Central Asia
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Tajikistan Turkmenistan Uzbekistan Kazakhstan Kyrgyzstan

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Central Asia Climate Information Platform

Development and Technical updates of the Platform (CACIP)

26 February 2020 – Almaty, Kazakhstan

Enrico Bonaiuti, Akmal Akramkhanov

ICARDA
Science for resilient livelihoods in dry areas

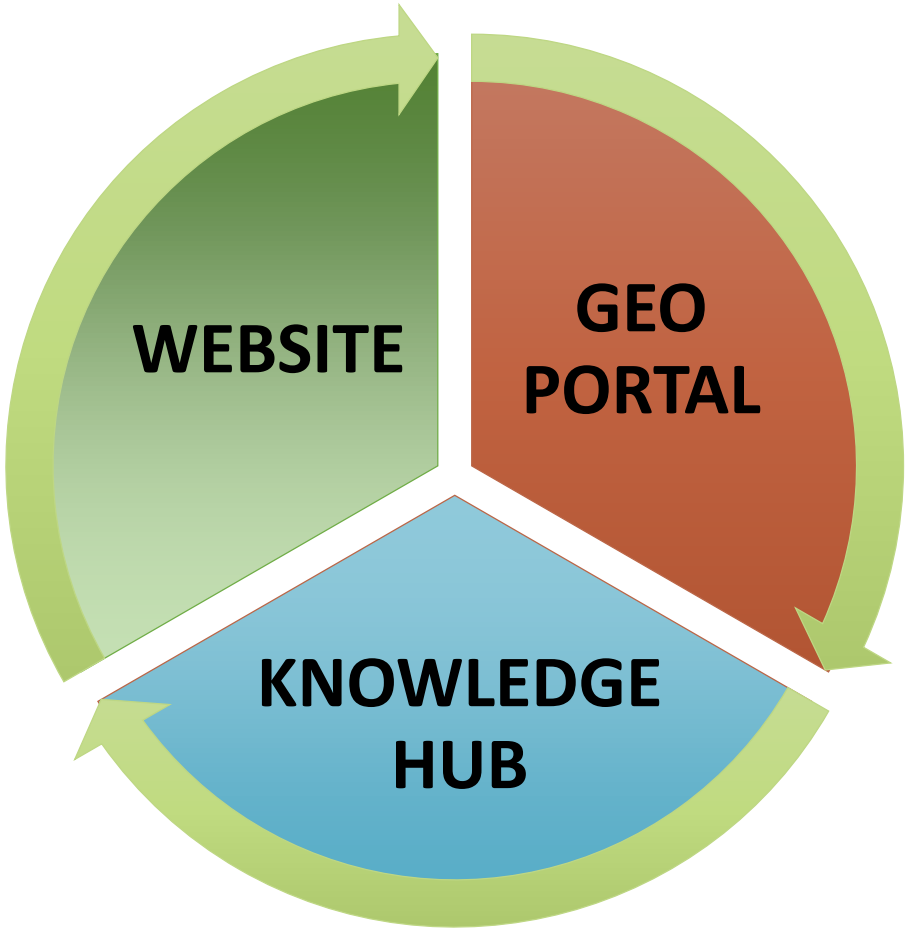
Agenda

- 2019 Activities
- 2020 Plan
- Feedback with Stakeholders and Awareness
- Sustainability: MoU and Capacity Development
- CACIP Technical Updates

Logical Architecture

the **WEBSITE** is the entry point of the platform

the **KNOWLEDGE HUB** collects, store and provides docs, ideas, contacts, and all relevant information



the **GEO PORTAL** collects manages and displays geographical data and includes analysis tools

