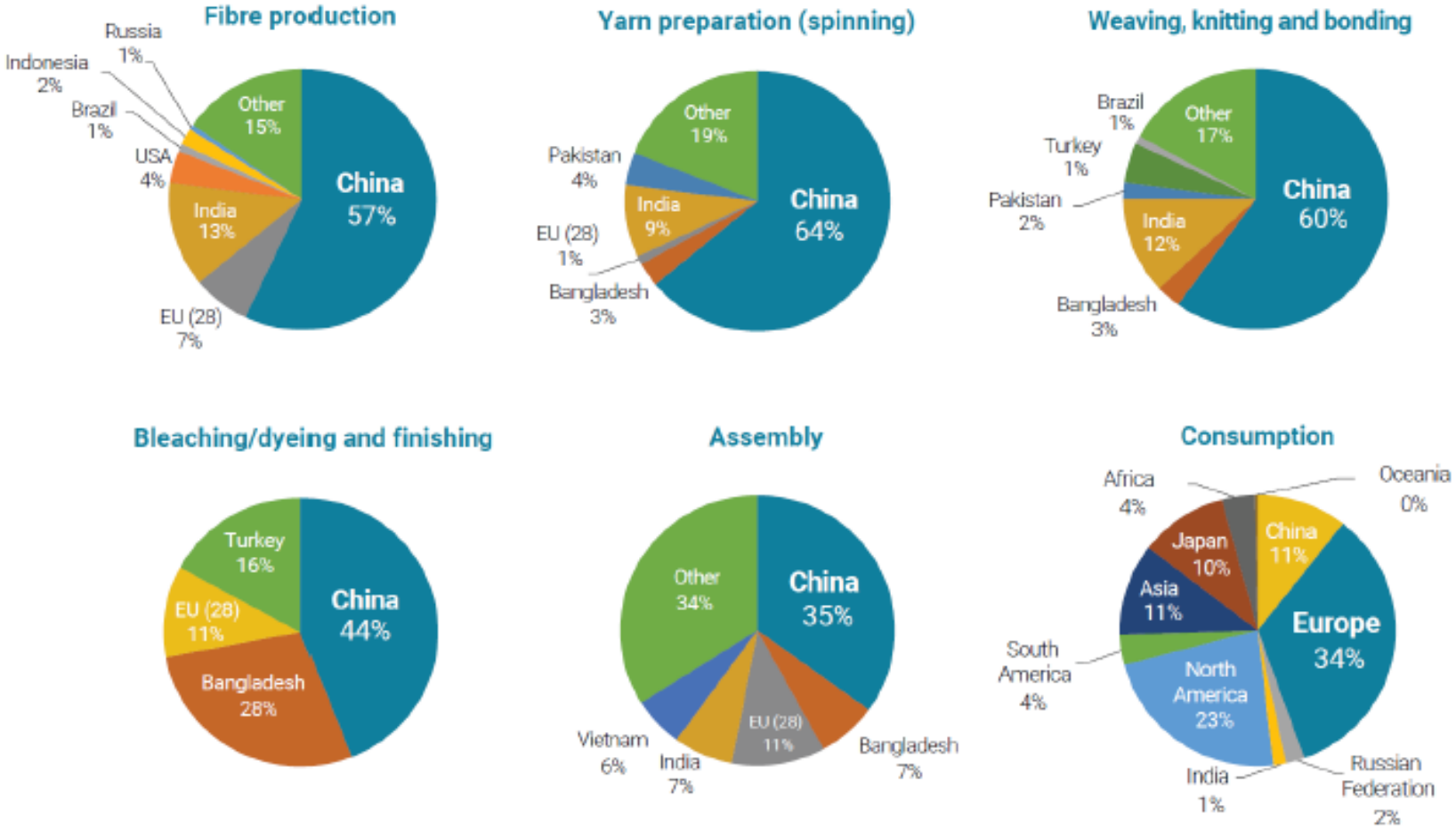
Kommende Ecodesign-kriterier i EU

- Alle data, figurer og udsagn er fra
"Preparatory study on textiles for product policy instruments"

Geografisk fordeling af tekstilproduktion og -forbrug

Produktion i alle led er størst i Asien med vægt på Kina, mens forbruget er størst i Europa.

