

27-29 May 2024 

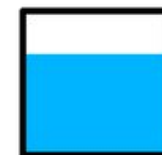


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International conference on Marine Data and Information Systems



MARIS



National
Oceanography
Centre



eosc
Blue-Cloud2026



Workflows for marine metadata and data management

IRD, FORTH, CNR, FIRMS network (FAO & tuna-RFMOs)



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Funded by
the European Union

EOSC, Blue-Cloud 2026 project: VRE and VLabs



- **General context**

- **EOSC - Blue-Cloud 2026 HORIZON project**, VRE & VLabs, **VLab 5 – “Global Fisheries Atlas”** focusing on **fisheries data**:

- past european research projects: FP7 [iMarine](#), H2020 [BlueBridge](#), H2020 [OpenAire-Connect](#), H2020 [Blue-Cloud](#)

- [FIRMS](#) network (FAO, research bodies and RFB: WECAFC, RECOFI, tuna-RFMOs..)

- same approach with other domains / data types: FAO, french research bodies (IRD, INRAE, CNRS..)..

- **Workflows for FAIRification** of spatial (meta-)data

- implement FAIR DMPs with widely used tools: e.g. OGC standards, SDIs & R software..

- **R packages** since few years (mainly with Java and Python until now)

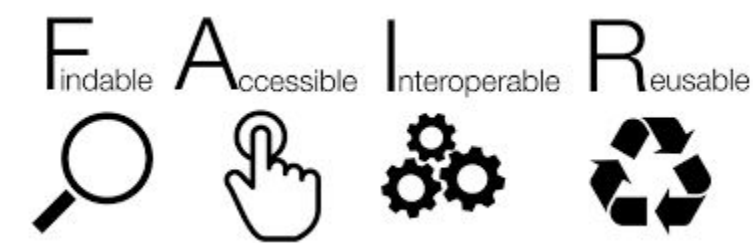
- automate redundant data management tasks / minimize duplication of efforts

- read, write, publish spatial (meta-)data (e.g. in GeoNetwork, GeoNode..)

- mapping standard (e.g. CF conventions to ISO 19115)

- assign DOIs, ensure reproducibility..

FAIRification: workflows for what data ?



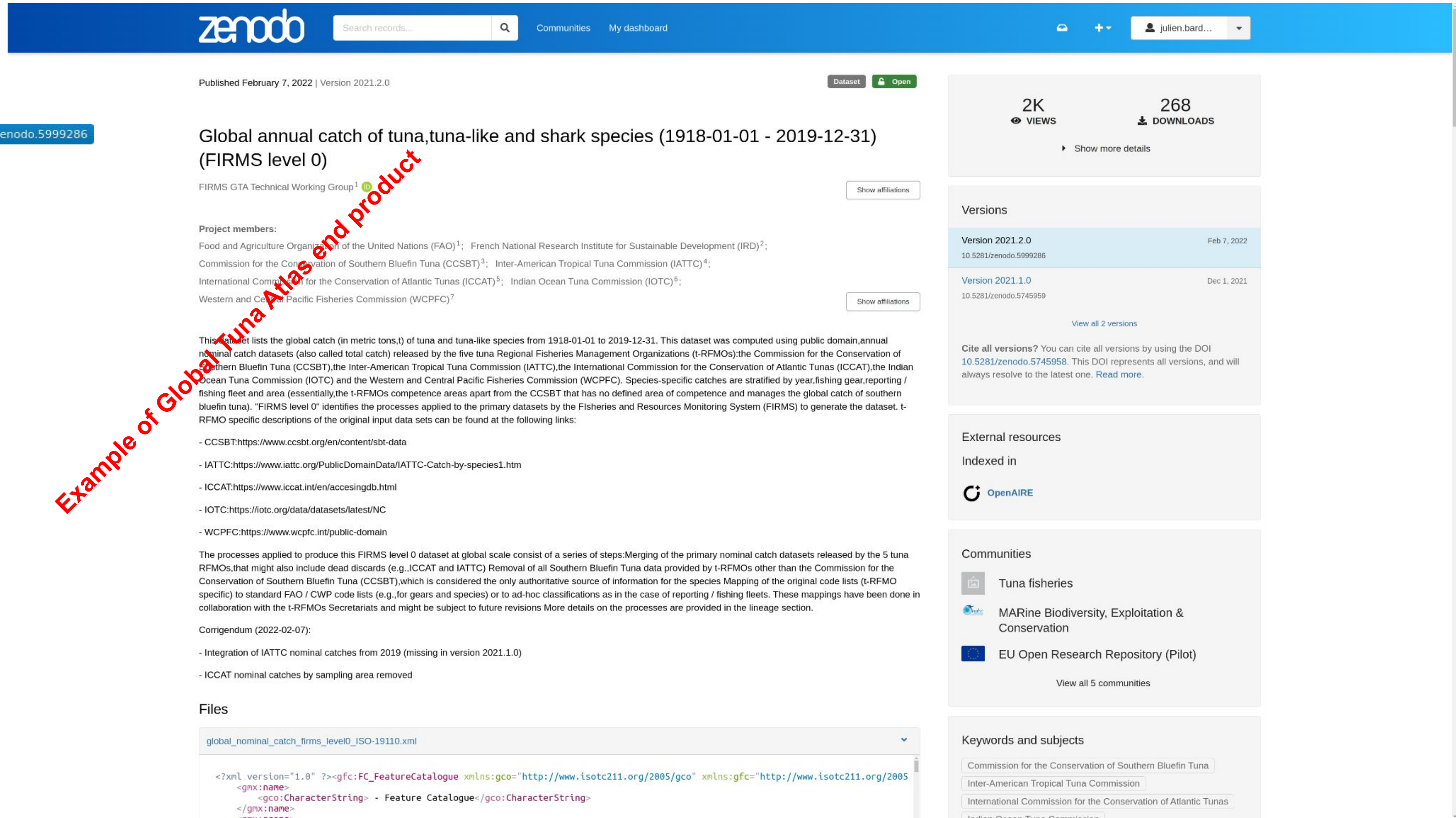
We identified a set of key use cases in the marine domain using main data types and formats:

- **fisheries data** (our pilot use case): e.g. [FIRMS Global Tuna Atlas](#) (CSV + Postgis DB)
 - nominal catch (per year / management area)
 - gridded data (catches, efforts, size classes..)
 - tagging data..
- **vector data**:
 - flat files in usual vector formats: csv, gpkg, shp, GML..
 - any spatial relation (table or view) stored in a spatial relational databases (SQL + SFS)
- **raster data**:
 - usual raster formats: geotiff / COG, NetCD-CF..
 - e.g. drone: raw data and photogrammetric process results (orthophotos, DEM..)
- **sensors data**: any data stored in a NetCDF-CF (model outputs, satellites, in situ sensors..)

FAIRification end product, DOI as a cornerstone: e.g. [FIRMS Global Tuna Atlas](#)

DOI [10.5281/zenodo.5999286](https://doi.org/10.5281/zenodo.5999286)

Example of Global Tuna Atlas end product



The screenshot shows a Zenodo dataset page for the 'Global annual catch of tuna, tuna-like and shark species (1918-01-01 - 2019-12-31) (FIRMS level 0)'. The page includes a search bar, navigation links, and a user profile. The dataset is published by the FIRMS GTA Technical Working Group. It features a 'Versions' section with two entries: Version 2021.2.0 (Feb 7, 2022) and Version 2021.1.0 (Dec 1, 2021). The page also lists project members, external resources, and communities. A 'Files' section at the bottom shows the dataset file 'global_nominal_catch_firms_level0_ISO-19110.xml' with its XML content.

zenodo Search records... Communities My dashboard julien.bard...

