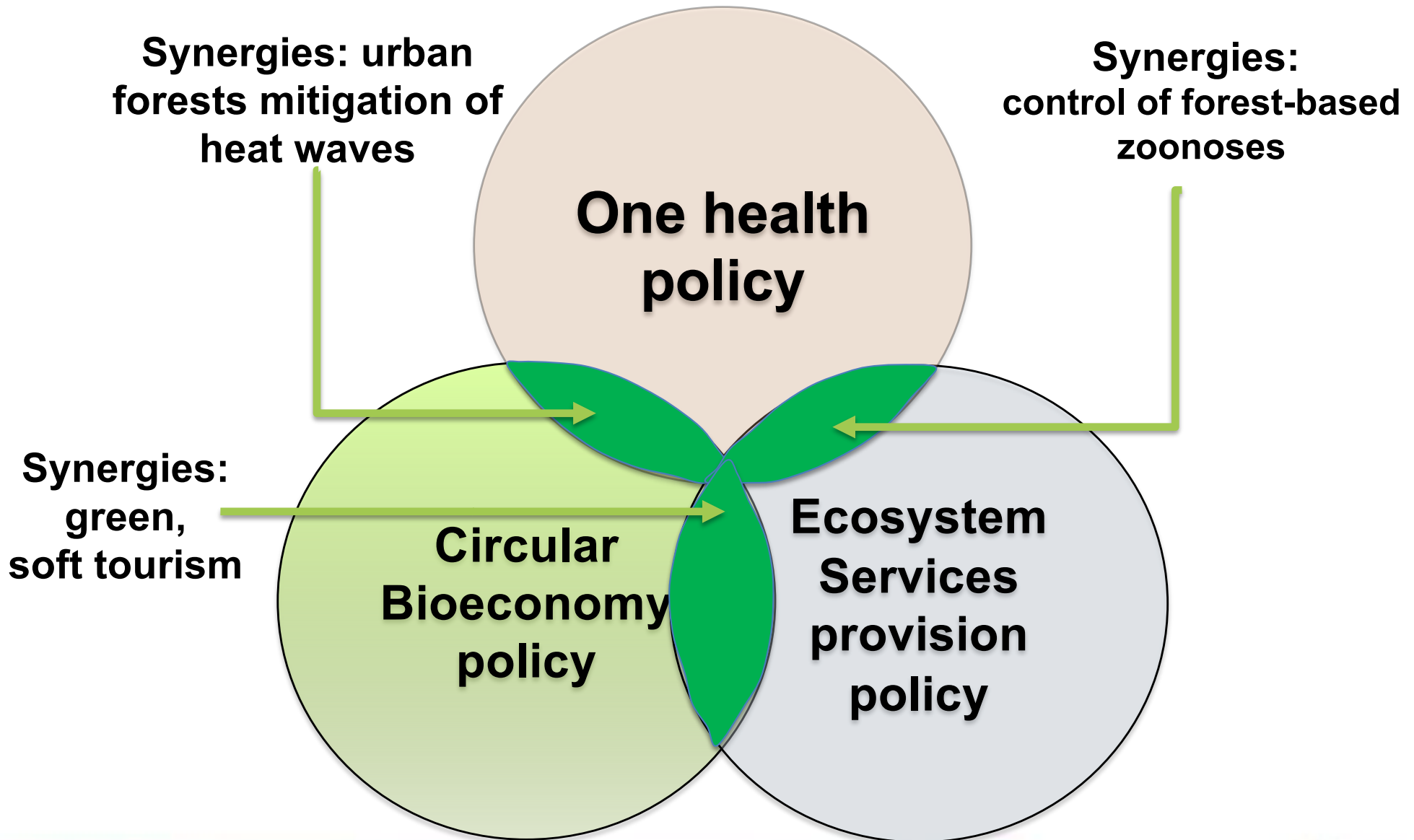


Outline

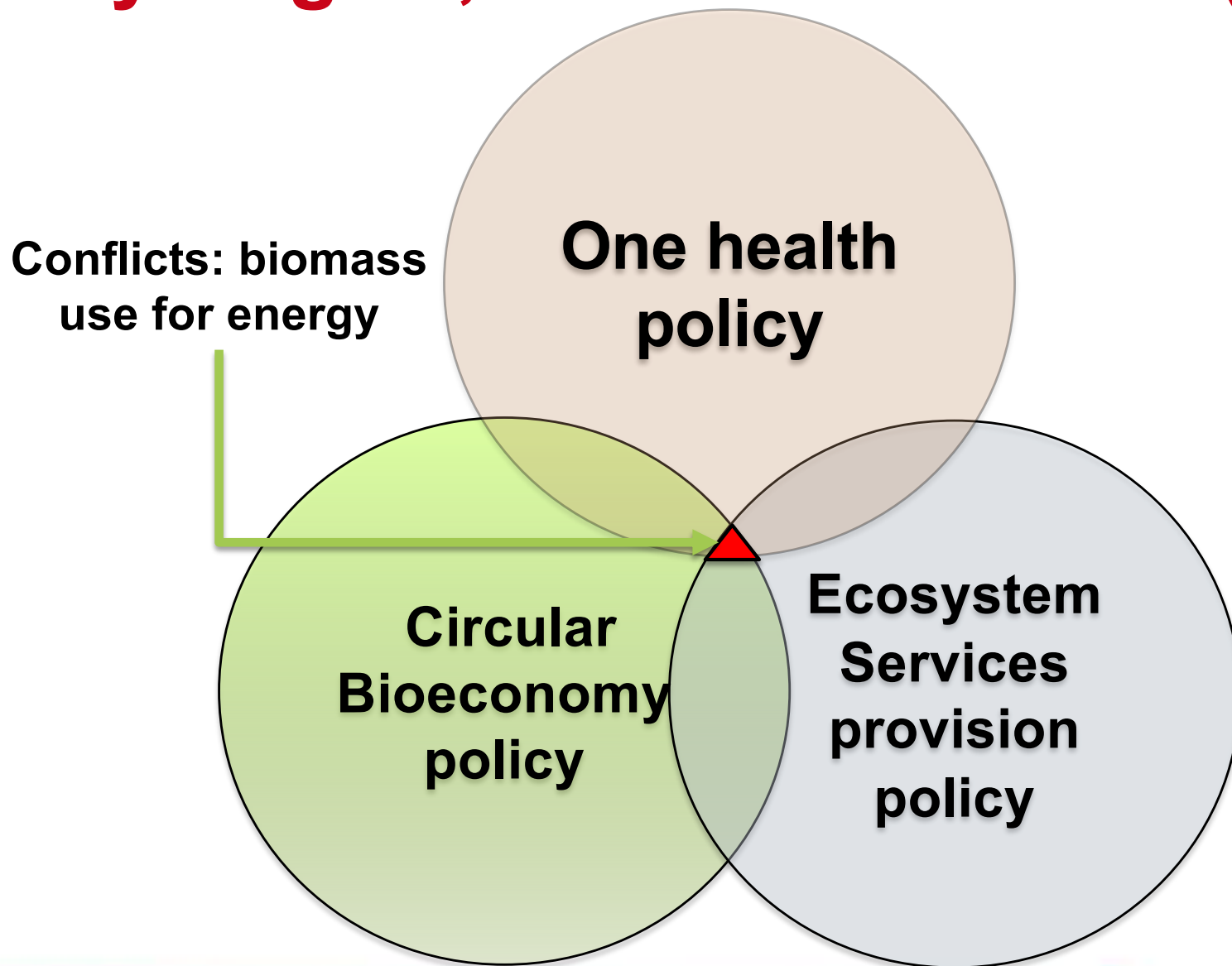
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- Concluding remarks

