

Sharing and reuse of data, a growing need

- Global climate change is disrupting our established knowledge
- To adapt the vineyard to these new challenges, we must improve the sharing and reuse of data
- Collecting quality data is costly in time and budget
- Data acquired here today may be useful elsewhere tomorrow



The lifecycle of data management.

Source:

<https://dynamics.folio3.com/blog/what-are-the-three-main-goals-of-data-lifecycle-management-dlm/>

But not an easy way...

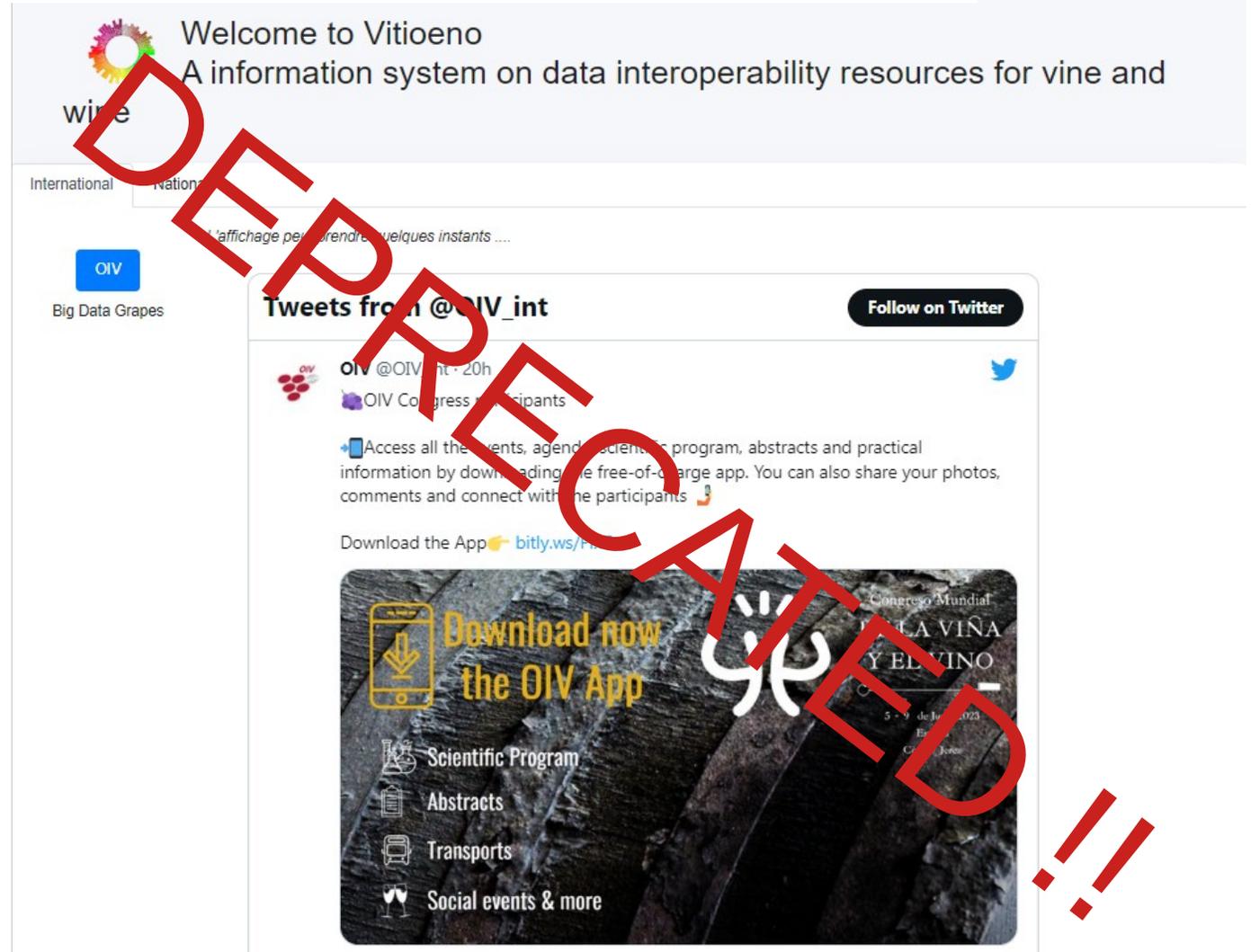
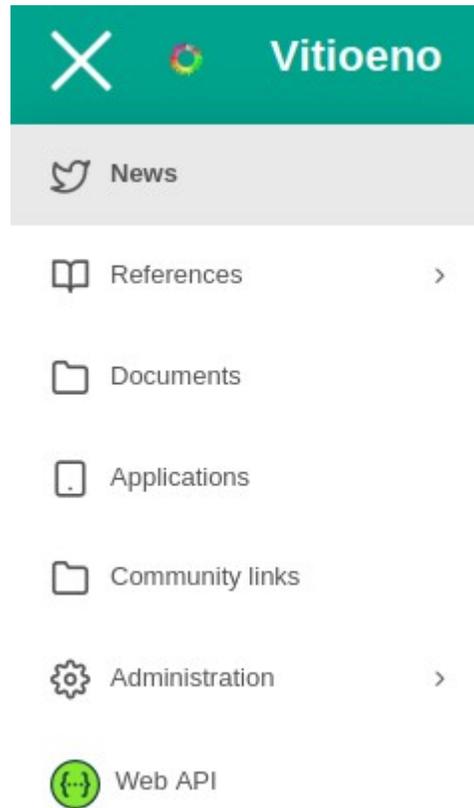
- Why actors don't share data ?
 - Scooping
 - Lack of time
 - Lack of incentives
 - Unclear value
 - Unclear process
 - Inappropriate use