Published February 7, 2022 | Version 2021.2.0 Dataset Open

Global annual catch of tuna, tuna-like and shark species (1918-01-01 - 2019-12-31) (FIRMS level 0)

FIRMS GTA Technical Working Group¹

Project members:
Food and Agriculture Organization of the United Nations (FAO)¹; French National Research Institute for Sustainable Development (IRD)²; Commission for the Conservation of Southern Bluefin Tuna (CCSBT)³; Inter-American Tropical Tuna Commission (IATTC)⁴; International Commission for the Conservation of Atlantic Tunas (ICCAT)⁵; Indian Ocean Tuna Commission (IOTC)⁶; Western and Central Pacific Fisheries Commission (WCPFC)⁷

2K VIEWS **268** DOWNLOADS
Show more details

Versions

Version	Date
Version 2021.2.0 10.5281/zenodo.5999286	Feb 7, 2022
Version 2021.1.0 10.5281/zenodo.5745959	Dec 1, 2021

[View all 2 versions](#)

Cite all versions? You can cite all versions by using the DOI [10.5281/zenodo.5745958](https://doi.org/10.5281/zenodo.5745958). This DOI represents all versions, and will always resolve to the latest one. [Read more.](#)

External resources

Indexed in

OpenAIRE

Communities

- Tuna fisheries
- MARine Biodiversity, Exploitation & Conservation
- EU Open Research Repository (Pilot)

[View all 5 communities](#)

Keywords and subjects

- Commission for the Conservation of Southern Bluefin Tuna
- Inter-American Tropical Tuna Commission
- International Commission for the Conservation of Atlantic Tunas
- Indian Ocean Tuna Commission

Files

global_nominal_catch_firms_level0_ISO-19110.xml

```
<?xml version="1.0" ?><gfc:FC_FeatureCatalogue xmlns:gco="http://www.isotc211.org/2005/gco" xmlns:gfc="http://www.isotc211.org/2005/gfc" >
  <gmx:name>
    <gco:CharacterString> - Feature Catalogue </gco:CharacterString>
  </gmx:name>
</gfc:FC_FeatureCatalogue>
```


FAIRification end product: e.g. [FIRMS Global Tuna Atlas](#)



Food and Agriculture Organization of the United Nations | **FIRMS** Fisheries and Resources Monitoring System | **Global Atlas of Tuna and Tuna-like species (Beta version)**
Browse statistics of Tuna fisheries around the world

Access

Monthly catch of tuna and tuna-like species (1952-01-01 - 2019-12-31) by purse seiners and pole-and-liners in the Indian, Atlantic and Eastern Pacific Oceans aggregated by statistical squares of 1° longitude and latitude (FIRMS level 0) [global_catch_1deg_1ps_bb_firms_level0]

FILTERING

Attributes

- Source authority
- Flagstate
- Gear
- Species
- School type

THEMATIC MAPPING

Select a variable: Catch [value]

Map options

- Choropleth map
- Ckmeans clustering
- 5
- (Y)GnBu

Query & Map

Export options

Month: 1 - 12

Quarter: 1 - 4

Year: 1999 - 2019

metric tons [t]

Sum [sum]

Legend

TUNA FISHERIES MAPS

- Monthly catch of tuna and tuna-like species (1952-01-01 - 2019-12-31) by purse seiners and pole-and-liners in the Indian, Atlantic and Eastern Pacific Oceans aggregated by statistical squares of 1° longitude and latitude (FIRMS level 0)
View parameters:
• month: 1,2,3,4,5,6,7,8,9,10,11,12
• quarter: 1,2,3,4
• year: 1999,2000,2001,2002,2003,2004,2005,2006,2007,2008,2009,2010,2011,2012,2013,2014,2015,2016,2017,2018,2019
• unit: t
• aggregation_method: sum

Catch

- 0 to 3756.67
- 3756.67 to 11534.8
- 11534.8 to 25767.69
- 25767.69 to 58804.44
- 58804.44 to 128602.78

BASE OVERLAYS

- Grid 5x5 (CWP)
- Grid 1x1 (CWP)
- FAO major areas & breakdown

BASEMAPS

- World Imagery
- UN Clear Map
- UN Clear Map (Dark)
- EMODnet Bathymetry World baselayer

© FAO, 2020

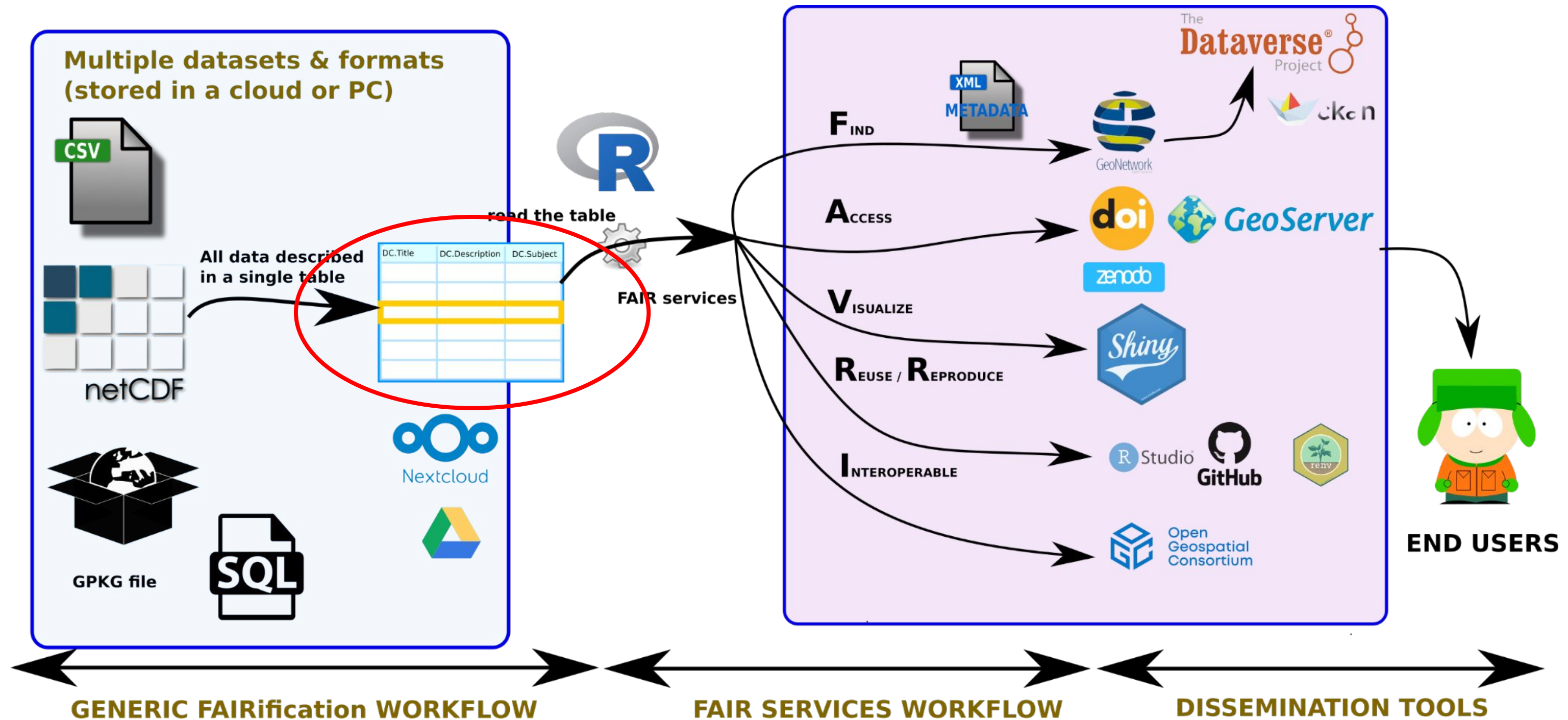
© OpenFairViewer (version 2.2.1)

Workflows to automate the **main data management steps** (by using R scripts and packages):

- **Read & write various inputs & outputs:** by using the main standards for (meta-)data **formats** and access **protocols**, e.g.:
 - [Spatial OGC standards](#):
 - metadata: 19115 / 19139 (discovery), 19110 (usage), 19119..
 - data: SQL / SFS, gpkg (shp..), CF compliant NetCDF / NCML..
 - protocols: CSW, WMS / WFS / WCS, OPeNDAP..
 - [Biodiversity Information Standards \(TDWG\)](#): e.g. EML, Darwin Core
 - [Ad hoc APIs](#): Zenodo, GeoNetwork, GeoServer, Dataverse, Nextcloud (OCS) ..
- **Transform:** metadata standards mapping, data structure harmonization
- **Load / publish:** (meta-)data in widely used tools (eg GeoNetwork, GeoServer, Zenodo..)
- **Long term storage and versioning:** DOIs assignment by implementing DataCite schema (e.g. in Zenodo data repository)