Figure 4. Geographical breakdown of global apparel production and consumption – representation B



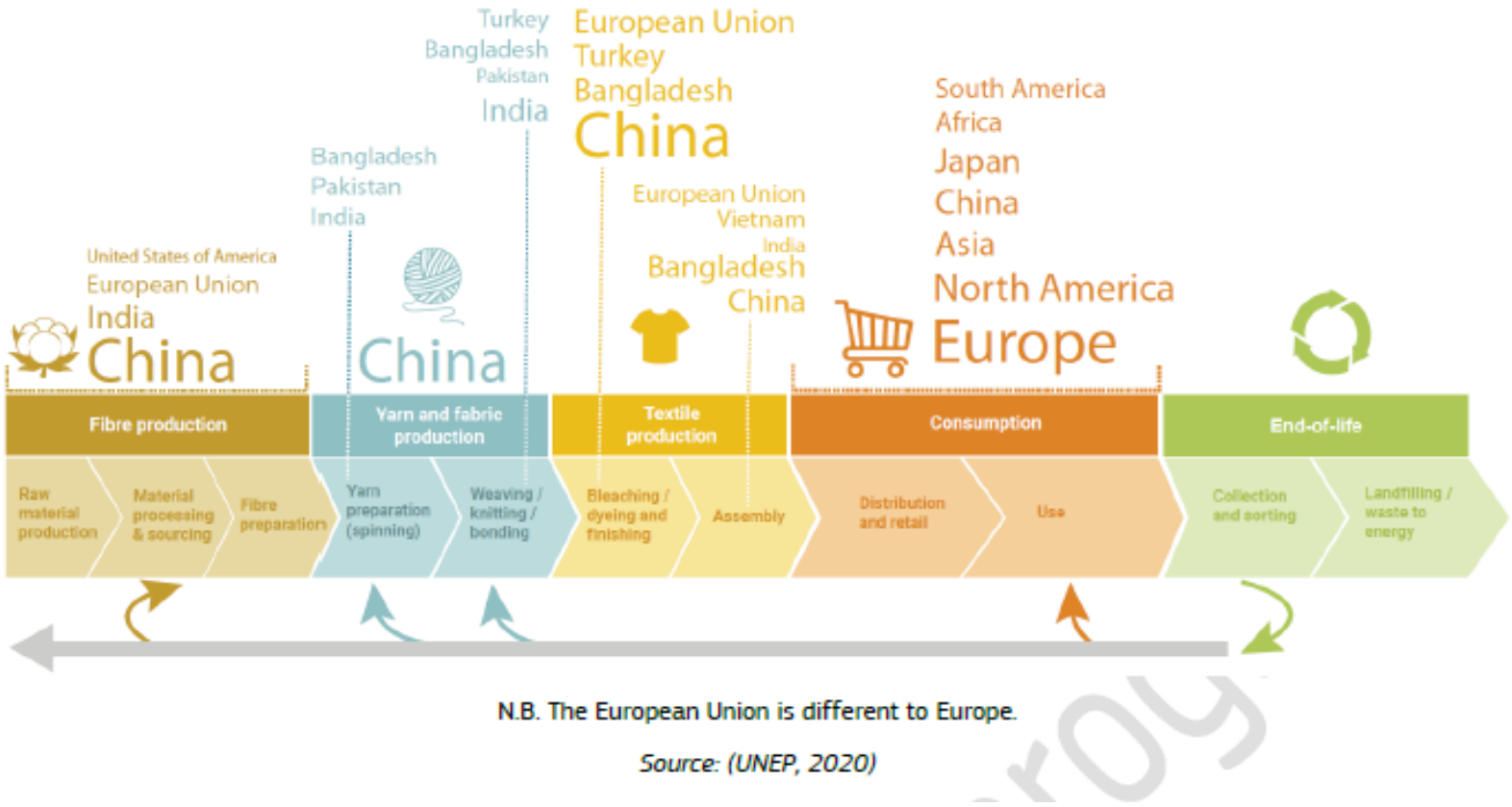
N.B. The EU figures include the United Kingdom. The EU is different to Europe.

