



SUMMARY REPORT

on vocational education & training for
transhumance practitioners

MARCH 2023



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CONTENT & DESIGN OF FIGURES

Kerstin Potthoff (NMBU) has compiled the information for the figures based on the National Reports and additional information provided by the partners. Nuria Liébana (OnP) has designed the figures.

AUTHOR'S NOTE

All the information collected in this summary report has been done with great care to the topic and involved stakeholders by project partners across Europe, however this report does not imply total correctness/accuracy as its main goal is to provide an overview of trends and differences in transhumance practices. Further resources are made available in the final section of this report.

CREDITS OF THE PICTURES ON FRONT PAGE

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INTRODUCTION

The TRANSFARM project (Vocational education & training for transhumance practitioners), financed by the ERASMUS+ funding programme, aims to empower transhumance practitioners and rural entrepreneurs who wish to start or maintain transhumance practices and provide them with training material. At the same time, the project wishes to raise awareness on transhumance with a specific focus on its benefits for rural development, landscape management, and biodiversity. The TRANSFARM project started in December 2021 and will end in May 2024 and consists of seven partners across multiple European countries: the Institute for Research on European Agricultural Landscapes e.V. (DE), Hof und Leben (DE), OnProjects (ES), the Technical University in Zvolen (SK), the Aristotle University of Thessaloniki (GR), the European Landowners' Organisation (BE), and the Norwegian University of Life Sciences (NO) – the latter coordinating the project. In addition, the project has three associated partners: The Polish Farm Advisory and Training Centre (PL), the Norwegian Institute of Bioeconomy (NO) and VetAgroSup (FR).

To be considered as transhumance within the TRANSFARM project, livestock has to be accompanied by people. To distinguish between the various types of transhumance practices, characteristics such as range, distance, and direction of elevational movement have been used. For example, vertical transhumance takes place between lowlands and mountain valleys and high-altitude mountain pastures, as can be observed in the Alps and Scandinavia. Horizontal transhumance refers to a continuous movement of livestock without large differences in altitude.

"Seasonal, long-distance movement of livestock between fixed pastures at varying distances to the permanent farm"

Definition of Transhumance (for definitions of terms see the glossary on the Transfarm website)

However, from a European perspective, transhumance encompasses a broad range of practices that resist clear-cut definition. More recently, landscape management has emerged as a prevailing purpose of transhumance, and an ever-increasing use of modern means of transportation and technological tools (e.g., no fence technology through collars with GPS transmitters) have utterly diversified transhumance practices. Moreover, transitions to practices occur that comprise the movement of livestock among pastures as well as people who look after the livestock; however, the degree to which livestock is attended in person is decreasing due to technological advances. As one of the first steps of the TRANSFARM project, the partners compiled an overview about the current situation of transhumance in their respective countries into National Reports: France, Germany, Greece, Hungary, Italy, the Low Countries (including Belgium and the Netherlands), Norway, Slovakia, and Spain. These in-depth reports are available from the project's website (<https://transfarm-erasmus.eu>).

As an addition to the National Reports, this Summary Report collates information from the Reports into an overview across national borders with the goal to present the state transhumance practices across a continental scale, in contrast to a national scale. The information presented in this report follows a structure similar for all National Reports and answers a set of questions agreed upon by the project partners to ensure consistency. Topics covered include the current extent of and awareness about transhumance, educational offers, as well as challenges for transhumance practitioners. This Summary Report provides information about transhumance in a very condensed form. Interested readers are asked to refer to the section 'Literature and additional resources' and the National Reports for more country-specific information. Moreover, text boxes will be added to the online version of this Summary Report to provide even more additional information.

CURRENT AREAS OF TRANSHUMANCE

Transhumance is currently practised in all project countries, apart from the Low Countries, which will therefore no longer be considered in the remaining part of the report.

Summer pastures (where livestock graze) are located in mountainous areas as well as in other areas of marginal crop production (e.g., salt marshes and heathlands), whereas winter pastures are commonly located in the lowlands.

More recently urban and peri-urban (adjacent to cities) areas have been taken into use for transhumance.