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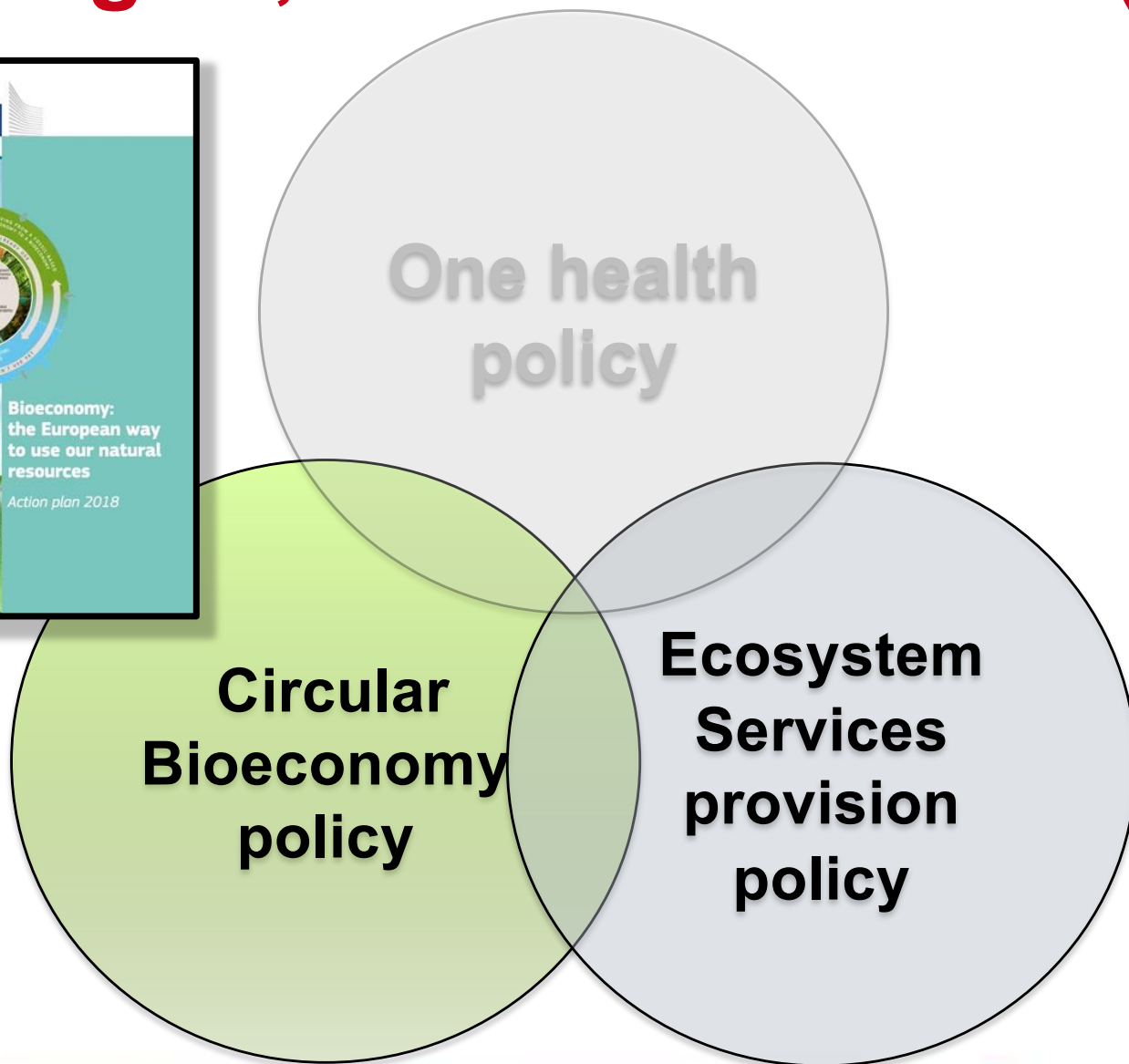
The general framework: 3 dominant policies