Source: (UNEP, 2020)

Geografisk opdeling af tekstil-værdikæden

Produktion sker overvejende i Asien, mens forbrug sker i Europa.

Figure 3. Geographical breakdown of global apparel production and consumption – representation A



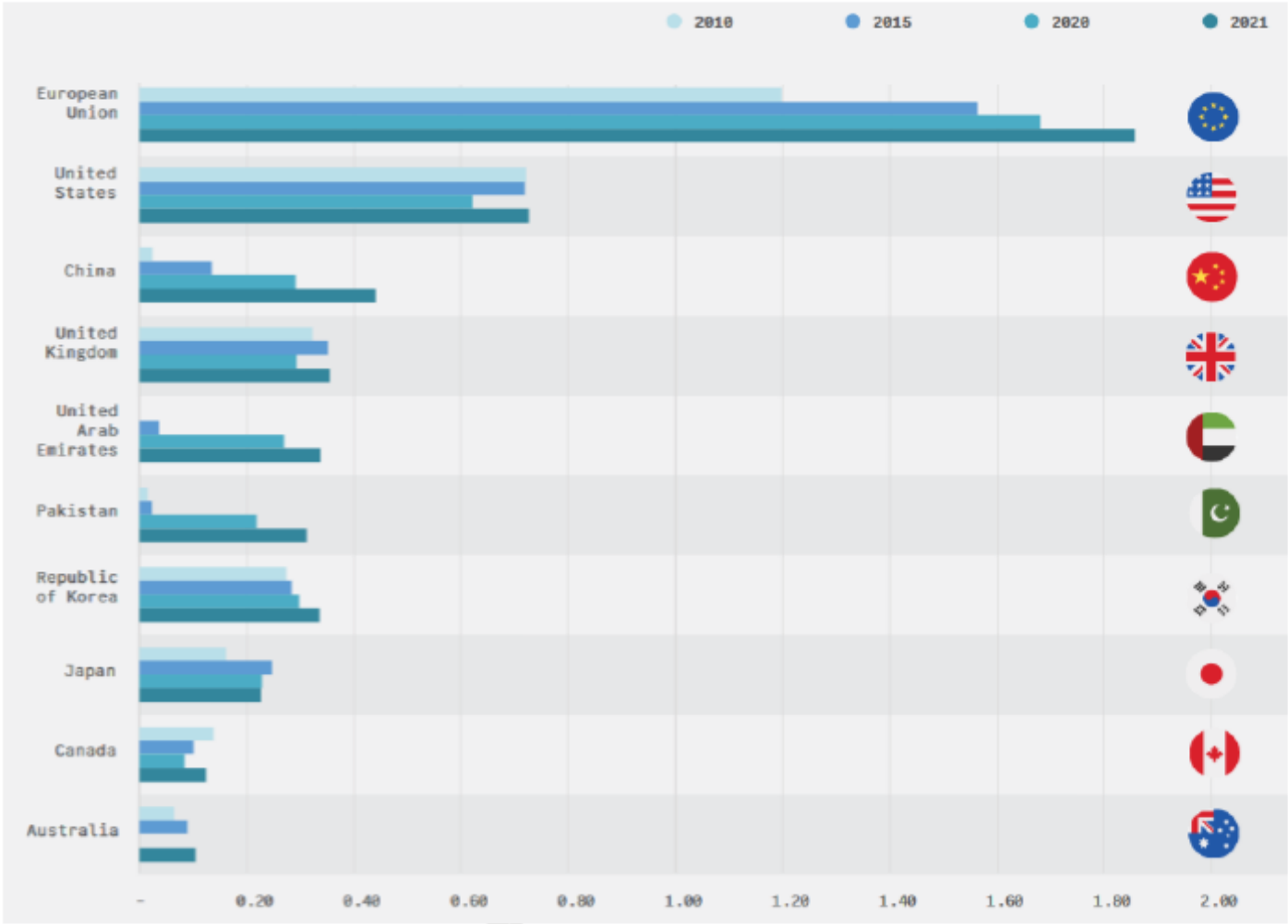
N.B. The European Union is different to Europe.

