

Module 2.

How to practice transhumance

Training units

1. Moving animals through different landscapes
2. Multifunctionality links economic activities thus creates synergies
3. Transhumance and challenges
4. Transhumance education

Transhumance, as a traditional way of moving animals through different landscapes, initiates a variety of human–nature interactions, mirrored in many traditions and a large diversity of products. The training module provides an insight into transhumance linking economic activities, which create synergies among sustainable land use and biotopes preservation, water supply management, high value food production and recreational facility provision. A list of available European formal and informal training material enriches the possibilities of (self-)study and makes the training and education material international.

1. Moving animals through different landscapes

Transhumance is a human–animal activity interacting with different environments and landscapes. It is especially important for the maintenance of landscape types such as alpine meadows and heathlands. Transhumance has economic and social benefits for residents, contributes to the management of protected biotopes, and helps to maintain the landscape character. The following **transhumance landscapes** exist:

Alp: Alpes are vast areas of high mountain pastures / alpine pastures. The pasture landscape (alp) includes buildings, where herders, dairymaids and dairymen spend several months. Furthermore, alp is a synonym for common land in the mountains. Transhumance occurs between at least two different altitudes, in Switzerland up to four. The long–distance movement is between a main settlement and a seasonal settlement twice a year. After arrival at the seasonal settlement, the daily movement occurs within the alp. Due to an increase in predators, herders are re-introduced.

Common land: Common land is land used by the community of one or several municipalities or (all) farmers of an area. Common land occurs in mountains and may be located close to villages. It sometimes includes (small) forests. Common land is not a specific type of landscape but a juristic model. It has been the basis for transhumance but is disappearing.

Montado, Dehesa: Dehesa (Spanish) or Montados (Portuguese) are Mediterranean wood pastures, combining native trees such as holm oak and cork oak with grasslands. The tree cover is open but provides shadow, the grasslands provide fodder. Dehesa/Montados are landscapes of high biodiversity. They reached their greatest extent when long–distance transhumance was at its maximum. The pigs for Jamón Ibérico de Bellota gain at least 40% of their live weight only through the acorns of the holm oak (bellota means “acorn”) and herbs.

Heathland: Heathlands are extensive uncultivated pasturelands. Podzols are the typical soil types. The vegetation is dominated by dwarf ericaceous shrubs, dwarf oak, and juniper. Heathlands are generally warmer and drier than moorlands. Heathlands occur along the coasts (e.g. Mediterranean coasts), in the plains (e.g. Germany) and in the high mountains (e.g.

France). The landscape is kept open by grazing and, in some cases, controlled fire management.

Dykes: Dykes are artificial embankments along rivers and especially the coast to protect land and settlements from water. Sheep are needed to maintain the dykes, keep the grass short and the soil compact.

Table 1. Transhumance characteristics

Type of transhumance	Alp	Montado/Dehesa	Heathland	Dykes
Type of transhumance	Vertical	Horizontal	Horizontal	Horizontal
Products	Milk, cheese, meat Landscapes attractive for tourism Landscape management	Well-known local products, e.g. meat products Landscape management	Honey, meat Landscapes attractive for tourism Landscape management	Protection against flooding Landscape management
Typical livestock	Cattle, sheep, goats	Pig, cattle (Spain), sheep (Greece)	Sheep, often special breeds, e.g. German heath sheep, white horned head)	Sheep
Case studies	AT01, FRO1, GRO1, GRO3, GRO4, GRO5, NO1, NO02, NO04, NO05	ESO1		DE03

2. Multifunctionality links economic activities thus creates synergies

Transhumance is a multifunctional activity. Therefore, interactions with other professions are more than welcome to increase benefits for all actors (farmers, dairymaids/-men, herders, etc) and society. Multifunctionality often is depending on involvement of family members. Multifunctionality can include:

- **Milk and cheese production:** typical for vertical transhumance; milk is produced in all case studies; see the following case studies for examples of cheese production: DE01, GRO5, NO1, NO02, NO04, NO05, SK02
- **Meat production, especially sausages and ham:** typical for horizontal transhumance; see the following case studies for examples of meat production: DE01, DE03, FRO1, FRO3, GRO1, GRO3, GRO4, GRO5, HU01, ITO1, NO02
- **Tourism activities:** direct selling, catering, accommodation, guiding; see following the case studies and an additional example from Slovakia for examples of tourism activities: AT01, NO02, NO04, NO05, gazdovsky-dvor.com/aktivita-pre-navstevnikov.xhtml

