



Food and Agriculture
Organization of the
United Nations

COMMISSION ON
GENETIC RESOURCES
FOR FOOD AND
AGRICULTURE



Development of new DAD-IS related tools

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What's new in DAD-IS?

- I. New environments and contents**
- II. New DAD-IS tools**
- III. Breed identification application**

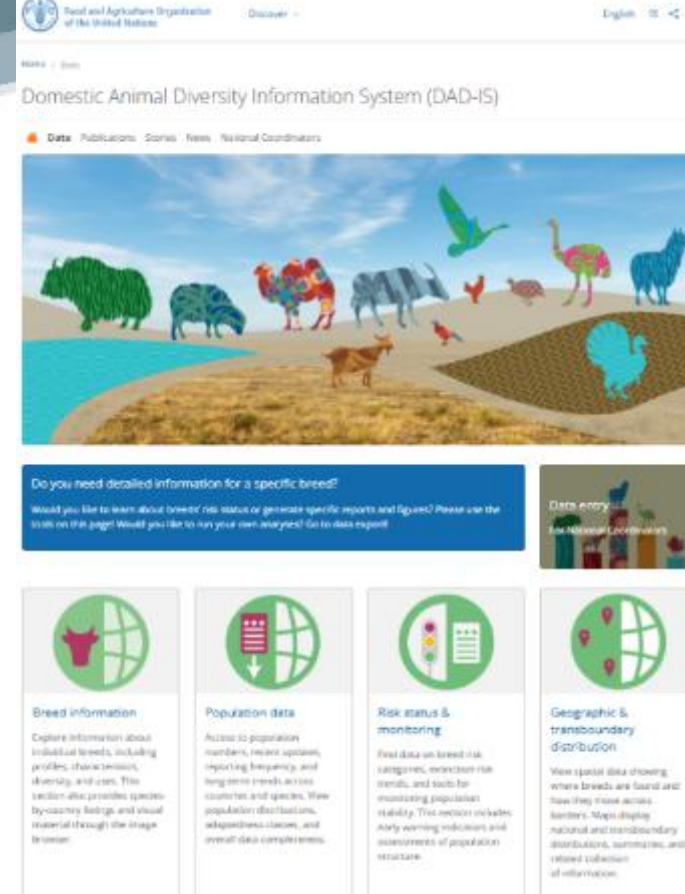


I. New DAD-IS environments

Migration requested to new environments

- Dissemination interface
 - Migration to Sitefinity
 - Completed in April
- Data entry
 - To be completed in August-September

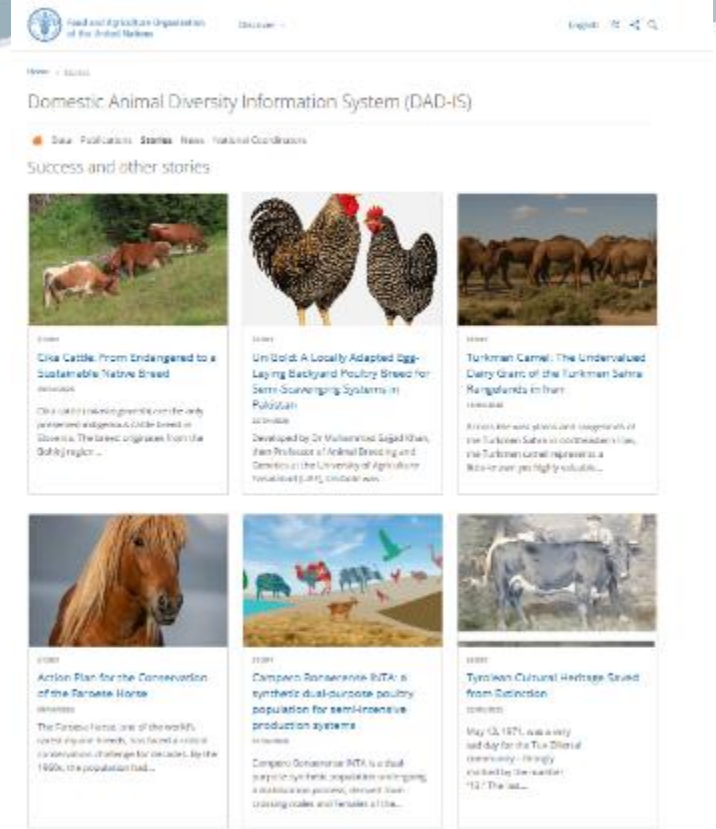
**Your feedback are welcome!
Use of ERFIP survey!**





