


Food and Agriculture
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SUSTAINABLE
DEVELOPMENT
GOALS

FAO Report to ERFP


September 2022 – August 2023

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Overview

Overview

- 12th Session of the ITWG-AnGR and requests from the 19th Session of the CGRFA
- Activities undertaken by FAO September 2022 - August 2023
 - DAD-IS/EFABIS development
 - Preparation of the 3rd State of the World Report
- Call for action and contacts

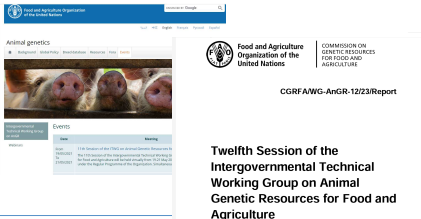
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12th Session of the ITWG-AnGR Intergovernmental Technical Working Group on Animal Genetic Resources for Food and Agriculture

- 18-20 January 2023 (in-person)
- Topics discussed :
 - Status of implementation of GPA
 - Monitoring the diversity of animal genetic resources
 - Preparation of The Third Report on the State of the World's Animal Genetic Resources for Food and Agriculture

Here you find the report:
<https://www.fao.org/animal-genetics/events/events-detail/en/c/1603813/>




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Overview

Requests from the 19th Session of the CGRFA related to AnGR

- 17 – 21 July 2023
- It **recommended** that the FAO Council request **FAO to support capacity building**, ..., and to continue to prepare technical guidelines,....
- to explore new low-cost approaches to addressing data collection for SDG Indicator 2.4.1 ...explore ...the potential for **broadening the scope of SDG Indicator 2.5.2 to include transboundary breeds**.



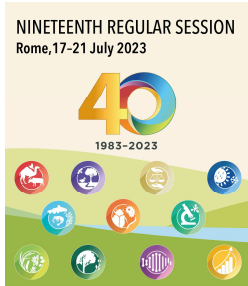
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Overview

Requests from the 19th Session of the CGRFA related to AnGR

- The Commission recommended that the FAO Council request FAO to continue to provide technical support to further maintain and **develop DAD-IS and to continue to increase its user-friendliness**, including tools that facilitate data entry, export and updating, and storage and visualization of **geographic distributions of national breed populations**, and to consider the inclusion of additional data fields, including for digital object identifier (DOI) or PubMed ID records, which would increase the visibility and use of DAD-IS.



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Overview

Requests from the 19th Session of the CGRFA related to AnGR

- The Commission also recommended that the FAO Council request FAO to continue developing and/or **refining low-cost and cost-efficient methodologies for estimating the sizes of national breed populations**
- The Commission recommended that the FAO Council request FAO to perform an **analysis of the rate of reporting of breed performance data** in DAD-IS for consideration by the Working Group at its next session and that countries and FAO **continue working on the interoperability** of DAD-IS with existing regional data information systems to avoid duplication of efforts.
- Moreover, it recommended that the FAO Council request FAO to continue to study, develop and refine **genomic, pedigree and/or demographic indicators** of within-population genetic diversity, to explore the potential impact on risk classification of combining such indicators with current census population size data and to **propose related data fields for DAD-IS**, for consideration by the Working Group at its next session.

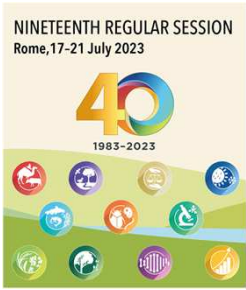
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Overview

Requests from the 19th Session of the CGRFA related to AnGR

- The Commission reviewed and endorsed the proposed outline, process, questionnaire and timeline for the **preparation of the Third Report, It invited countries to initiate the collection of information and data** for the completion of their country report questionnaires. It requested the Secretariat to finalize the **questionnaire and circulate it to countries by September 2023**, subject to internal FAO clearances, and **invited countries to submit their completed questionnaires for the preparation of the Third Report by 30 June 2024**

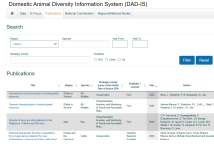
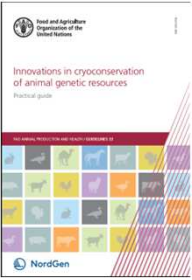
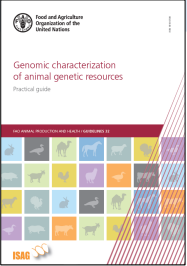


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Activities undertaken by FAO