A method for editing metadata through basic tools : general overview

Simple tools and ergonomics (no endless html forms): data managers and users collaborate to fill a **single table** (e.g CSV) using **basic GUIs** (spreadsheets in a cloud or PC)



A pivot model to comply with widely used metadata standards: structure

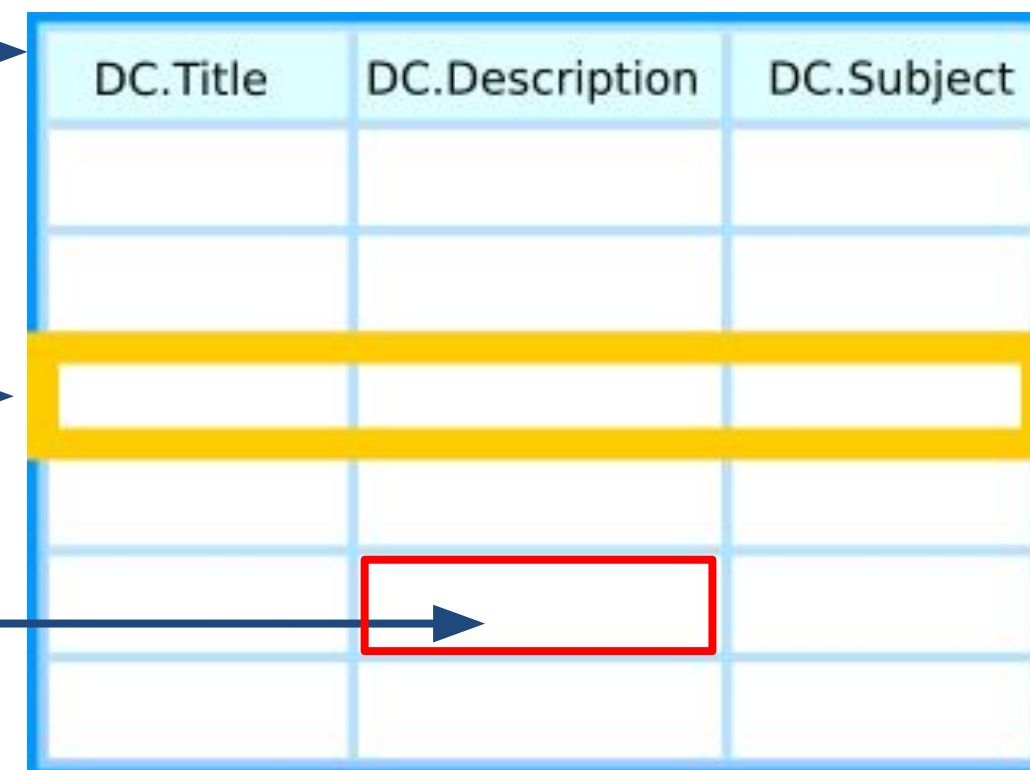
[geoflow R package](#) implements a simple metadata model made of:

- **15 Dublin Core (DCMI) metadata elements:** used as columns names in our tabular format
 - DCMI is a domain agnostic standard providing a list of key metadata elements
- **additional metadata elements to comply with other standards (optional):** directly named in the cells of the columns by using simple syntactic rules (key-value pairs, KVP)
 - **OGC** (spatial)
 - **EML & Darwin Core** (spatial)
 - **Datacite** (global and cross domain dissemination and long term access through DOIs)

one **column** = one DCMI metadata element

one **row** = one description of a dataset

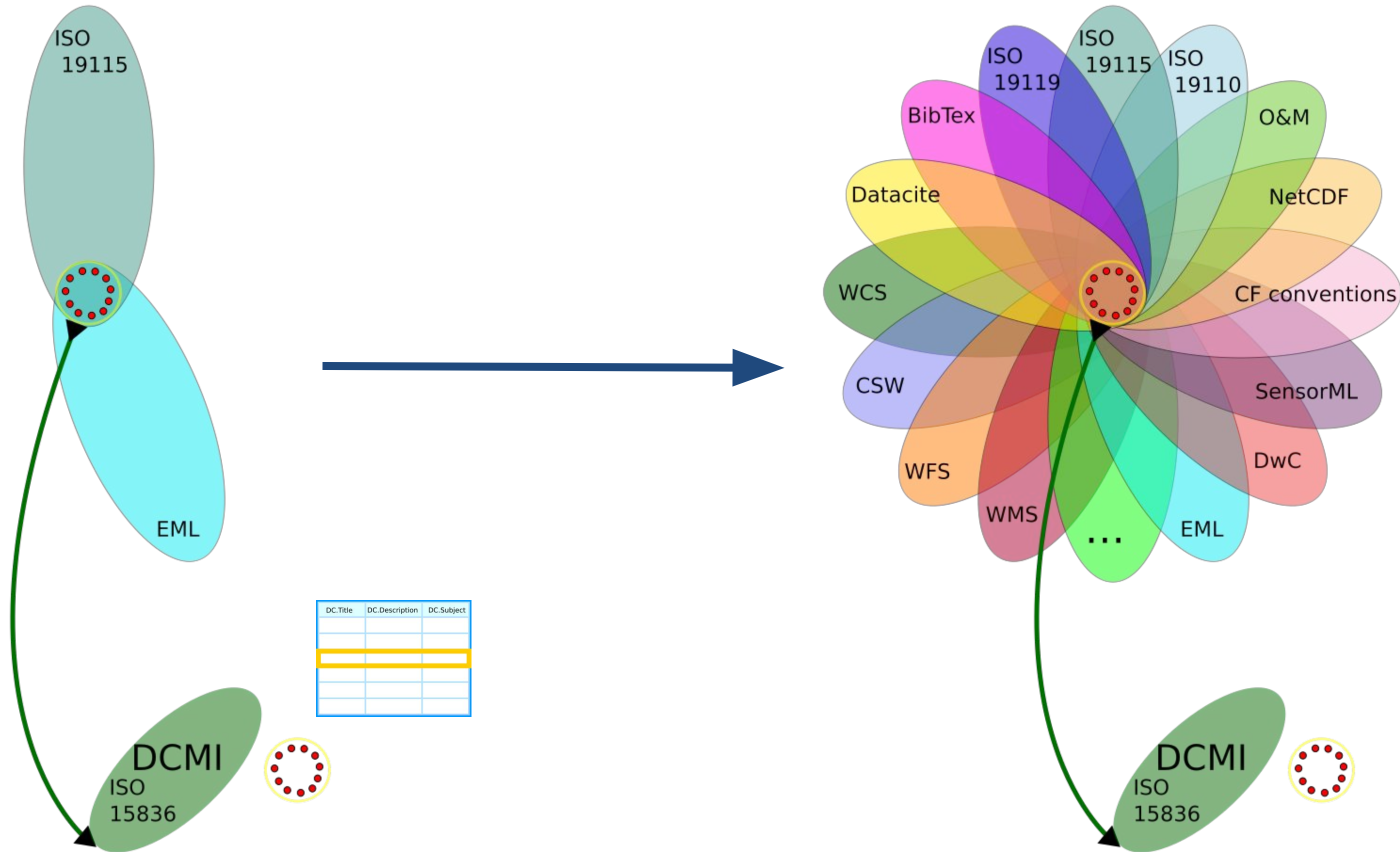
one **cell** = 1..* sub-metadata elements
(required by OGC, EML, Datacite..)



The diagram shows a table with three columns: DC.Title, DC.Description, and DC.Subject. The first row is highlighted in yellow. A red box highlights a cell in the second row, second column, with an arrow pointing to it from the text 'one cell = 1..* sub-metadata elements'.

