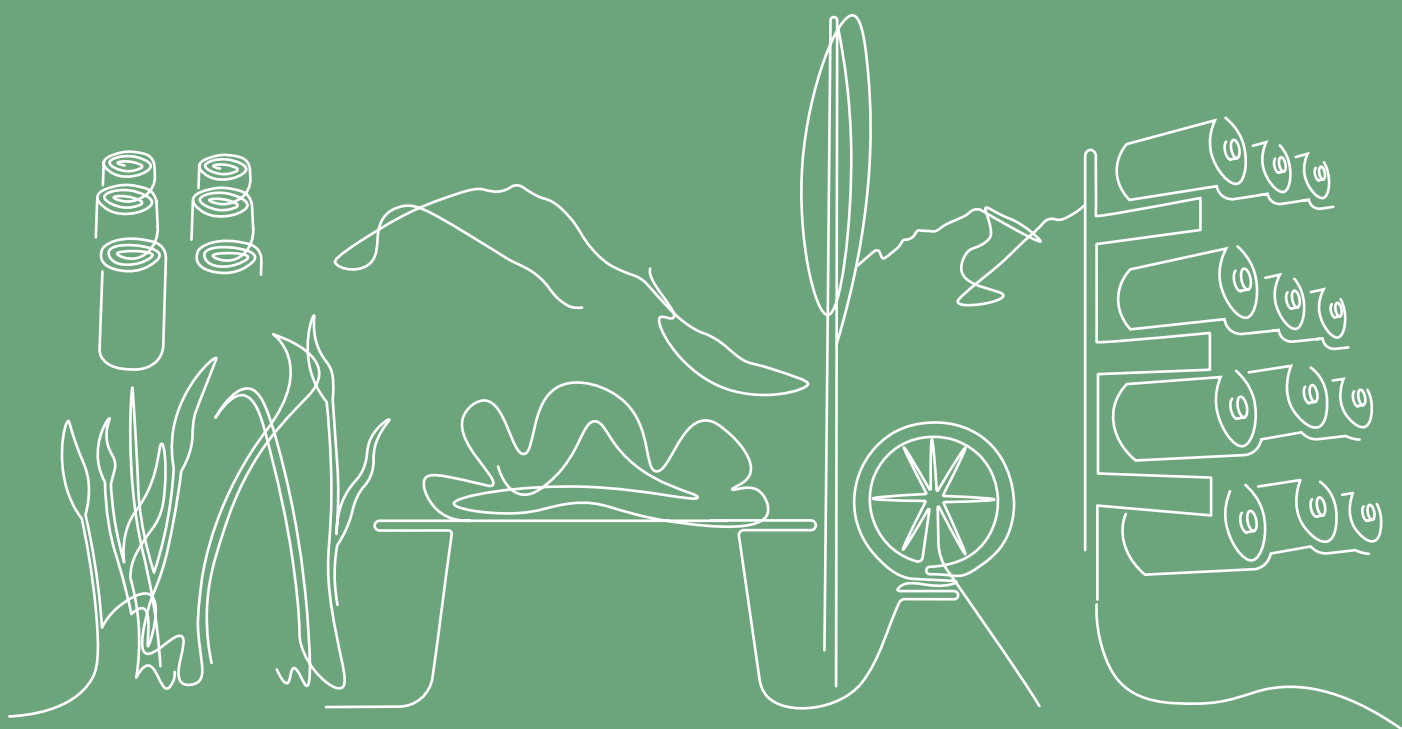


ALPINE TEXTILE MAPPING

ECONOMY, INSTITUTIONS
AND LABELS



MAPPING ALPINE TEXTILES

ECONOMY, INSTITUTIONS & LABELS

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This commented mapping is a result of the Interreg Alpine Space project AlpTextyles (<https://www.alpine-space.eu/project/alptextyles/>).

It synthesizes the results of Activity 1.2 (Mapping the current state of Alpine textile value chains) and is part of work package 1 (Mapping textile heritage & circularity in textile Alpine value chains to prepare pilots & solutions).

Erlangen 2024



CONTENT

Introduction	4
The textile sector in the European Alps	4
Textile production in the global and European context	6
Methodology & data	11
Mapping the economic perspective of the textile industry in the Alps	12
Mapping institutions in the Alpine textile sector	18
Description & findings	18
Mapping labels in the Alpine textile sector	20
Description & findings	20
Mapping market related regulations	22
Description & findings	22
Summary	24
Outlook on pilots and solutions	26
Sources	27
Annex	28



FIGURES

Figure 1:	Shares of fiber types at total fiber production in 2021	6
Figure 2:	Composition of fiber types and share of sustainable certified fibers in 2021	7
Figure 3:	Size of companies in the European textile and clothing Industry	8
Figure 4:	Development of turnover in textile and clothing between 2011 and 2023	9
Figure 5:	Number of trademarks referred to the keyword search Alps	10
Figure 6:	Density of enterprises in the Textile industry	14
Figure 7:	Change in number of enterprises in the textile industry	15
Figure 8:	Density of enterprises in the clothing industry	16
Figure 9:	Change in number of enterprises in the clothing industry	17
Figure 10:	Institutional mapping of actors in the Alpine textile sector	19
Figure 11:	Mapping of Labels in the Alpine textile sector	21
Figure 12:	Market related regulations for the example of Alpine wool	23

TABLES

Table 1:	Query D&B database for enterprises in the textile and clothing sector (NACE classification)	28
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INTRODUCTION

THE TEXTILE SECTOR IN THE EUROPEAN ALPS

The Alpine textile sector is characterized by a highly fragmented setting of institutions, certifications, and labels. As the example of wool shows, value chains are embedded regionally, but also linked to global production networks (Petek and Marinšek Logar 2021). The Alpine region comprises seven nation states and therefore different political systems. As a result, textile companies have to comply with a variety of legal systems and regulations at national and European level. According to the European Apparel and Textile Confederation, the leading countries in terms of employment, turnover and exports are Italy, Germany and France (Euratex 2024). These three countries are partly located in the Alps, which indicates the importance of textile and clothing production based on a long tradition in the Alpine region.

Consumer perspectives have gained significant importance for economic success (for more information on the consumer perspective and Alpine Textile Heritage, see online: <https://www.alpine-space.eu/project/alptextyles/>). This has led to an increasing relevance of environmental sustainability and animal welfare in public debates and production processes. These debates are further fueled by the fact that Life Cycle Assessments (LCA) often consider man-made fibers to have a better environmental balance. This may be the case for 100% recycled production processes, but the environmental and sanitary footprint of the petroleum-based substances used in the production process might be underestimated. This is important to highlight as the demand for finished products at comparatively low prices has led to a current apparel sector with high levels of finished oil-based textiles.

The commented mappings at hand highlight the current situation in the Alpine area from different points of view. It presents a set of cartographic maps (Figure 6, Figure 7, Figure 8, Figure 9), institutional mappings (Figure 10, Figure 11, Figure 12), and condensed commentaries. The focus is on the Alpine textile sector, highlighting the economic perspective, institutions, certifications and labels, and market related issues.



Based on an institutional mapping approach, the mappings provide a multi-scalar overview of important actors across textile value chains. They present the institutional setting and refer also to certifications and labels. In a second step, statistical data were processed to provide a cartographic overview of the current status and ongoing developments in the Alpine textile sector. Considering the availability of comparable data, the Industrial Classification of Economic Activities in the European Communities (NACE) differentiates the textile sector into two very prominent parts of the value chain. On the one hand, the textile manufacturing industry includes the processing of yarn and fibers and the production of non-clothing textiles. On the other hand, the production of apparel refers to the clothing sector, including outerwear, underwear, etc. This classification allows to visualize different indicators (e.g. number of enterprises or persons employed). The approach ensures comprehensive and reliable results in a differentiated way, serving as an analytical basis for the pilot and implementation phases of the project.