✉ A need for resources and tools to facilitate the FAIRisation of data

News

- News from several twitter accounts



Variables: the VITIS Ontology

A friendly access to the **VITIS ONTOLOGY** (Grape Ontology including OIV and bioversity descriptor)



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Variables

Germplasm

Ontologies

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Applications

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The screenshot shows the 'Variables' section of the Vitioeno application. The header includes the Vitioeno logo and the title 'Variables' with a subtitle 'Manage and configure variables, entities, characteristics, methods and units'. Below the header is a navigation bar with tabs for 'Variables', 'Entity', 'Entity of interest', 'Characteristic', 'Method', 'Unit/Scale', and 'Group of variables'. A search bar is present, and a 'Selected Variables' counter shows 0. The main content area displays a table of variables with columns for 'Name', 'Entity', and 'Entity of interest'. The table shows 40 to 60 of 345 entries. A callout box highlights the URI for the variable 'DOY_FLO'.

<input type="checkbox"/>	Name	Entity	Entity of interest
<input type="checkbox"/>	DOY_BUD Date de débourrement (50%) en quantième Day of Year Budbreak (50%) Date de débourrement (50%) en quantième	Plant	
<input type="checkbox"/>	DOY_FLO Date de floraison (50%) en quantième Day of Year Flowering (50%) Date de floraison (50%) en quantième	Plant	
<input type="checkbox"/>	DOY_VER Date de véraison (50%) en quantième Day of Year Veraison (50%) Date de véraison (50%) en quantième	Plant	
<input type="checkbox"/>	EUTYP_OIV_460 Degré de résistance à l'eutypiose (analyse ... Degré de résistance à l'eutypiose (analyse ...)	Plant	

URI :
https://cropontology.org/term/CO_356:1000076

Variables: the VITIS Ontology

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 **DOY_BUD | Date de débourrement (50%) en quantième** ?   
Variable

 Informations générales

URI https://croponontology.org/term/CO_356:1000076

Nom DOY_BUD | Date de débourrement (50%) en quantième

Nom alternatif
Day of Year Budbreak (50%) | Date de débourrement (50%) en quantième

Description Creator : Eric Duchene
Institution : INRAE

 Structure

Entité [Plant](#)

Entité d'intérêt  [Budbreak](#)

Caractéristique [Budbreak](#)

Méthode
[Stage_Interpolation](#) | Interpolation après évaluation visuelle

Unité/Echelle [julian day](#)

 Ontologies de référence

Aucune référence disponible

 Informations avancées

Type de donnée Date

Intervalle de temps

Échantillonnage

URI du trait https://croponontology.org/term/CO_356:2000000

Nom du trait Budbreak | Date de débourrement (50%)

Genetic references (URI)

A friendly access to the RFCV database including species, varieties, accessions, etc.