- **Education activities:** on farms and during movement; especially urban transhumance plays an important role in establishing relationships between children and animals (where does food come from) and for therapeutically reasons (caress animals can help overcome anxieties etc.); see the following case studies for examples of education activities: [FR2](#), [FRO3](#), [ES01](#), [NO02](#), [NO04](#), [NO05](#), [SK02](#)
- **Wool products:** felt, wool, insulation material, pellets, fertilizer, polymer-fibre composites or sorbent materials (for water pollution treatment), keratin and its derivatives (for protein-based biomaterials for re-generative medicine and cosmetics); in many countries, sheep wool is considered toxic waste (see factsheet on sheep wool); see the following case studies and an additional example from Slovakia for examples of wool products: [FRO2](#), [FRO3](#), [sk-sk.facebook.com/Farma-Roziak-180127102095214](#)
- **Landscape management:** high degree of biodiversity can only be maintained, if the land is kept open; more and more countries, regions or nature protection organisations have set-up programs to hire and pay transhumance practitioners; see the following case studies for examples of paid landscape management: [DE01](#), [DE03](#), [FRO1](#), [FRO2](#), [HU01](#), [SK03](#)
- **Organising and/or participating in festivals**
- **Soap production from sheep milk**

3. Transhumance and challenges

The unit addresses challenges common to all EU countries and highlights country-specific challenges. Networking, sharing experiences and knowledge through good practices or exchange platforms can be helpful to solve problematic situations.

Difficult access to land, missing and/or disconnected grazing land and limits for animal transport by foot through settlements set-up by municipalities

Solution:

- **Settlements:** National legislation has to set-up rules for animal transport by foot through the countryside. Rules have to be same for all municipalities.
- **Roads:** In case of highly frequented roads, signs and/or other kinds of traffic regulation and crossing possibilities have to be installed.
- **Regulations** need to be implemented in the spatial / urban planning documents or other strategic planning documents, which are designed to solve conflicts of interests.



High bureaucracy (forms of several pages, street crossings need to be registered days/weeks in advance, more and more administration tasks require access to internet and computer)

Solution:

- Regular workshops of competent national bodies with farmers and other organisations engaged in transhumance for communication, exchange of knowledge and solutions to simplify administration.
- The simplification of administration needs to be addressed at national level under the supervision of competent European Union bodies, e.g. a questionnaire designed by the relevant EU body and adopted to the national situation by competent national bodies could be used to identify and solve issues of high bureaucracy.



Missing network and cooperation

Solution:

- Solutions might be embedded in educational or other projects delivering intellectual outputs.
- Regular workshops with the local/regional transhumance community for communication, exchange of knowledge and solutions. Invite different bodies and levels, depending on the topic, e.g.:
 - Farmers, local shop owners, restaurants, multipliers
 - Partners providing funding and grants, having an overview on national and EU-financing
 - Students / young generation and their teachers / trainers
 - Groups on social media (e.g. WhatsApp / Facebook) to exchange, ask questions, learn from the experience of others
- Provide financial means for persons dedicated to facilitating exchange among different stakeholders.



A workshop was organised at the Slovak Environmental Agency in Banská Bystrica to achieve higher impact of the Transfarm project. It was a very successful event. (Martina Slámová, 2023)

Increasing challenges with tourists and other people carrying out leisure activities (approach herds, especially new-borns; accidents with shepherds' dogs)

Solution:

Information about shepherds' guard dogs:

- Signposts providing information about the dogs along educational touristic trails and at the entries of protected areas
- Mobile application working also in offline mode (due to weak signal in remote mountainous areas) providing a map and the location of flocks with dogs. This solution requires transhumance practitioners to continuously update the location of their flock.
- Information could be integrated in education panels and materials about 'how to behave in nature' sometimes provided at airports.
- Flyers at tourist hotspots, accommodation facilities, tourist information points



Source: Region Savoie in France

Increasing problems with predators (bear, wolf, lynx)

Solution:

Attacks by predators can be only partly eliminated. If we want to preserve the nature of transhumance, which is characterized by the free movement of livestock without electric fences it is important

- to have a stable network of breeders of certified shepherd guard dogs. They protect herds at night in a sheltered, dog-guarded fold as well as on pastures during free grazing.
- to have additional deterrence technologies. Combining them with the presence of an adult and experienced shepherd's dog is highly effective livestock protection.
- In addition, in some countries other national solutions need to be developed.



