UNIC
ITALIAN TANNERIES

LEATHER
THE NATURAL CHOICE

SUSTAINABILITY REPORT
ITALIAN TANNING INDUSTRY
2024

LEATHER

More than 99% of **the raw hides and skins** used by the tanning industry as raw material are **recovered from the food chains of cattle, sheep, goats, and pigs.**

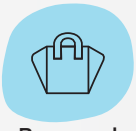
These hides are classified as **ABP, Animal By-Products** (under EU Regulation 1069/2009), and the recovery process carried out by tanneries prevents their disposal in landfills as waste.
No cattle, sheep, goat, or pig is raised or slaughtered for its hide.

Leather is a **circular, renewable, durable, biodegradable, and bio-based** material with unique aesthetic and performance characteristics, enhanced by the tanning process, which makes it incredibly versatile for different sectors and applications.


Automotive


Furniture


Clothing


Bags and accessories

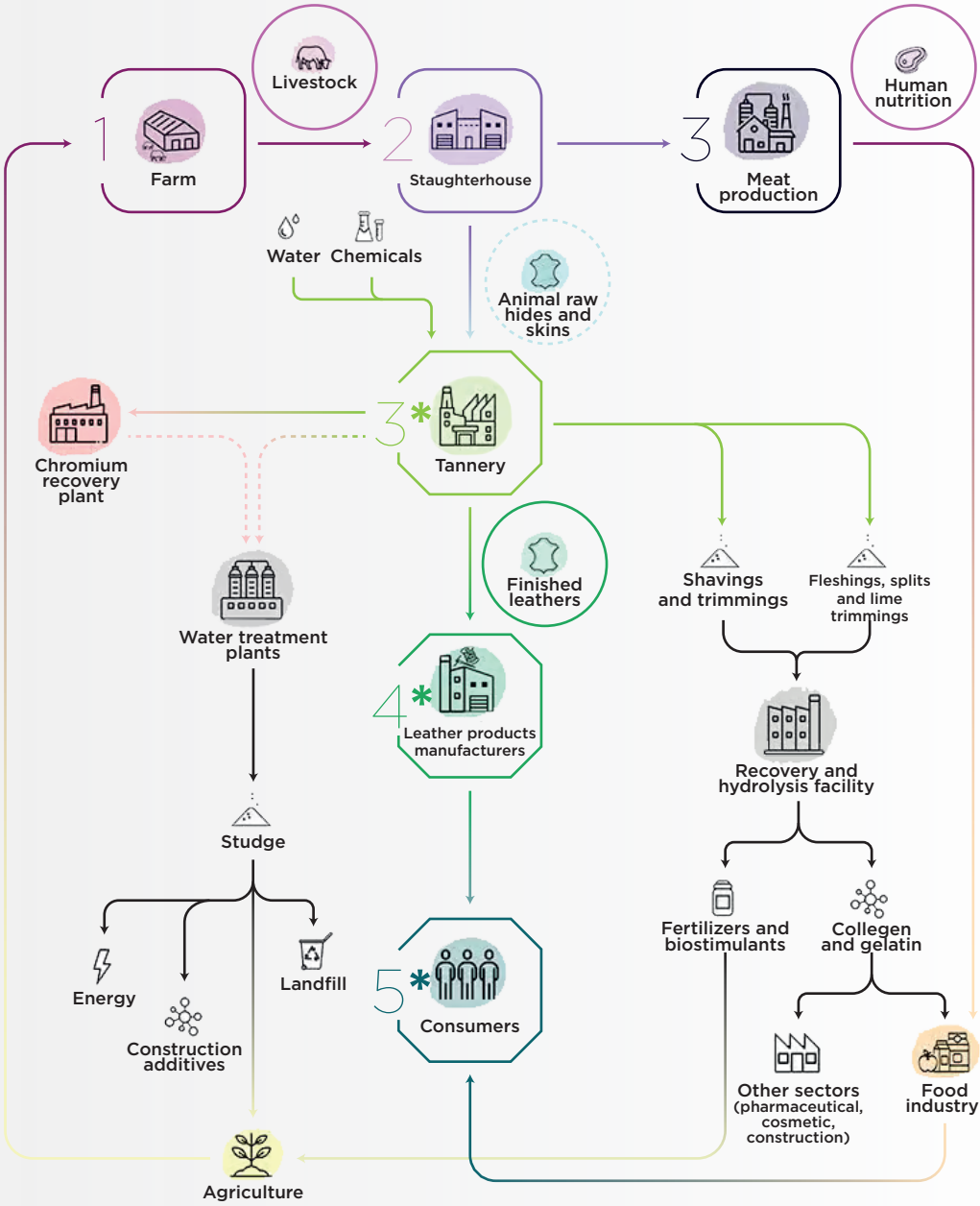

Footwear

CIRCULAR BY NATURE

The **processes for recovering tanning waste** represent an interesting case study of **circular bioeconomy.**
In Italian tanneries, the main processing waste is recovered to produce:

- Fertilizers and biostimulants for agriculture;
- Gelatins and collagen for food, cosmetics, pharmaceuticals, and adhesives;
- Inert aggregates and bituminous conglomerates for construction.

For example, the agricultural use of recovered tanning biomass, which is currently prevalent, exemplifies **the ideal closure of the natural materials loop.**


1
Farm
Livestock
2
Staughterhouse
3
Meat production
Human nutrition
Water
Chemicals
Animal raw hides and skins
3*
Tannery
Chromium recovery plant
Water treatment plants
Finished leathers
Shavings and trimmings
Fleshings, splits and lime trimmings
4*
Leather products manufacturers
Recovery and hydrolysis facility
Studge
Energy
Construction additives
Landfill
5*
Consumers
Fertilizers and biostimulants
Collegen and gelatin
Other sectors (pharmaceutical, cosmetic, construction)
Food industry
Agriculture

Environment

A natural and renewable material, at the core of an industry that has chosen the reduction of environmental impact as a pillar of its development.

MAIN OUTPUTS OF THE PRODUCTION PROCESS

Water consumption

Water is the medium in which most processes take place, but it is not "consumed": **95%** of the water used in tanning processes is sent to **treatment plants**.