The Alps, here defined as the Interreg Alpine space program, cover 42 NUTS-2 regions in Austria, eastern France, Liechtenstein, northern Italy, Slovenia, southern Germany and Switzerland.

TEXTILE PRODUCTION IN THE GLOBAL AND EUROPEAN CONTEXT

According to the Textile Exchange platform, about 113 million tons of fibers were produced worldwide in 2021 (see Figure 1). The majority of the fibers produced are synthetic fibers with 64%, in particular polyester with a share of more than 50% of the total fibers produced. The second most produced fiber are plant fibers with 28% and man-made cellulosic fibers with 6.4%. Animal fibers have a share of only 1.6%. Wool tends to be a niche fiber with a share of less than 1%.

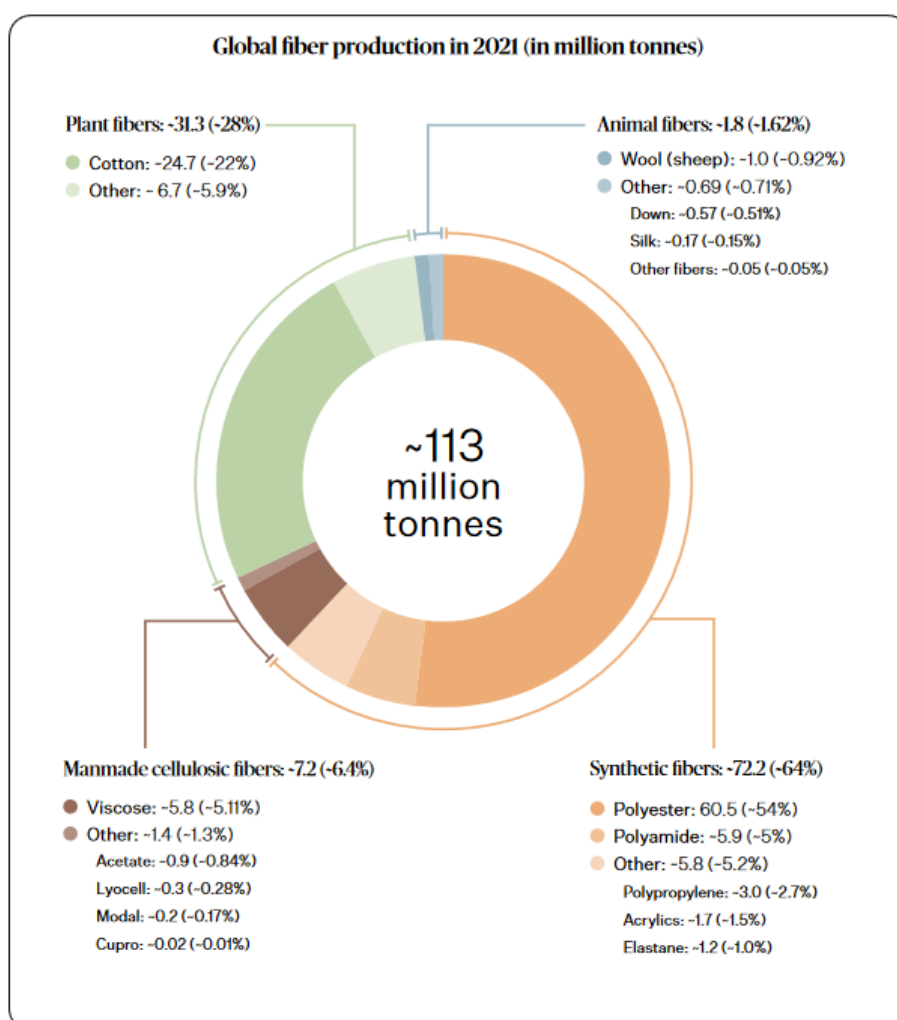
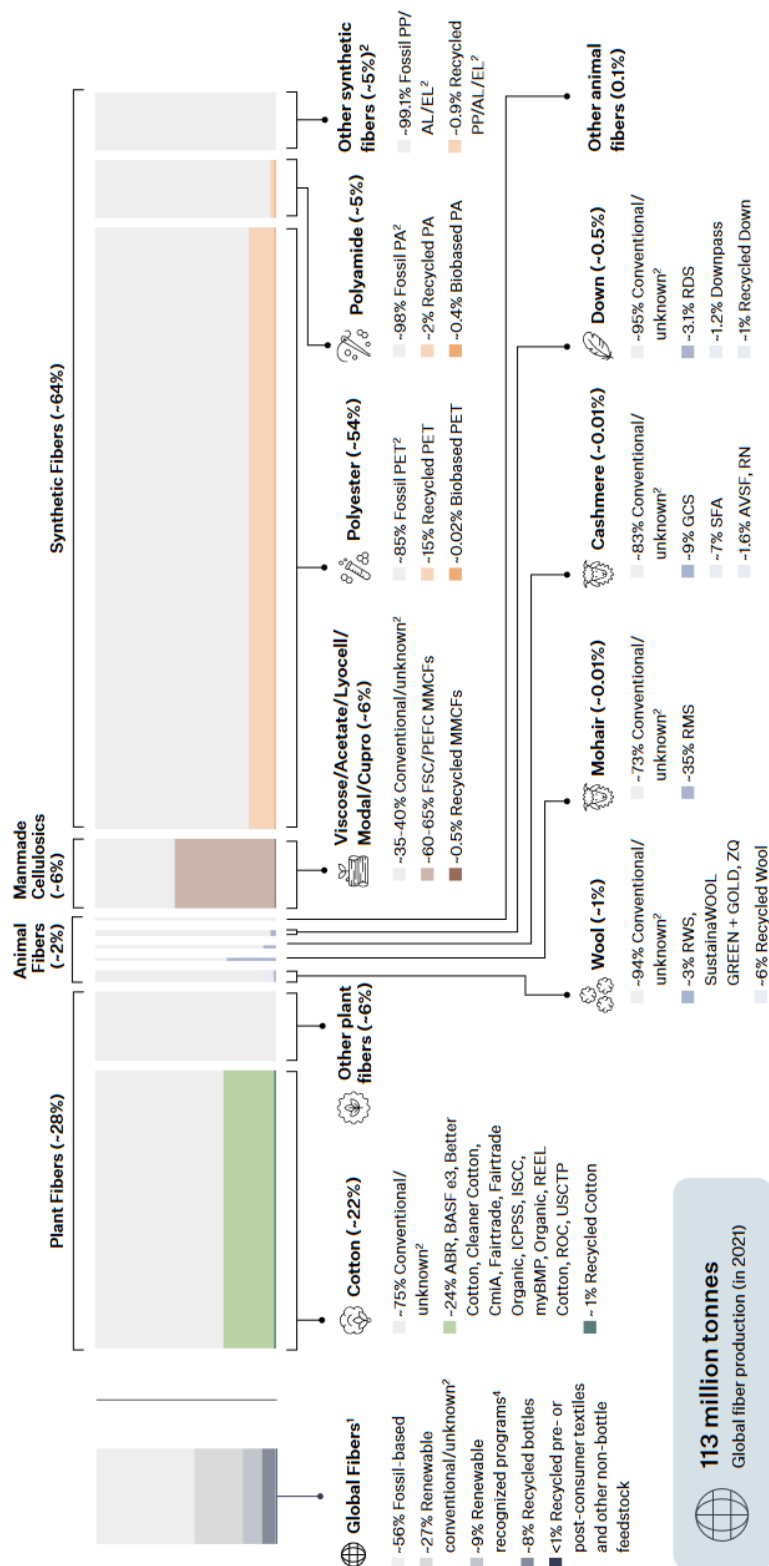


Figure 1: Shares of fiber types at total fiber production in 2021 (source: Textile exchange 2022).