New DAD-IS contents

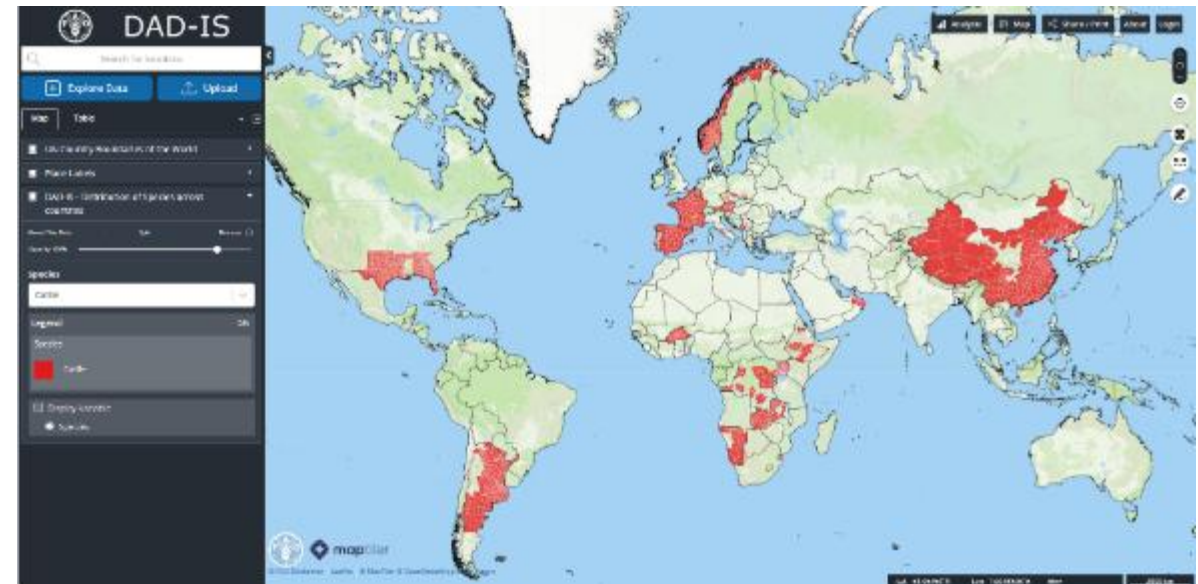
- In the context of case study collection for SoW3 process, around 20 cases displayed in DAD-IS over the next weeks
- Some animations generated for specific breeds
- Cases and animations advertised in FAO social networks



II. New DAD-IS tools: geographical distribution

- Launched in 2024
- Provide distribution of species, transboundary and local breeds within countries
- Two admin levels or reporting (e.g. regions and districts)
- Two kind of reporting:
 - Presence/absence
 - Number and density of animals
- As of April 2026, 38 countries had submitted data for 1134 national breed populations