- Both practical guides, on innovations in cryoconservation and on genomic characterization, made available online. See also: <https://www.fao.org/dad-is/publications/en/>
- Distribution of hard copies of *Guidelines on developing sustainable value chains for small-scale livestock producers*

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Global Workshop for National Coordinators

- Held 16 to 17 January 2023 in person
- Topics
 - How to fill the data gaps in DAD-IS? Experiences from countries
 - Tool for Agroecological Performance Evaluation (TAPE)
- Webcasts are available at <https://www.fao.org/animal-genetics/events/events-detail/en/c/1627248/>

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DAD-IS/EFABIS development

Tools

DAD-IS provides you with tools to monitor national breed populations and with this, to make informed decisions on the management of animal genetic resources. More than 15 000 national breed populations, representing 100 breeds and about 40 species) from 182 countries are recorded.

Progress made towards target 2.5 under the Sustainable Development Goals (SDG) focusing on the genetic diversity of farmed and domesticated animals. Try our tool!

Domestic Animal Diversity Information System (DAD-IS)

Home | Data | In Focus | Publications | National Coordinators | Regional/National Nodes

The breed Camel of the Canary Islands joins the 100% Indigenous Breed Label

16/02/2023 Since the 100% Indigenous Breed Label was created in 2013 through the Royal Decree 505/2013 of June 29th, the trust of livestock breeders' associations has been constant and currently, the label comprises 60 breeds of seven different species. To the classic species (cattle, sheep, goats, swine, poultry and equines) is now added the only breed of camels existing in the Official Catalogue of Livestock Breeds of Spain, namely the Camel of the Canary Islands.

In 2012, the Camel of the Canary Islands was admitted as an indigenous breed in the aforementioned Catalogue, becoming thereby the only European indigenous breed of this species. Two years later the Association of Breeders of the Camel of the Canary Islands has gone one step further by requesting to join the 100% Indigenous Breed Label in order to identify its meat, milk, skins and processed and derived products. In this way, the Association of Breeders of this camel aims to increase its visibility and seeks to make the breed known to the general public.

The roles and values of animal genetic resources remain diverse, particularly with regard to the livelihoods of poor people

There are around 8800 livestock breeds of 38 different species in the world, providing a diversity of products and services.

Many breeds have unique characteristics that can contribute to meeting challenges related to climate change.

The threats to animal genetic resources need to be better identified and prioritized. Once better assessed, so that action can be taken.

Success and other stories

Guay Cattle: Returning from the threshold of extinction

The Guay Cattle, a variety which has produced many cattle and sheep breeds for centuries.

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Visualization Tool for USES and ES

- Breed uses field list has been completed with nine ES not listed previously and data entry has been reorganized to reflect current Common International Classification of Ecosystem Services (CICES) nomenclature
- ES specific tool developed for the visualization of Uses and ES by species, country and ES category

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Status of information recorded in the Global Databank for Animal Genetic Resources

SDG Indicator 2.5.1b broadened

SDG 2.5.1

- Upon consultation with internal and external experts, FAO prepared a document proposing the broadening of the SDG Indicator 2.5.1b
- Formally approved by the Inter-agency and Expert Group on SDG Indicators (IAEG-SDG)
- DAD-IS has been amended accordingly

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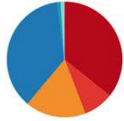


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Some smaller improvements:


e.g. **Breed Diversity tool** allows filtering for regions and countries 😊



Note: Only non-extinct national breed populations are considered.
Last update: 24/07/2023 15:02:34

Complete View (All national breed population)

Country Name	Species	Breed Name	Transboundary Name	Animal class	Local mammalian breeds	Regional transboundary mammalian breeds	International transboundary mammalian breeds	Local avian breeds	Regional transboundary avian breeds	International transboundary avian breeds
Germany	Ass	Alpaca	Test	Suri	Mammalian					
		Deutscher Esel	-	-	Mammalian	■				
		Europäischer Esel	-	-	Mammalian	■				
	Thüringer Knottel	-	-	Mammalian	■					
	Cattle	Wasserbüffel	-	-	Mammalian	■				
		Aberdeen Angus	Aberdeen, Angus	-	Mammalian			■		
Angus		-	-	Mammalian			■			
Cattle	Aubrac	-	-	Mammalian				■		
	Aubrac	Aubrac	-	Mammalian				■		
	Blonde d'Aquitaine	Blonde d'Aquitaine	-	Mammalian					■	




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Some smaller improvements:

e.g. **Tool for SDG indicator 2.5.2** simplified 😊

Risk status of all non-extinct local breeds in a selected region/country



Risk status of local breeds with valid information on population size




SDG Region: *
DAD-IS Region: *
Country: Alle
Percentage of local breeds with unknown risk status: 62.17%


Totals:
Not at risk: 803
At risk: 1,871
Unknown risk: 4,394
Proportion of countries with at least partial reporting: 41.30%

SDG Indicator 2.5.2
Regional aggregation not permissible due to less than 50% of countries reporting

Last update: 03/02/2023



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Some smaller improvements:

e.g. Improved Interoperability through improved Application Programming Interface

- IDs for species, national breed populations and transboundary breeds generated
- API token (= unique identifier used to authenticate a user or application to access an API) generated.