DC.Title	DC.Description	DC.Subject

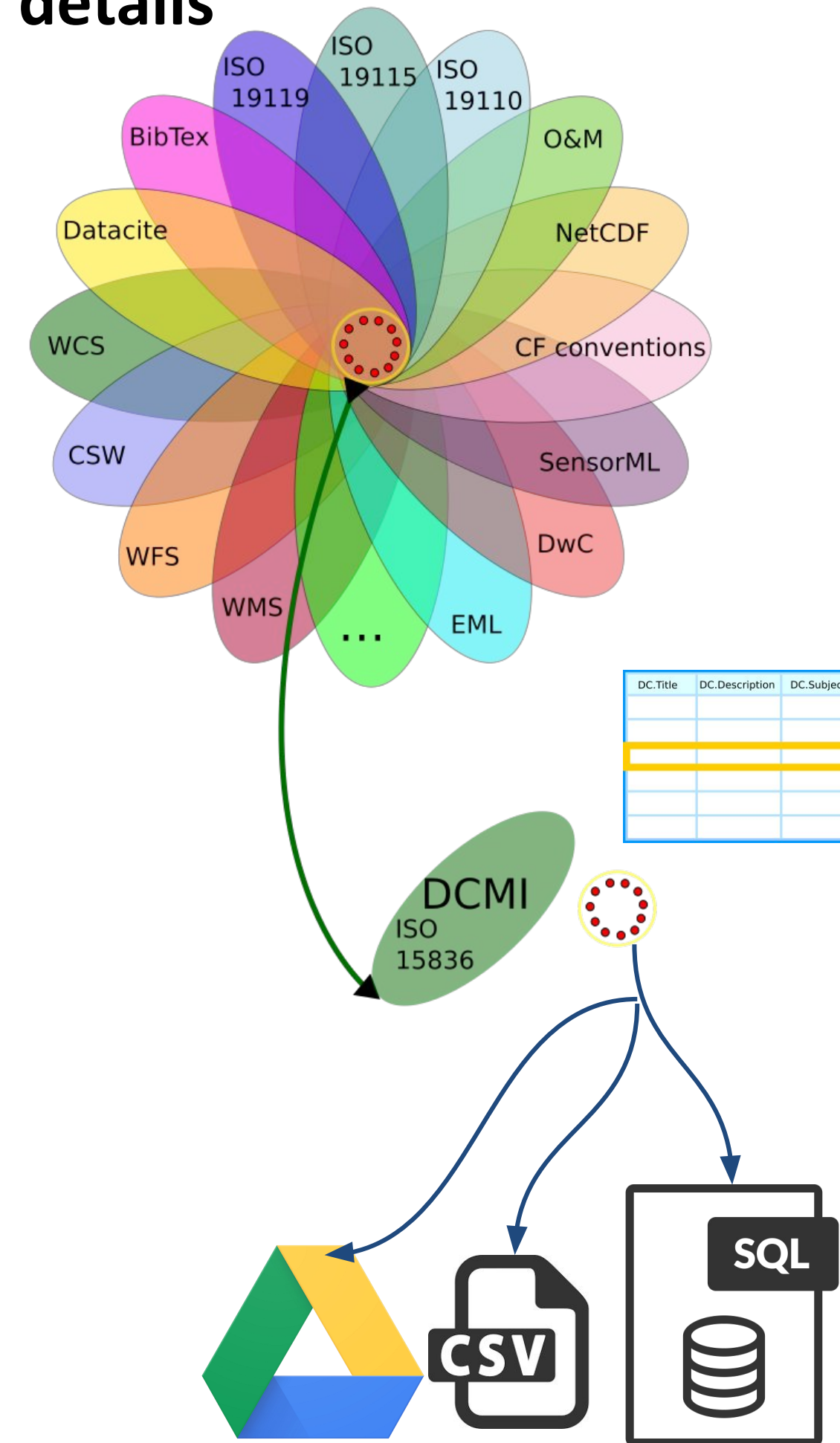
A pivot model to comply with widely used metadata standards: example



A pivot model to comply with widely used metadata standards: details

Dublin Core metadata elements are used to label the columns of a table (CSV..)

- **Identifier:** “string_identifier” + [DOIs](#), [URI](#), [URNs](#)..
- **Title:** “free text”
- **Description:** “prefix:free text” (abstract, purpose, additional info..)
- **Creator:** “role:person” / “role:email” + [UID](#), [ORCID](#) / [FOAF](#)
- **Subject:** thesaurus:keywords KVP or [controlled vocabularies](#) (eg [GEMET](#), [GCMD](#))
- **SpatialCoverage:** [eWKT](#) (dynamic if “Data” column valued)
- **TemporalCoverage:** [ISO](#) (dynamic if “Data” column valued with “time” dimension)
- **Date:** [controlled syntax](#)
- **Type:** free text
- **Format:** free text
- **Language:** code (e.g. fre, eng..) → norme [ISO 639](#)
- **Relation:** type:relation KVP or [URLs](#), [URIs](#)...
- **Provenance:** “prefix:free text”
- **Rights:** “prefix:free text” or [Creative Commons](#)....
- **Data:** “prefix:free text” Rules to attach data



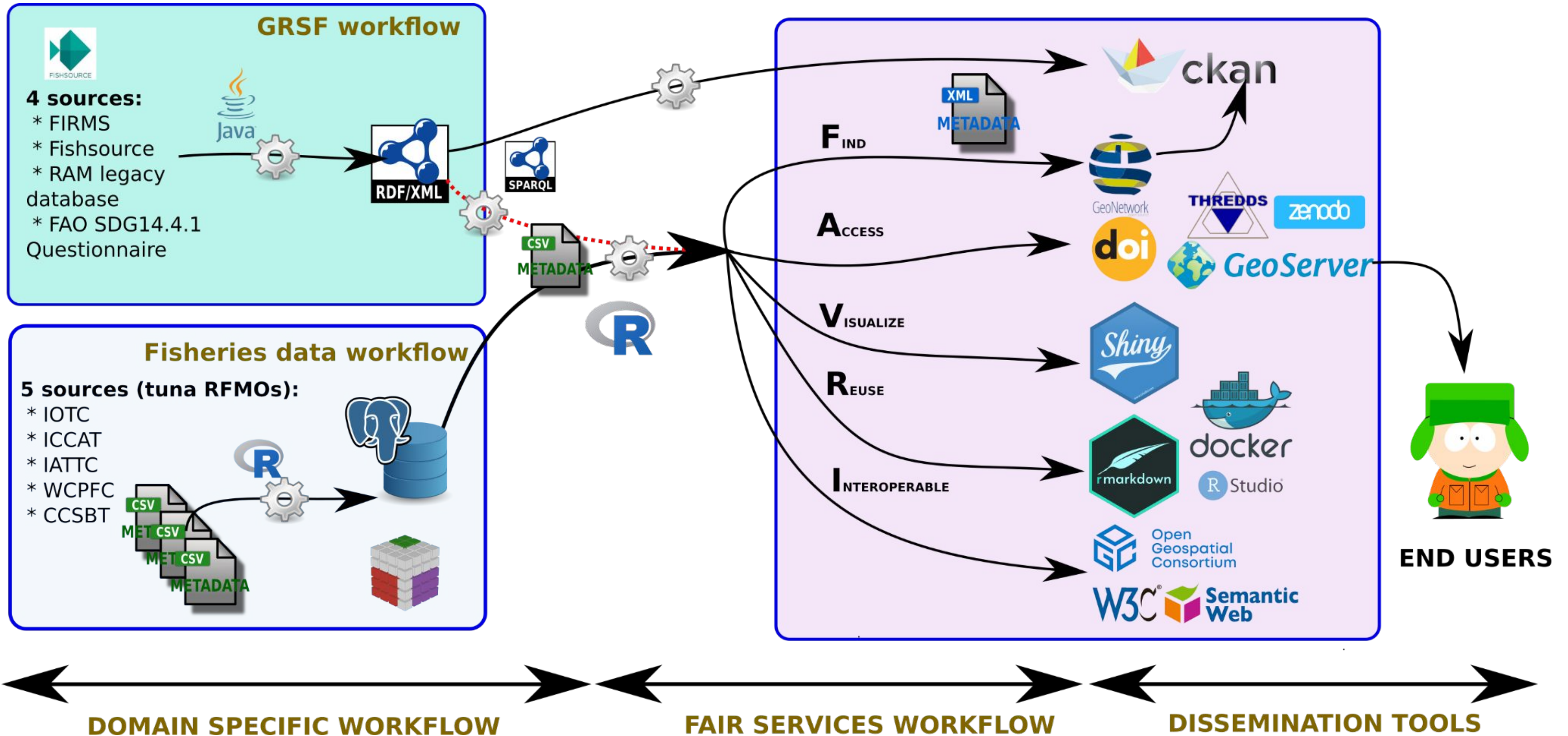
Implementing workflows with R programming language within a VRE