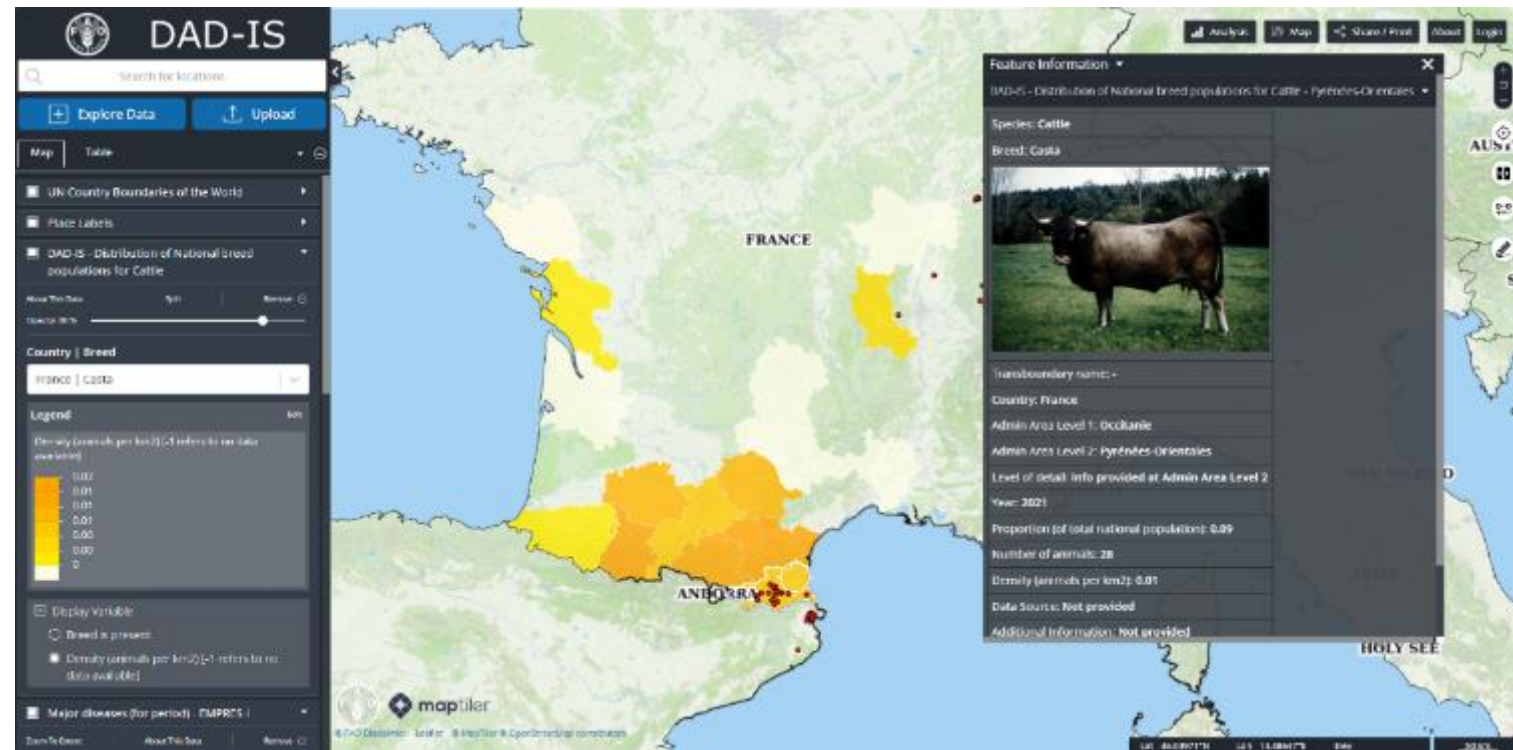
-> efforts in data entry needed!



Distribution of cattle species (i.e. all breeds reported) in the tool



- Hosted in the FAO Hand-in-Hand Geospatial platform
- Possibility to add other environmental and socio-economic layers
- This include animal disease events
-> **Early warning tool!**



Casta cattle breed distribution and lumpy skin disease cases reported between September and November 2025

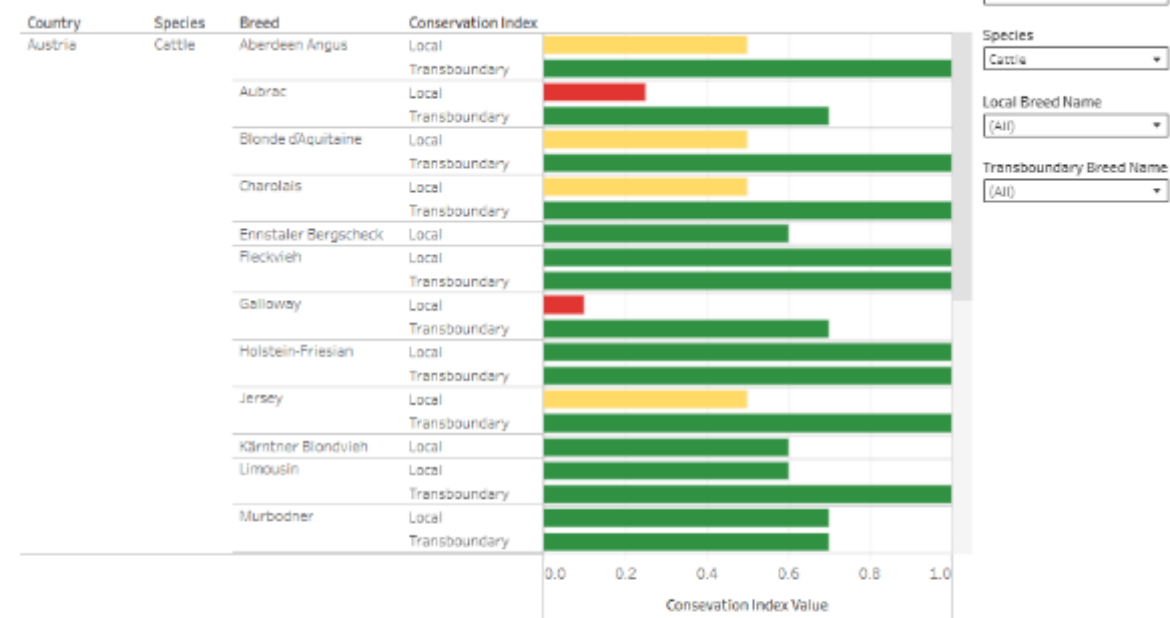


Conservation index (*in test*)