The figures' authors comment:

"This graph aims to inform the industry about the global total production volumes and the shares covered by different programs. Our definition of 'Preferred' is currently being updated, and the assessment of the programs along a continuum of different levels of preferred is work-in-progress; ²Conventional and unknown. This includes volumes of preferred or potentially preferred but unassessed programs for which data are not accessible or available; ³Other synthetic fibers include polypropylene (PP), acrylics (AC), and elastane (EL); ⁴Renewable recognized programs include here all the recognized programs listed in this chart apart from the recycled fibers".

Figure 2: Composition of fiber types and share of sustainable certified fibers in 2021 (source: Textile exchange 2022).



Also Figure 2 shows the composition of fiber types, including their share of preferred fibers for the year 2021 (classified by Textile Exchange). Most of the fibers produced worldwide are more or less fossil-based or conventionally produced. Taking animal fibers as an example, the share of certified fibers ranges from 35% for mohair to only 5% for down. Recycling rates also vary widely. While polyester fibers have a 15% recycled content, often in the form of recycled bottles, most other fiber production ranges between 0% and 6%.

Following the European apparel and textile confederation (Euratex), the enterprise structure in Europe is characterized by a high proportion of micro enterprises, meaning they have between 0 and 9 persons employed. Their share accounts for the vast majority of all companies. Small and medium sized companies are the second largest group with together about 11% of all companies. Only under 1% of the enterprises in the textile and clothing industry have more than 250 persons employed (see Figure 3).

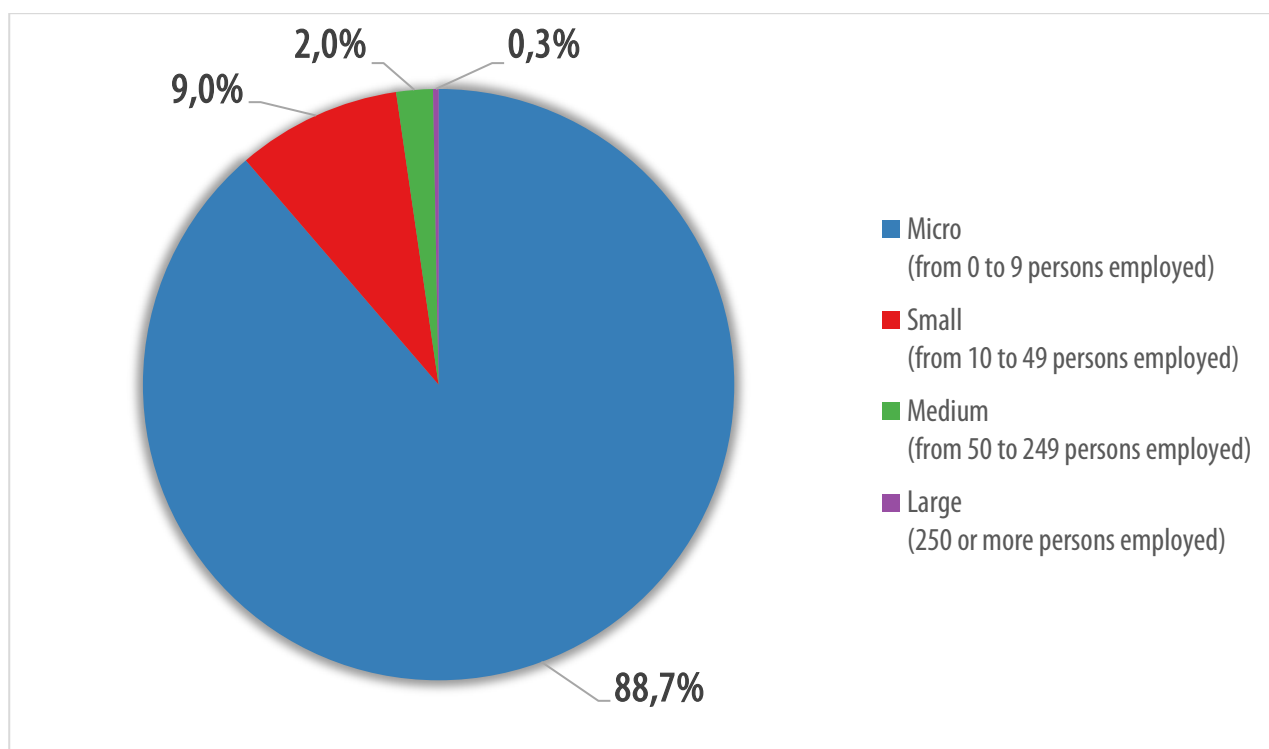


Figure 3: Size of companies in the European textile and clothing industry (source: Euratex 2024).



Figure 4 shows the development of the turnover compared to the previous year over time. It focusses on the turnover of manufacturing in general (NACE class C), the turnover of manufacturing of textiles (NACE class C13) and manufacturing of clothing (NACE class C14) between 2001 and 2023. The graphs are quite similar. However, the two shocks of the financial crisis in 2009 and the Covid-19-pandemie in 2020/21 are obvious. Nevertheless, the turnover clearly increased after the two shocks, proofing a certain resilience. According to Euratex 2024, the slowing down of the crisis recovery in 2023 can be explained with rising costs and lower demand.



Figure 4: Development of turnover in textile and clothing between 2011 and 2023 (source: Eurostat 2024).



The Alps serve as a symbol and a unique selling narrative, as shown by the number of trademarks registered worldwide using the term ‘Alps’. Figure 5 shows the results from a search for the terms of “ALPIN*”, “ALPS”, and “ALPEN”. The figure shows an increased density of brand names with a connection to the Alps, particularly in the clothing and textiles sector whereas Carpets, Yarns, etc. are less related.

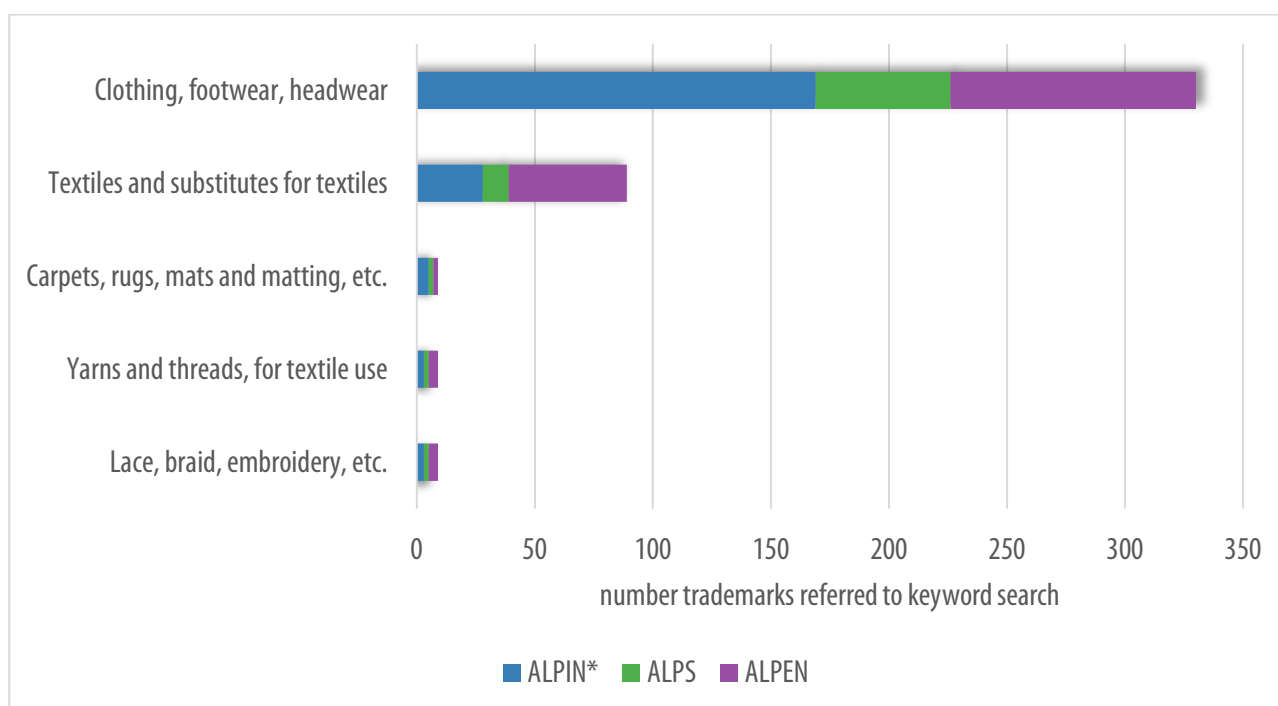


Figure 5: Number of trademarks referred to the keywords (source: EUIPN – European Union Intellectual Property Network: TMViewer, processed by emlyon 2023).