The general framework: synergies, but also conflicts (tradoff)



The general framework: synergies, but also conflicts (tradoff)



UNFCCC with
IPCC Reports,
CBD with IPBES
Report

July 2019




Brussels, 23.7.2019
COM(2019) 352 final

COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT, THE COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL COMMITTEE AND THE COMMITTEE OF THE REGIONS

Stepping up EU Action to Protect and Restore the World's Forests

{SWD(2019) 307 final}



Brussels, 20.5.2020
COM(2020) 381 final

COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT, THE COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL COMMITTEE AND THE COMMITTEE OF THE REGIONS

**A Farm to Fork Strategy
for a fair, healthy and environmentally-friendly food system**

May 2020

May 2020



Brussels, 16.7.2021
COM(2021) 572 final

COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT, THE COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL COMMITTEE AND THE COMMITTEE OF THE REGIONS

New EU Forest Strategy for 2030

{SWD(2021) 651 final} - {SWD(2021) 652 final}

COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT, THE COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL COMMITTEE AND THE COMMITTEE OF THE REGIONS

EU Biodiversity Strategy for 2030

Bringing nature back into our lives

New ideas from recent strategic documents

EU Action to Protect and Restore the World's Forests (2019)

- «Encourage the strengthening of standards and certification schemes that help to identify and promote **deforestation-free commodities**»

Farm to Fork Strategy (2020)

- approval of the **Carbon farming initiative (including the forestry sector)**
→ «generation of tradable carbon certificates» to be sold in the European Trading System

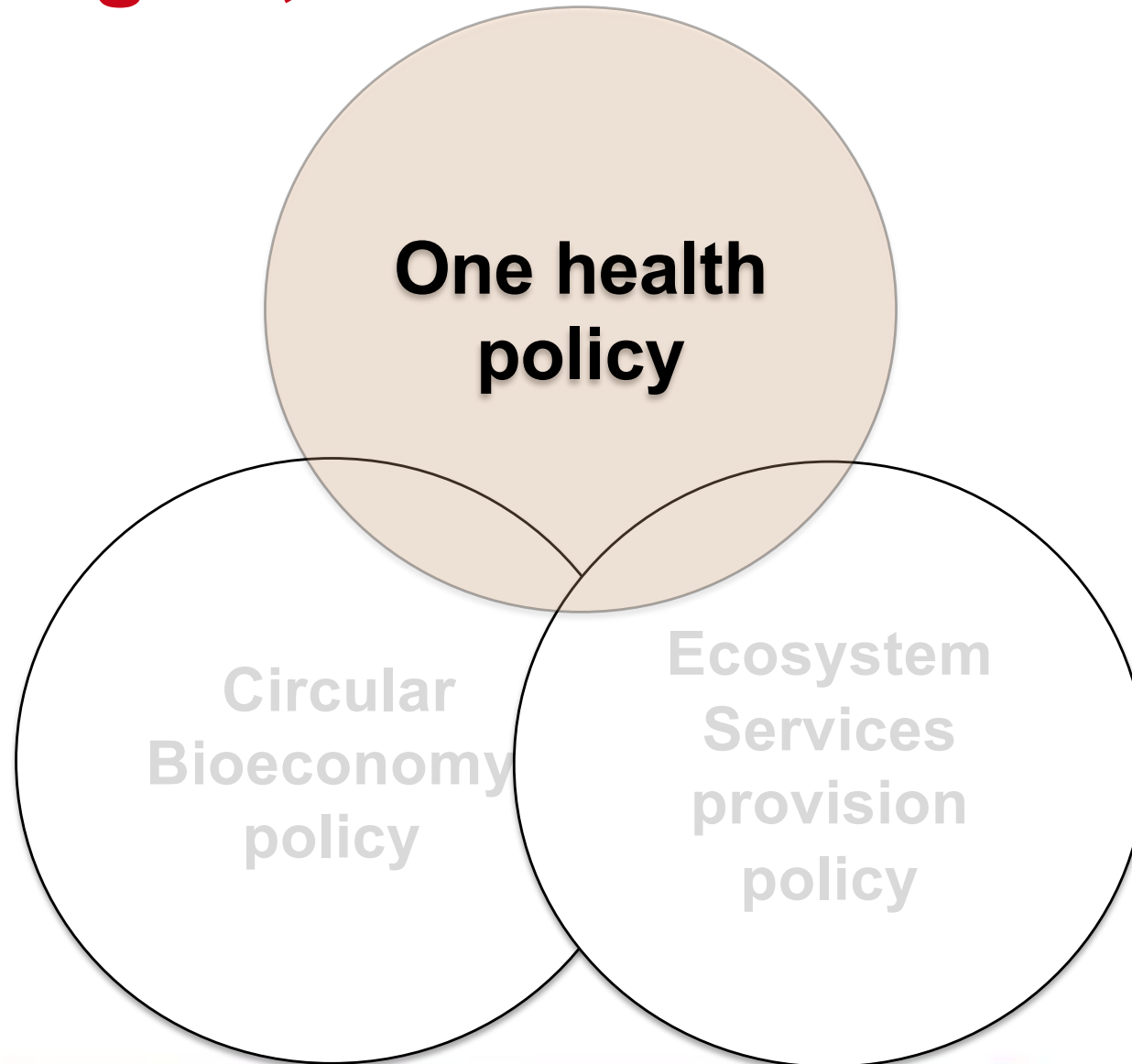
Biodiversity Strategy (2020)