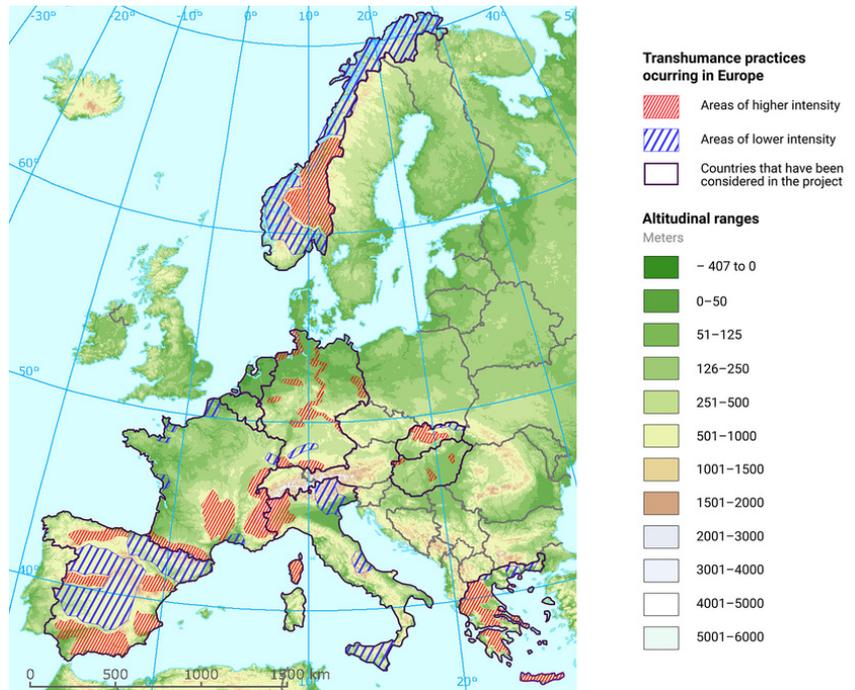


Figure 1. Current extent of transhumance in Europe in the countries considered in the project. Currently no transhumance is practised in Belgium & the Netherlands.

HISTORY

In central and southern European partner countries, the practice of transhumance started already in the Neolithic, which is the era when farming began. In contrast, in Slovakia & Hungary, it was first introduced during the Middle Ages. Throughout history, transhumance increased and decreased based on country- and region-specific events. However, what unites all the countries is the current decreasing trend of transhumance practices in the modern era.

Table 1. A selection of events during transhumance history. For more details see the Project's Website. N.B.: the timing of the periods differ among countries. The time periods overlap since the earliest occurrence of an age and its latest occurrence is shown.

Countries*	GR	IT	FR	ES	NO	SK	HU
6500 – 1800 BC <i>Neolithic</i>	Transhumance dates back to the Neolithic	Transhumance dates back to the Prehistoric	Existence of a form of transhumance	Evidence of Neolithic groups in the highlands			
3200 – 500 BC <i>Bronze Age</i>				Minor livestock movements between valleys and mountains	Maybe establishment of seasonal farming		
1200 BC – 1050 AD <i>Iron Age</i>					Establishment of seasonal farming		
753 BC – 476 AD <i>Roman Age</i>	Extensive rangelands created	111 BC Lex agraria: Regulates use of public pastures and roads					
324 – 1537 AD <i>Middle Ages</i>	Extensive rangelands created	Since 1100s, transhumance plays a key role in the north	Since 1300s, all sheep flocks in the south involved in transhumance	410 Visigothic Law: Free transit of herds on public roads	Expansion during the Viking Age and early Middle Ages	In 1200s, transhumance started with the Wallachian culture	In 1363, transhumance mentioned for the first time
1453 - present <i>Modern Era</i>	After WWII decline of transhumance due to rural exodus	Since 1950s, strong decline of transhumance	In 1950, sheep flock at minimum number, new decline since 1980s	After WWII rural exodus, transhumance becomes marginal	Largest number of seasonal farms c. 1850, afterwards decline	In 1950s, strong decline of transhumance	The war from 1886 - 1891 ended traditional form of transhumance

*Countries: FR = France; GR = Greece; HU = Hungary; IT = Italy; NO = Norway; SK = Slovakia; ES = Spain.

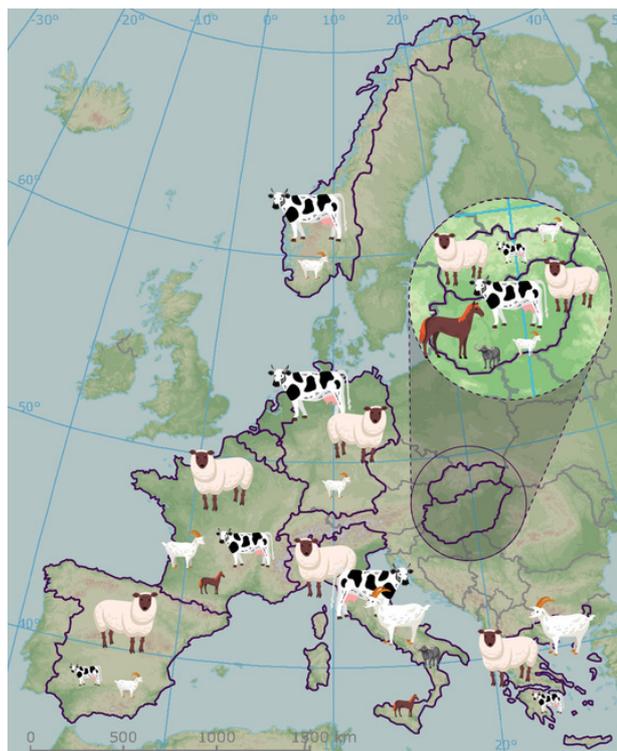
LIVESTOCK

The most common types of livestock used for transhumance across the project partner countries that have been identified are sheep, goats, and cattle;

To a minor degree, horses and buffaloes have also been identified as being involved in transhumance;

In some countries, accompanying animals are used for transport (donkeys) and protection (dogs). These animals are used for transhumance practices and are not the animals being shepherded;

In several countries, both regional and local breeds are used for transhumance (Figure 2). In the long-term, this helps maintain a diversity of different breeds.