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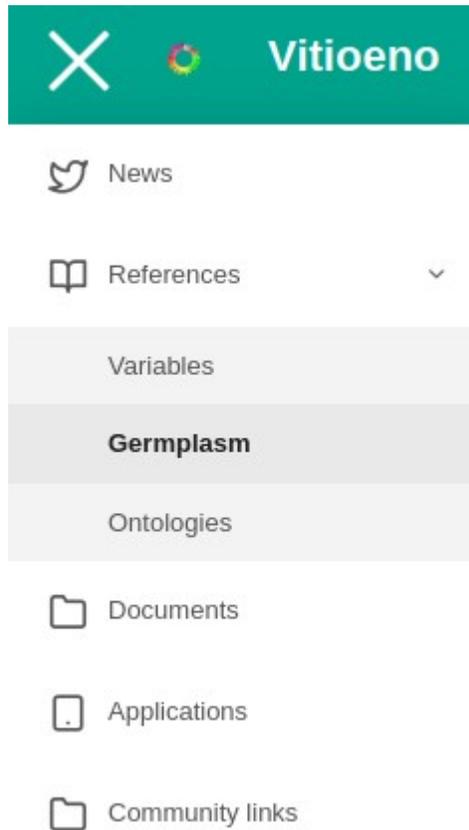
Community links

The screenshot shows the Vitioeno Germplasm interface. The header includes the Vitioeno logo and the text "Germplasm Manage Genetic Resources Information". The left sidebar contains search filters: Type (Variety), Species (Select a species), Production year (Enter a year), Institute code (Enter an institute code), Name (merlot), Germplasm Group (Select one germplasm group), and URI (Enter a part of an uri). The main content area shows "Selected Germplasm 0" with a license notice "Attribution - No Commercial Use - No Modification CC BY-NC-ND - RFCV Collections Database" and buttons for "Display", "Actions", and "Export all". Below this is a table with 54 entries, showing the first 7:

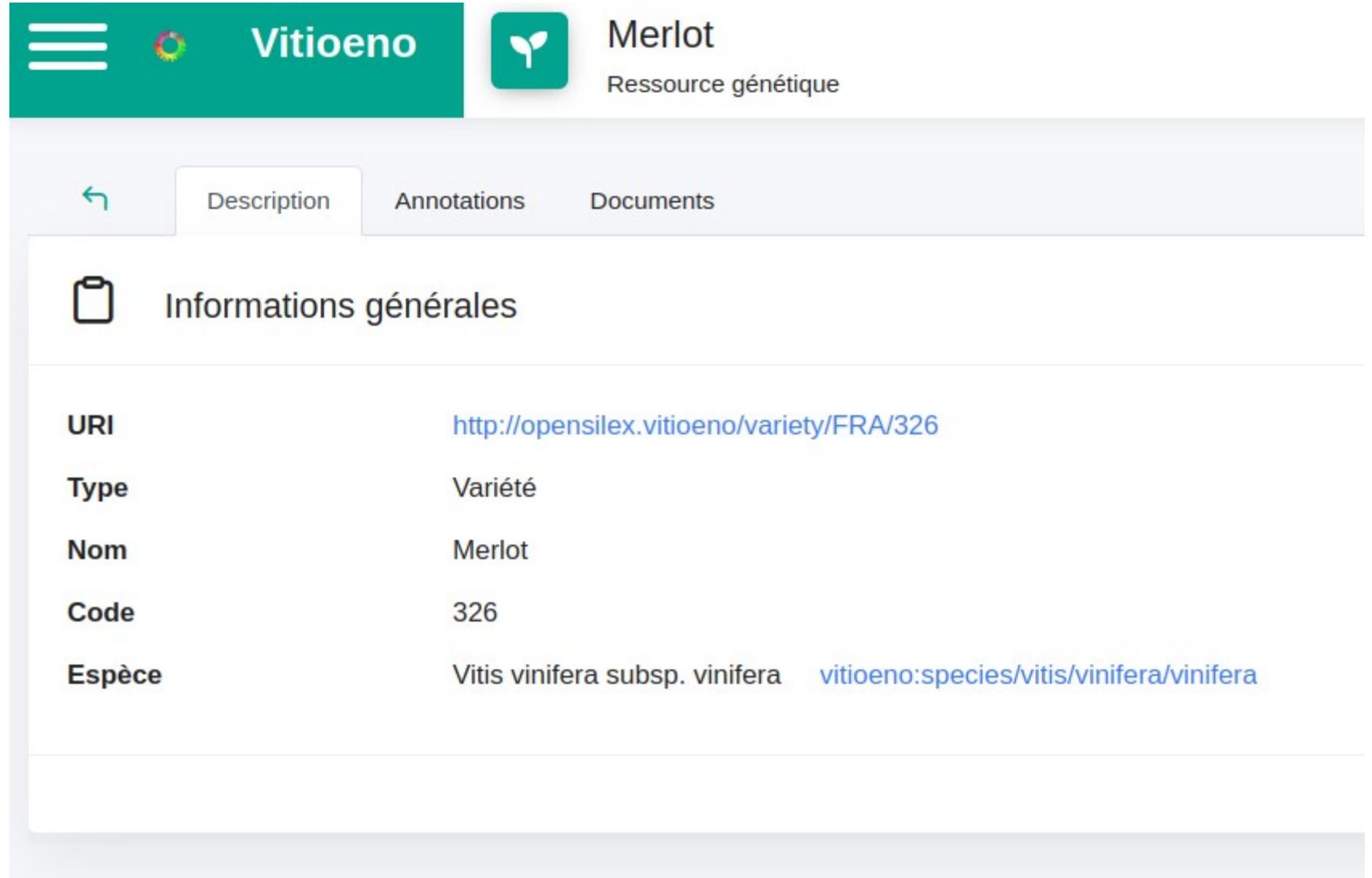
<input type="checkbox"/>	Name	Type	Species
<input type="checkbox"/>	Merlot	Variety	Vitis vinifera subsp. vinifera
<input type="checkbox"/>	Merlot blanc	Variety	Vitis vinifera subsp. vinifera
<input type="checkbox"/>	Merlot gris	Variety	Vitis vinifera subsp. vinifera
<input type="checkbox"/>	Merlot Kanthus	Variety	Vitis x interspécifique
<input type="checkbox"/>	Merlot Khorus	Variety	Vitis x interspécifique
<input type="checkbox"/>	popAFF (Mourvèdre x Merlot)	Variety	Vitis vinifera subsp. vinifera
<input type="checkbox"/>	popMtp1512 (Grenache N x Merlot N)	Variety	Vitis vinifera subsp. vinifera