Water consumed per m^2 of leather produced:

116,7 [L/m^2]

2023 data

Variation 2002/23:

-21,7%

Energy consumption

The leather production process requires both **electrical energy** for the operation of machines and **thermal energy** for heating process water and facilities.

Energy consumed per m^2 of leather produced:

1,01 [TEP/1000m^2]

2023 data

Variation 2002/23:

-38,3%

Over the last few years, the Italian tanning industry **has reduced its energy consumption**, promoting greater use of **renewable energy** sources and incentivizing the adoption **of high-efficiency cogeneration systems.**

↑ 84%

Renewable energy as a percentage of total purchased electricity 2023 data

↑ 42%

Renewable energy as a percentage of total energy consumption 2023 data

Chemicals

Chemicals are used to modify the structure of the dermis and improve its characteristics. Thanks to collaboration between tanneries and suppliers, **leather chemistry is continuously evolving towards increasingly efficient, safe, and sustainable solutions**.

Chemicals consumed per m^2 of leather produced:

2,1 [Kg/m^2]

2023 data

MAIN OUTPUTS OF THE PRODUCTION PROCESS

Wastewater

The wastewater from tanning districts is treated by **consortium treatment plants**, which represent an international example of inter-company collaboration aimed at environmental sustainability.

Efficiency analyses of the treatments are based on the ratio between the concentration of pollutants at the output of the treatment system and that at the input, and are conducted on the **main parameters that characterize tanning effluents.**

Levels of Removal of Major Pollutants in Water (Treatment Plants in the Tanning Districts of Tuscany and Veneto)

2023 data

-97,8%	-99,4%	-95,5%	-99,5%	-28%
COD	Chromium III	Total Nitrogen	Suspended Solids	Chlorides

Emissions

The emissions generated by boilers and energy generators depend on the type of production process, with significant variations based on the type of product.

The emissions release a range of gases into the air that can contribute to the greenhouse effect (such as CO_2 and nitrogen oxides). For these, the impact indicator considered is the CO_2 equivalent content, calculated based on energy consumption, evaluating both direct (gas, diesel, and other fuels) and indirect (electricity consumption from off-site generation) contributions.