Source: (UNEP, 2020)

Top 10 eksport-lande af second-hand tekstil

Europa er klart den største eksportør af kasserede tekstiler, og tendensen har været stigende de seneste år.

Figure 5. Top ten exporting countries of second-hand apparel by mass (million tonnes)

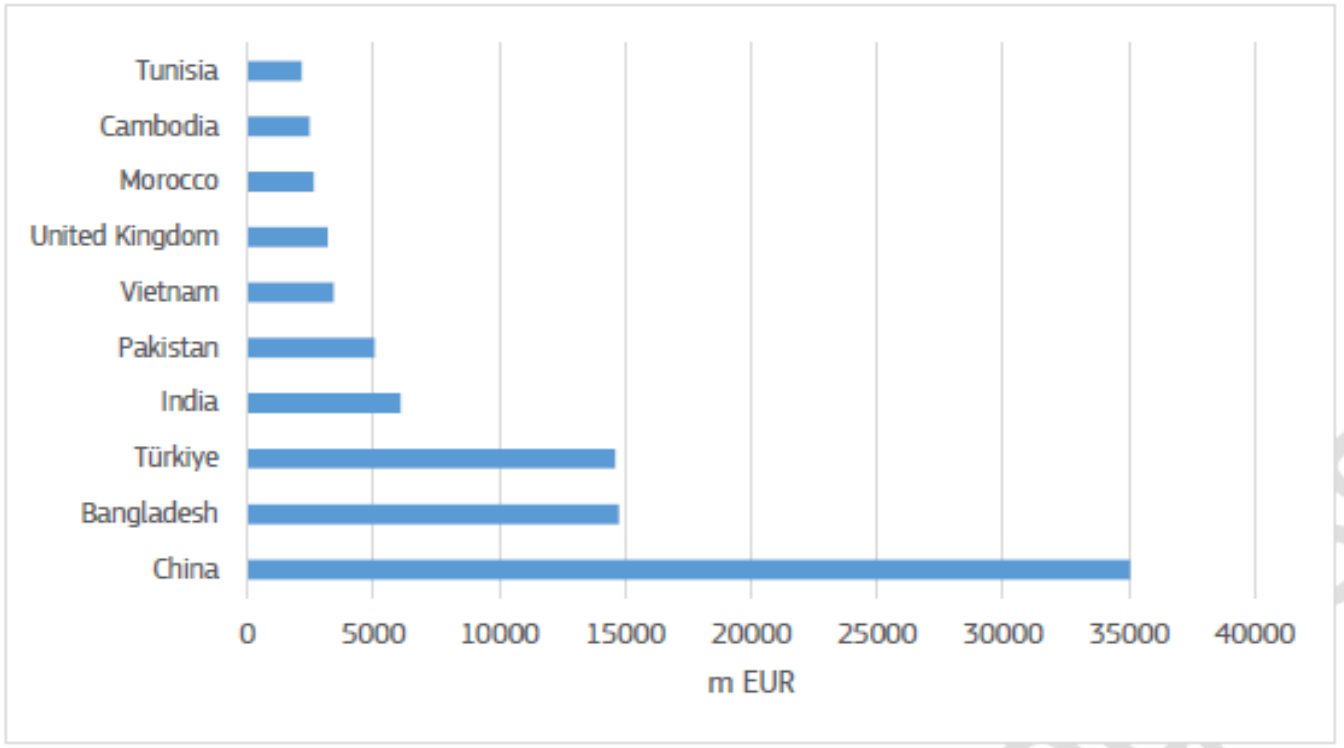


Source: (UNECE and ECLAC, 2024) based on UN Comtrade - HS Code 6309: Worn Clothing and Other Worn Textile Articles

Største tekstil-leverandører til Europa

Kina, Bangladesh og Tyrkiet er på top 3 over største leverandører af tekstiler til Europa.