Country Stakeholder Consultations

June 11, 2019
Tashkent
Uzbekistan

June 14, 2019
Almaty
Kazakhstan

July 11, 2019
Bishkek
Kyrgyzstan

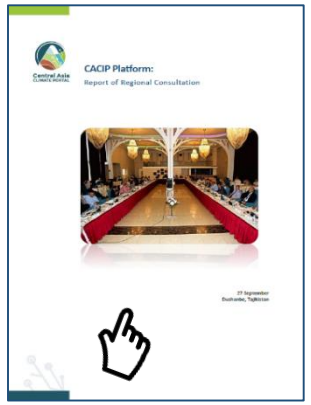
July 15, 2019
Dushanbe
Tajikistan

August 26, 2019
Khujand
Tajikistan

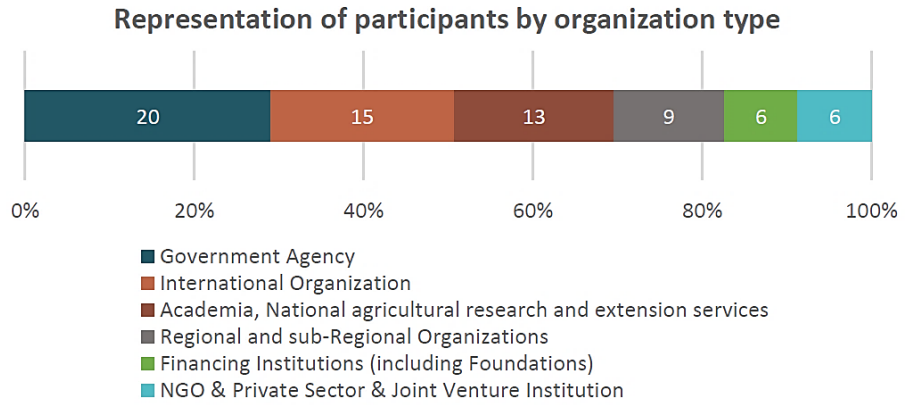
Sept 9, 2019
Ashkhabad
Turkmenistan

Regional consultation 27 September 2020

The workshop was held on 27th of September 2019 in Dushanbe (Tajikistan) to conduct the regional consultation for Central Asian Climate Information Platform (CACIP). The event was jointly hosted by the Tajik Academy of Agricultural Sciences (TAAS) and the State Committee on Environmental Protection (CEP) of Tajikistan.



Report of Regional consultation



86% appreciation rate with meeting

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Action Plan 2020

Activity	Description of Activity	2019	2020									
		Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
Delivery 1 Concept of CACIP												
1.1	MoU among key stakeholders signed and national team appointed											
	MOU draft submitted to CAREC											
	MOU amended with CAREC comments											
	Stakeholders are consulted jointly with CAREC offices											
	MOU signed, CACCC-2020											
1.2	Updated Stakeholder's inventory; updated web-sites inventory											
1.3	Pilot demo developed											
Delivery 2.1 Stakeholders consultation: Usage and Contribution												
2.1.1	Technical visits and joint working c/o stakeholders in each country											
	Follow-up actions as per results of Technical visits											
2.1.2	Define CACIP system design and architecture documentation (final)											
2.1.3	Feedback regional workshop with key stakeholders CACCC-2020											
2.1.4	Roll-out and sustainability plan for the platform: Sustainability plan											
	Roll-out and sustainability plan for the platform: Detailed budget											
	Roll-out and sustainability plan for the platform: Cloud server storage to run CACIP											
Task 2 – Completion 30 June 2020												
Delivery 3.1 – Full CACIP developed												
3.1.1	CACIP Full Platform											
3.1.2	Quality assurance with key partners											
3.1.3	Launch workshop of CACIP & testing session for feedback											
3.1.4	Development of capacity development media material											
3.1.5	Capacity development program (individual, group courses and e-learning)											
3.1.6	Finalize help-desk support system to collect feedback and enhancement											
Task 3 – Completion – 30 October 2020												