CO_2 eq emitted per m^2 of leather produced:

2,03 [Kg CO_2 eq/m^2]

2023 data

The emission of VOCs (Volatile Organic Compounds), on the other hand, is significantly influenced by the intended use of the leather. Filters and scrubbers installed to safeguard the facilities minimize pollutant emissions and help meet regulatory parameters.

VOCs emissions per m^2 of leather produced:

54 [g/m^2]

2023 data

Solid wastes

Less than 30% by weight of raw hides is converted into finished products; the residual material, removed during the various stages of the tanning process, generates **by-products and** heterogeneous **waste**, which are destined for different treatments or uses depending on their origin.

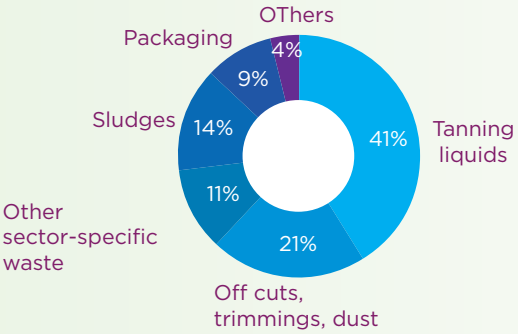
Waste produced per m² of leather produced

1,88 [Kg /m²]

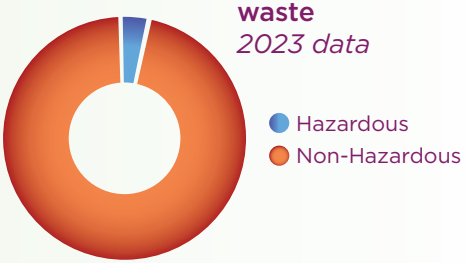
Waste produced excluding tanning liquids per m² of leather produced

1,11 [Kg /m²]

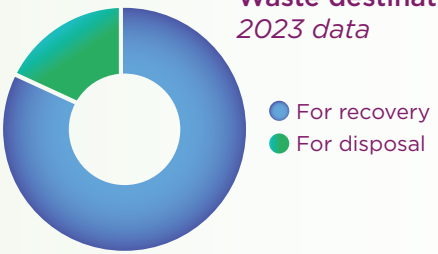
Types of waste
2023 data



Hazardousness of waste
2023 data



Waste destinations
2023 data



The flesh, which results from the mechanical removal of subcutaneous tissue from the hides in the liming process, **hair, and other solid residues from the early stages of processing** are not classified as waste under current regulations, but as **ABPs (Animal By Products) recovered and reused in other industrial sectors.**

ABPs produced per m² of leather produced:

1,96 [Kg /m²]

Social

The Italian tanning industry, with its deep roots in craftsmanship and creativity, places great importance to people, recognising their central role in its production model.

SOCIO-ECONOMIC FRAMEWORK OF THE ITALIAN LEATHER INDUSTRY

1.074
companies

17.230
employees

95,4 millions of m^2
production volume

4,1 billions of €
production value

67%
EU production value

25%
global production value

74,3%
permanent workers

17,2%
female employment share of the total

10,7%
foreign employment share of the total

HEALTH AND SAFETY IN THE WORKPLACE

The safety and health of workers in tanneries are key elements of the Italian tanning industry's **social responsibility**. The industry's focus on the health and safety of workers has led to significant results over the years in terms of prevention, as shown by INAIL data related to workplace injuries and occupational diseases.

521

number of injuries

Inail 2023 data

76%

workplace injuries

2023 data

24%

commuting injuries

2023 data

TRAINING

One of the goals of the SDGs for 2030 is to substantially increase the number of young people and adults with relevant skills, including technical and professional skills, for employment and entrepreneurship.

This is the context for the ongoing commitment of UNIC - Concerie Italiane and the entire tanning sector to promoting **training and enhancing the culture of Italian leather** and its distinctive values through educational initiatives aimed at schools, higher education institutions, universities, and commercial operators throughout the supply chain.

Training of young people in secondary schools, IFTS, ITS, fashion institutes, and universities both in Italy and abroad

- 150 courses
- 4.310 partecipants
- 378 hours of lessons

Training in the supply chain for brands, manufacturing companies, retailers,designers

- 25 courses
- 400 partecipants
- 125 hours of lessons

Governance

An inclusive approach focused on dialogue, aimed at promoting collaborative relationships with stakeholders and encouraging shared management of environmental, social, and economic responsibilities.