DAD-IS Interoperability API


The scope of this document is to describe the APIs implemented for DAD-IS interoperability. The document explain how each API must be called and how authorize the call through the authentication header.

Environments
These are the current API base URL of the DAD-IS' different environments:


ENVIRONMENT	API BASE URL
Development	https://us-central1-fao-dadis-dev.cloudfunctions.net/api/
Working System	https://us-central1-dadis-ws.cloudfunctions.net/api/

- continued collaboration with Vertebrate Breed Ontology initiative and **ERFP Ad-Hoc Action group**

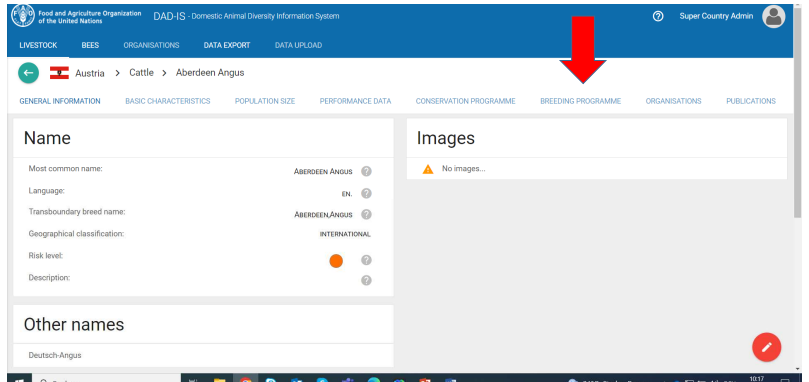
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In preparation of the 3rd SoW report: **New data fields on breeding programmes!**



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In preparation of the 3rd SoW report: New data fields on breeding programmes!

The screenshot shows the 'Breeding programme' section of the FAO database. The left sidebar lists various data fields: 'Activities undertaken for the breed', 'Animal identification', 'Breeding goal defined', 'Performance recording', 'Pedigree recording', 'Genetic evaluation (classic approach)', 'Genetic evaluation including genomic information', 'Management of genetic variation', and 'Artificial insemination'. A red arrow points to a red pencil icon at the bottom right of the main content area, indicating a new data field for editing.

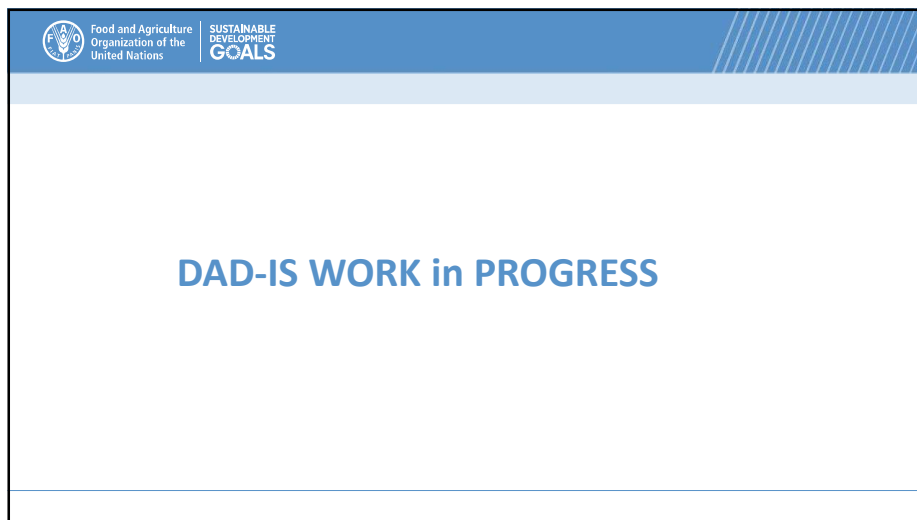
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In preparation of the 3rd SoW report: New data fields on breeding programmes!