Figure 8. The EU's main suppliers of textiles and apparel in 2021

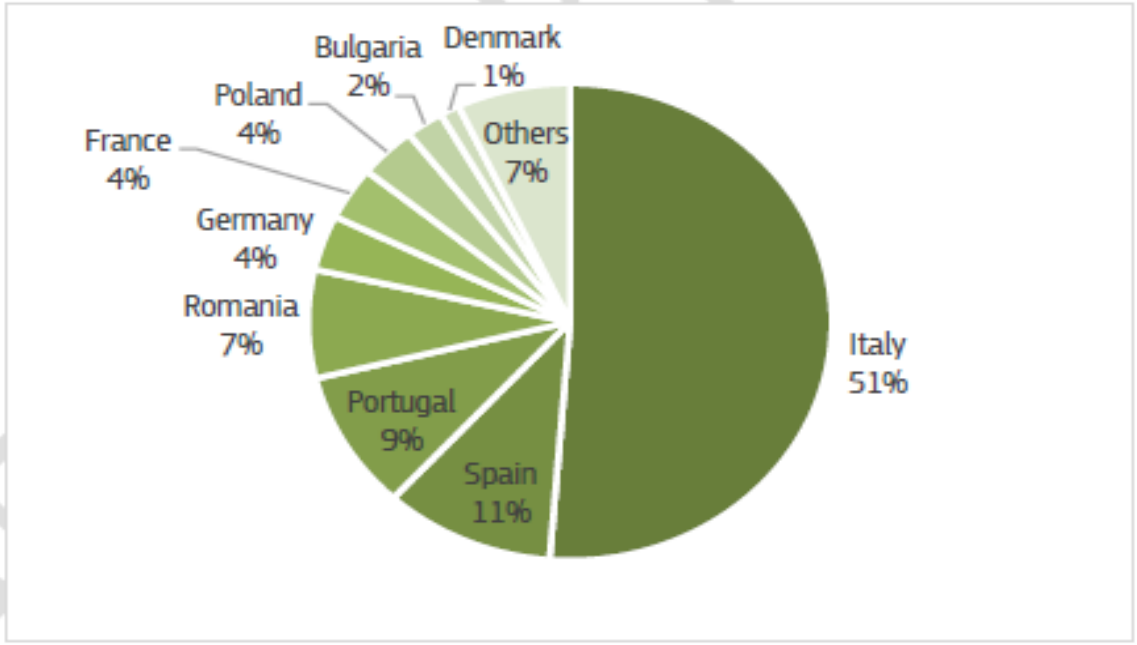


Source: EURATEX (2022a)

Lande i EU med mest tekstilproduktion

I EU er det Italien, der har den største produktion af tekstil (udgør over halvdelen af produktionen inden for EU) efterfulgt af Spanien og Portugal.

Figure 11. Member States producing textile apparel in 2019



Composition based on value

Source: own production based on PRODCOM database (Sold production, exports and imports – DS-056120)

Polyester udgør den største andel af recy-fibre

Polyester udgør den største andel af genanvendte fibre. Men næsten det hele kommer fra plastik-flasker.

The current global availability of recycled fibres is very limited (**Table 21**). The highest share of recycled material is available for polyester (15%) and wool (6%) fibres. However, almost all recycled polyester fibres come from recycling of plastic bottles, which are made of a specific type of polyester that is called polyethylene terephthalate (PET) (Textile Exchange, 2022a). From 2020 to 2023 the estimates of recycled fibres were relatively constant (**Table 21**).