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

Forest Strategy (2021)

- The Commission will «develop a definition and adopt guidelines for closer-to-nature-forestry practices, by Q2 2022, as well as voluntary closer-to-nature **forest management certification scheme**, by Q1 2023»
- The EC will «propose a **legally binding instrument for ecosystem restoration**, including forest ecosystems, by the end of 2021»

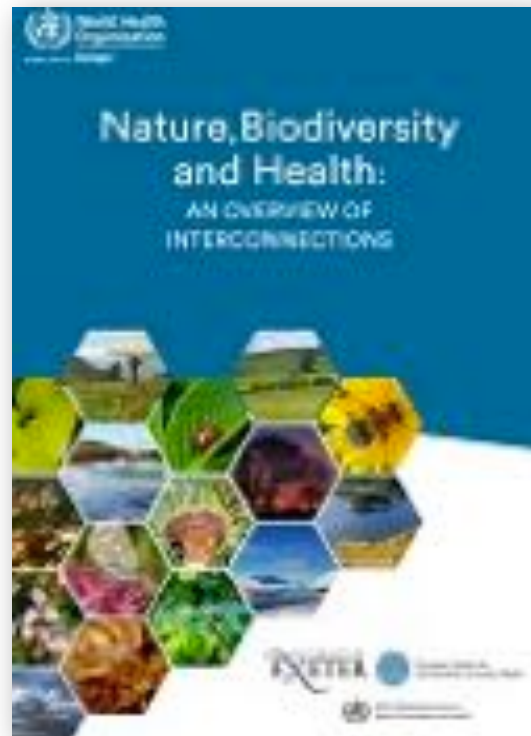
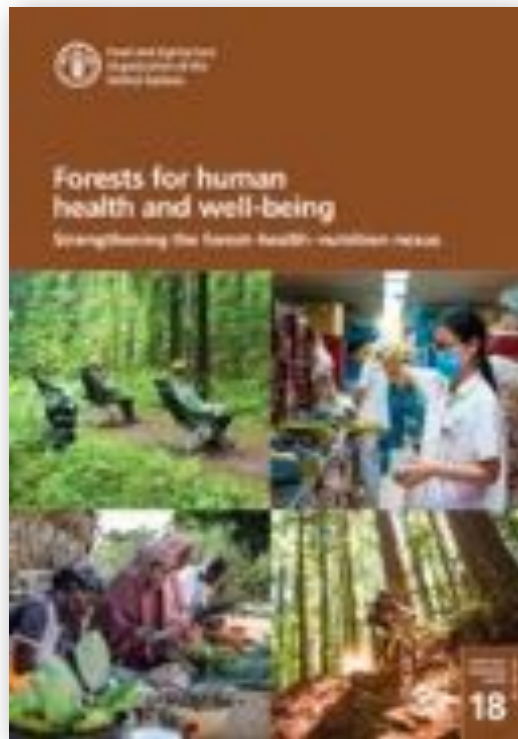
The general framework: synergies, but also conflicts (tradoff)



One Health policy

(WHO, FAO, OIE, UNICEF et al., 2008)

Human health is interdependent and bound to the health of the ecosystems → A growing attention to the relationship between environmental protection and human health

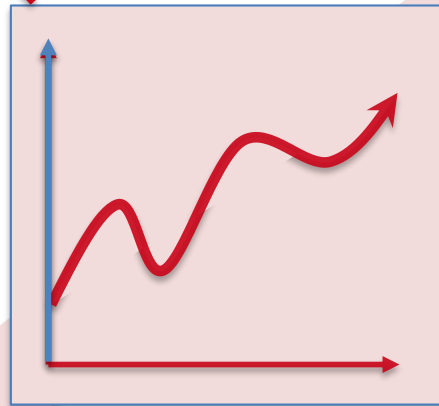


Source: <https://www.oie.int/>

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5 yrs
Policies

Nat. Forest
Strategy
(20 yrs horizon)



IMPLEMENTATION ACTION PLAN
(2020-2025) FOR THE ITALIAN
BIOECONOMY STRATEGY BIT II

BIT
Bioeconomy in Italy

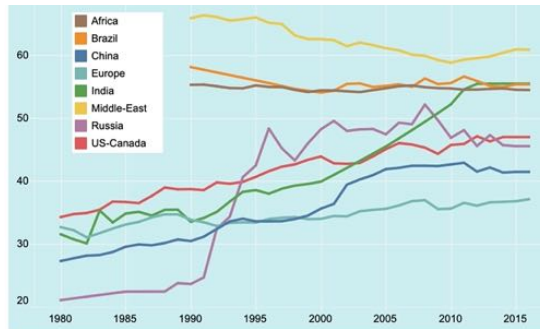
INTEGRATED NATIONAL
ENERGY AND CLIMATE
PLAN

Ministry of Economic Development
Ministry of the Environment and
Protection of Natural Resources and the Sea
Ministry of Infrastructure and Transport

Italy

December 2019

Global
trends



Business as usual

TESAF

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

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

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Consultazione pubblica per la pred
Strategia Forestale Nazionale per
sue filiere

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

Esito della Consultazione pubblica - Analisi dei contributi (101)



St
Fo
Nazionale

3 main conflicts:

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

Appendice 51

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

On other topics, much more general consensus

- Maintenance of more 30% of forest under a protection regime
- Old forests (“*boschi vetusti*”): strict protection
- Natural regeneration; continuous cover forestry
- Focus on fire prevention (more than on fire fighting)
- Important role of wild forest products
- Cultural services: forest and health (“Green care”)
- Investment in forest monitoring and communication
- Simplification of administrative procedures
- Role of plantations (poplar)
- ...