Genetic references (URI)

A friendly access to the RFCV database including species, varieties, accessions, etc.



The navigation menu for Vitioeno, featuring a search icon, a Vitioeno logo, and several menu items: News, References, Variables, Germplasm (highlighted), Ontologies, Documents, Applications, and Community links.



The Merlot genetic reference page, showing the Vitioeno logo and the Merlot resource name. The page displays general information for the variety Merlot, including its URI, type, name, code, and species.

URI	http://opensilex.vitioeno/variety/FRA/326
Type	Variété
Nom	Merlot
Code	326
Espèce	Vitis vinifera subsp. vinifera vitioeno:species/vitis/vinifera/vinifera

Genetic references (URI)

A friendly access to the RFCV database including species, varieties, accessions, etc.



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The screenshot shows the Vitioeno website interface. At the top, there is a navigation bar with a menu icon, the Vitioeno logo, and a search bar containing '0Mtp1098' with the label 'Germplasm'. Below the navigation bar, there are tabs for 'Description', 'Annotations', and 'Documents'. The main content area is titled 'General informations' and contains a table with the following data:

URI	https://doi.org/10.15454/6TBLTD
Type	Accession
Name	0Mtp1098
Species	Vitis vinifera subsp. vinifera vitioeno:species/vitis/vinifera/vinifera
Variety	Kali Sahebi vitioeno:variety/FRA/3279

Below this table, there is a section titled 'Additional information' which contains another table:

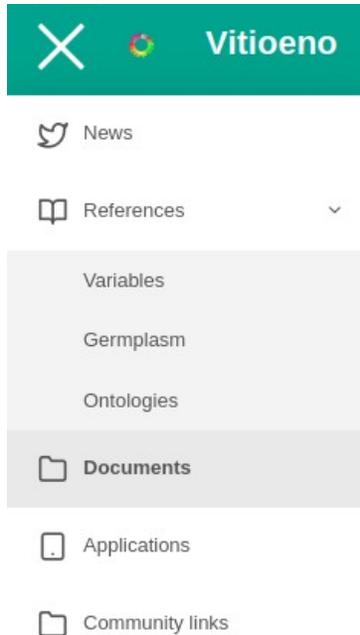
Attribute	Value
UnitelIntro	Plante
last_update	2022-08-11T17:03:09.819533
NomIntro	Tandanya (par erreur)



Documents (URI)

- A set of available documents :

- Protocols
- Technical guides
- Datasets
- Etc.



Vitoeno navigation menu with options: News, References, Variables, Germplasm, Ontologies, Documents, Applications, Community links.

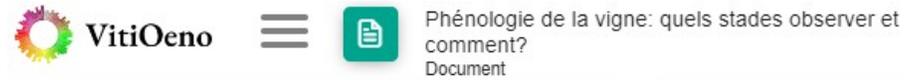
identifiers

URI
vitoeno-ressource.id/document/phnologie_de_la_vigne_...