Table 21. Estimated percentages (%) of recycled fibres in recent years

Fibre	2019	2020	2021	2022
Polyester (PES)	14	15	15	14
Wool	NA	6	6	7
Polyamide (PA)	NA	2	2	2
Cotton	NA	0.96	1	1
MMCF	NA	0.4	0.5	0.5

N.B. Approximately 99% of the polyester recycled fibres come from plastic bottles made of polyethylene terephthalate (PET).

Source: Own elaboration based on Textile Exchange (2020(, DG GROW (2021b), Textile Exchange (2021), Textile Exchange (2022), Textile Exchange (2023)

Mængden af recy-fabrikker

Ud af i alt 130 recy-fabrikker er de fleste i Europa (50 %), Asien (33 %) og Nordamerika (11 %).

I Europa er der flest mekaniske.

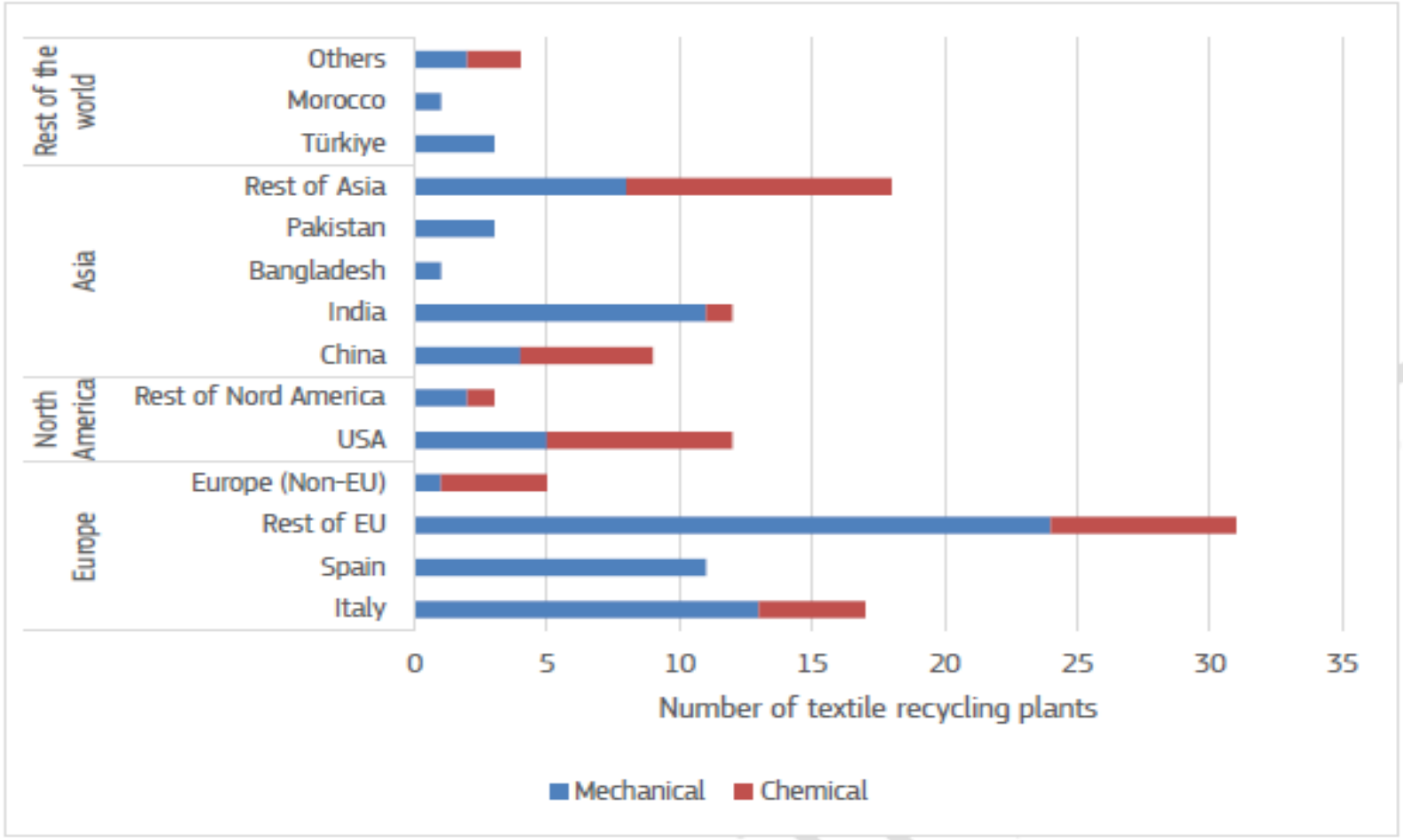
Det er de lande, der forbruger mest, der har flest recy-fabrikker – men også her, hvor tekstilproduktion er lavest sammenlignet med Asien.

