Wood Supply in the EUSALP region:

Besides climatic changes, which other market drivers?

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1

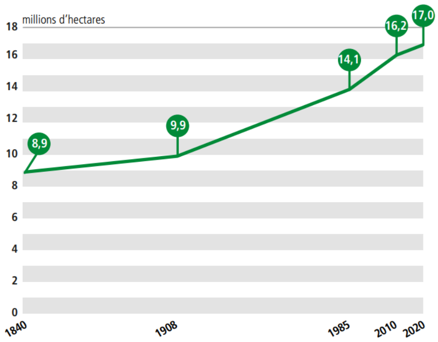
2

Italian forest cover area (2005 and 2015)

	INFC2005			Proiezioni INFC2015[1]			Superficie territoriale[2]
	Bosco	Altre Terre boscate	Superficie forestale totale	Bosco	Altre Terre boscate	Superficie forestale totale	
Abruzzo	391.492	47.099	438.590	423.943	51.150	475.093	1.079.512
Basilicata	263.098	93.329	356.426	290.190	103.674	393.864	999.461
P.A. Bolzano	336.689	35.485	372.174	342.776	36.127	378.903	739.997
Calabria	468.151	144.781	612.931	511.793	159.175	670.968	1.508.055
Campania	384.395	60.879	445.274	420.195	66.750	486.945	1.359.025
Emilia-Romagna	563.263	45.555	608.818	581.746	47.878	629.625	2.212.309
Friuli-Venezia Giulia	323.832	33.392	357.224	330.578	34.908	365.486	785.648
Lazio	543.884	61.974	605.859	599.211	68.493	667.704	1.720.768
Liguria	339.107	36.027	375.134	359.315	38.216	397.531	542.024
Lombardia	606.045	59.657	665.703	602.170	62.022	664.192	2.386.285
Marche	291.394	16.682	308.076	294.124	16.908	311.032	969.406
Molise	132.562	16.079	148.641	153.480	18.742	172.222	443.765
Piemonte	870.594	69.522	940.116	882.268	72.843	955.110	2.539.983
Puglia	145.889	33.151	179.040	153.903	35.183	189.086	1.936.580
Sardegna	583.472	629.778	1.213.250	583.142	658.266	1.241.409	2.408.989
Sicilia	256.303	81.868	338.171	288.943	92.704	381.647	2.570.282
Toscana	1.015.728	135.811	1.151.539	1.055.144	141.848	1.196.992	2.299.018
P.A. Trento	375.402	32.129	407.531	377.862	32.339	410.201	620.690
Umbria	371.574	18.681	390.255	396.540	20.120	416.660	845.604
Valle d'Aosta	98.439	7.489	105.928	103.820	7.898	111.719	326.322
Veneto	397.889	48.967	446.856	414.361	51.264	465.624	1.839.122
Italia	**8.759.200**	**1.708.333**	**10.467.533**	**9.165.505**	**1.816.508**	**10.982.013**	**30.132.845**

Source: RAF 2019

French forest cover area (1840-2020)