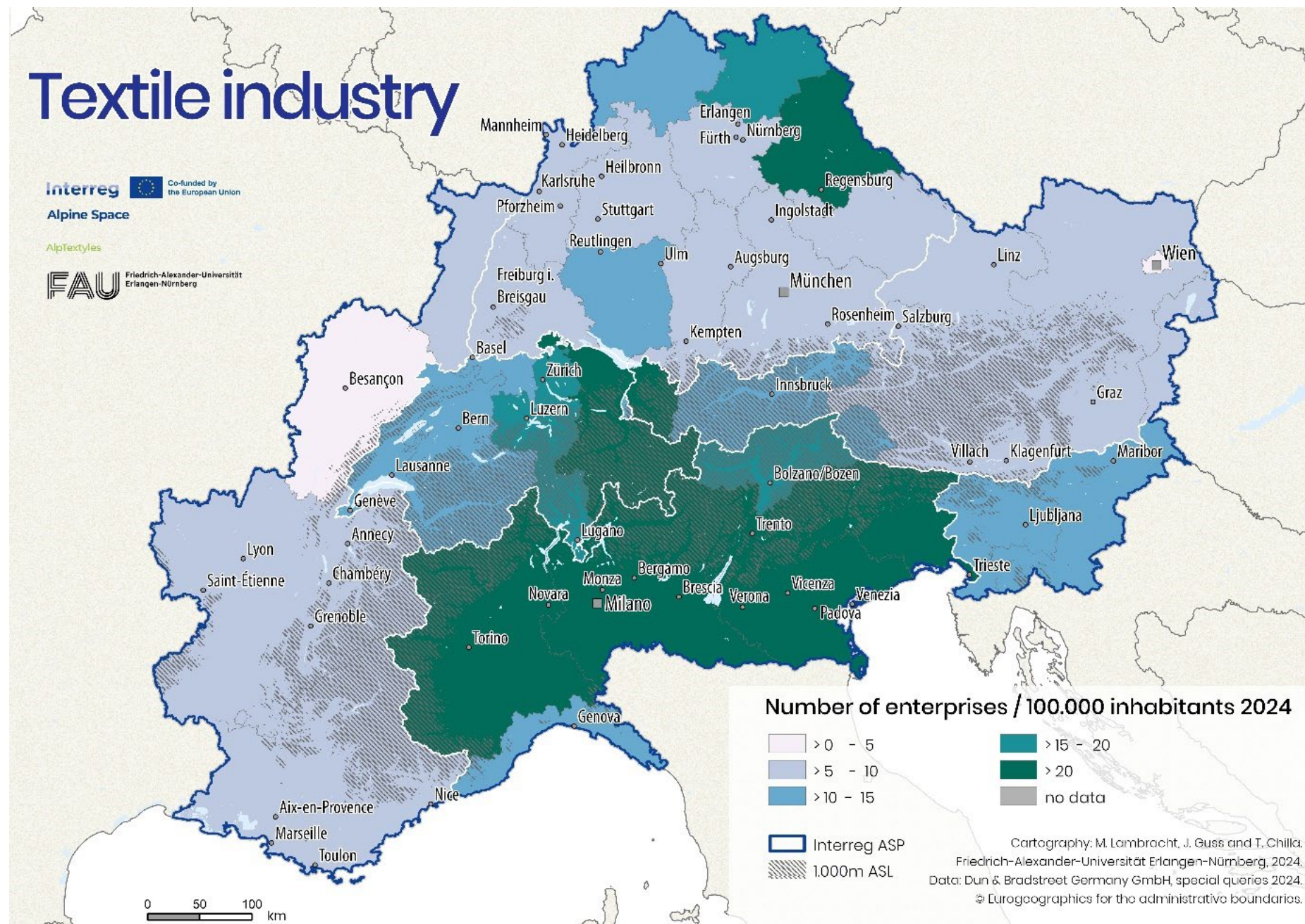
This finding can be explained with a concentration of many global players in the apparel segment in Northern Italy. In particular, many fashion companies have their headquarters located in these areas.



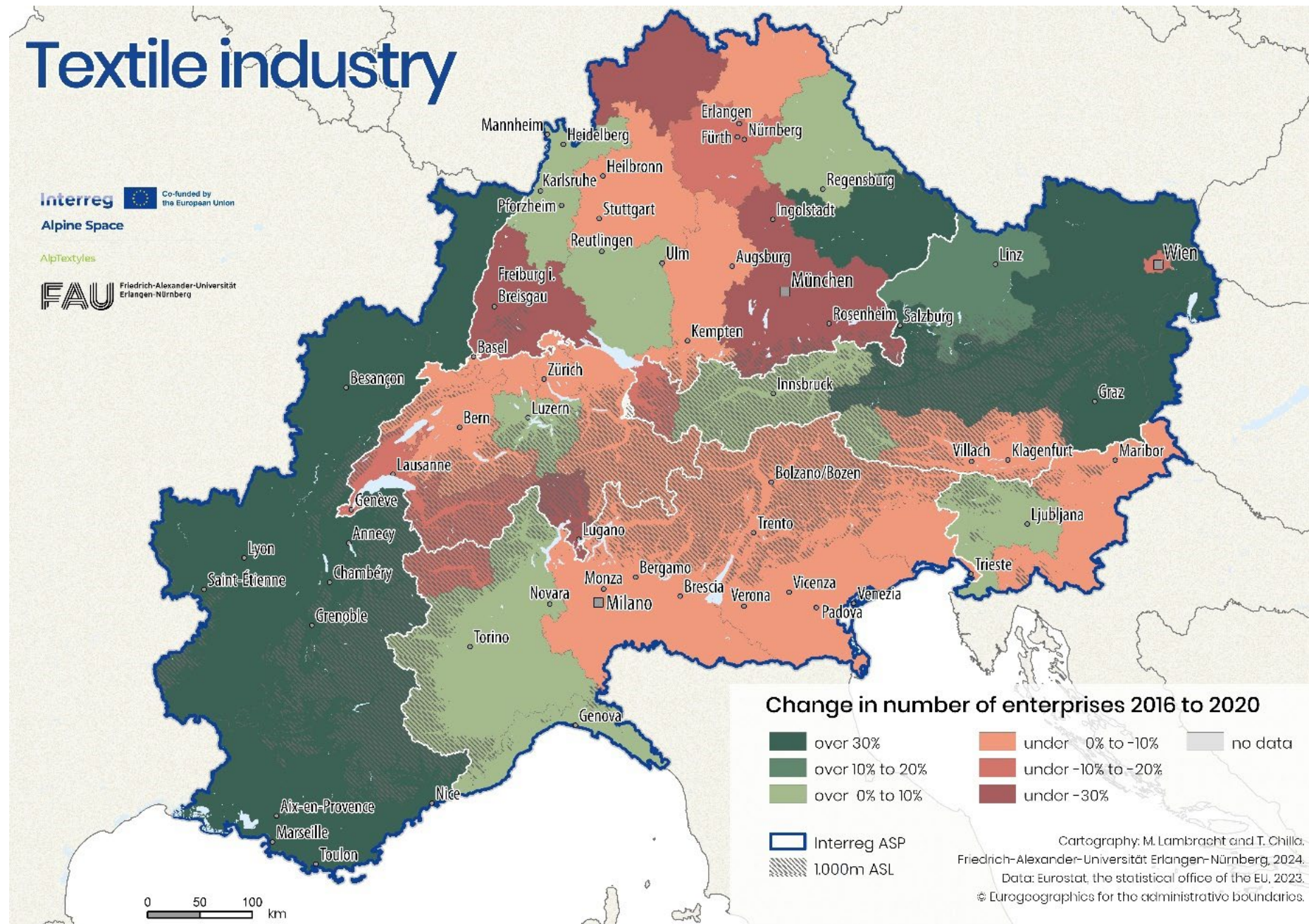
Figure 9 shows the change in the number of enterprises in clothing production over time.) This map refers to the section of manufacturing of wearing apparel following the Industrial Classification of Economic Activities in the European Communities (NACE). The map shows, in a green and red gradient color logic, the development of the number of enterprises between 2016 and 2020. The overall development in the number of enterprises is quite positive for French, Italian and Austrian parts, whereas German and Slovenian regions reveal a strong decline. Switzerland comprises both, decline in the lowland regions and increased numbers in the eastern and southern regions.