Grey cattle, Hungary. Photo: Csaba Centeri



Hungarian Racka, Hungary. Photo: Alexandra Kruse



Grey cattle, Hungary. Photo: Csaba Centeri



Telemark cattle, Norway. Photo: Anna Rehnberg, Norsk genressurscenter, NIBIO



Vestland fjord cattle, Norway. Photo: Anna Rehnberg, Norsk genressurscenter, NIBIO



Coloursided Troender and Nordland Cattle, Norway. Photo: Anna Rehnberg, Norsk genressurscenter, NIBIO

Figure 2. Types of local and regional livestock breeds used for transhumance practices in Europe; background map: <https://www.eea.europa.eu/data-and-maps/figures/major-mountain-ranges-of-europe-1>.

Table 2. Estimated number of livestock involved in transhumance per project partner country.

Countries*	FR	DE	GR	HU	IT	NO	SK	ES
Number of heads of livestock	Alps & Provence: 770,000 sheep, 90,000 cattle, 15,000 goats, 2000 horses Jura: 35,000 cattle	50,000 cattle, 115,000 sheep	60,000 cattle, 934,000 sheep & goats	20,000	266,000 sheep & goats 215,000 cattle	-	-	365,000 cattle (intra-community) 45,000 cattle (inter-community; outward) 30,000 cattle (inter-community; return) 450,000 sheep (intra-community) 50,000 sheep (inter-community)
Number of heads of livestock (%)	c. 22	< 1 of the cattle c. 8 of the sheep	< 6.5 of the cattle c. 7.5 of the sheep & goat flocks	-	2.2 sheep & goats 3.6 cattle & buffaloes	-	-	6 cattle 3 sheep

* FR = France; DE = Germany; GR = Greece; HU = Hungary; IT = Italy; NO = Norway; SK = Slovakia; ES = Spain

- Data not available

TRANSHUMANCE PRACTITIONERS

A range of transhumance practitioners have been found; farmers (male and female), members of the farmers' families, hired shepherds and dairymaids/men (responsible for milking and processing of milk) (Figure 3);

As a whole, transhumance practitioners are men – shepherds and dairymen, with Norway being the only exception where dairymaids are far more common than dairymen;

In France, an increasing trend of female herders has been identified;

In addition, there is an increasing trend in the share of transhumance practitioners coming from abroad, due to immigration (among other factors);

However, there is a significant lack of centralised, consistent, and standardised statistics of transhumance practitioners across the continent (Table 3).



Figure 3. Examples of transhumance practitioners; background map: <https://www.eea.europa.eu/data-and-maps/figures/major-mountain-ranges-of-europe-1>.

Table 3. Transhumance practitioners and farms or seasonal farms involved in transhumance across selected TRANSFARM project partner countries.

Countries*	FR	DE	GR	HU	IT	NO	SK	ES
Number of transhumance practitioners	c. 20,000 shepherds	2,600 or less farmers	-	c. 100 - 500 practitioners	> 8,000 practitioners	-	-	-
Farms/seasonal farms involved in transhumance	c. 60,000 farms	-	3,300 sheep & goat farms 940 cattle farms	-	-	780 seasonal farms	-	8400 farms

* FR = France; DE = Germany; GR = Greece; HU = Hungary; IT = Italy; NO = Norway; SK = Slovakia; ES = Spain

- Data not available

KINDS OF TRANSHUMANCE

Current transhumance practices cover a broad range of movement patterns across the continent (Figure 4).

The most common movement is from low-elevation areas in winter to high-elevation areas in summer due to limited space in lowland areas (among other reasons). Pastures in high elevations are due to climatic conditions only available during summer.

However it is interesting to highlight the significant differences in elevational range and distances covered among countries and regions.

Overall, movement occurs via vehicles (e.g., lorries, trailers), however there is still a presence of movement on foot.