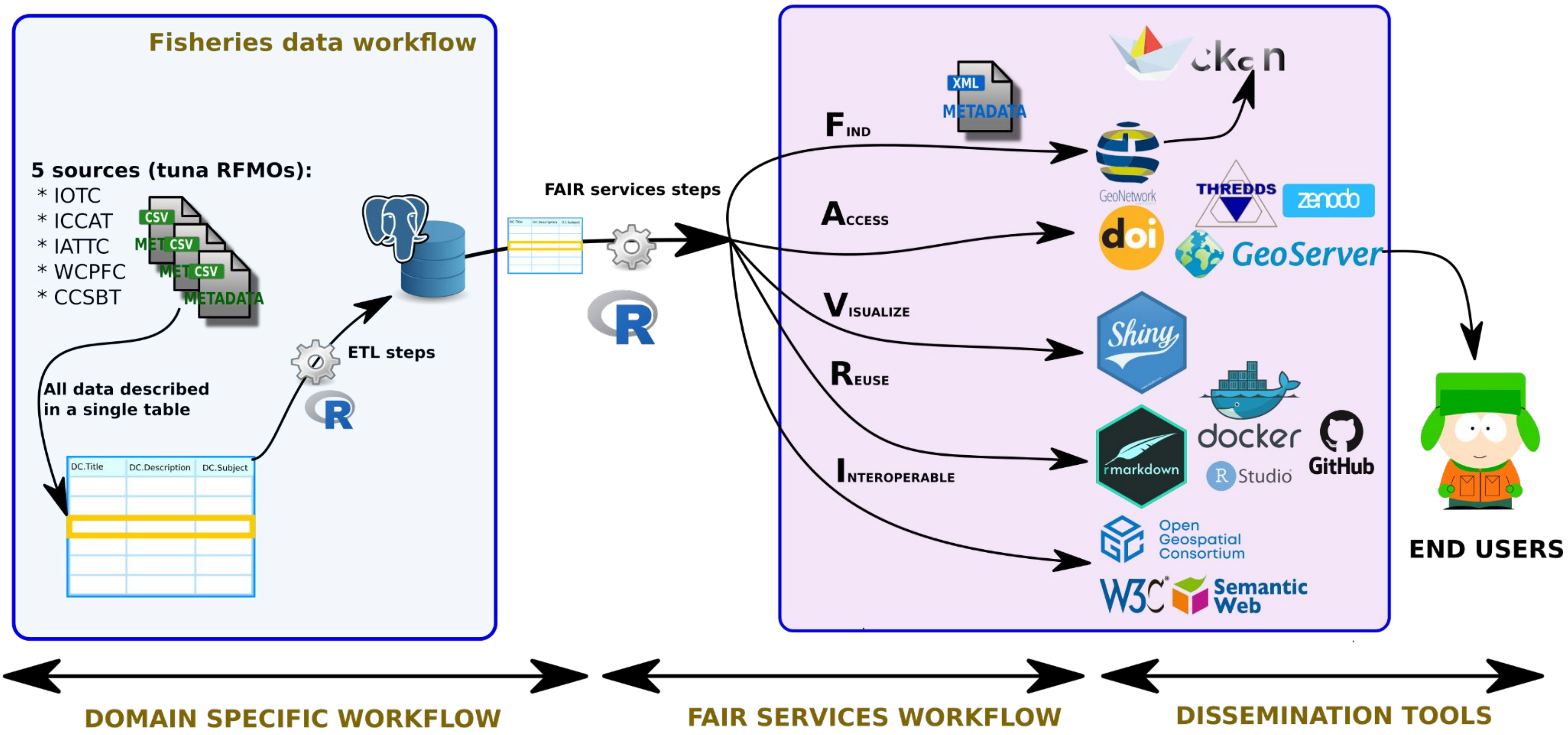
Our VRE / VLab environment requires multiple **software** and R packages:

- **Workflow orchestration:** geoflow package works on top of other packages
- **Multiple SDI software** to manage usual steps of the workflow:
 - extract (meta-)data from **nextcloud** (ocs4R), **Postgres / Postgis** (DBI)
 - read and write metadata: geometa (19115), ows4R (CSW)
 - publish metadata in **GeoNetwork**: geonapi, ows4R (CSW-T)
 - publish data in **GeoServer**: geosapi
 - assign DOIs (out of the VLab): **Zenodo** (zen4R)
- **Environment: JupyterHub / RStudio** IDE customized for all VLab users
 - pre-installed packages & environments (using renv package to foster reproducibility)
 - cloned GitHub repositories (TBD)

Examples of marine metadata and data management with R workflows: VLab5



Examples of marine metadata and data management with R workflows: VLab5



Examples of marine metadata and data management with R workflows : fisheries data

Food and Agriculture Organization of the United Nations Fisheries GeoNetwork Platform

Retour à la recherche

Global monthly catch of tuna and tuna-like species (1958-12-01 - 2021-12-31) by purse seiners and pole-and-liners in the Indian, Atlantic and Eastern Pacific oceans aggregated by statistical squares of 1° longitude and latitude (FIRMS level 0)

This dataset lists the monthly-spatially aggregated catch of tuna and tuna-like species (i.e. billfish, bonitos, and mackerel) by purse seiners and pole-and-liners from 1958-12-01 to 2021-12-31 in the Indian, Atlantic and Eastern Pacific Oceans.

This dataset was computed using public domain georeferenced catch-and-effort datasets released by the five tuna Regional Fisheries Management Organizations: the Commission for the Conservation of Southern Bluefin Tuna (CCSBT), the Inter-American Tropical Tuna Commission (IATTC), the International Commission for the Conservation of Atlantic Tunas (ICCAT), the Indian Ocean Tuna Commission (IOTC) and the Western and Central Pacific Fisheries Commission (WCPFC).

Species-specific catches expressed in weight or number are stratified by year, month, reporting / fishing fleet, fishing gear, fishing mode (i.e. type of school association) and area (statistical squares of 1° longitude and latitude).

Data from the Western Pacific ocean were not included because WCPFC only provides purse seine and pole-and-line catch at a spatial resolution of statistical squares of 5° longitude and latitude.

FIRMS level 0 identifies the processes applied to the primary datasets by the Fisheries and Resources Monitoring System (FIRMS) to generate the dataset.

t-RFMO specific descriptions of the original input data sets can be found at the following links:-
 CCSBT: <https://www.ccsbt.org/en/content/sbt-data>
 IATTC: <https://www.iatct.org/>
 ICCAT: <https://www.iccat.int/en/accessingdb.html>
 IOTC: <https://iotc.org/data/datasets/latest/CESurface>
 WCPFC: <https://www.wcpfc.int/public-domain>

The processes applied to produce this FIRMS level 0 dataset at global scale consist of a series of steps: Original catch-and-effort data are disseminated in such a way that redundancy may exist between the various datasets released, or that dimensions may be split over the datasets for some strata. To cope with these issues and collate a unique and (possibly) complete value of catch per stratum (i.e. with all the available dimensions), the original datasets had to be merged and post-processed by removing the duplicated strata or reassembling those strata with all available dimensions split over multiple datasets; Removal of all Southern Bluefin Tuna data provided by t-RFMOs other than the Commission for the Conservation of Southern Bluefin Tuna (CCSBT), which is considered the only authoritative source of information for the species Mapping of the original code lists (t-RFMO specific) to standard FAO / CWP code lists (e.g. for gears and species) or to ad-hoc classifications as in the case of reporting / fishing fleets. These mappings have been done in collaboration with the t-RFMOs Secretariats and might be subject to future revisions

More details on the processes are provided in the lineage section.

