



ERFP Joint Working Groups Annual Meeting

6 - 7 May 2025, Athens, Greece

## ERFP TF – Transboundary breeds in Europe and Ex Situ Conservation

ERFP Task Force « Transboundary Breeds »

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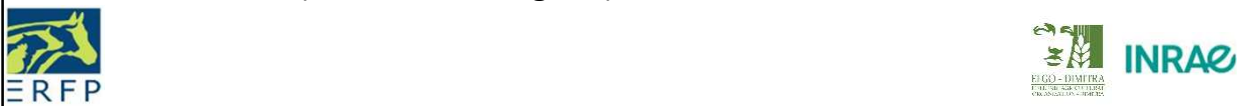
- Overview of the work done
- Article submitted to GenRes Journal (is under review) is about what countries declared, but not on how they describe the conservation programs, In and Ex Situ
- Next steps – > Case studies > describe diverse situations
- Discussion



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# Background

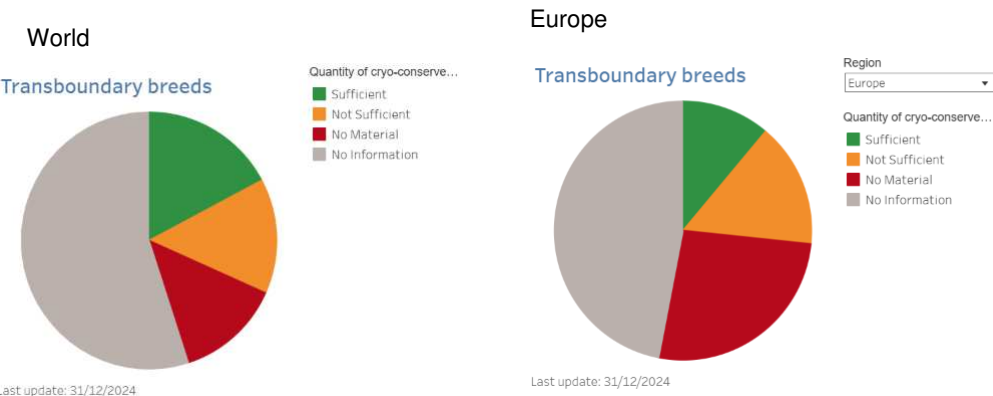
- Transboundary breeds in Europe, could be an example for the cooperation between countries on the efficient conservation breeds improve data quality and utilisation of EFABIS through better monitoring of breeds’ population
- Final Goal : Make the link between data and *in situ (and ex situ)* situations
- > What do we have through Eugena and/or in ex situ collection in countries (in ou out of Eugena)



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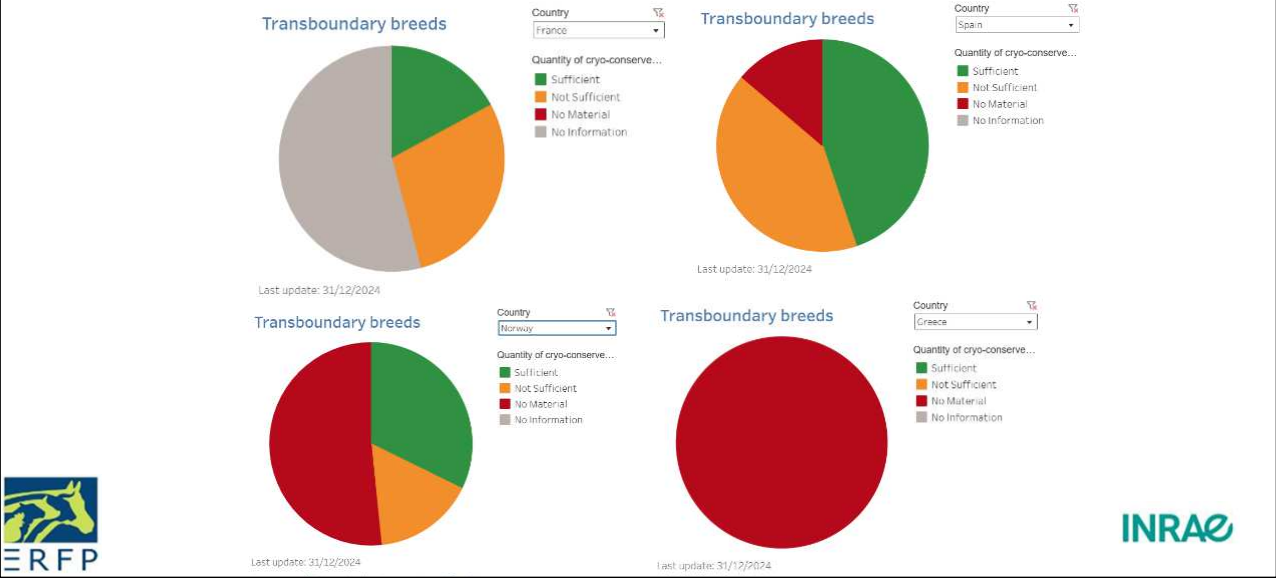
## SDG indicator 2.5.1b