The screenshot shows the 'Edit' form for the 'Breeding programme' section. The form includes a dropdown menu for 'A breeding programme is implemented for the breed' with 'No' and 'Yes' options. A red arrow points to the 'No' option, indicating a new data field for editing. Other fields include 'Breeding goal defined', 'Performance recording', and 'Pedigree recording'.

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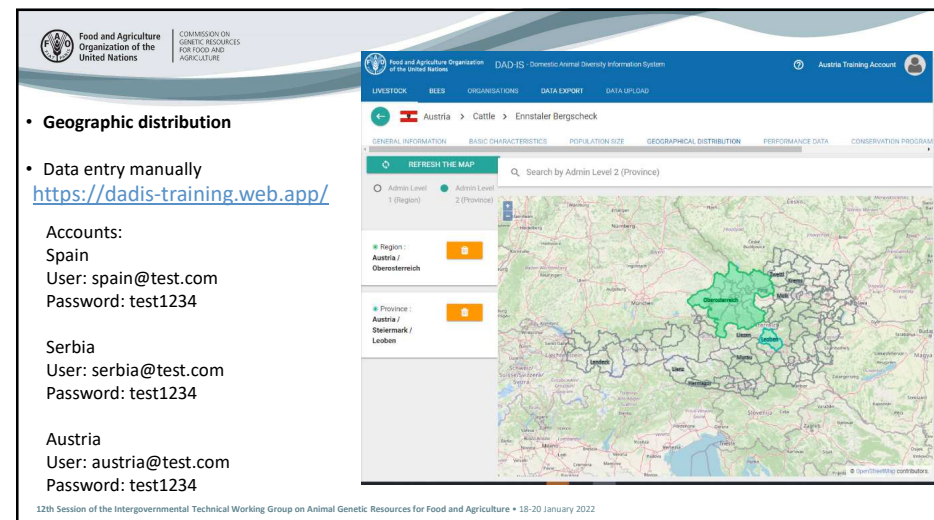


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DAD-IS WORK in PROGRESS

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Food and Agriculture Organization of the United Nations DAD-IS: Domestic Animal Diversity Information System Austria Training Account

- **Geographic distribution**
- Data entry manually
<https://dadis-training.web.app/>

Accounts:

- Spain
User: spain@test.com
Password: test1234
- Serbia
User: serbia@test.com
Password: test1234
- Austria
User: austria@test.com
Password: test1234

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Geographic distribution

Data formats to develop bulk upload

Examples received from :

- Spain
- Serbia
- France

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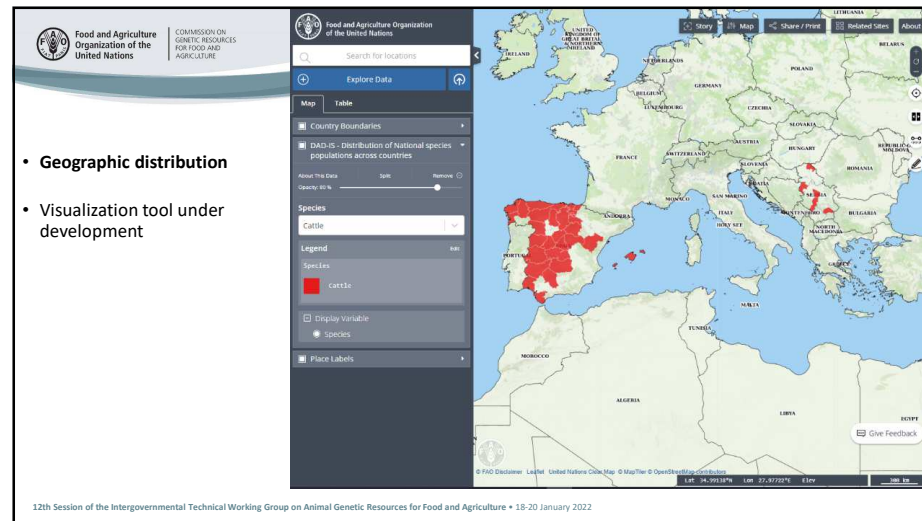
Geographic distribution