The final document

(70 pages, Annexes included)

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



Sources of funding

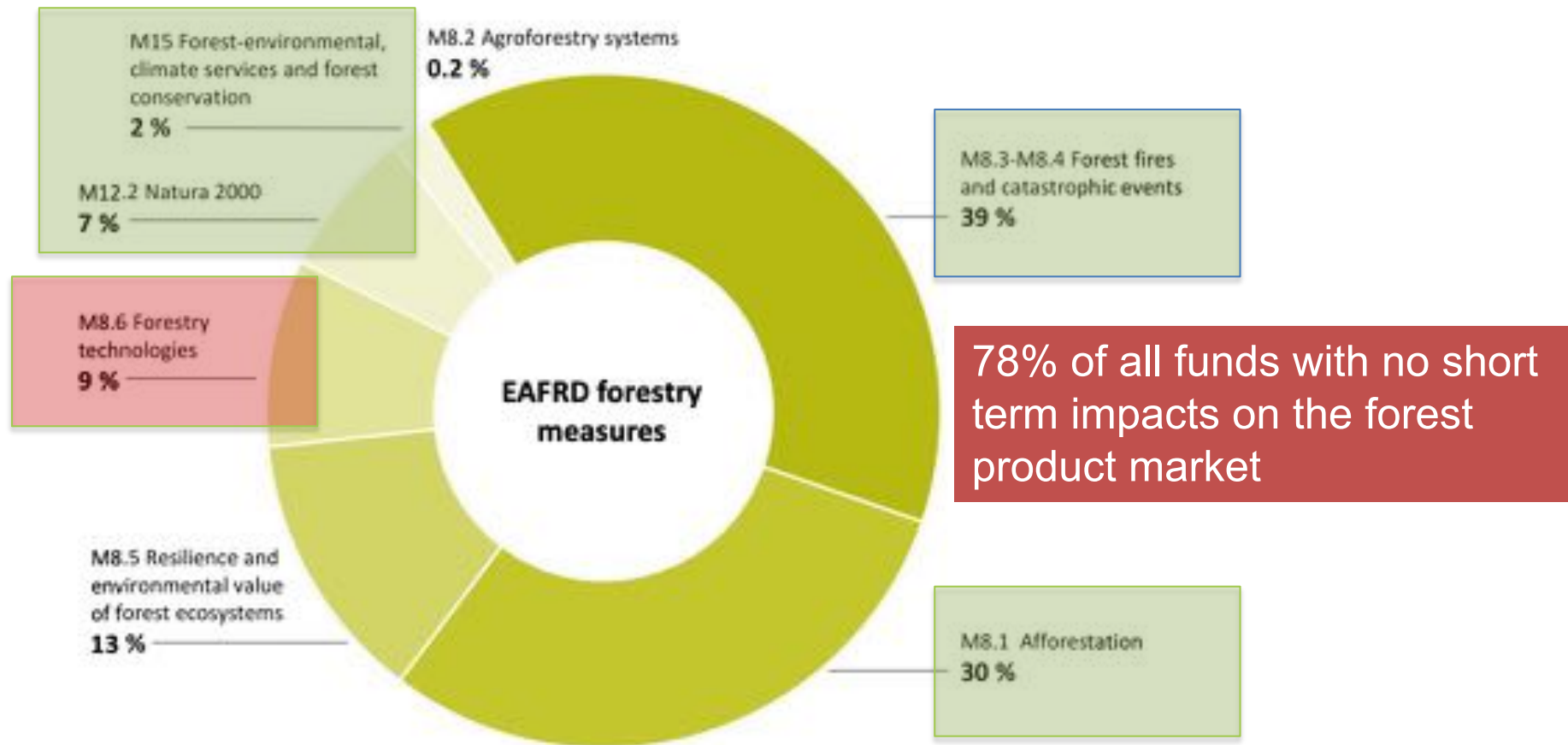
- Rural Development Program (EAFRD) = **the traditional tools** to support the sector
- National Resilience and Recovery Plan = support to **new development opportunities**
- Other sources: European Regional Development Fund, Life+, Interreg, H2020, ...

Rural Development Program (EAFRD)



Source: ECA, based on map from European Environment Agency, created on 12 November 2009, last modified on 28 October 2015; on State of Europe's Forests 2015 data; and on Commission's data from the first approved 2014-2020 rural development programmes.

Rural Development Program (EAFRD)



Source: ECA, based on Member State replies to the questionnaire.

The Italian National Resilience and Recovery Plan

- **Urban and peri-urban forests: 330 M €**
- Improvement of **logistics in the primary sector** : **1.2 Bill. €** (also for value-chain contracts in the forestry sector)
- Renewable energy, **district heating**, “Green Communities”: **2.5 Bill. €**
- Reducing flood and **hydraulic risks**: **2,49 Bill €**