- Weight demographic risk (*in situ*) and cryoconservation (*in vitro*) to assess breed situation
- Local and transboundary (when relevant) indexes differentiated

-> **Feedback welcome!**

Conservation Index In vivo/In vitro (local and transboundary)



Kindly note:
Breeds with only Local row are not considered transboundary.
Breeds with only Transboundary row are considered extinct in the country (but not globally).
Breeds extinct both locally and globally are excluded from this visualization.

CONSERVATION INDEX MATRIX

IN VITRO	IN VIVO	Conservation Index Matrix						
		Not endangered	Vulnerable	Endangered maintained	Endangered	Critical Maintained	Critical	No information
Sufficient material	1	1	0.8	0.6	0.5	0.3	0.2	0
Not sufficient	0.4	0.7	0.7	0.6	0.5	0.45	0.35	0.3
No material / Unknown	0	0.5	0.4	0.3	0.25	0.15	0.1	0

Conservation index (prototype)



Country dashboard (in development)

- The concept: a single tool to report relevant AnGR info at country level
- Awareness raising tool oriented

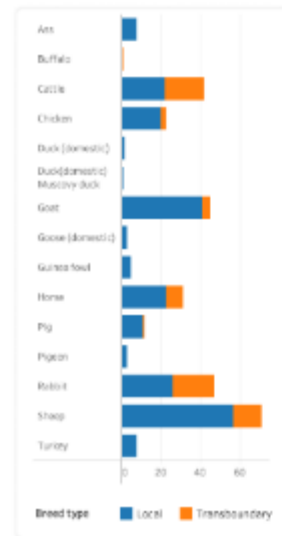
-> **Feedback welcome!**

Home > Data > Country Dashboard

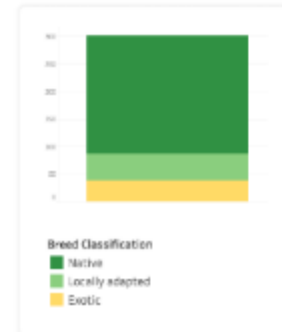
Country Dashboard

Italy

Number of national breed populations per species



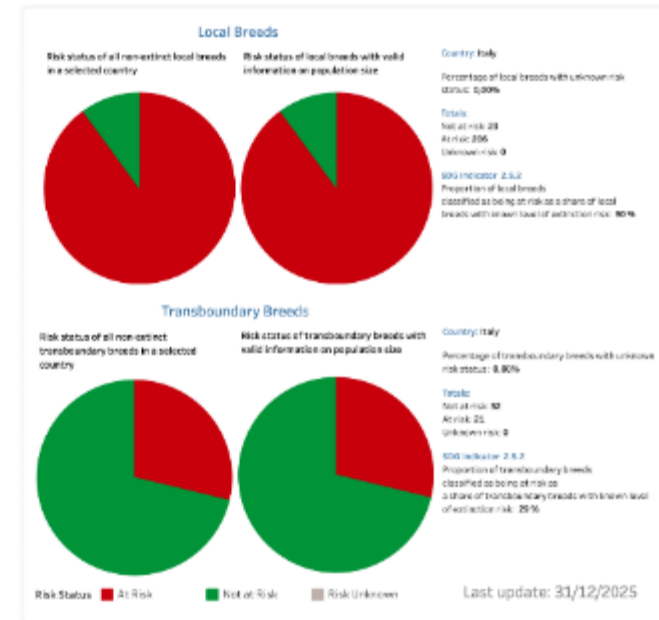
Distribution of national breed populations across adaptedness classes



SDG Indicator 2.5.1 (b): Number of animal genetic resources for food and agriculture secured in either medium- or long-term conservation facilities



SDG Indicator 2.5.2: Proportion of breeds classified as being at risk of extinction



Kindly note: updates for SDG indicators are published at least once a year (February) and up to a maximum of four times per year according to an internally agreed calendar.