Source: State of the European Forests

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3

Changing the landscape where and how

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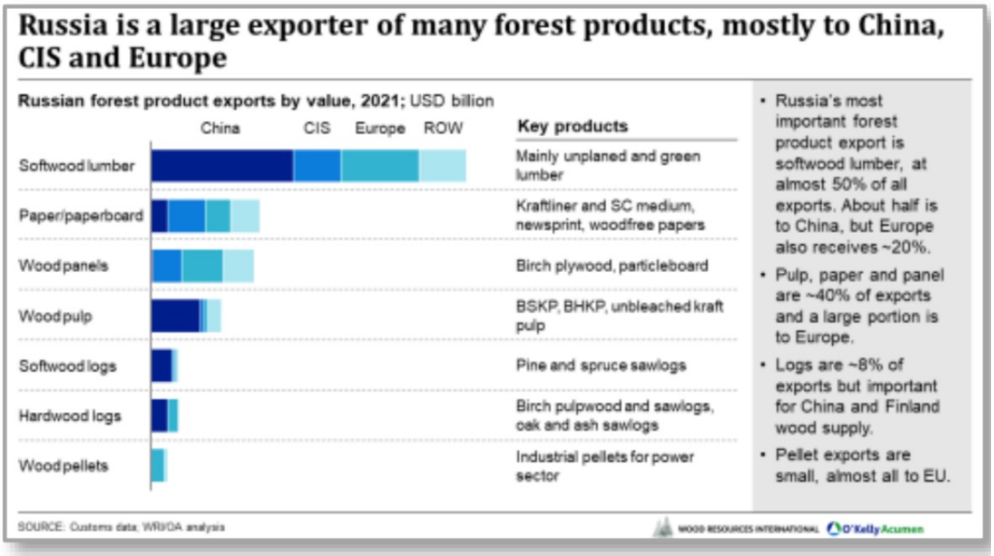
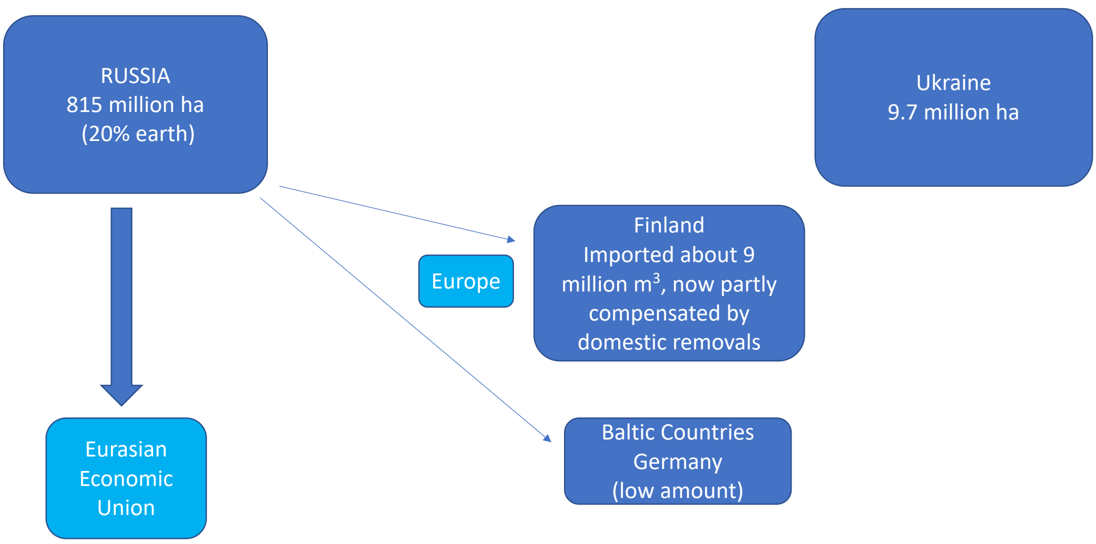
Before the conflict with Ukraine



5

Roundwood export



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Russian Federation and Belarus export 34 million m^3 (2021), it has been estimated that imports of coniferous sawnwood from Russia and Ukraine account for about 10% of total EU consumption

Source: Global Wood Markets and EUWID

Packaging from Ukraine by pallets and wood for packaging. Products from broadleaves

IMPACT ON FOREST MACHINERY INDUSTRY

Source: Wood Markets e EUWID

https://wcm.gozdis.si/sl/novice/2022040320172589/vojna-v-ukrajini-in-njen-vpliv-na-evropski-in-globalni-trg-lesa/