Outline

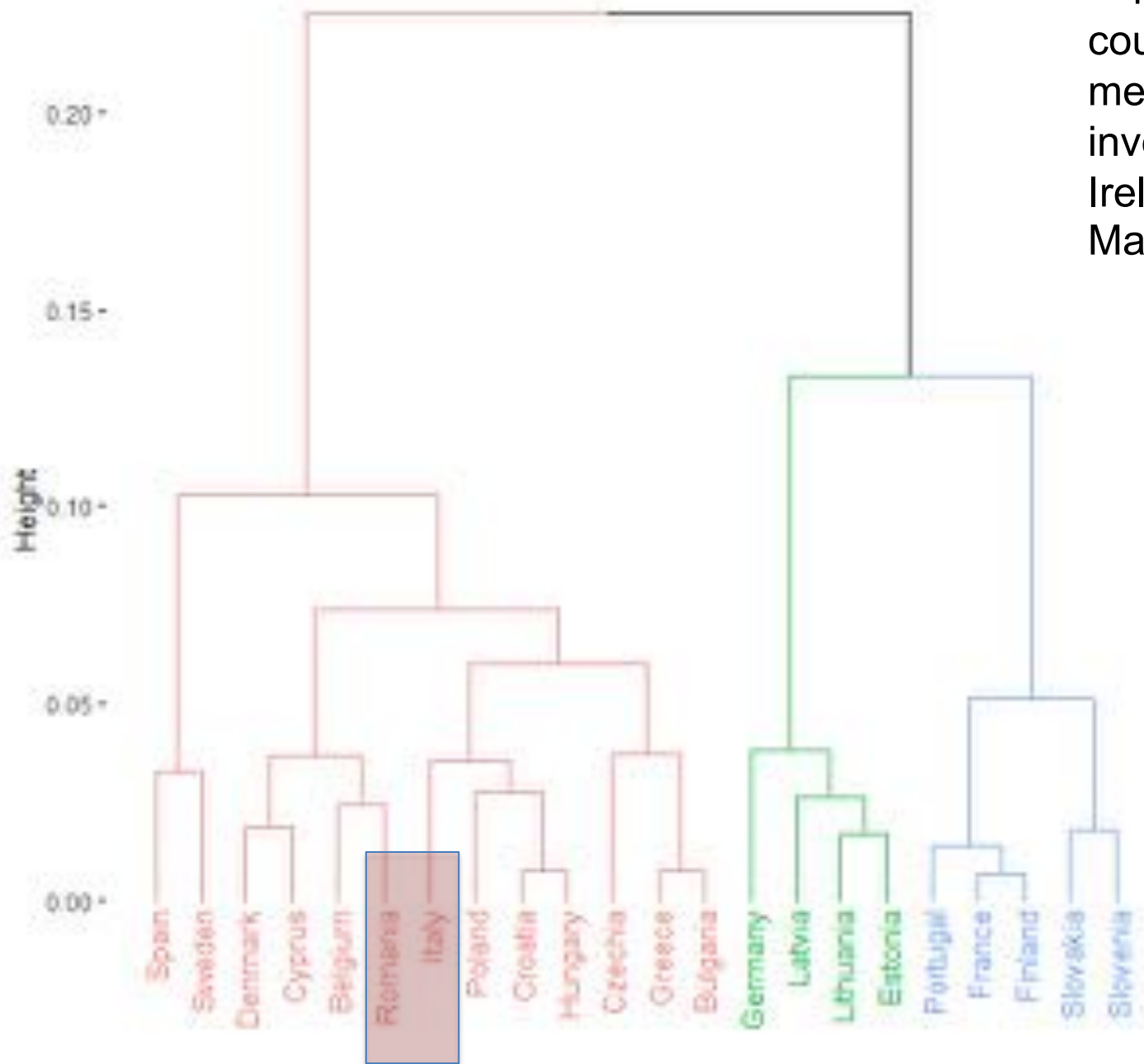
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NRRPs: is Italy part of the mainstream? where forests and wood are mentioned?

	Circular bioeconomy	Green revolution / ecological transition	Green jobs	Rural Development	Climate Adaptation/ natural hazard prevention	Climate Mitigation	Biodiversity	Sustainable Forestry	FES provision/ enhancement	Urban Nature-Based solution	Gender Balance and women inclusion	Innovation
Austria												
Belgium			X		X		X		X	X		
Bulgaria			X	X	X	X	X		X			
Croatia				X			X					
Cyprus					X	X	X					
Czechia		X		X	X	X	X	X	X			
Denmark						X	X			X		
Estonia	X	X				X						X
Finland	X				X	X	X	X	X			X
France	X			X	X	X	X	X	X			X
Germany	X		X			X		X				X
Greece			X	X	X		X		X			
Hungary				X	X		X					
Ireland												
Italy				X			X		X	X		X
Latvia		X			X							X
Lithuania	X											X
Luxembourg							X			X		
Malta												
Poland				X					X			
Portugal	X		X	X	X	X	X	X	X			X
Romania					X		X	X		X		
Slovakia	X	X	X		X	X	X	X	X	X		X
Slovenia	X	X	X		X	X	X	X				X
Spain				X	X		X	X	X		X	
Sweden		X					X		X		X	

Source: Bottaro, Liagre, Pettenella (in press)

Cluster Dendrogram



+ 1 cluster of 4 countries with no mention of forest investments (Austria, Ireland, Cyprus, Malta)

1st cluster: focus on biodiversity, climate adaptation (no references to circular bioeconomy and ecological transition)