The current availability of textile recycling plants was investigated in terms of location, technologies, possible input fibres and scale of the plants (pilot or full scale). **Figure 14** shows the location of these 130 recycling plants, highlighting consuming and producing countries (see Sections 5.1 and 5.3). Europe and North America, which are the largest consumers, host about 50% and 11% of the global textile recycling plants, respectively. Europe hosts mainly mechanical recycling plants, whereas North America mostly has chemical recycling plants. Italy and Spain are the largest EU producers and the countries with the largest number of textile recycling plants. Asia, which is the continent producing the most global apparel, has 33% of the textile recycling plants. In particular, China and India, the world's largest producers, host only 7% and 9% of the global textile recycling plants. **Figure 14** shows that there are currently more textile recycling plants in countries that consume the most apparel.

Se figur på næste side.

Mængden af recy-fabrikker

Figure 14. Current number of textile recycling plants classified by location



Source: own elaboration based on Airtable – Sorting for Circularity – Recyclers Database ([97]), (Jørgensen et al., 2022; Textile Exchange, 2022a)

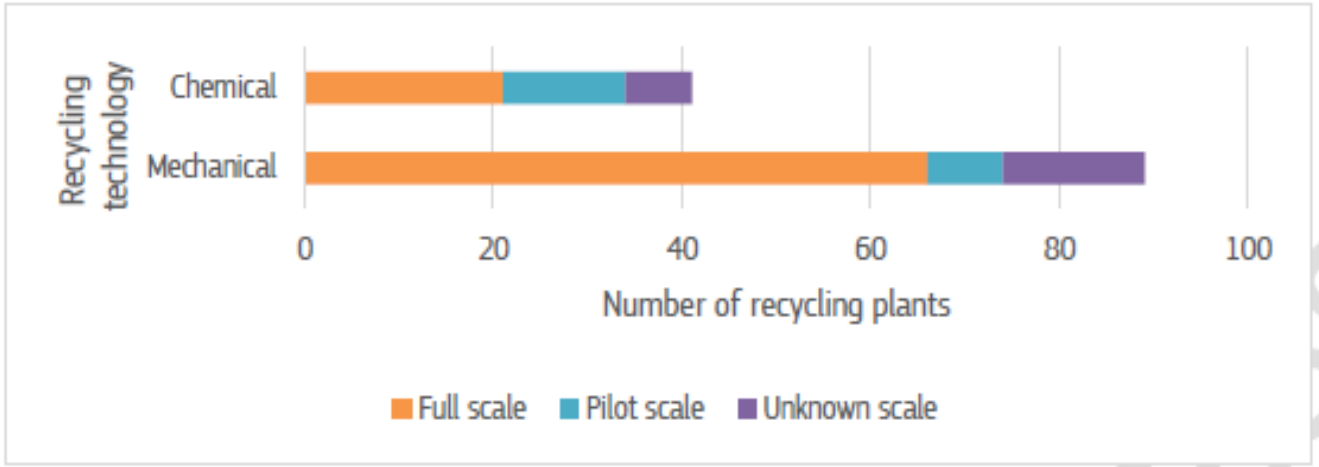
Fremtiden for recy-fabrikker

Det forventes, at der i 2030-2035 vil være en stigning på 30% i mængden af tekstilaffald.