Martina Slámová, 2023, Silica Plateau in the Slovak Karst Mts./SK

Missing acknowledgement/recognition (by citizens and administration)

Solution:

Different approaches exist:

- In the countryside, awareness raising through educational trails and agritourism (involving tourists in transhumance activities).
- Promotion of farm products and services through different media.
- Introduction of transhumance in school curricula (geography, agriculture, ecology).
- Museums, exhibitions and festivities to raise awareness and show the qualities and skills of transhumance practitioners.
- Invitation of transhumance practitioners to (international) fairs.



© Bergeries en ville.

Missing skills, due to missing education facilities, missing transfer of knowledge and foreign herders

Solution:

- Founding transhumance schools where they do not exist
- Increase awareness by sharing information (weblinks) about existing transhumance vocational education and training (formal and informal), schools and vocational centres, local action groups and non-government organisations engaged in the topic
- Requalification of training courses funded by European Social Fund (ESF) for adults who would like to do become transhumance practitioners. The ESF is a common schema for grants in Slovakia mainly to improve employment in rural regions.
- Use ERASMUS+ or other kinds of mobility grants for students to learn from good practices in different regions and countries



Low market prices

Solution:

- Direct sale at the farm often gives higher prices.
- Selling products to/at regional shops.
- Direct sale to tourists, hikers, e.g. at cable cars, train or bus stops, crossings of important hiking routes, shelter huts (if not too remote).
- Direct sale on farms is limited due to the remoteness of many farms; however, it might be catchy for tourists and hikers as 'gastronauts' (Slow Food).
- Regional shops have higher prices but residents as well as tourists know that products are of higher quality. They often are willing to pay for healthy farm products and to support local high value farming.
- Increase awareness about farm products (beginning with education in primary schools), perform promotion also in public media.
- Change EU law to facilitate the use of regional products in public canteens (school, university, enterprises)



Martina Slámová, 2023, The Farm Turček/SK



Alexandra Kruse, fridge at a dairy for self-service, Swiss Alps 2023



Alexandra Kruse, fridge and little shop for self-service with regional products at a cable car station, Swiss Alps 2023

Wool has decreased in value and is currently not effectively used in industries. It is considered toxic waste. Wool treatment is insufficient and therefore, wool processing almost disappeared in some (European) countries.

Solution:

- Continuation of traditional wool processing as attraction for tourists and for educational purposes to maintain historical knowledge and traditions and support the feeling of regional identity. People, conserving and sharing this knowledge, need to be paid, either by entry fees or by state support.
- Promotion of innovative usages of wool in construction (roof and facade insulation), in the pharmaceutical and well-being sector; as eco-packaging material, fertiliser, pellets etc.
- Support of local, regional, national processing activities
- Changing EU-regulations

For information about wool and processing alternatives see the [Transfarm factsheet about wool](#).



Income insufficient for feeding a family

Solution:

Multifunctionality – establishing various activities – can be a solution:

- It is possible to combine for instance beekeeping and transhumance with goats. Bee products are valued and easy to trade.
- Transhumance can be supported by national and European funds to ensure protected biotope's management.
- An example of multifunctionality from the Polish part of the Carpathian is "wypas kulturowy" – a cultural-social-economic model of mountain farming. The main aim of this cooperation between nature protection, landscape management, economy and local cultural and natural heritage maintenance is to preserve culture.



Missing accommodation for herders during the movement

Solution:

- In France, some municipalities provide modern caravans/cabins specifically designed for seasonal employees and students at secondary vocational schools. They have solar panels and washing facilities and are transportable, if necessary, by helicopter.
- This kind of accommodation brings innovation including water supply, electricity, internet access – i.e. a comfortable place for living. Students can test such a modern mobile house during their studies, to train for real life conditions on seasonal farms.



Pierre-François Toulze, Praloubeau/FR 2022

Missing innovation on seasonal farms

- Mountain huts may need modern equipment. Small investments (e.g., photovoltaic panels, small wind turbines) can be very helpful for remotely located seasonal farmsteads. It is possible to acquire financial support from Rural Development Programs.
- In Slovakia [Rural development Program 2014–2022](#) provided support (Submeasures 6.1 and 6.4)
- In France, some enterprises who use the transhumance landscape for advertising their products financed the equipment of mountain huts.