TRACEABILITY

Traceability is a fundamental tool for the Italian leather industry to ensure that raw hides come from ethically sustainable sources, with particular attention to preventing deforestation, animal welfare, and reducing the environmental impact of livestock farming. The Italian tanning industry has long been actively engaged in the collection and transparent sharingof information relating to its production chain.

Guides, standard e certifications

Traceability systems have the greatest value when implemented using relevant **standards and regulations**, including for the data to be collected and exchanged.
The sector has developed a range of tools, such as standards, guidelines, and certifications, to implement traceability systems and ensure **high levels of compliance** with stakeholders on this
issue. One of the most widely used tools among these is the **ICEC TS 410 and 412 certification.**

DEFORESTATION

Recognizing the crucial role that biodiversity and forest protection play in food security, public health, and global socio-economic development, **for over fifteen years, UNIC** has actively supported the tanning sector and the entire production chain through initiatives aimed at preventing any form of connection with farms originating or expanding through illegal deforestation practices, with particular reference to areas at risk in South America.

In this context, one of the most significant interventions is the collaboration with the non-governmental organizations **NWF** (NationalWildlife Federation) and **WWF USA** (World Wide Fund for Nature),which has led to the development of the project**.**

ANIMAL WELFARE

Since raw hides are a by-product of meat, responsibility for animal welfare, defined as an assessment system with the aim of minimizing suffering in the conditions of breeding, transport, slaughter, and butchering of animals, fallsmainly on breeders and slaughterers.The tanning industry also has a limited role due to its lowThe tanning industry also has a limited role due to its low commercial weight (the value of hides is only 1%-5% of the total value of the animal). Despite this, the tanning sector monitors farming and slaughtering practices in accordance with internationaland European regulations, thus contributing to improving the quality of hides and responding to growing ethical concerns. A study has shown that **78% of processed hides come from areas with advanced regulations** (Europe, North America, and Oceania).

PARTNERSHIPS FOR SUSTAINABILITY

The sustainability of leather depends on the shared commitment of all players in the supply chain. Since the tanning industry represents only one stage in the process, the active involvement of farmers, slaughterers, and other stakeholders is essential. In this context, UNIC participates in international and multisectoral round tables on sustainability, promoting collaborations with both established partners and new interlocutors.

In February 2022, UNIC becomes a member of the **United Nations Global Compact Network**.

Since 2017, UNIC has been participating in SARCA, an international initiative that promotes transparent and responsible supply chains for reptile leather.

In 2018, UNIC and **NWF National Wildlife Federation** signed a collaboration agreement for projects against deforestation.

In 2021, UNIC, ICEC, and **WWF USA** formed a partnership on various environmental issues.

In December 2021, UNIC signed the **Terra Carta**, an initiative launched by the then Prince Charles of England to promote the protection of nature.

Since 2015, UNIC has been collaborating with **ZDHC Zero Discharge Hazardous Chemicals**, a multi-stakeholder initiative on the use of chemicals in the fashion industry.

Tanneries that collaborated for data

Ambassador S.p.a.
Antiba S.p.a.
BCN Concerie S.p.a.
Bonaudo S.p.a.
Conceria INCAS S.p.a.
Conceria Pegaso S.p.a.
Conceria Pietro Presot S.r.l
Conceria Settebello S.p.a.
Conceria Zabri S.p.a.
D.L. Leather S.r.l
Dani S.p.a.
Nuti Ivo Group - Nuti Ivo S.p.a.
Nuti Ivo Group - Everest S.p.a.
Nuti Ivo Group - Lloyd S.p.a.
Finco 1865 S.p.a
Russo di Casandrino S.p.a.
Sciarada Industria Conciaria S.p.a.
Vignola Nobile S.p.a.

Thanks also for the contributions

Acque del Chiampo S.p.a.
Confindustria (Centro Studi)
Consorzio Acquarno S.p.a.
Consorzio Cuoio-Depur S.p.a.
ICEC – Istituto di Certificazione della Qualità per l'Industria Conciaria
INAIL – Istituto Nazionale per l'Assicurazione contro gli Infortuni sul Lavoro
Medio Chiampo S.p.a.
Studio Bini

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