Téléchargements et liens

- Digital Object Identifier
DOI <http://dx.doi.org/10.5281/zenodo.5745986> Ouvrir le lien
- global_catch_1deg_1m_surface_firms_level0 Visualiser
Cette donnée est publiée dans le service de visualisation (WMS) disponible à l'adresse https://www.fao.org/fishery/geoserver/gta/ows?service=WMS,couche=global_catch_1deg_1m_surface_firms_level0.
- global_catch_1deg_1m_surface_firms_level0 - Data (features) access - OGC Web Feature Service (WFS) Visualiser
Cette donnée est publiée dans le service de téléchargement (WFS) disponible à l'adresse https://www.fao.org/fishery/geoserver/gta/ows?service=WFS,couche=global_catch_1deg_1m_surface_firms_level0.
- wfsNoOutputFormats Télécharger
- global_catch_1deg_1m_surface_firms_level0 - Data download - OGC Web Feature Service (WFS) - GML Télécharger
https://www.fao.org/fishery/geoserver/gta/ows?service=WFS&request=GetFeature&version=1.0.0&typeName=global_catch_1deg_1m_surface_firms_level0
- global_catch_1deg_1m_surface_firms_level0 - Data download - OGC Web Feature Service (WFS) - GeoJSON Télécharger
https://www.fao.org/fishery/geoserver/gta/ows?service=WFS&request=GetFeature&version=1.0.0&typeName=global_catch_1deg_1m_surface_firms_level0&outputFormat=json

Aperçu

map

global_catch_1deg_1m_surface_firms_level0

Food and Agriculture Organization of the United Nations

French National Research Institute for Sustainable Development

IRD Institut de Recherche pour le Développement FRANCE

Aucune évaluation

Voir tous les commentaires

Ajouter votre commentaire

Étendue spatiale

Étendue temporelle

Date de création: 2024-05-07

Fourni par

Mis à jour: il y a 13 jours

Partager



Food and Agriculture Organization of the United Nations FIRMS Fisheries and Resources Monitoring System Global Atlas of Tuna and Tuna-like species (Beta version) Browse statistics of Tuna fisheries around the world

Access

Monthly catch of tuna and tuna-like species (1952-01-01 - 2019-12-31) by purse seiners and pole-and-liners in the Indian, Atlantic and Eastern Pacific Oceans aggregated by statistical squares of 1° longitude and latitude (FIRMS level 0) [global_catch_1deg_1m_surface_firms_level0]

FILTERING

Attributes

- Source authority
- Flagstate
- Gear
- Species
- School type

THEMATIC MAPPING

Select a variable: Catch [value]

Map options

- Choropleth map
- Kmeans clustering
- 5
- Y/GnBu

Query & Map

Export options

Month: 1 - 12

Quarter: 1 - 4

Year: 1999 - 2019

metric tons [t]

Sum [sum]

Legend

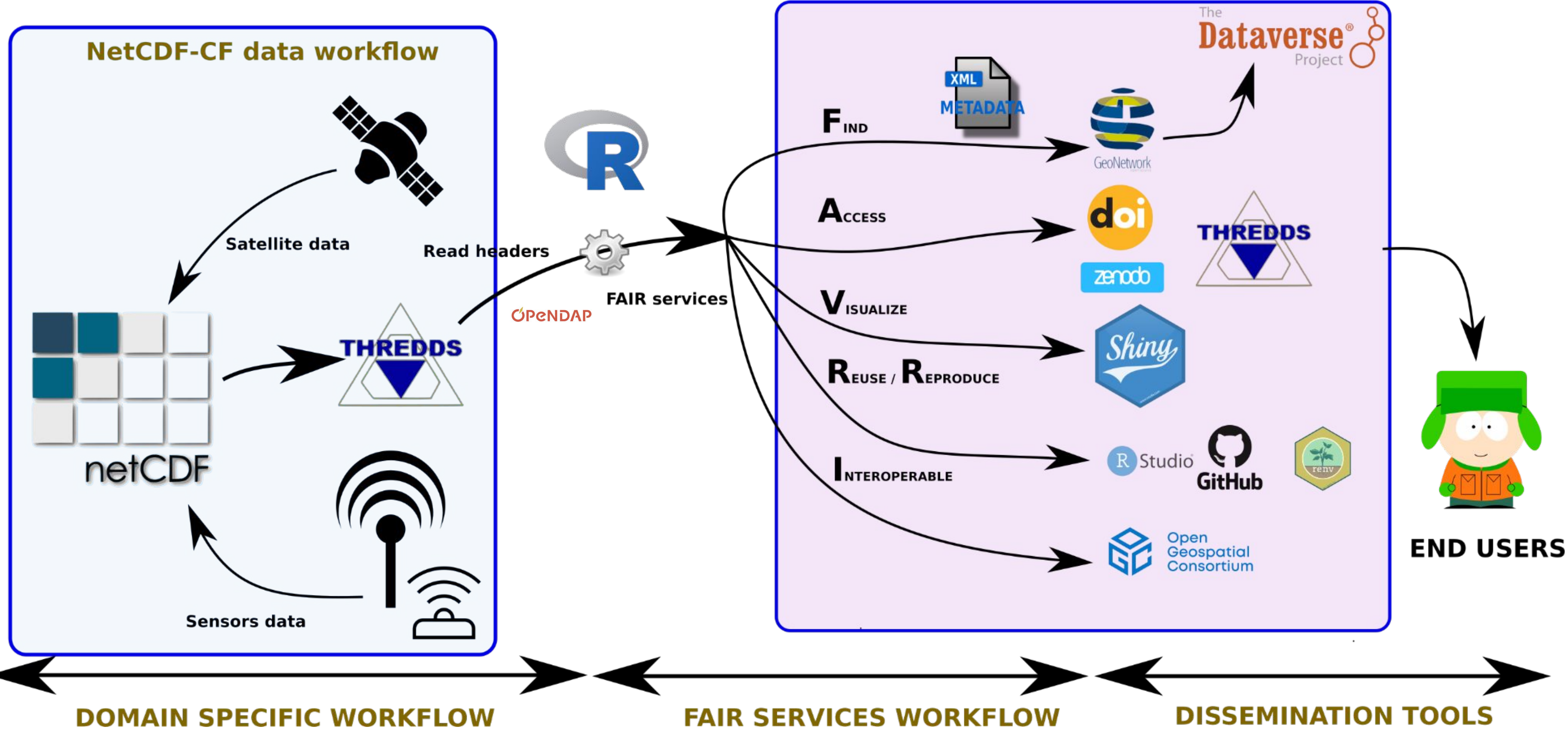
TUNA FISHERIES MAPS

- Monthly catch of tuna and tuna-like species (1952-01-01 - 2019-12-31) by purse seiners and pole-and-liners in the Indian, Atlantic and Eastern Pacific Oceans aggregated by statistical squares of 1° longitude and latitude (FIRMS level 0)
 - View parameters:
 - month: 1,2,3,4,5,6,7,8,9,10,11,12
 - quarter: 1,2,3,4
 - year: 1999,2000,2001,2002,2003,2004,2005,2006,2007,2008,2009,2010,2011,2012,2013,2014,2015,2016,2017,2018,2019
 - unit: t
 - aggregation_method: sum
 - Catch
 - 0 to 3756.67
 - 3756.67 to 11534.8
 - 11534.8 to 25767.69
 - 25767.69 to 58804.44
 - 58804.44 to 128602.78
- BASE OVERLAYS
 - Grid 5x5 (CWP)
 - Grid 1x1 (CWP)
 - FAO major areas & breakdown
- BASEMAPS
 - World Imagery
 - UN Clear Map
 - UN Clear Map (Dark)
 - EMODnet Bathymetry World baselayer

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© OpenFairs Viewer (version 2.2.1)

Examples of marine metadata and data management with R workflows: NetCDF data



Examples of marine metadata and data management with R workflows: NetCDF data



The screenshot shows a web interface for the WaveWatch III (WW3) Global Wave Model. The page title is "WaveWatch III (WW3) Global Wave Model" and it is updated 3 years ago. A descriptive paragraph states: "Through a collaborative effort with NOAA/CEP and NWS Honolulu, the University of Hawaii has implemented a global-scale WaveWatch III (WW3) 7-day model with a 5-day hourly forecast at approximately 50-km or 0.5-deg resolution. The global model is forced with NOAA/CEP's Global Forecast System (GFS) winds. This model is designed to capture the large-scale ocean waves and provide spectral boundary conditions for the Hawaii and other Pacific regional WW3 models. While considerable effort has been made to implement all model components in a thorough, correct, and accurate manner, numerous sources of error are possible. As such, please use these data with the caution appropriate for any ocean-related activity."