Identifier
Https://doi.org/10.15454/1.5514275483910464e12

metadata

Type: Technical Document
Title: Phénologie de la vigne: quels stades observer et comment?
Date:
Description: Fiche protocole d'observation des principaux stades phénologiques de la vigne (débourrement, floraison et véraison)
Target:
Authors: Destrac-Irvine, Agnès; Barbeau, G.; de Resseguier, L.; Dumas, Vincent; García de Cortázar-Atauri, Inaki; Ojeda, Hernan; Saurin, Nicolas; van Leeuwen, Cornelius; Duchêne, Eric; Dufourcq, Thierry
Language: Fr
Format: Pdf
Keywords: Phénologie - débourrement - floraison - véraison - vigne -



VitiOeno logo and navigation icons. Text: Phénologie de la vigne: quels stades observer et comment? Document



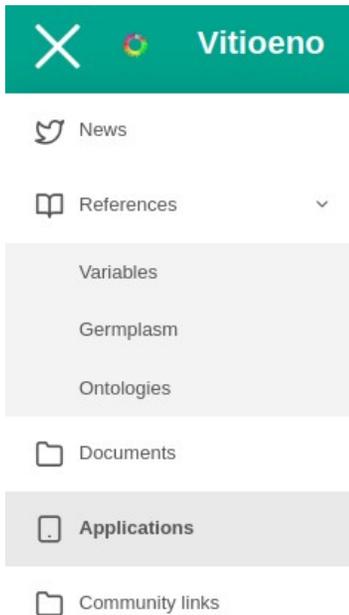
PDF document preview showing text and images of grapevines. Includes buttons for 'Preview File' and 'Download File'. The document title is 'Phénologie de la vigne: Quels stades observer et comment?' and it is associated with INRA and PERPHECLIM.