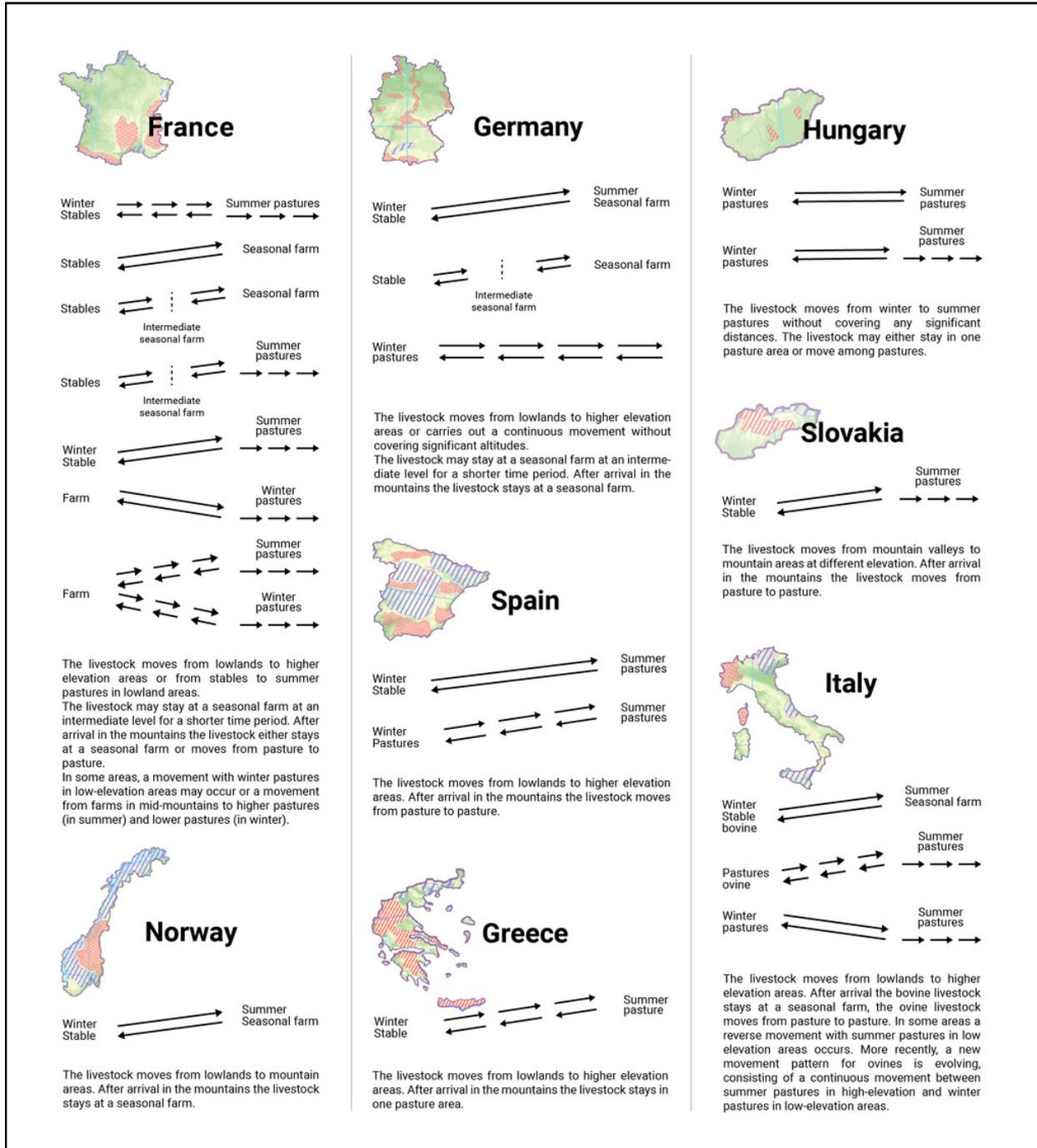


Figure 4. Types of transhumance movements occurring in the different countries in Europe. N.B: if livestock is transported by vehicles the movement to the summer pastures is not occurring in several steps.

PURPOSE & PRODUCTS

The main purpose of transhumance is to make use of grazing resources for livestock.

Transhumance practitioners provide a range of different products: milk and associated products (e.g., cheese and yoghurt) as well as meat and associated products (e.g., sausages).

However, it is interesting to point out that the historically valuable wool has decreased in value. Landscape management is becoming an increasingly important purpose of transhumance occurring, for example in protected areas (Figure 5).



Dairymaid selling sausages and cheese to visitors, Norway. Photo: Alexandra Kruse



Special cheese, Norway. Photo: Alexandra Kruse



Trotters tripe, Hungary. Photo: Csaba Centeri

Figure 5. Purposes of and major products resulting from transhumance practices in selected European countries; background map: <https://www.eea.europa.eu/data-and-maps/figures/major-mountain-ranges-of-europe-1>.

VALUES & MEANINGS



Cheese dairy with shop, Austria. Photo: Alexandra Kruse



Seasonal farms with cheese dairy, Norway. Photo: Alexandra Kruse



Stone enclosures to protect flocks during the night, France. Photo: Alexandra Kruse



Seasonal farmstead, Norway. Photo: Oskar Puschmann, NIBIO



Heathland - typical transhumance landscape, France. Photo: Alexandra Kruse



Ephemeral buildings for transhumance practitioners, Greece. Photo: Maria Karatassiou



Dehesa - typical transhumance landscape, Spain. Photo: Ignacio Rojas Pino



Dehesa - typical transhumance landscape, Greece. Photo: Maria Karatassiou



Flutes for communication in the mountains, Slovakia. Photo: Alexandra Kruse

Historically, across all partner countries, transhumance has been an important socio-economic production system. While income from transhumance and transhumance's importance for practitioners' self-sufficiency has declined in recent times, transhumance provides significant cultural heritage values.