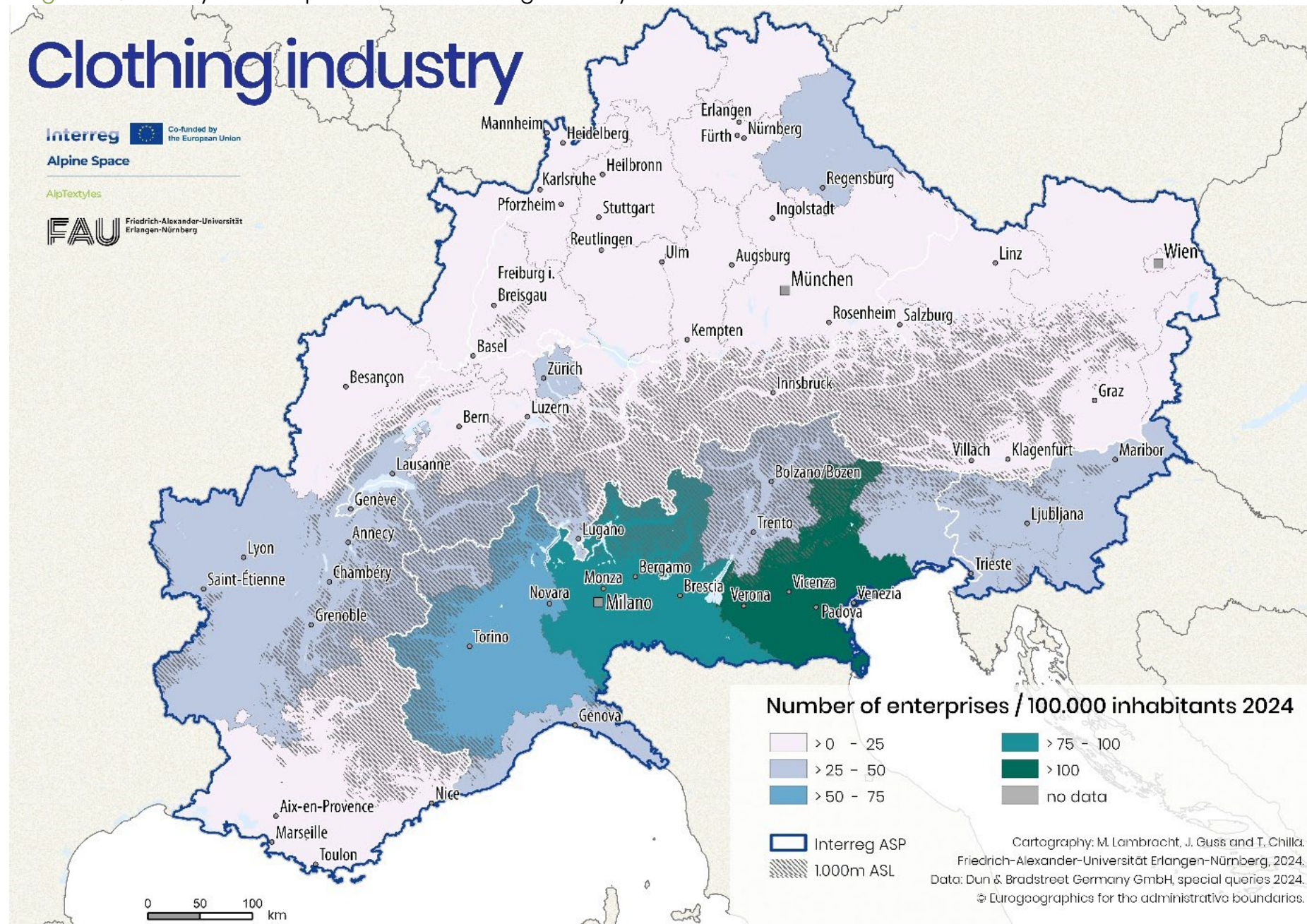
> Figure 6 | Density of enterprises in the textile industry in 2024.



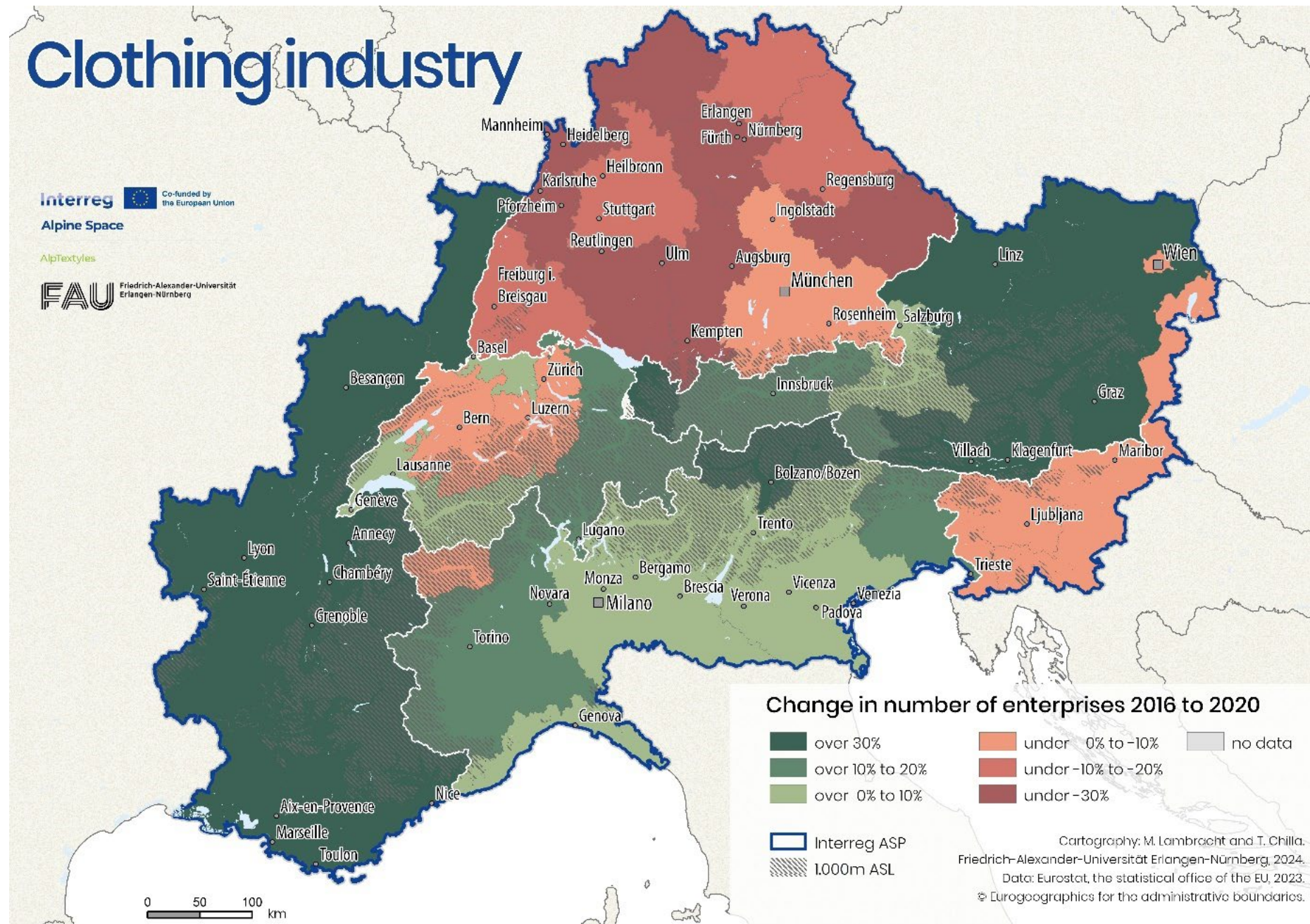
> Figure 7 | Change in number of enterprises in the textile industry from 2016 to 2020.