.pdf file



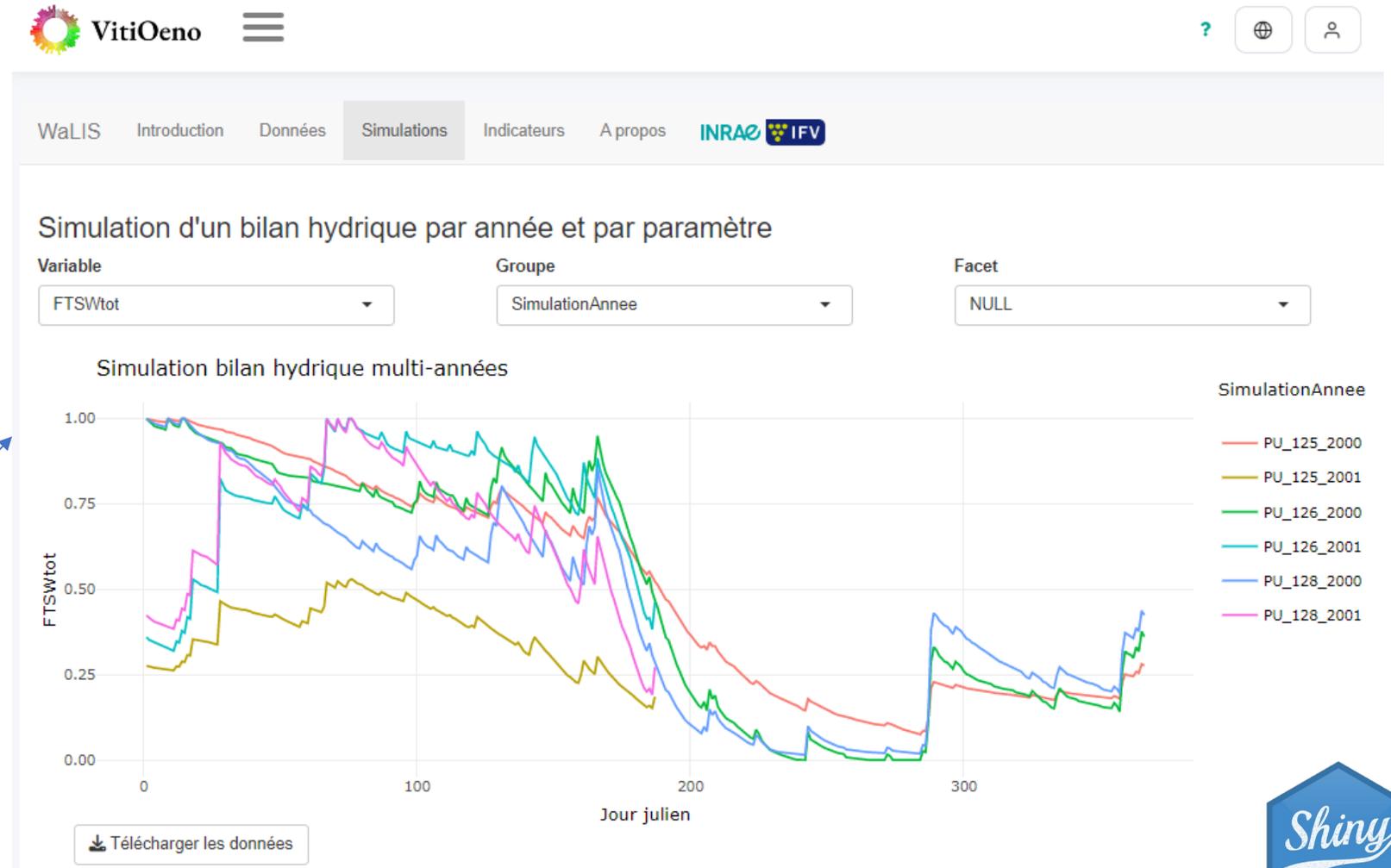
Apps

- A list of useful apps



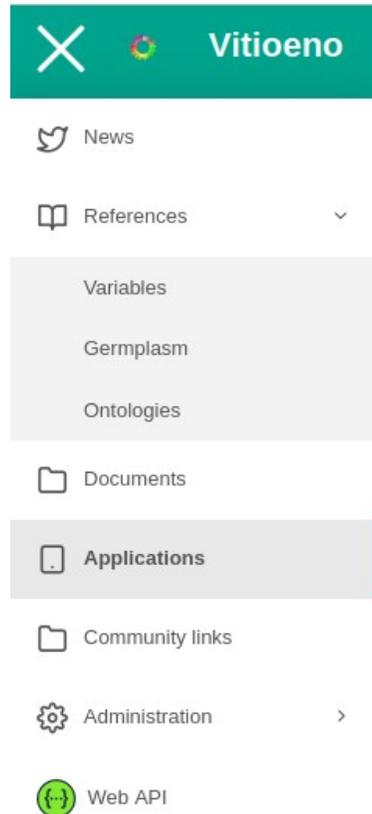
The screenshot shows the VitiOeno application menu. At the top is a green bar with a white 'X' icon and the text 'Vitioeno'. Below this are several menu items: 'News' with a bird icon, 'References' with a book icon and a dropdown arrow, 'Variables' with a list icon, 'Germplasm' with a leaf icon, 'Ontologies' with a list icon, 'Documents' with a folder icon, 'Applications' with a document icon and a dropdown arrow, and 'Community links' with a folder icon.

An R shiny app to simulate the soil water balance with the WaLIS model.



An API access

- An API access for software agents!



Variables

Show/Hide | List Operations | Expand Operations

GET	/core/characteristics	Search characteristics by name
POST	/core/characteristics	Add a characteristic
PUT	/core/characteristics	Update a characteristic
DELETE	/core/characteristics/{uri}	Delete a characteristic
GET	/core/characteristics/{uri}	Get a characteristic
GET	/core/characteristics/by_uris	Get detailed characteristics by uris
GET	/core/entities	Search entities by name
POST	/core/entities	Add an entity
PUT	/core/entities	Update an entity
GET	/core/entities_of_interest	Search entities of interest by name
POST	/core/entities_of_interest	Add an entity of interest
PUT	/core/entities_of_interest	Update an entity of interest
DELETE	/core/entities_of_interest/{uri}	Delete an entity of interest
GET	/core/entities_of_interest/{uri}	Get an entity of interest
GET	/core/entities_of_interest/by_uris	Get detailed entities of interest by uris
DELETE	/core/entities/{uri}	Delete an entity
GET	/core/entities/{uri}	Get an entity

Conclusions

- A web resource center available online
- A compilation of resources useful to improve the FAIRness of data
- Ongoing work to enrich, maintain and animate this website and the community
- An opportunity for an international collaboration

Prospects

- Dereferencing identifiers
- Agroportal exchanges
- Multiple labels
- Global search
- Users Feed back and Metrics
-

Acknowledgement

This work was carried out within the framework of the **VITIS DATA CROP project** with the support of the **French Ministry of Agriculture and Food**, with the financial contribution of the special allocation account for agricultural and rural development (CASDAR).

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