Nationally and internationally recognized tangible and intangible cultural heritage provides new economic opportunities for rural communities in terms of tourism. Transhumance is also important for maintaining tangible and intangible cultural heritage, attractive landscapes, and biodiversity.

Transhumance provides important knowledge on how to utilise marginal resources and produce high-quality food at the same time. This is crucial in modern times and for future perspectives since there is an increase in demand for locally produced high-quality food.

Figure 6. Identified values created by transhumance practitioners in Europe over time.

LEGAL SITUATION & FUNDING

FUNDING AVAILABLE	FUNDING NOT AVAILABLE
 Norway	 Spain
 France	 Hungary
 Germany	 Slovakia
 Italy	 Greece

For the most part, farmers, shepherds, or companies own the livestock that is used for transhumance.

Pastures are owned by a wide range of different stakeholders: official public bodies (e.g., state, municipalities), communities, farmers, and other private landowners.

Transhumance practitioners, as a whole, receive funding and support in line with other agricultural practitioners, such as payments through the Common Agricultural Policy and compensation payments for livestock killed by predators (Figure 7).

Figure 7. Availability of funding in TRANSFARM project partner countries specifically targeted at transhumance activities.

In some countries, landscape management is remunerated (e.g., Germany and Hungary), whereas in others it is not. In some countries transhumance practitioners receive funding targeted at transhumance .

VOCATIONAL EDUCATION, TRAINING OFFERS & TRAINING GAPS

In all countries, informal acquisition of knowledge through learning from other practitioners has been identified as an important way for transhumance practitioners to get access to know-how and skill development.

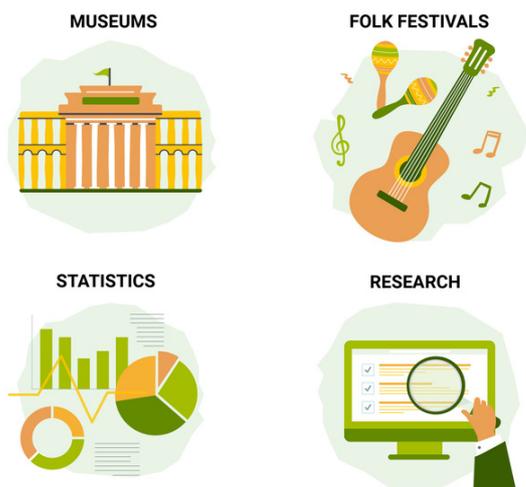
The degree to which vocational education and training is available varies strongly among countries (Figure 8).

In several countries courses providing different kinds of skill development within, for example, herding, hygiene regulations or cheese production are offered by private and public organisations; however few countries offer comprehensive education by one specific organisation.

Figure 8. Types of formal education of and on transhumance practices offered across selected European countries. N.B.: learning from other practitioners is an important way to acquire knowledge in all countries.

FRANCE	<ul style="list-style-type: none"> • Training at training centres • Training through shepherd organisations • Training offers at two High schools
SPAIN	<ul style="list-style-type: none"> • Private shepherd schools • Courses on transhumance related topics
NORWAY	<ul style="list-style-type: none"> • No complete transhumance education • Offers through some secondary schools and at seasonal farms
ITALY	<ul style="list-style-type: none"> • No formalised VET offer • Recent attempts to provide offer
SLOVAKIA	<ul style="list-style-type: none"> • No specific VET offer • Different educational initiatives on related topics
GERMANY	<ul style="list-style-type: none"> • No formalised VET offer • Attempts to provide offers and different educational initiatives by shepherd organizations and associations
HUNGARY	<ul style="list-style-type: none"> • No formalised VET offer
GREECE	<ul style="list-style-type: none"> • No formalised VET offer

AVAILABLE KNOWLEDGE



It has been found that the available knowledge on transhumance practices and to which degree it is easily available differs strongly among countries.

Examples of sources and/or locations for available information have however been consistent with regard to museums, film festivals, research activities, and folk festivals (Figure 9).

A general consensus amongst the project countries is that to increase the awareness on transhumance practices, the knowledge on the topic must be made more available to the general public.

Figure 9. Various means of transhumance knowledge transfer identified in the TRANSFARM project in selected European countries.

AWARENESS

Individuals currently close to and/or linked to agricultural production, e.g., through their place of residence or family ties, have a higher awareness of transhumance than those entirely disconnected from agricultural production.

Based on the limited availability of data across the countries, to compare the degree to which the general public is aware of transhumance among the different countries is not possible, leading to difficulties in finding detailed trends.

In several countries, certain activities (Figure 10) are undertaken to raise awareness of transhumance, such as festivals that specifically celebrate the return of the livestock from the mountain pastures (e.g., in France), as well as ones that welcome visitors at seasonal farms.