Martina Slámová, 2023, Jasov Plateau in the Slovak Karst Mts./SK

Lack of water supply in natural dry regions is a big problem in some landscapes, mainly in karst regions. Lack of water makes some pastures unusable.

Solution:

- Revitalisation of (historical) water resources (see photo) and water transport to pastures by vehicles.
- Creation of new water reservoirs, which will retain water in the landscape and prevent floods. Several grant schemas support such measures: Rural Development Programmes, INTERREG, LIFE+.



Martina Slámová, 2023, The Lizard Lake – water resource for farms of the Silica Plateau in the Slovak Karst Mts./SK

Pastures overgrown with shrubs provide less grass, makes it easier for the wolf to attack livestock and the shrubs use water.

Solution:

- Regular cleaning of pastures is an efficient prevention against predatory attacks, mainly wolf.
- Pastures can be cleared by students as part of regular training courses at farms.
- The biomass of shrubs and young trees is suitable for renewable energy production. Thus, it is possible to make an agreement with biomass processing companies to cut shrubs and transport biomass to the power-generation plant.
- Mixed herds guarantee a more homogeneous clearing of the pastures.



4. Transhumance education

Founding specific transhumance/shepherding schools is supported by the [European Parliament in a report from 2018](#). Shepherding schools focusing on transhumance shall be set up in those Member States where this kind of practice is common. Besides employment in livestock farming that will favour generational renewal, education enhances the dignity and social recognition of the traditional transhumance profession. The education situation varies a lot among different European countries. While for instance, Spain and France have a well-developed system of shepherds' schools, other countries have only one or few schools including transhumance in their study programmes (e.g. Slovakia and Germany).

Even model teaching and training at real farms can be in sharp contrast to the reality students meet after graduation. Playful and interactive forms of education through competitions or contests, help to improve the quality of the students' training and prepare them for real business. The ERASMUS+ mobility program funds summer camps for student training. Students and transhumance practitioners searching for good practice examples from different countries will find inspiration in the [TRANSFARM case studies](#). Last, but not least, practical training on pastures during a summer season is very important for students. They need to test real life conditions on seasonal farms.

Collection of short information and weblinks about shepherd schools and schools including transhumance in their study programmes from the countries of the project consortium.

Austria	
Shepherd school or school with study programme including transhumance	No official VET-offer.
Title of the training or study program	Information about how to become herder in Austria in the journal "Schafe und Ziegen" (sheep and goats)
Weblink & comments	schafeundziegen.com/.../ausbildungswege-fuer-schaefer
France	
Shepherd school or school with study programme including transhumance	VET-offers in several parts of France
Title of the training or study program	<ol style="list-style-type: none"> 1. The Agro Institute / Montpellier SupAgro 2. Agricultural training and promotion centres CFPPA 3. Two agricultural high schools offer operational modules
Weblink & comments	<ol style="list-style-type: none"> 1. Continuous training, diploma, master courses 2. Training for shepherds in ruminant breeding (Pamiers, Pyrenees); training for shepherds (Besançon, Jura); training for mountain pasture shepherds (Die, Southern Alps; La Côte Saint André, La Motte Servolex, Northern Alps); training for transhumant shepherds (Pau and Lannemezan, Pyrenees); training for multi-skilled shepherds (Montmorot, Jura) 3. 'Alpage école' in Contamine-sur-Arve (Northern Alps) and the Carmejane high school in Chaffaut Saint-Jurson (Southern Alps) for the training of sheep breeders in the heart of the pre-Alpine zone.
	<ul style="list-style-type: none"> • en.institut-agro-montpellier.fr/search (in English) • bergerie-nationale.educagri.fr/.../cfppa-centre-de-formation-professionnelle (in French) • epl.contamine.educagri.fr/filiere-agricole (in French) • digne-carmejane.educagri.fr/exploitation-ovine (in French)