Number of local and transboundary breeds for which sufficient genetic materials are stored for reconstitution



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Diverse situations in countries



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Table 4. Transboundary Breed cases examples

Species	Transboundary Breed	Local Breed name	Country	SDG local risk status	adaptedness	regional risk status	
Horse	Hutsul	Hucuľ	Poland	at risk	native	at risk	
		Hutsul	Romania	unknown	no info		
		Hucuľ	Slovakia	at risk	locally adapted		
		Hucuľ	Hungary	at risk	native		
		Huzule	Germany	at risk	exotic		
		Gutsul	Ukraine	at risk	no info		
		Huzule	Austria	at risk	native		
		Huculsky kun	Czechia	at risk	locally adapted		
Cattle	Podolian	Podolica	Italy	Not at risk	native	Not at risk	
		Podolian	Serbia	at risk	locally adapted		
Sheep	Precoce	Merino	Spain	at risk	locally adapted	At risk	
		Precoz	Portugal	at risk	exotic		
		Merina					
		Precoce	France	unknown	native		
sheep	Ouessant	Ouessant	France	at risk	native	Not at risk	
		Ouessant	Belgium	at risk	no info		
		Ouessant	Netherlands	at risk	exotic		
		Ouessant	Germany	at risk	exotic		
		Schaf	Czechia	at risk	exotic		
		Kesantská ovce					
		Ouessant	Denmark	at risk	no info		





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Several countries linked their National Breed Population to a Transboundary Breed			
European Risk Status	Not Endangered	Not Endangered	Endangered
Local Risk Status	Not Endangered in at least 1 country	Endangered/Unknown in all the countries (but the total lead to "Not Endangered" status at European level)	Endangered/Unknown in all the countries (and the total lead to "Endangered" status at European level)
Questions / Actions	OK for SDGs calculation as a Not Endangered Transboundary Breed	Do the countries work together? Is the Transboundary Breed is really Not Endangered? Should this breed be in SDGs calculations as "Not Endangered"?	Do the country work together? Do we know more about the genetic proximity within the different NBPs? OK for SDGs calculation as Endangered Transboundary Breed

In Situ / Ex Situ cases studies






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Distribution of Regional Transboundary breeds and their Risk Status  
(in red TBs Endangered or Unknown at European level;  
in blue TBs not Endangered at European level but Endangered or Unknown in all the countries ; the remaining are not endangered at European level, and in at least one country)