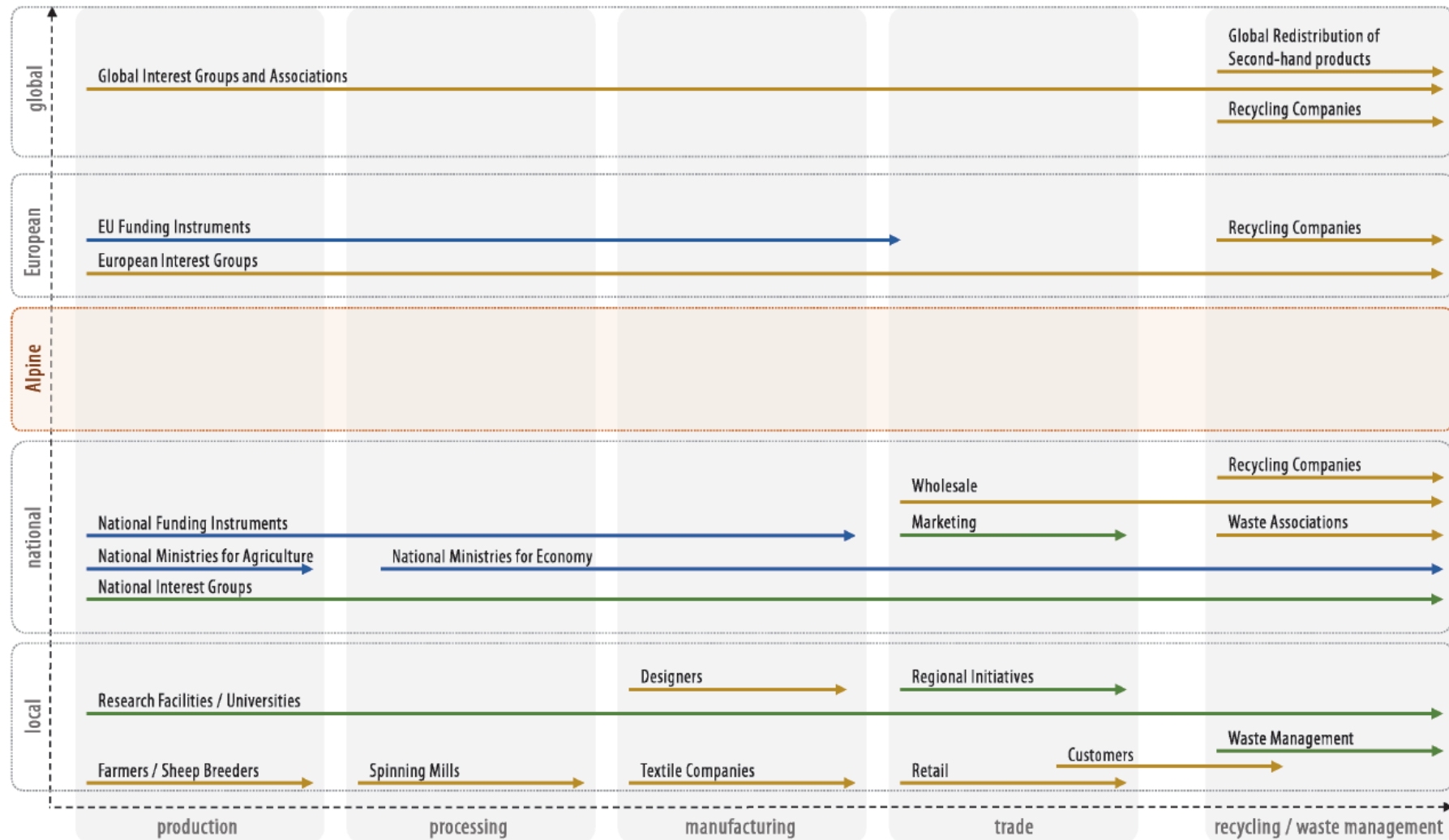
> Figure 8 | Density of enterprises in the clothing industry in 2024.



> Figure 9 | Change in number of enterprises in the clothing industry from 2016 to 2020.



> Figure 10 | Institutional mapping of actors in the Alpine textile sector.