Herder with folkloristic/traditional cap, Hungary. Photo: Csaba Centeri



Transhumance Museum of Podpolaniein, Slovakia. Photo: Alexandra Kruse



Dairymaid showing the seasonal farm to tourists and especially school classes, Norway. Photo: Alexandra Kruse



Group visiting an organic alpine dairy. The cables transport the milk directly from the pastures to the dairy, Austria. Photo: Alexandra Kruse



Group visiting an organic alpine dairy, Austria. Photo: Alexandra Kruse



Educational trail explaining different transhumance activities, Austria. Photo: Alexandra Kruse



Stew festival, Hungary. Photo: Csaba Centeri

Figure 10. Examples of identified activities that raise awareness of transhumance practices.

A noteworthy example of awareness raising is the inscription of transhumance on the UNESCO world heritage list as intangible cultural heritage in 2019.

CHALLENGES

Figure 11. Identified main challenges for transhumance practices in selected European countries as part of the TRANSFARM project

Transhumance and the values transhumance practitioners produce are recognized to a small degree.

The number of transhumance practitioners is declining, resulting in a decrease in available workforce. This leads to a significantly lower chance of knowledge transfer, due to the fact that transhumance practitioners are the largest source of teachings in the practices.

MAIN CHALLENGES FOR TRANSHUMANCE			
Declining number of practitioners	Future economic support and economic viability	Wolf predation	Access to water and grazing resources
 SPAIN FRANCE	 SPAIN FRANCE	 ITALY FRANCE SLOVAKIA	 FRANCE SLOVAKIA
 NORWAY GREECE	 NORWAY SLOVAKIA	Competition with other types of land use in lowland areas	
 GERMANY SLOVAKIA	 GERMANY GREECE		
 HUNGARY		 SPAIN FRANCE ITALY	

Serious concerns about uncertainty of future economic support indicates that economic viability is an issue for transhumance practitioners and a deciding factor on whether or not they continue/begin practices. There is rising competition in the lowlands between transhumance practitioners who wish to utilise pasture land and urban and industrial developers. Significant shifts in the natural environment such as the return of the wolf and the impact of climate change on pastures and water supply poses threats and challenges the access to important resources. Other challenges highlighted in the National reports include fragmentation of land, drops in meat consumption, increases in larger-scale farming, and practical and logistical challenges.

CONCLUSION & PATHWAY FORWARD

This report has clearly highlighted that transhumance enriches rural areas. It provides attractive and diverse landscapes, tangible and intangible heritage, high-quality food products, and it is an important part of living rural culture. However, declining numbers of transhumance practitioners has been highlighted as one of the main challenges to maintain and develop transhumance throughout the countries represented in the TRANSFARM project. There is an important need to make the transhumance profession attractive enough to compete with other types of occupations in the rural sector. Thus raising awareness about transhumance and the needs of practitioners is important in this respect. For example, access to pastures needs to be secured, especially in the lowlands. The maintenance of transhumance seems to be challenged by worries about future economic support and viability, meaning that increased and secured economic incentives targeted at transhumance practitioners are important for the future of transhumance.

A declining number of transhumance practitioners has not only had an impact on the degree to which transhumance is practised but also on learning opportunities for practitioners. Transfer of knowledge among different generations of practitioners and learning from each other is as important in the present day as it was in the past. Therefore, to support platforms for knowledge exchange such as transhumance practitioners' associations is essential to maintain and pass on knowledge. The number of educational offers and the degree to which they are institutionalised differ strongly among the partner countries. Making educational offers available will support knowledge exchange and learning and help to make the transhumance profession more attractive.

This report has shown that there is a broad range of transhumance practices occurring in the partner countries. To promote and raise awareness about transhumance and its values, it is important to support all different ways of practising transhumance. Finally, more knowledge about transhumance is needed especially in terms of providing and collecting data that is comparable across national borders, for example, knowledge about the awareness of transhumance and statistics such as the number of practitioners or heads of livestock involved in transhumance.

LITERATURE & ADDITIONAL RESOURCES

This section provides a selection of references to literature about transhumance and other resources that can be used to get country- and place-specific information about transhumance.



- <https://www.farmingfornature.ie/resources/best-practice-guides>
- Bele, B., Nielsen, V. K. S. N., Orejas, A. & Tejedó, J. A. R. 2021. Intangible cultural heritage of transhumance landscapes: their roles and values – examples from Norway, France and Spain. In: Bowden, M. & Herring, P. (eds.) Transhumance. Papers from the International Association of Landscape Archaeology Conference, Newcastle upon Tyne, 2018. Archaeopress, Oxford, pp. 111-128.
- Daugstad, K., Mier, M. F. & Peña-Chocarro, L. 2014. Landscapes of transhumance in Norway and Spain: Farmers' practices, perceptions, and value orientations. *Nor. J. Geogr.* 68, 248-258.
- Potthoff, K., Smrekar, A., Hribar, M. Š. & Urbanc, M. 2020. The past and perspective development of pasturing and tourism in the mountains: Insights from Norway and Slovenia. *Geografski vestnik* 92, 81-99.