Country	CirBioec	EcoTrans	GI	RD	ClimAd	ClimMit	Biodiv	SF	FES	UNBS	GenderB	Innov
Belgium	0	0	1	0	1	0	1	0	1	1	0	0
Bulgaria	0	0	1	1	1	1	1	0	1	0	0	0
Croatia	0	0	0	1	0	0	1	0	0	0	0	0
Cyprus	0	0	0	0	1	1	1	0	0	0	0	0
Denmark	0	0	0	0	0	1	1	0	0	1	0	0
Greece	0	0	1	1	1	0	1	0	1	0	0	0
Hungary	0	0	0	1	1	0	1	0	0	0	0	0
Italy	0	0	0	1	0	0	1	0	1	1	0	1
Poland	0	0	0	1	0	0	0	0	1	0	0	0
Romania	0	0	0	0	1	0	1	1	0	1	0	0
Spain	0	0	0	1	1	0	1	1	1	0	1	0
Sweden	0	1	0	0	0	0	1	0	1	0	1	0
Estonia	1	1	0	0	0	1	0	0	0	0	0	1
Germany	1	0	1	0	0	1	0	1	0	0	0	1
Latvia	0	1	0	0	1	0	0	0	0	0	0	1
Lithuania	1	0	0	0	0	0	0	0	0	0	0	1
Czechia	0	1	0	1	1	1	1	1	1	0	0	0
Finland	1	0	0	0	1	1	1	1	1	0	0	1
France	1	0	0	1	1	1	1	1	1	0	0	1
Portugal	1	0	1	1	1	1	1	1	1	0	0	1
Slovakia	1	1	1	0	1	1	1	1	1	1	0	1
Slovenia	1	1	1	0	1	1	1	1	0	0	0	1

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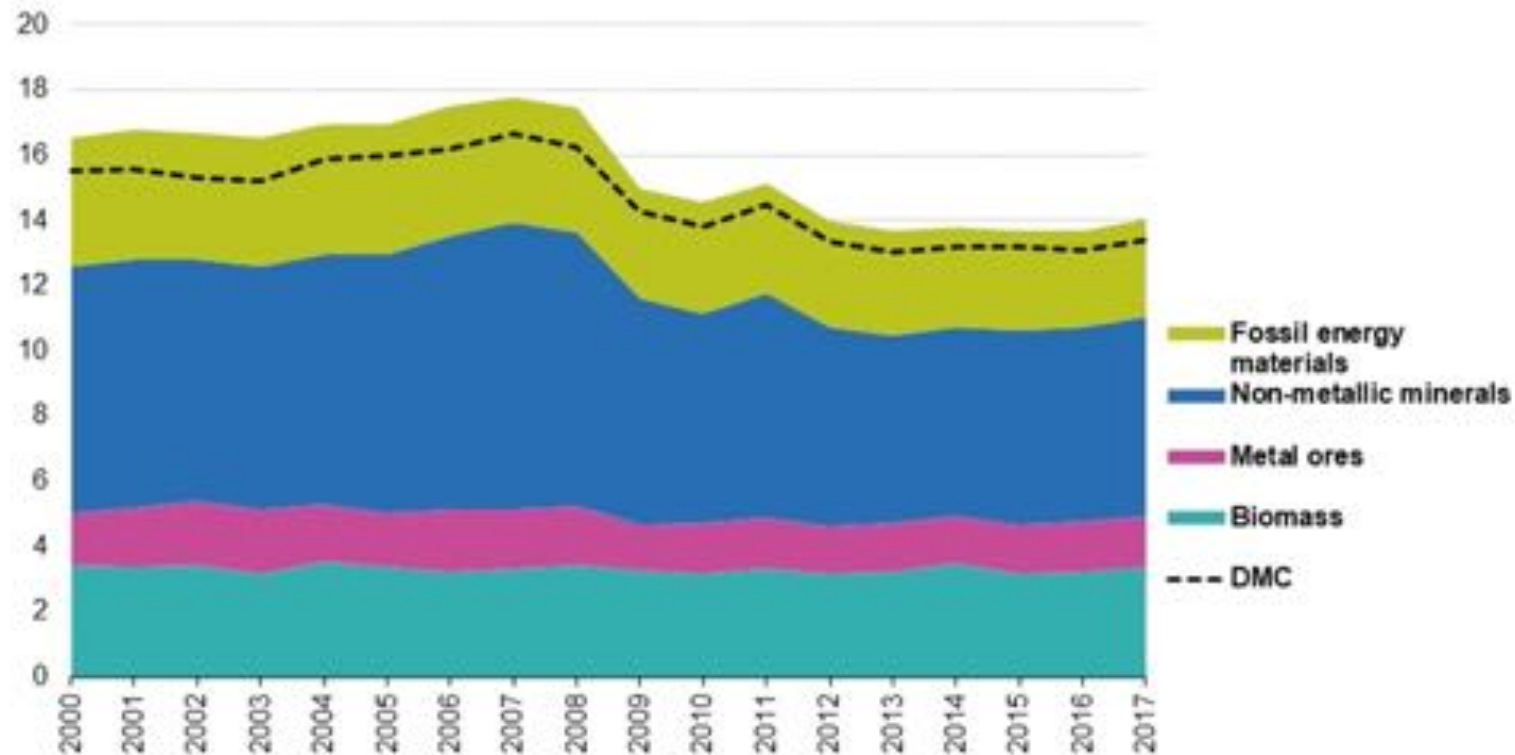
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Which are the trends in innovation of forest policies (not only in Italy), also as a consequence of Covid-19?

- A new (active) **role of the State** in market regulation and support
- Public funds mainly oriented to **biodiversity protection and forest adaptation** (quite obvious: they are public goods!)
- A new focus on **cultural services, health and environment**
- The issue of **future biomass needs** to feed the circular bioeconomy (and reach the decarbonization targets) is not much considered: **which trade-off** with the increased protection of European forests? With the quality and quantity of forests outside the EU (embodied deforestation and forest degradation)?

No visible increase in wood consumption in EU

Raw material consumption (RMC) by main material categories, EU-28, 2000-2017 (tonnes per capita)



Source: Eurostat (online data codes: env_ac_mfa, env_ac_rme, demo_gind)

eurostat

The main wood building product (sawnwood) no much increased in the EU after the economic crisis

Growth rates in the consumption of engineered wood products during selected time periods.