Mapping of textile institutions in the European Alps

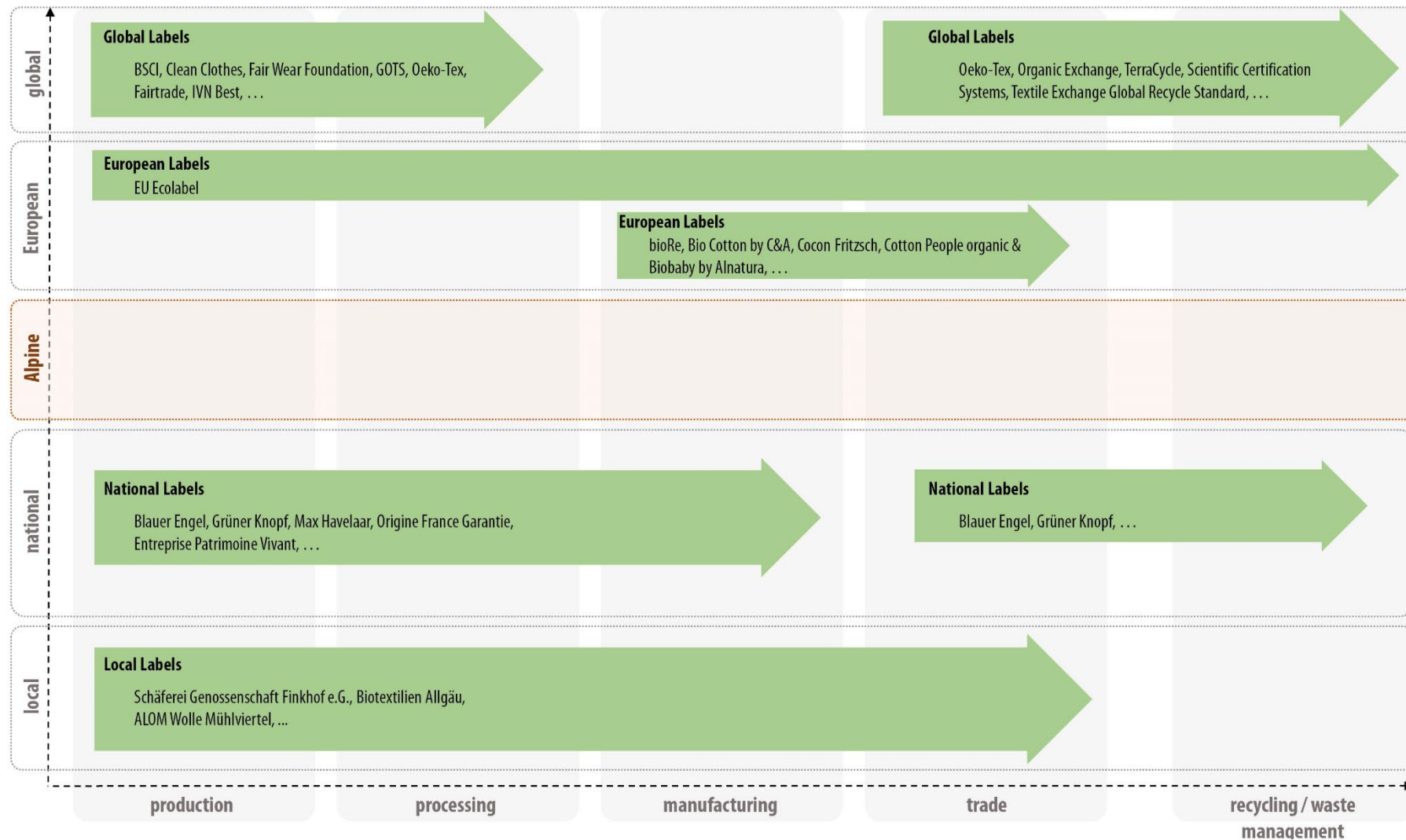
- Public authorities and actors
- Private actors
- Public & private actors

Data: based on sector reports and own research

Project: AlpTextyles, 2023 & 2024

Concept & Visualisation: M. Lambracht, R. Sachs and T. Chilla,
Friedrich-Alexander-Universität Erlangen-Nürnberg, 2024.

> Figure 11 | Mapping of Labels in the Alpine textile sector.



Mapping of textile brandings and labels in the European Alps

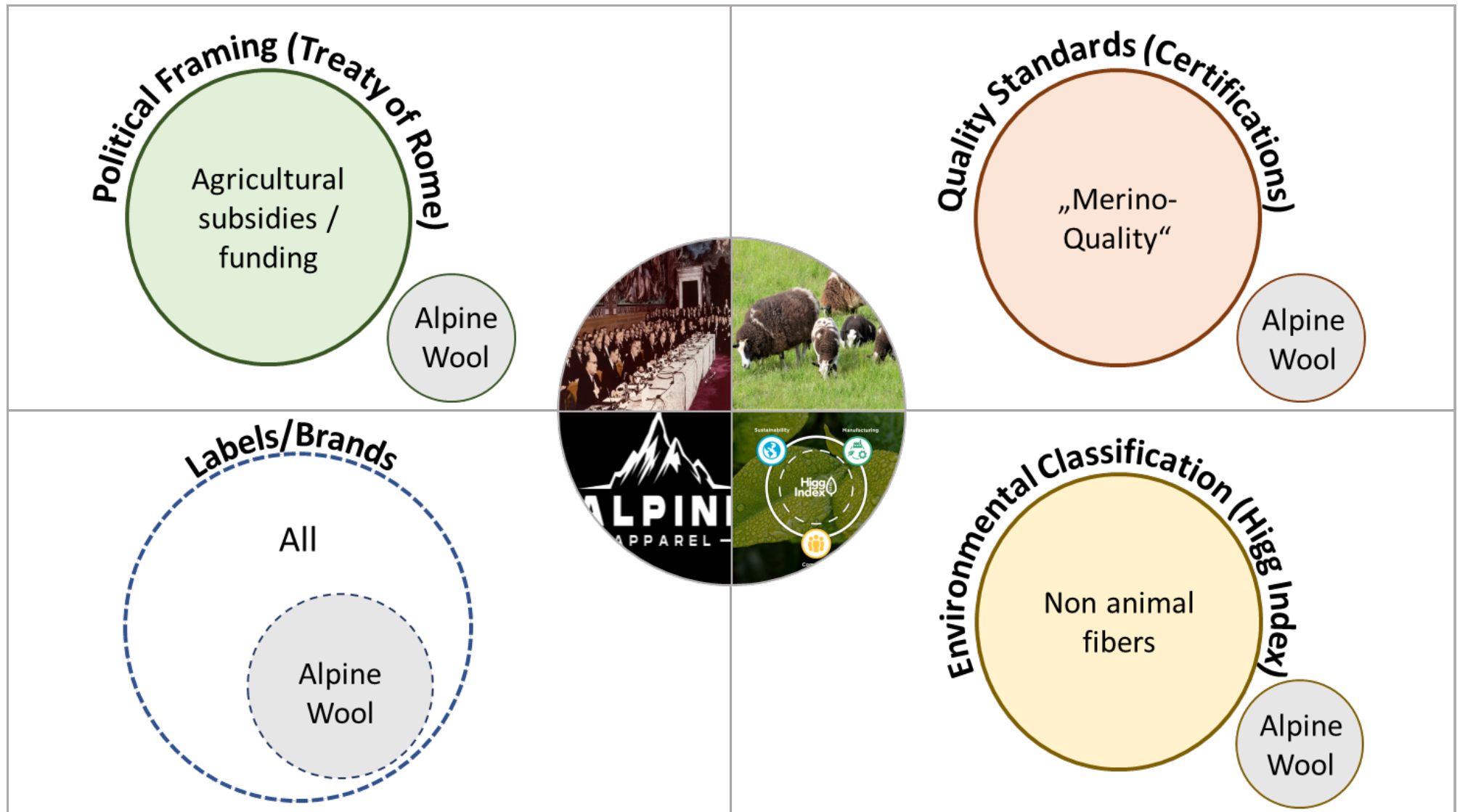
Data: based on sector reports and own research

Project: AlpTextiles, 2023 & 2024

Concept & Visualisation: M. Lambracht, R. Sachs and T. Chilla,
Friedrich-Alexander-Universität Erlangen-Nürnberg, 2024.

To sum up, one could say that in the collective unconscious the Alps do not primarily refer to a specific place, but to an imaginary embedding of activities, practices and concepts related to high mountains.

> Figure 12 | Market related regulations for the example of Alpine wool.



SUMMARY

The Alpine textile sector can be described as comparably strong. In particular, the strong clothing sector in Northern Italy, embedded in the global market, ensures a certain resilience of the textile and clothing industry in the Alps. Also, the textile sector shows strong values for certain regions in Switzerland, Austria and parts of Northern Bavaria. In addition to clothing, technical textiles are very important, especially in the Auvergne-Rhône-Alpes region. This sector of the economy is highly innovative and creates significant added value through applications in markets such as transport, sports, infrastructure and security. The economic success for both these sectors within the textile environment in the Alpine region can be explained on the one hand by strong global companies, and is also characterized by a large proportion of vital and innovative SMEs and micro-enterprises. The embeddedness in a strong cultural heritage and path dependencies support this strength.

However, these textile companies in the Alpine region have to address many different sectors (from clothing to technical textiles) with a complex actor setting (public and private) at all levels of the multi-level system (from local to global). This complexity comes along with a multitude of regulations and entrepreneurial support. A central finding is, that 'the Alps' are not really visible in terms of institutions or certifications/labels concerning the textile and clothing ecosystem, although the trademark analysis revealed an over proportional use of the term for marketing reason.