Download and links

Download and links	Open link
WaveWatch III (WW3) Global Wave Model - Threats Catalog <small>(Best Time Series)</small>	<input type="text" value="Open link"/>
sea_surface_wave_significant_height <small>This dataset is published in the view service (VMS) available at https://pseph@pacios.hawaii.edu/reddb/ww3net3_global/ww3net3_III_Global_Wave_Model_best.ncd?service=VMS with layer name thgt.</small>	<input type="text" value="Add to map"/>
sea_surface_wave_period_at_variance_spectral_density_maximum <small>This dataset is published in the view service (VMS) available at https://pseph@pacios.hawaii.edu/reddb/ww3net3_global/ww3net3_III_Global_Wave_Model_best.ncd?service=VMS with layer name tpep.</small>	<input type="text" value="Add to map"/>
sea_surface_wave_from_direction <small>This dataset is published in the view service (VMS) available at https://pseph@pacios.hawaii.edu/reddb/ww3net3_global/ww3net3_III_Global_Wave_Model_best.ncd?service=VMS with layer name tdir.</small>	<input type="text" value="Add to map"/>
sea_surface_swell_wave_significant_height <small>This dataset is published in the view service (VMS) available at https://pseph@pacios.hawaii.edu/reddb/ww3net3_global/ww3net3_III_Global_Wave_Model_best.ncd?service=VMS with layer name whgt.</small>	<input type="text" value="Add to map"/>
sea_surface_swell_wave_period <small>This dataset is published in the view service (VMS) available at https://pseph@pacios.hawaii.edu/reddb/ww3net3_global/ww3net3_III_Global_Wave_Model_best.ncd?service=VMS with layer name wper.</small>	<input type="text" value="Add to map"/>
sea_surface_swell_wave_from_direction <small>This dataset is published in the view service (VMS) available at https://pseph@pacios.hawaii.edu/reddb/ww3net3_global/ww3net3_III_Global_Wave_Model_best.ncd?service=VMS with layer name wdir.</small>	<input type="text" value="Add to map"/>
sea_surface_wind_significant_height <small>This dataset is published in the view service (VMS) available at https://pseph@pacios.hawaii.edu/reddb/ww3net3_global/ww3net3_III_Global_Wave_Model_best.ncd?service=VMS with layer name whgt.</small>	<input type="text" value="Add to map"/>
sea_surface_wind_wave_period <small>This dataset is published in the view service (VMS) available at https://pseph@pacios.hawaii.edu/reddb/ww3net3_global/ww3net3_III_Global_Wave_Model_best.ncd?service=VMS with layer name wper.</small>	<input type="text" value="Add to map"/>
sea_surface_wind_wave_from_direction <small>This dataset is published in the view service (VMS) available at https://pseph@pacios.hawaii.edu/reddb/ww3net3_global/ww3net3_III_Global_Wave_Model_best.ncd?service=VMS with layer name wdir.</small>	<input type="text" value="Add to map"/>

About this resource

Categories

- Earth Science Services > Models > Ocean General Circulation Models (OGCM)/Regional Ocean Models
- Earth Science Services > Models > Weather Research/Forecast Models
- Earth Science > Oceans > Ocean Waves > Significant Wave Height
- Earth Science > Oceans > Ocean Waves > Wave Period
- Earth Science > Oceans > Ocean Waves > Wave Speed/Direction
- Not Applicable > Not Applicable
- Models/Analyses > Operational Models
- Pacific Islands Ocean Observing System (PacIOOS)
- Pacific Islands Ocean Observing System (PacIOOS)
- Earth Science Services > Models > Ocean General Circulation Models (OGCM)/Regional Ocean Models
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- Not Applicable > Not Applicable
- Models/Analyses > Operational Models
- Pacific Islands Ocean Observing System (PacIOOS)
- Pacific Islands Ocean Observing System (PacIOOS)

Language

- English

Resource Identifier

- WaveWatch_III_Global_Wave_Model_best.ncd

Contact for the resource

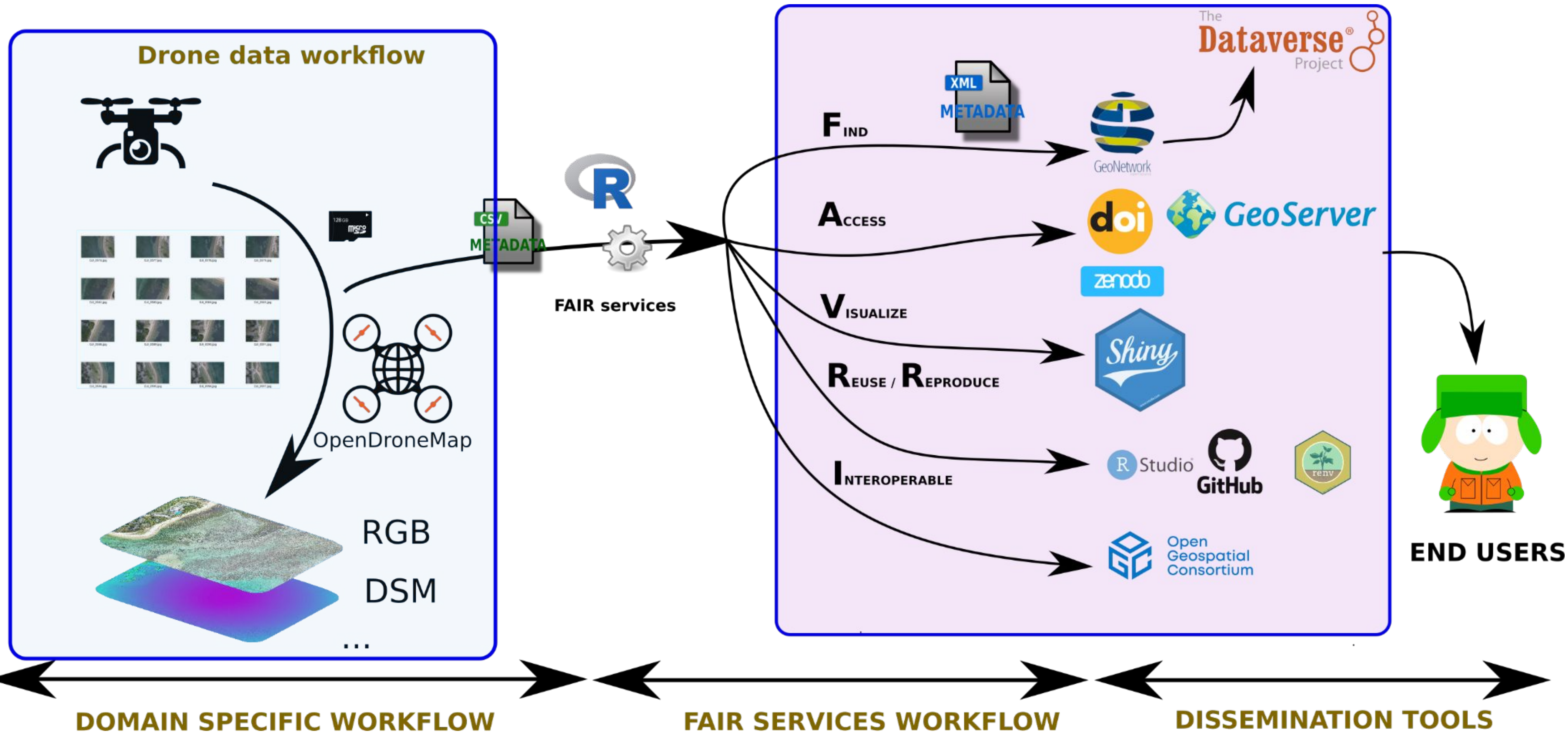
Owner
University of Hawaii at Manoa
cheung@hawaii.edu