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7

Trade restrictions will impact all regions, both short and long-term

Impact of trade restrictions due to the war in Ukraine

Trading partner	Short-term				Mid to Long-term
"The West" US, EU, Japan, Korea, etc.	Trade sanctions against Russia and Belarus – no export or import of forest products.	Higher costs for energy and wood raw material.	Altered trade flows for forest products.	Reduction in Ukrainian production and export due to ongoing war in country.	Reduced investment in Russian forest products industry[1]. Import restrictions on parts and equipment to Russia impacting production and export. Lasting changes to trading patterns (forest products and equipment etc).
Non-sanctioning countries China, India, etc.	"Conflict timber" status for Russian forest products, e.g. no longer certified by FSC, PEFC, etc.	Financial sanctions impeding international payments with Russia and Belarus.	Lower demand for imported forest products in Russia, Belarus and Ukraine.		

1. Both foreign investment in Russia, and potentially investment by Russian companies and state due to restricted access to global finance, lower profits with restricted market access, and lower national export revenue from oil and gas.

SOURCE: WRI/OA analysis

WOOD RESOURCES INTERNATIONAL O'Kelly Acumen 1

8

Import of plywood and veneers from Russa to Italy

In 2020 Italy imported 47,159 tons for a value of 30 M US$, equal to 13.9% of the total Italian value for this commodity item. Plywood and veneer products therefore represent 32.2% of our total imports of timber from Russia. The most significant component (26 M US$) of plywood and veneer products is hardwood plywood (birch for Russia, mainly used for parquet and automotive). USA import plywood from Russia and Vietman. Vietnam produces plywood by means of timbers coming from Russa.

https://www.woodworkingnetwork.com/technology/birch-based-concept-car-runs-sustainable-biofuel

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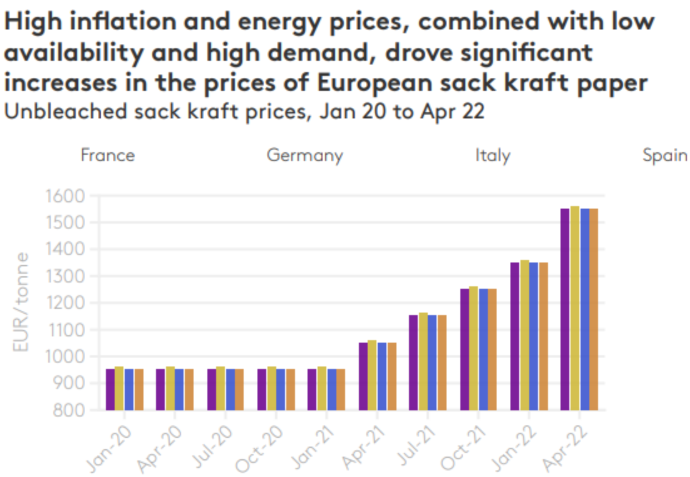
- **Other indirect effects**



10

EU sanctions on Russian exports will impact the world market for wood products?

The total lumber exports from the three countries (Russia, Belarus and Ukraine) were 34 million m^3 in 2021. Over 25% was exported to countries with current sanctions against Russia and Belarus.

FSC and PEFC have labelled all timber from the two countries as «conflict timber».

It is estimated that unlikely directly 30% i.e. 10 million m^3 (compared to 2021) will not reach the market in Europe and Asia (outside China), 8.5 million m^3 were imported in Europe as hardwoods.

Troubles from commodities produced in China which cannot be certified for their provenance from Russia.

Even if there are not direct restrictions, trade with China will be probably impacted because of economic reason (Rublo and Swift), lacking certified products FSC and PEFC, foreign investors could not support more some value chains.