Nevertheless, the situation comes along with potentials that support the current situation. Firstly, establishing a specific marketing referred to 'Made in the Alps' that displays considerable shares of production within the Alpine region is a key to support regional actors in the Alpine textile ecosystem. On the one hand, this is an effective tool to raise awareness amongst consumers and at the same time give farmers, SMEs, and Lead firms the opportunity to benefit from the region. On the other hand, a stronger regulation approach with the labelling could identify 'Alpine washed products' and empower regional trademarks and products.



Secondly, reaching a critical mass through regional networks leads to negotiation power within an international commercial system. This is true for certifications costs but also in terms of innovation or the achievement of standards.

Thirdly, the adaptation and simplification of the legal handling creates an environment which equal competition. In particular, the equality of conditions between different fiber types is important to safeguard equal market access, including the classification of agricultural products to enable public financing. compete with regard to a growing international market.

And finally, beside the revision of existing treaties and classifications, support with environmental classifications or the modification of LCA approaches allows to consider an even market access. This could lead to a situation where regional strength compared with the safeguarding of cultural heritage increases awareness on the consumer side and creates regional solutions for farmers and enterprises at all levels to better compete with regard to a growing international market.



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ANNEX

Table I: Query D&B database for enterprises in the textile and clothing sector (NACE classification; Date of access: November 2023)

NUTS	Name	13 Herstellung von Textilien									14 Herstellung von Bekleidung						
		13.1 Spinnstoffaufbereitung und Spinnerei	13.2 Weberei	13.3 Veredlung von Textilien und Bekleidung	13.9 Herstellung von sonstigen Textilwaren							14.1 Herstellung von Bekleidung (ohne Pelzbekleidung)		14.3 Herstellung von Bekleidung aus gewirktem und gestricktem Stoff			
					13.91 Herstellung von gewirktem und gestricktem Stoff	13.92 Herstellung von konfektionierten Textilwaren (ohne Bekleidung) 1392	13.93 Herstellung von Teppichen	13.95 Herstellung von Vliesstoff und Erzeugnissen daraus (ohne Bekleidung)	13.99 Herstellung von sonstigen Textilwaren a. n. g.			Summe	14.13 Herstellung von sonstiger Oberbekleidung	14.19 Herstellung von sonstiger Bekleidung und Bekleidungs-zubehör a. n. g.	14.31 Herstellung von Strumpfwaren		
AT11	Burgenland	0	5	4	9	5	0	0	4	18	27	3	0	7	37		
AT12	Niederösterreich	4	34	64	16	65	5	0	38	124	125	39	2	55	221		
AT13	Wien	4	35	55	25	36	7	1	27	96	103	44	0	60	207		
AT21	Kärnten	2	8	34	2	21	0	0	7	30	44	19	0	29	92		
AT22	Steiermark	2	19	47	6	39	6	1	13	65	94	21	0	39	154		
AT31	Oberösterreich	2	34	63	17	71	10	2	23	123	97	29	2	60	188		
AT32	Salzburg	1	7	15	13	24	1	0	13	51	87	25	0	17	129		
AT33	Tirol	6	18	45	15	30	3	3	30	81	90	16	0	42	148		
AT34	Vorarlberg	10	28	65	13	36	2	1	86	138	38	10	5	22	75		
CH01	Région lémanique	1	12	38	4	64	6	0	110	184	299	121	0	9	429		
CH02	Espace Mittelland	10	14	73	5	79	8	0	147	239	235	127	3	13	378		
CH03	Nordwestschweiz	6	8	61	5	30	8	4	115	162	157	84	3	4	248		

CH04	Zürich	9	10	70	2	76	13	1	186	278	312	177	1	8	498
CH05	Ostschweiz	27	26	94	6	86	5	3	204	304	155	87	4	15	261
CH06	Zentralschweiz	11	6	42	3	49	5	0	92	149	127	77	1	4	209
CH07	Ticino	1	6	8	2	18	1	0	43	64	84	61	0	0	145
DE11	Stuttgart	19	34	392	12	166	12	15	114	319	142	241	6	2	391
DE12	Karlsruhe	12	16	267	4	97	13	11	93	218	86	195	3	0	284
DE13	Freiburg	20	12	227	7	94	6	15	38	160	46	112	3	0	161
DE14	Tübingen	13	31	257	40	122	4	5	102	273	141	193	6	6	346
DE21	Oberbayern	8	31	540	12	181	22	4	202	421	322	595	3	3	923
DE22	Niederbayern	0	7	118	3	47	4	1	34	89	51	83	1	3	138
DE23	Oberpfalz	13	11	365	14	98	11	10	109	242	191	183	4	3	381
DE24	Oberfranken	28	71	187	13	85	8	14	75	195	64	95	2	3	164
DE25	Mittelfranken	9	10	186	2	72	3	5	50	132	78	135	0	0	213
DE26	Unterfranken	6	7	232	11	59	8	7	75	160	134	122	1	2	259
DE27	Schwaben	15	25	208	7	89	7	12	47	162	71	146	8	1	226
FRC2	Franche-Comté	3	4	9	1	32	0	1	14	48	55	19	1	3	78
FRF1	Alsace	3	12	23	6	82	2	8	23	121	103	59	4	11	177
FRK2	Rhône-Alpes	26	123	95	22	421	14	12	128	597	1325	446	18	44	1833
FRL0	Provence-Alpes-Côte d'Azur	17	30	77	11	352	8	2	88	461	577	288	6	22	893
	Lyon	1	10	1	1	20	0	0	6	27	68	30	2	0	100
	Grenoble	0	0	1	0	2	0	0	0	2	10	7	0	0	17
	Marseille	2	0	4	0	33	2	0	10	45	75	33	0	1	109
	Nizza (Nice)	1	0	2	1	10	0	0	6	17	26	15	0	2	43
	Annecy	0	0	1	0	6	0	0	0	6	14	5	0	0	19
	Chambery	0	0	1	0	2	0	0	4	6	7	2	0	1	10
	Toulon	0	0	0	0	3	0	0	0	3	13	4	0	0	17
	Besancon	0	0	1	0	2	0	0	1	3	9	0	1	0	10
	Saint-Étienne	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Straßburg	0	0	2	0	13	1	0	2	16	21	14	1	1	37
ITC1	Piemonte	433	359	281	34	604	56	57	176	927	1573	533	15	159	2280

ITC2	Valle d'Aosta/Val-lée d'Aoste	0	2	2	1	19	0	1	4	25	30	12	2	3	47
ITC3	Liguria	9	14	33	6	156	13	4	45	224	406	133	1	51	591
ITC4	Lombardia	548	1144	909	128	1742	131	142	527	2670	4278	2393	552	447	7670
ITH1	Provincia Au-tonoma di Bol-zano/Bozen	9	17	7	5	39	9	0	28	81	170	29	1	9	209
ITH2	Provincia Au-tonoma di Trento	10	11	10	0	97	7	4	21	129	118	50	5	10	183
ITH3	Veneto	90	218	552	81	891	49	135	257	1413	2683	1903	40	400	5026
ITH4	Friuli-Venezia Giu-lia	13	32	21	6	187	13	11	48	265	304	82	2	21	409
LI00	Liechtenstein	0	0	2	0	2	0	0	2	4	4	2	1	0	7
SI03	Vzhodna Slovenija									0					0
SI04	Zahodna Slovenija									0					0
	Slowenien (Gesamt)	10	5	51	14	184	3	14	66	281	406	126	23	37	592

Explanation of colors:

- Yellow highlights regions with no data
- Blue marks regions with own elaboration and aggregation within the D&B databse



AlpTextyles is an Interreg Alpine Space project that gathers the heritage of Alpine textile ecosystems to develop collaborative business and cultural solutions toward a circular and sustainable textile industry.

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