Country dashboard (mockup)



AI DAD-IS Research engine *(in development)*

- AIDA: a MML tool processing only FAO source
- Potential use for targeting research on DAD-IS
- Release of test version during the autumn, to be then adapted for DAD-IS



III. Breed identification application

- An AI phone application tool allowing breed identification based on pictures
- First test on cattle species
- Long term and large extent data collection process to collect picture to train the model (100 pictures per breed)
 - National Coordinators
 - External contributors (with validation procedure)
- The tool will help in decision making in case of uncertainty
- Several “options” to be provided



DAD-IS Cattle Breeds Image Collection Process



For the creation of an image-based breed identification system, DAD-IS is building a reference database. In this portal we ask you to upload any pictures of a cattle breed from your country to help expand the database and improve the accuracy of the tool.

Are you a national coordinator?

If so, enter your email below and click verify.

Show Password

Verify

Not a national coordinator?

Select the country you want to upload an image for below and click next

Select a Country

Next

https://us-central1-dadis-aws.cloudfunctions.net/dadis_image_upload_statistics



Current status and next steps

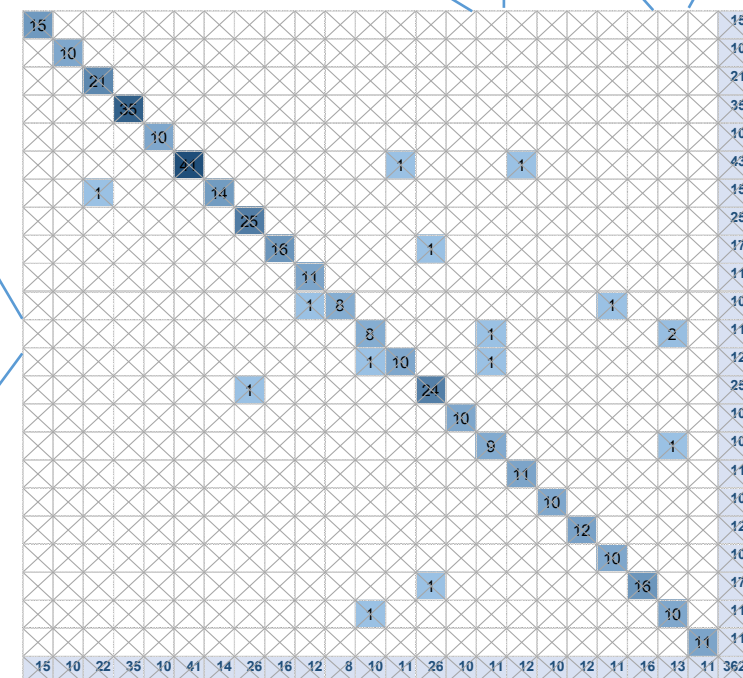
- Development on country specific training dataset (+ 1 global data set in a first step)
- Current stage of data collection
 - One country (Austria) with full breed set
 - 49 breeds completed in total (1 missing for first global dataset)
- First test with Austrian data set: **Average precision: 97.4%**

What's next?

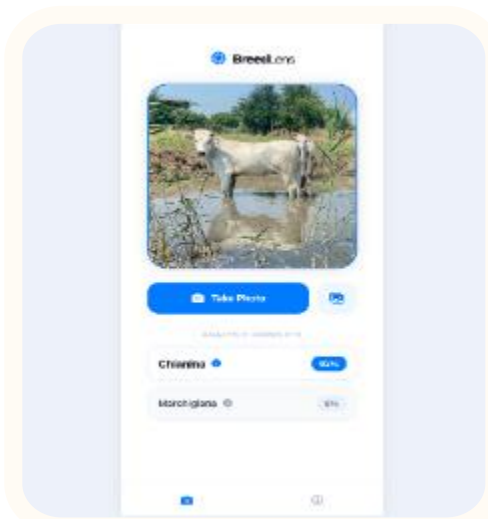
- Data collection continued with Georgia (+ other countries?)
- In July: release of the prototype application
- Test at field level
- Test with specific cases: e.g. crossbred animals
- **More breeds and countries? Require your support**



Karntner blondvieh



Confusion matrix for the Austria dataset





Conclusion

- New tools have been developed
 - They address current challenges effectively
 - They respond to country and user needs
 - They leverage up-to-date technology
- National coordinators are critical for feedback and data contribution
 - Use of shortcuts? E.g. use of network, students...