Specie	By 1 country	By more 2 or 3 countries	By 4 and more countries
Cattle	Azerbaijan Zebu (AZ)	Armorican (FR, UK)	Angeln (BE, LT, UA, UK)
	Buša (AL)	Belgian Blue mixte (NL, BE)	Bazadais (BE, FR, IE, UK)
	Dahomey (NL)	Breton Black Pied (FR, UK)	Danish Red (DK, LV, LT, RO, UK)
	Fries Hollands (BE)	Caucasian (GE, RU, TR)	
	Glan Donnersberg (NL)	Caucasian Brown (AZ, GE)	
	Jutland cattle (NL)	Estonian Red (AL, AZ)	
	Möltaler (AT)	Fighting Bull (PT, ES)	
	Murboden (AT)	Greater Caucasus (AM, RU)	
	Simford (IL)	Groningen White-Headed (NL, UK)	
	Vache Maraichine (NL)	Heck cattle (NL, FR)	
		Hinterwald (DE, CH)	
		Kostroma (BY, RU)	
		Lebedin (AZ, UA)	
		Podolian (IT, RS)	
		Polish Red (PL, UA)	
	Russian Brown (BY, RU)		
	Whitebacked Cattle (LT, UA)		
	Carpathian Goat (RO)	Azerbaijan (AM, AZ)	Maltese (GR, IT, MT, TR)
	Coloured Chamois Goat (CH)	Brown Shorthair Goat (CZ, SK)	Valais Blackneck (AT, CZ, DK, DE, CH)



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Example : Hutsul

HTTP

Transboundary breed

Hutsul

Species

Horse

Breed Type

Mammalian

Geo Classification

regional

Number of countries reporting the breed


8


Number of countries reporting population data

7

Estimated Population Size

4795





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Transboundary Breed: **Hutsul**

Number of countries reporting the breed: 8

Number of countries reporting cryo-conserved material: 6

Most Common Name	Country	National Risk Status	Risk Level	Population Size Min	Population Size Ma					
<b>Gutsul</b>	Ukraine	At Risk		32	32					
<b>Hucul</b>	Hungary	At Risk		380	380					
<b>Hucul</b>	Slovakia	At Risk		400	600					
<b>Huculsky kun</b>	Czechia	At Risk		1000	1200	369	17	94		
<b>Hucul</b>	Poland	At Risk		2600	2780					
<b>Hutsul</b>	Romania	Unknown								
<b>Huzule</b>	Austria	At Risk		43	100	39	4	100		
<b>Huzule</b>	Germany	At Risk		22	22	20	2			

Most common name

Country

Year

Semen count

Semen males

Emb cour

**Hucul**

Slovakia

2021

178

5

-

**Huculsky kun**

Czechia

2019

405

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- What is the situation per Transboundary population? How many country has sufficient material? A region level do we have enough material? Is it
- Which case studies we should take to show different situations and help building guidelines?
- How improve management of TB?



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## Summing up

- Inconsistencies, (i.e. TBs linked to only one NBP) open the discussion on the **definitions of TBs** and the applied **criteria to link a NBP to a TB**.
  - Under which conditions, would be feasible to establish unified criteria, including historical data and genetic information?
- Gaps in data / problems : different names? Same names? are they all linked to “transboundary breed list name”?
- Environmental context: How many populations have a geographical description/adaptability to specific environment in DAD IS? In one or each country?
- Advances in genomics and the progress of relevant research could further enrich existing knowledge on Transboundary Breeds and support their sustainable management
- TBs cannot be examined exclusively through demographic data and genetic information. Several **technical, social and political aspects shape the future management opportunities**.



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## Summing up

- Focus Regional Transboundary breeds
- Specific case could be developed around small populations that are International but Native/Locally adapted from a European country.  
The case study approach is recommended: *in situ* and *ex situ* cases of breeds that have common breeding programs or frequent exchange of breeding animals, either cases of breeds with common history, or raised in similar environments, but have no common activities yet.
- Specific breed cases could be also considered in connection with other relevant development initiatives, as could be the case of mountain TBs.
- This discussion is in accordance with the **recommendations of the AnGR Strategy in Europe**
  - promotes the *in situ* and *ex situ* strategies of TBs, specific actions are foreseen to improve the knowledge on TBs, support the exchange between actors involved in the conservation and breeding programmes of these breeds and promote cooperation on this field (ERFP, 2021).



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## Discussion

- Define case studies
- Setting up groups to work on specific cases
- Work on definitions / improve data recording



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