Fonte: WRI Market Insights, Mar 2022

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11

Under-exploited species might be a resource

›us and pine sites, which account for only about 12 percent of the total surface area of the Sloven

Potential forest sites in Slovenia

Forest sites	Growth coefficient	Area in 1 000 ha	%
Willow and alder forest	9.2	7 508	1
Oak and hornbeam forest	10.5	87 373	8
Oak forest	5.1	33 769	3
Thermophile deciduous forest	1.0	57 935	5
Pine forest	4.2	39 394	4
Forest of beech and oak	10.2	115 165	11
Beech forest on carbonate parent rock	7.6	288 074	27
Acidophilic beech forest	7.7	179 481	17
Fir forest	12.1	49 228	4
Dinaric fir and beech forest	9.7	163 581	15
Spruce forest	7.7	15 471	1
High-mountain forest	6.6	41 525	4
Total		**1 076 474**	**100**

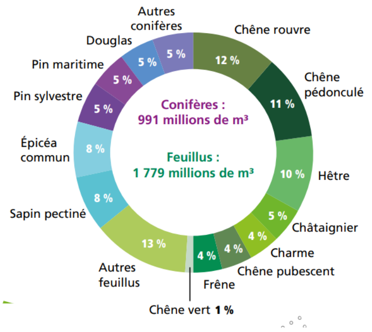

Abete rosso – Spruce tree

Specie - Tree species	Volume (m^3)	ES (%)	Volume (%)
Fagus sylvatica L.	271 997 316	2.7	18.1
Picea abies K.	229 843 756	3.5	15.3
Castanea sativa Mill.	135 980 129	3.5	9.0
Quercus cerris L.	121 502 429	3.5	8.1
Larix decidua L.	90 196 939	4.6	6.0
Quercus pubescens Willd.	86 889 856	3	5.8
Ostrya carpinifolia L.	54 797 596	3.8	3.6
Quercus ilex L.	48 935 748	5.5	3.3
Abies alba Mill.	40 190 267	7.2	2.7
Pinus nigra Arn.	38 322 551	8.8	2.6
Pinus sylvestris L.	34 753 875	6.3	2.3
Others	349 396 628	-	23.2
Total	1 502 807 089	4.5	100.0

Volume delle principali specie forestali – Growing stock volume of the main tree species

France

Distribution of conifer stocks by species



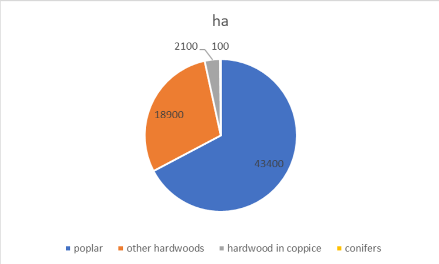
12

Species substitution in wood products: some examples

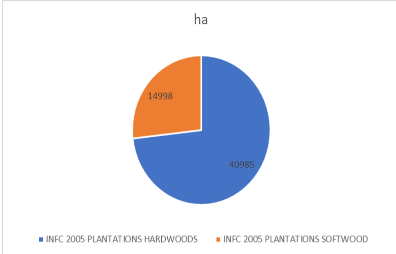
Birch

Poplar

Scots pine
Mediterranean pines



RAF 2017



RAF 2017

Essence	Volume sur pied (millions de m³)	Surface (milliers d'ha) où l'essence est principale[1]	Surface (milliers d'ha) où l'essence forme un peuplement monospécifique[2]	
Pins laricio et noir	70 ± 11	378 ± 34	240 ± 27	64 %
Douglas	135 ± 17	426 ± 31	297 ± 27	70 %

France

13

Some examples on how research may help

Lecture Notes in Civil Engineering • Volume 24, Pages 783 - 807 • 2019

Solid wood and wood based composites: The challenge of sustainability looking for a short and smart supply chain

Romagnoli M.[a] ; Fragiacomo M.[b] ; Brunori, Antonio[c] ;
Follesa M.[d] ; Scarascia Mugnozza G.[a]
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Construction and Building Materials 271 (2021) 121589

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Construction and Building Materials

journal homepage: www.elsevier.com/locate/conbuildmat

Mechanical characterization of novel Homogeneous Beech and hybrid Beech-Corsican Pine thin Cross-Laminated timber panels