Der forventes også at komme flere sorteringsanlæg.

Størstedelen af fremtidens recy-fabrikker forventes at være mekaniske (Huygens et al., 2023).

Figure 16. Scale of current textile recycling plants



Source: own elaboration based on Airtable - Sorting for Circularity - Recyclers Database ([99]), (Jørgensen et al., 2022; Textile Exchange, 2022a)

Fremtiden for recy-fabrikker

Udfordringen med stor-skala genanvendelse er, at virgin fibre er billigere, og at tekstilproducenter på tværs af værdikæden lige nu anser det som en risiko at sætte recy-fibre i produktion grundet manglende skalerbarhed (teknologi og råmateriale).

The main barrier to the development of a market for recycled fibres results from the general low cost of products: from the raw material to the final product placed on the market. Textile products containing recycled fibres are more expensive than the same products made only of virgin fibres. The research conducted by the JRC found that the insufficient internalisation of externalities in the global textile supply chain produces economic market barriers to recycling. Therefore, the economy of scale for the establishment of a profitable recycling system is challenged due to (Huygens et al., 2023):

- Technical limitations in recycling techniques (see **Table 51**);
- The design of non-recyclable textile products (technological externalities);
- Risk aversion to adopting recycled fibres by the next value chain user (consumption externalities);
- The cost associated to the identification of feedstock characteristics suitable for the specific recycling technology.

Kommende Ecodesign-kriterier

Kommende Ecodesign-kriterier vil have særligt fokus på cirkulære aspekter af tekstilerne (minimumskrav og standarder under hvert emne er under udvikling i EU).

9.1 Relevant product aspects

Article 5(1) of ESPR establishes that, in order to address environmental impacts of products, the ecodesign requirements in the delegated acts shall improve a specific list of product aspects. This list includes 16 product aspects:

(a) durability

(b) reliability

(c) reusability

(d) upgradability

(e) repairability,

(f) the possibility of maintenance and refurbishment

(g) the presence of substances of concern

(h) energy use and energy efficiency

(i) water use and water efficiency

(j) resource use and resource efficiency

(k) recycled content

(l) the possibility of remanufacturing

(m) recyclability

(n) the possibility of recovery of materials

(o) environmental impacts, including carbon footprint and environmental footprint

(p) expected generation of waste

Kommende Ecodesign-kriterier

EU vil stille krav til, hvorvidt tekstiler er genanvendelige i form, komposition og sorterbarhed.

Der vil fx komme mere fokus på logoer, print, valg af farver m.m. ift. at kunne producere 'rene' recy-fibre af dem.

9.2.5.2 How to assess recyclability

The analysis of the ecosystem reported in the section 9.2.5.1 suggests to address recyclability with an integral and dynamic approach assessing the evolution over time of all elements of the recycling system, from the

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feedstock to all process techniques involved. To this aim, in the framework of this PS, a recyclable textile apparel must have the following five characteristics, which apply as soon as it becomes waste:

1. It can be effectively collected;
2. It can be sorted, i.e. segregated from other textile waste and sent to the subsequent suitable recycling pathways;
3. It can be pre-treated before recycling, or can be sent directly to recycling without specific pre-treatment;
4. Its fibre content can be fully used as feedstock for one or more recycling techniques to produce recycled fibres usable in textile products;
5. It has no elements or substances in amounts that disrupt the collection, sorting, preparation for recycling and recycling, or that limit the use of the recycled fibre.

Therefore, textile apparel that meets all these five characteristics is considered to be recyclable, otherwise it is not recyclable. This integrated approach was chosen to assess the recyclability of textile apparel because all elements in the recycling system are important. This integral approach based on these five characteristics is a similar approach used by the French Law n° 2020-105 ([154]) to define recyclable textile products.