Publisher
Pacific Islands Ocean Observing System (PacIOOS)
hio@pacioos.org

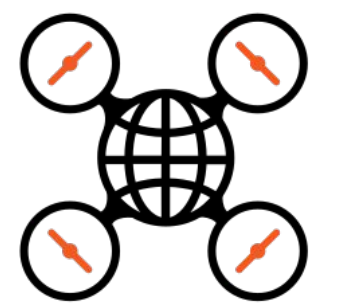
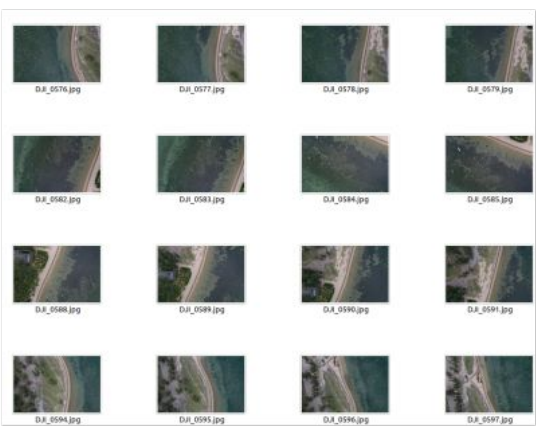
Technical information

Overview

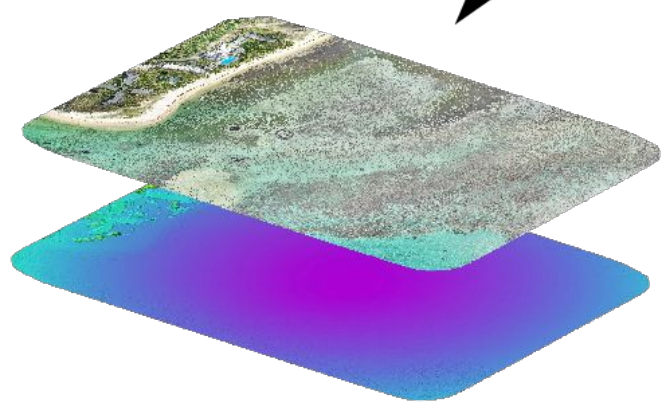
Examples of marine metadata and data management with R workflows: drone data



Examples of marine metadata and data management with R workflows: drone data



OpenDroneMap



RGB

DSM

...

zenodo

Published October 22, 2023 | Version "PROCESSED DATA"

Orthophoto & DEM (MNE) issues d'images drone, UAV, Ermitage, Saint-Gilles, Réunion - 20230524 - 02_3

210 VIEWS | 86 DOWNLOADS

Version & PROCESSED DATA

Version RAW DATA

External resources

Indexed in

Communities

Keywords and subjects

Details

Rights

Citation

Files

Name	Size
000_photogrammetry_report.pdf	8.7 MB
01_sample_rasterdata_overview.png	708.6 kB
DCIM.zip	3.4 GB
GPS.zip	182.1 MB
METADATA.zip	22.1 MB

geOrchestra

Des données ouvertes pour une science durable au Sud

DataSuds-geo Preproduction

Orthophoto d'îlot Sancho, Maurice

Ce jeu de données présente les résultats des traitements photogrammétriques d'images de drone DJI Mavic 2 Pro UAV acquises sur le site de Ermitage, Saint-Gilles, Réunion à la date suivante : 20230524. Les traitements ont été réalisés avec le logiciel OpenDroneMap à partir des images brutes fournies dans la première version de ce DOI.

Le dépôt est composé des éléments suivants:

- 00_ : Planche d'aperçu des images
- DCIM.zip: Images brutes issues du drone
- GPS.zip: Geopackage contenant l'emprise du survol ainsi que la géolocalisation des images accompagnées de leurs miniatures dans la table d'attribut en base64. RINEX et LLH issus d'un Emlid Reach M2 synchronisé avec la LED de navigation (événement envoyé dans le log du récepteur GNSS lors du déclenchement d'une image). Le but est de pouvoir réaliser un PPK (similaire au RTK en post-traitement) et ainsi disposer d'une position centrimétrique sur chaque image.
- METADATA.zip: Métadonnées au format ISO19115, Rapports avec miniatures des images de drone (dossier tb) et statistiques de vols.
- PROCESSED_DATA.zip: Orthophoto, DEM, nuages de points, ...

Arborescence d'origine:

```

|--- 20230524_REU-ermitage_UAV-02_3
|----- DCIM
|----- GPS
|----- base_2023_05_24_pascal
|----- reach_2023_05_24_drone
|----- reachsvl_raw_202305240249_RINEX_3_03
|----- reachsvl_raw_202305240330_RINEX_3_03
|----- reach_2023_05_24_rover
|----- METADATA
|----- tb
|----- PROCESSED_DATA
    
```

Découvrir les données

API

Propulsé par GeoNetwork 4.2.2.0

eosc | Blue-Cloud2026



blue-cloud.org



[@bluecloudeu](https://twitter.com/bluecloudeu)



[blue-cloud org](https://www.linkedin.com/company/blue-cloud-org)



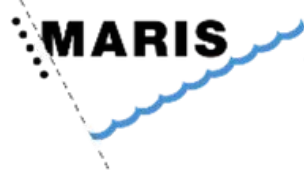
Funded by
the European Union

27-29 May 2024 



imdis

International conference on Marine Data and Information Systems



Execution of a workflow with geoflow command: `executeWorkflow("config.json")`

geoflow requires a single configuration file “config.json”

```
{  
  "id": "my-workflow",  
  "mode": "entity",  
  "metadata": { <metadata sources defined here> },  
  "software": [ <pieces of software defined here> ],  
  "actions": [ <actions defined here> ],  
  "profile": { <global profile (metadata) defined here> },  
  "options": { <global options defined here> },  
}
```


A geoflow shiny app to avoid manual edition of the “config.json” configuration file

Geoflow UI

Configuration editor

The geoflow configuration editor allows users to create a geoflow data flow configuration file in an interactive user-friendly manner. The user will be able to load an existing configuration file. Once the configuration file created/edited, the user will be able to execute it workflow interactively.

Load configuration file?

Choose Json File

Browse... No file selected

Load

Profile Metadata Software Actions

Workflow identifier

Workflow mode

entity

Project name

Organization

Logos

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Load configuration file?

Choose Json File

Browse... config.json

Upload complete Valid JSON

Load

Profile Metadata Software Actions

Contacts Entities

Add a new contact source Modify a new contact source Delete a contact source

Handler	Source
gsheet	https://docs.google.com/spreadsheets/d/144NmGsikdIRE578IN0Mck9uZEUHZdBuZcGy1pJS6nAg/edit#gid=0
gsheet	https://docs.google.com/spreadsheets/d/1qGUhFnH93d-DucDphL2MSCE6pXY5aSNJu0vjBK4Tziw/edit?usp=sharing

Showing 1 to 2 of 2 entries

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Choose Json File

Browse... config.json

Upload complete Valid JSON

Load

Profile Metadata Software Actions

Add a new action Modify an action Delete an action

Identifier	Run?	Action Type	Definition
zen4R-deposit-record	true	Data publication	Deposits/Publish data and/or metadata in the Zenodo infrastructure
geometa-create-iso-19115	true	Metadata production	Produce an ISO/OGC 19115/19139 metadata object

Options

- logo: true
- doi: false
- doi_thumbnail: false
- addfeatures: false

Dynamic datasets: e.g. SQL queries (stored as views or not)