Engineered wood products for timber constructions	Average annual growth rates in consumption from 2009-2014	Growth rates from 2011-2014	Sources
Sawn wood	-0.80%	0.73%	UNECE/FAO (2001, 2008, 2011, 2012, 2013, 2015); United Nations (2010)
Wood fibre insulation boards (WFIB)	12.17%	1.25%	Ibid.
Medium-density fibre boards (MDF)	0.90%	1.25%	Ibid.
Cross-laminated timber (CLT)	24.17%	13.33%	Ibid.
Glued laminated timber (Glulam)	8.57%	-0.60%	Ibid.
Oriented strand board (OSB)	14.06%	5.76%	Ibid.
Average annual consumption of wood-based construction materials [in 1000 t/a]	15516.1	19239.7	Own calculation
Weighted average growth rate related to the overall consumption	3.09%	1.96%	Own calculation

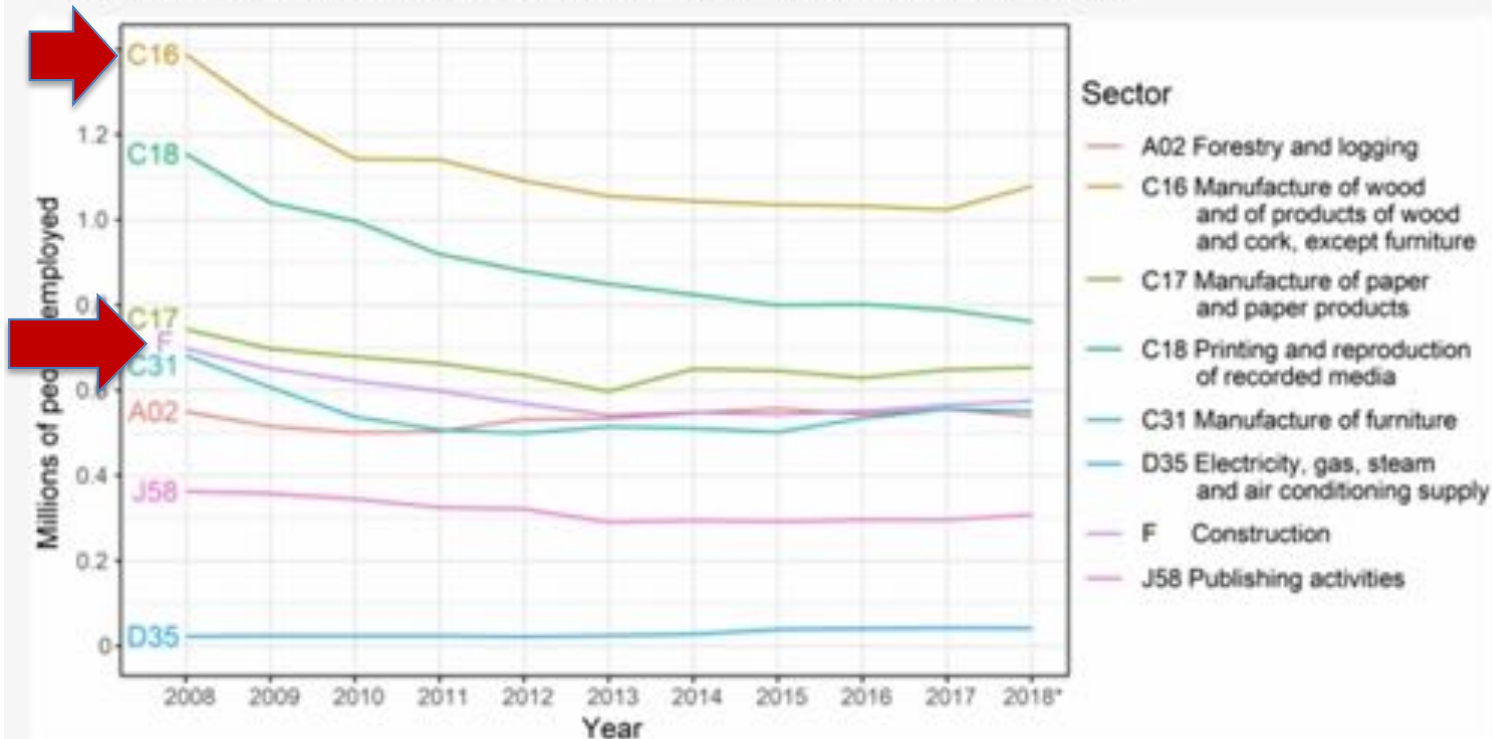
Source: Hildebrandt et al., 2017

Decreased employment

The EU Bioeconomy: Supporting an Employment Shift Downstream in the Wood-Based Value Chains?

by [Nicolas Robert](#)^{1,*}, [Ragnar Jonsson](#)¹, [Rafal Chudy](#)² and [Andrea Camia](#)¹

Figure 3. Change in employment in forestry, the primary, and secondary processing of wood in the EU-28 (For mixed sectors, 2018* preliminary estimates).



<https://doi.org/10.3390/su12030758>

«...not only is there no empirical evidence supporting the existence of a decoupling of economic growth from environmental pressures on anywhere near the scale needed to deal with environmental breakdown, but also, and perhaps more importantly, such decoupling appears unlikely to happen in the future»

Source: Parrique et al., 2019

Is the the idea of a bioeconomy based on full substitution of fossil resources with (woody) biomass a **concrete and feasible policy** or a **rhetoric commitment**?