- Blaschka, A., Ringdorfer, R., Huber, R. Guggenberger, T. & P. Haslgrübler 2014. Almkultivierung durch gezielte Beweidung mit Schafen – Ergebnisse aus dem Almlammprojekt.
- David Bollier & Silke Helfrich (Ed.) (2015): Patterns of communing. The commons strategy Group.
- Bundesanstalt für Landwirtschaft und Ernährung BLE (2021) Statistisches Jahrbuch über Ernährung, Landwirtschaft und Forsten 2021
- Czerkus Gunther, Evelyn Mathias and Andreas Schenk; Bundesverband Berufsschäfer (German Association of Professional Shepherds) (2020); Accounting for pastoralists in Germany
- Deutscher Bundestag (2019): Bedeutung der Wanderschäfer für die Biodiversität in Deutschland. Antwort der Bundesregierung auf eine Anfrage der Grünen. Drucksache 19/12778
- Gerken, Bernd & Martin Görner (eds) (2000): Landscape Development with Large Herbivores. New Models and Practical Experiences. (Neue Modelle zu Maßnahmen der Landschaftsentwicklung mit großen Pflanzenfressern. Praktische Erfahrungen bei der Umsetzung. In: Natur- und Kulturlandschaft. Band 4. Brakel.
- Herder-City Hungen: <https://www.hungen.de/leben-wohnen/gemeindeportrait-die-schaeferstadt/>
- Jacobeit, W. 1987 Schafhaltung und Schäfer in Zentraleuropa bis zum Beginn des 20. Jh.
- Luick, R. (2004): Transhumance in Germany. Pp. 137–54 in: R.G.H. Bunce et al. (eds.). Transhumance and biodiversity in European mountains. Report of the EUFP5 project TRANSHUMOUNT (EVK2CT200280017). IALE publication series No 1.
- Treiber, R. 2019 Gewöhnlicher Wacholder und Feld-Mannstreu als Zeigerpflanzen historischer Beweidung im Kaiserstuhl und am südlichen Oberrhein. Available: www.lubw.baden-wuerttemberg.de



- Antón Burgos (2007) Trashumancia y turismo en España. Cuadernos de Turismo, nº 20, (2007); pp. 27-54
- Estévez, Á. B. (2017). Tras la huella de la trashumancia. In Los Santos de Maimona en la historia VIII y otros estudios de la Orden de Santiago (pp. 69-96). Asociación histórico-cultural Maimona.
- Fernández-Giménez and Ritten Pastoralism: Research, Policy and Practice (2020) 10:10 <https://doi.org/10.1186/s13570-020-00163-4>
- Klein, J. (2013). The Mesta: A Study in Spanish Economic History, 1273-1836, Cambridge, MA and London, England: Harvard University Press. <https://doi.org/10.4159/harvard.9780674337206>
- MAFE -Ministry of Agriculture, Food and Environment-(2013). Transhumance White Paper [https://www.mapa.gob.es/es/desarrollo-rural/publicaciones/publicaciones-de-desarrollo\[1\]rural/LIBRO%20BLANCO%202013_tcm30-131212.pdf](https://www.mapa.gob.es/es/desarrollo-rural/publicaciones/publicaciones-de-desarrollo[1]rural/LIBRO%20BLANCO%202013_tcm30-131212.pdf)
- Zabalza, S., Linares, A., Astrain C., (2020) Identificación de barreras y oportunidades en la cadena de valor del ovino – caprino extensivo. https://trashumanciaynaturaleza.org/wp-content/uploads/2021/03/Informe_ovino_cadena_valor_v6.pdf

LITERATURE & ADDITIONAL RESOURCES



- Intangible cultural heritage inventory sheet, Practices and know-how of transhumance in France (Fiche d'inventaire du patrimoine culturel immatériel, les pratiques et savoir-faire de la transhumance en France), 2020.
- De Roince C., Seegers J., Étude prospective du pastoralisme français dans le contexte de la prédation exercée par le loup, 2020.
- ProjetPastoM, Propositions partagées pour améliorer les soutiens à l'agropastoralisme de montagne, Paris, Réseau rural national, 2018.
- UICN France, Panorama des services écologiques fournis par les milieux naturels en France – volume 2.4 : les écosystèmes montagnards. Paris, France, 2014.
- Gelin M, Quelles formes de transhumance dans les élevages européens, et quels enjeux (patrimoniaux, socio-économiques, écologiques, politiques) associés ? Synthèse bibliographique dans le cadre de la formation Systèmes d'élevage de l'Institut Agro - Montpellier SupAgro, 2020.