Germany		▼
Shepherd school or school with study programme including transhumance	<p>Vocational school for training in the profession of animal farmer which offers “herder”:</p> <p>Berufsbildende Schulen des LK Saalekreis, Standort “Carl Wentzel”, Delitzscher Str. 45, 06112 Halle, E-Mail: kontakt.cw@bbs-saalekreis.bildung-lsa.de</p>	
Weblink & comments	<p>bbs-saalekreis.bildung-lsa.de</p> <p>There is a boarding school for participants</p>	
Greece		▼
Shepherd school or school with study programme including transhumance	No official VET-offer.	
Hungary		▼
Shepherd school or school with study programme including transhumance	No official VET-offer.	
Italy		▼
Shepherd school or school with study programme including transhumance	<ol style="list-style-type: none"> 1. National School of Shepherd (SNAP) 2. School “Young Shepherd” in Piedmont 3. Sardinian School for pastoralists 4. Casentino Schools of the Life Project ‘Shep4Bio’ 5. Online course 6. Istituto Agrario di Macerata (Macerata Agrarian Institute) 7. Professor Letizia Bindi (from University of Studies of Molise) 8. Istituto Storico della Resistenza e dell’Età Contemporanea di Macerata (Macerata 9. Institute for the history of Resistance movement and Contemporary age) 9. Professors from several Italian Universities (especially University of Molise) 10. CNR (National Council of Research) 11. National Park of Monti Sibillini 	
Title of the training or study program	<p>‘Il pastore è un guardiano del futuro’ (The shepherd is a guardian of future), Aim: ‘to reflect on pastoralism, safeguard and regeneration of territories’</p> <p>Organised by SNAP (see 1), first introduced in 2023 with worldwide participants.</p>	
Weblink & comments	<p>org.wwof.it/.../national-school-of-shepherding (in English)</p> <p>iisgaribaldimacerata.edu.it (in Italian)</p>	

Collection of short information and weblinks about shepherd schools and schools including transhumance in their study programmes from the countries of the project consortium.

Norway	
Shepherd school or school with study programme including transhumance	<ol style="list-style-type: none"> 1. Secondary school Sogn Jord- og Hagebruksskule 2. Secondary school Storsteigen videregående skole
Weblink & comments	<ol style="list-style-type: none"> 1. sjh.no 2. storsteigen.vgs.no
Slovakia	
Shepherd school or school with study programme including transhumance	<ol style="list-style-type: none"> 1. Secondary Vocational School Pod Bánošom, Banská Bystrica 2. Association of Sheep and Goats Breeder 3. Online course 4. Agroinstitute of Nitra, The State Corporation 5. An overview of vocational education training schools in Slovakia is available at the portal of 'A Breeder and a Farmer'
Title of the training or study program	<ol style="list-style-type: none"> 1. 4584 H 00 Farmer for Mountain and Submountain Areas / 4553 K Rural Development Entrepreneur 2. 'Production of dairy products' since 25 February 2022; annually training courses 'A Hygiene manual based on Hazard Analysis and Critical Control Points (HACCP) principles for the production' and 'sale of products from sheep's milk in mountain farming conditions'
Weblink & comments	<ol style="list-style-type: none"> 1. en.sosbanbb.sk 2. mojbaca.sk/mlady-farmar 3. agroinstitut.sk/en/about-us 4. chovatelahospodar.sk

Collection of short information and weblinks about shepherd schools and schools including transhumance in their study programmes from the countries of the project consortium.

Spain ▼	
Shepherd school or school with study programme including transhumance	<p>Some shepherd schools offer non-formal training, mostly private schools run by foundations or non-profit organizations. E.g.:</p> <ul style="list-style-type: none"> • Madrid • Pais Vasco • Aragón • Cataluña • Andalucía • Extremadura • Canarias • Castilla y León • Castilla-La Mancha • Murcia • Valencia
Title of the training or study program	<p>Several organisations, including public agencies, organise courses on very specific aspects related to transhumance, such as cheese making, regulatory changes, sanitary aspects, insurance, like National farmers Unions (ASAJA, COAG and UPA), the Cheesemakers network and Cooperativas Agroalimentarias.</p>
Weblink & comments	<ul style="list-style-type: none"> • escueladepastores.es • gomiztegi.eus • escueladepastoreo.com • escoladepastorsdecatalunya.cat • escueladepastoresdeandalucia.es • fundacion.cooprado.es • aidergc.com/.../escuela-de-ganaderia-y-pastoreo • milcaminos.es/.../actuaciones-concretas • castillalamancha.es/actualidad • carm.es/web/pagina • agronewscomunitatvalenciana.com