Martina Sciomenta[a,*], Luca Spera[a], Chiara Bedon[b], Vincenzo Rinaldi[a], Massimo Fragiacomo[a], Manuela Romagnoli[c]

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[c] Department of Innovation of Biological, Food and Forestry Systems (DIBAF), University of Tuscia, Via S. Camillo de Lellis, 01100 Viterbo, Italy

Travi lamellari in castagno

Innovazione di prodotto nella filiera del legno per uso strutturale

di M. Brunetti, A. Silvestri, M. Nocetti, P. Burato, S. Moroni, F. Carbone, L. Portoghesi, M. Romagnoli

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Engineering Structures

journal homepage: www.elsevier.com/locate/engstruct

Mechanical characterization of homogeneous and hybrid beech-Corsican pine glue-laminated timber beams

Martina Sciomenta[a,*], Luca Spera[b], Alfredo Peditto[c], Edoardo Ciuffetelli[d], Francesco Savini[e], Chiara Bedon[f], Manuela Romagnoli[g], Michela Nocetti[h], Michele Brunetti[i], Massimo Fragiacomo[j]

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Preliminary assessment of sweet chestnut and mixed sweet chestnut-poplar OSB

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14

Market situation of other commodities is worst than for wood products

	Price			Day	Month	Year	Date
Soybeans	1602.7500	▲	20	1.26%	-3.48%	13.38%	16:35
Wheat	1002.2500	▲	18	1.83%	-20.16%	61.81%	16:35
Lumber	979.80	▲	14.9	1.54%	-33.19%	-4.72%	16:34
Cheese	2.21	▼	-0.0200	-0.90%	6.86%	29.98%	Apr/04
Palm Oil	5,691.00	▲	125.00	2.25%	-14.11%	52.21%	Apr/04
Milk	23.53	▼	-0.16	-0.68%	4.07%	33.69%	Apr/04
Cocoa	2,615.00	▲	16.00	0.62%	0.69%	11.94%	Apr/04
Cotton	137.44	▲	2.89	2.15%	13.91%	76.48%	Apr/04
Rubber	266.00	▲	8.70	3.38%	8.13%	10.47%	Apr/04
Orange Juice	161.30	▲	3.75	2.38%	16.97%	48.32%	Apr/04
Coffee	230.10	▲	1.70	0.74%	2.04%	88.45%	Apr/04
Oat	731.00	▼	-9.0000	-1.22%	4.13%	95.98%	Apr/04
Wool	1,375.00	▲	0	0%	-2.20%	5.77%	Apr/01

Fonte https://tradingeconomics.com/commodity/lumber

15

EU sanctions on Russian exports are set to profoundly change the world market for wood products

Import of roundwood from Russia was planned to decrease already before the invasion. That means it was already is a general market trend (see also other commodities).

At the moment there still quite a lot of low-quality roundwood available in Central Europe due to the savage wood availability after extreme climatic event (draught and storms in 2016-18) and some pathogenic threats (bark beetle).

If the conflict will slow down, Ukraine will probably increase its exports of timber, facilitated by a less strict control on wood harvesting

16

Take-home message

Rethinking Eusalp and European forest-wood value chain.

- Private ownerships always represent a bottleneck to develop a more structured forest-wood chain.
- We need (at least in some countries) to endorse an agreement between forest companies and forest owners (supply chain agreement) looking to territories which have a forest plan
- Domestic and planted trees (paying attention to the environmental sustainability) can assume a crucial role
- Awareness and inventory of potential manufacturing wood industry at European level (veneers, plywood…) to be less dependent by importing composite wood products
- Wood industry mechanization: versatile is the keyword. Companies must develop ability to change production according to different forest feedstock availability (less simple than we can expect, digitalization can support also in this field).
- Re-use and Re-cycling become an imperative to safe raw material.

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17

Thanks for your attention

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18