- Ragkos A., 2022, Transhumance in Greece: Multifunctionality as an Asset for Sustainable Development. In Letizia Bindi (ed) Grazing Communities: Pastoralism on the Move and Biocultural Heritage Frictions (Environmental Anthropology and Ethnobiology, 29). Pp 23 -43.
- National Inventory of the Intangible Cultural Heritage of Greece. Transhumant Livestock Farming. Available online: https://ayla.culture.gr/wp-content/uploads/2017/07/TRANSHUMANCE_GREECE_TRANSL.pdf (accessed on 15 Decemper 2022).
- Chatzimichali A., 2007. Sarakatsanoi, 2nd ed.; Angeliki Chatzimichali Foundation: Athina, Greece (In Greek).



- Paládi-Kovács A. 1965: A keleti palócok pásztorkodása. Műv. Hagy. VII. Debrecen
- Paládi-Kovács A. 1993a: A magyar állattartó kultúra korszakai. Kapcsolatok, változások és történeti rétegek a 19. század elejéig. Budapest
- Petercsák V. 1979: Közbirtokosságok, legeltetési társulatok a Hegyközben. HOMÉ XVII–XVIII. 261–280. Miskolc



- Aromataro M. M., 1992, Transumanza e civiltà sannitica, in «Civiltà della transumanza». Atti della Giornata di Studi (Castel del Monte, 4 agosto 1990), Archeoclub d'Italia - Sezione di Castel del Monte (AQ).
- Bindi L., 2019, "Bones" and pathways. Transhumant tracks, inner areas and cultural heritage, in "Il capitale culturale Studies on the Value of Cultural Heritage", 19, Università di Macerata.
- Cammerino A. R. B., Biscotti S., De Iulio R., Monteleone M, 2018, The sheep tracks of transhumance in the Apulia region (South Italy): steps to a strategy of agricultural landscape conservation, in "Applied Ecology And Environmental Research", available online: <http://www.aloki.hu>.
- Liechti K., Biber J. P., 2016, Pastoralism in Europe: characteristics and challenges of highland-lowland transhumance, in Rev. Sci. Tech. Off. Int. Epiz., 35 (2), 561-575.
- Motivazione della pratica agricola "La Transumanza", 2017, Registro nazionale dei Paesaggi Rurali, delle Pratiche Agricole e delle Conoscenze Tradizionali, available online: 06. La Transumanza (www.reterurale.it)
- UNESCO, Nomination file no. 01470 for inscription in 2019 on Representative List of the Intangible Cultural Heritage of Humanity, Fourth Session, Bogotá Colombia.

LITERATURE & ADDITIONAL RESOURCES



- Bjørlo, B. & Løvberget, A. I. 2021. Beitebruk og seterdrift [Online]. Statistics Norway. Available: <https://www.ssb.no/jord-skog-jakt-og-fiskeri/artikler-og-publikasjoner/beitebruk-og-seterdrift> [Accessed 15.08.2022].
- Bungler, A. A. & Haarsaker, V. 2020. Færre og større melkebruk – hva skjer med seterdrifta? Oslo: AgriAnalyse AS.
- Fønnebø, R. 1988. Langs Nordmannsslepen over Hardangervidda. Universitetsforlaget, Oslo, 229 pp.
- Gudheim, H. 2013. Kinning, breeding og ysting i Valdres sett i norsk og internasjonal sammenheng. Mat & Kultur AS, Vangsnes, 548 pp.
- Reinton, L. 1955. Sæterbruket i Noreg I. Sætertypar og driftsformer. H. Aschehoug & Co., Oslo, Norway, 481 pp.
- Sevatdal, H. & Grimstad, S. 2003. Norwegian Commons: history, status and challenges. In: Berge, E. & Carlsson, L. (eds.) Commons: Old and New. Department of Sociology and Political Science, NTNU, Trondheim, pp. 93-132.
- Solheim, S. 1952. Norsk Sætertradisjon. H. Aschehoug & Co., Oslo, 708 pp.
- Stensgaard, K. 2019. Hvordan står det til på setra? Registrering av setermiljøer i perioden 2009–2015. NIBIO, Ås, 175 pp.
- Strand, B. & Ødegård, N. T. (eds.) 2006. Stølsvidda. Ei bok om Ulness og Svenness sameier. Stølsviddeprosjektet i Valdres, Valdres, 214 pp.



- Hreško, J., Petrovič, F. & Mišovičová, R. 2015. Mountain landscape archetypes of the Western Carpathians (Slovakia). Biodiversity and Conservation 24: 3269–3283. <https://link.springer.com/article/10.1007/s10531-015-0969-6>
- Makovický, P. & Margetin M. 2017. Sheep as livestock with significant non-productive function. AgritechScience 11 (2): 1–10. <http://www.agritech.cz/clanky/2017-2-2.pdf>
- Novák, J. 2019. Salašnictvo v Karpatoch – Carpathian mountain sheep milk farming. Nitra, p. 511. ISBN 978-80-570-0841-5. https://www.researchgate.net/profile/Jan-Novak-16/publication/330005057_Salasnictvo_v_Karpatoch_-_Carpathian_mountain_sheep_milk_farming_pdf/links/5cdbe267299bf14d95989751/Salasnictvo-v-Karpatoch-Carpathian-mountain-sheep-milk-farming-pdf.pdf