Data formats to develop bulk upload

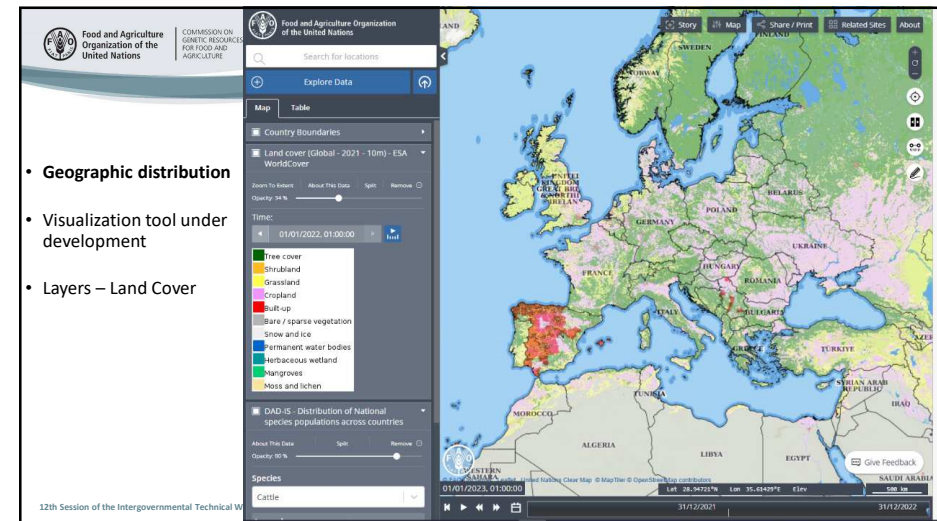
Examples received from :

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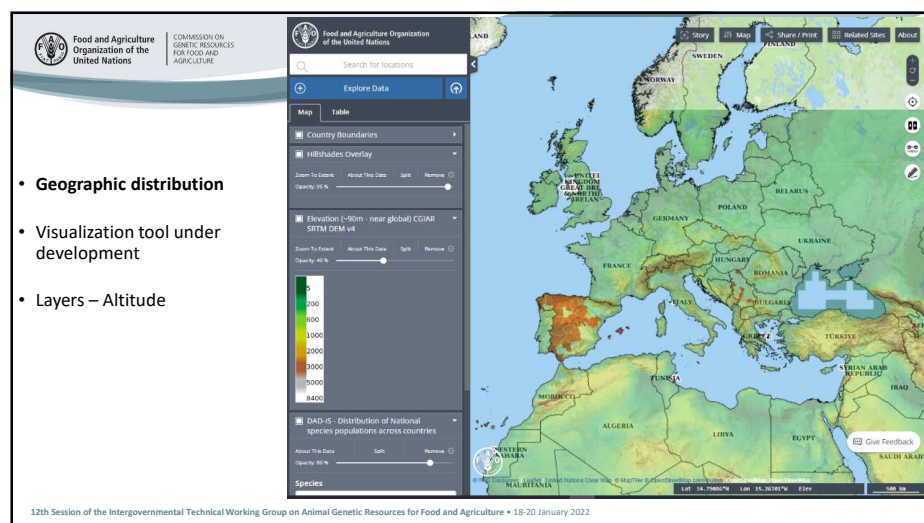
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- Geographic distribution
- Visualization tool under development
- Layers – Altitude

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Next steps


- Further development and testing of the tool for geographic distributions
- Development of a **tool allowing bulk upload of Breed Description Data (former “Metadata”)**
- Scope of **SDG indicator 2.5.2 to be broadened to transboundary breeds**
 - conditional on approval by the IAEG-SDGs
- Translations continued (Russian and Chinese)

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Preparation of the 3rd report t on the State of the World's Animal Genetic Resources


ITWG-AnGR

- reviewed the SoW3 questionnaire and recommended specific changes
- requested the addition to **new data fields in DAD-IS** (breeding programmes) to improve the complementarity of the questionnaire with DAD-IS

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Preparation of the 3rd report t on the State of the World's Animal Genetic Resources



Actions taken

- new fields added to DAD-IS
- xlsx files sent in June to each National Coordinator to facilitate **bulk upload** of new fields (38 responses, including 15 from Europe)
- questionnaire finalized (online platform) in collaboration with ITWG bureau

Next steps

- **questionnaire disseminated in September with tailored DAD-IS extraction**
- **online workshops organized in the next months to support the process**

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Call for Action

- Please fill your country progress report (September 2023 – June 2024)
- Please fill the new data fields on breeding programmes (now ☺)
- Please test data entry and visualization tool for breed distribution !

▪ If you have questions contact:

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- Roswitha.Baumung@fao.org
- Gregoire.Leroy@fao.org
- Dad-is@fao.org

• Livestock-Conference@fao.org

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Thank YOU!

FAO Global Conference on
Sustainable Livestock Transformation
 25-27 September 2023



See you at the Global Conference, 25-27 September 2023

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