Institutional Feedback

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- Scientific-Information Center of the Interstate Coordination Water Commission of the Central Asia (SIC ICWC)
- The Centre of Hydrometeorological Service of Uzbekistan (UzHydromet)
- National Coordination Unit of CAMP4ASB UZ (NCU UZ)
- Project preparatory group of Environmental Protection Committee (CEP) of Tajikistan, Project Implementation Unit of Ministry of Finance (MoF) of Tajikistan
- State Committee on Ecology and Environmental Protection of Republic of Uzbekistan
- Environmental Protection Committee of Tajikistan
- Hydrometeorological service of Tajikistan
- Ecological Youth Center of Tajikistan
- State Enterprise Research Institute of Water and amelioration (TajNIIGIM) under Ministry of Energy and water resources
- Environmental Protection Committee of Tajikistan, Information Center

Workshop “Farmers’ access to CACIP products in Dushanbe February 11, 2020

The· workshop· was· held· on· 11th· of· February· 2020· in· Dushanbe· (Tajikistan)· to· conduct·the·country·consultation·for·Central·Asian·Climate·Information·Platform· (CACIP)· to· discuss· with· national· stakeholders· the· "Farmers’· access· to· CACIP· products”.·The·event·was·jointly·hosted·by·the·State·Committee·on·Environmental· Protection·(CEP)·of·Tajikistan·and·Project·Implementation·Group·under·CEP.

Read more at National Tadjik Journal web News “Inson va Tabiat”.

Committee of Environmental Protection of Tajikistan in Tajik and Russian.

Or follow upcoming reports and newsletter from CACIP

83% appreciation rate with meeting

Awareness

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В рамках регионального партнёрства

Лекции консультативного характера по деятельности Центральноазиатской климатической информационной платформы прослушали представители министерств, включая «Туркменгидромет», Национальный институт пустынь, растительного и животного мира. Участниками семинара стали специалисты Межгосударственной комиссии по устойчивому развитию Международного фонда спасения Арала, Международного центра сельскохозяйственных исследований в засушливых регионах (ИКАРДА). Встреча прошла при организационной поддержке Министерства сельского хозяйства и охраны окружающей среды, Регионального экологического центра Центральной Азии. Был представлен текущий обзор положения в области климатической информации, рассматривалось значение научного сотрудничества. Кроме презентационной части семинар включал работу в группах по секциям для обсуждения вопросов климатической тематики. В финале прошли индивидуальные встречи в рамках обмена опытом. В качестве консультантов выступили Рустам Ибрагимов – заместитель главы узбекского представительства ИКАРДА и Акмал Акрамха-

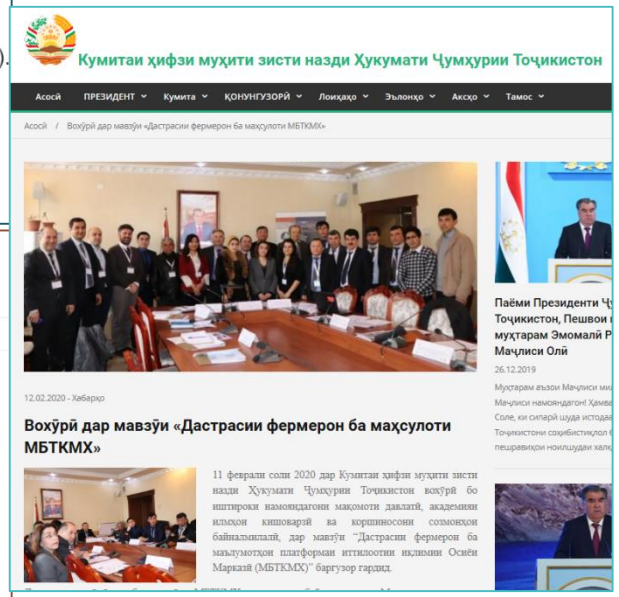
CACIP Regional consultation video reportage, Dushanbe, Tajikistan

Citation

Kanoatkhon Umurzokova, Enrico Bonaiuti, Valerio Graziano. (27/9/2019). CACIP Regional consultation video reportage, Dushanbe, Tajikistan.

Abstract

CACIP Regional consultation Video report, Dushanbe, Tajikistan



CACIP Overview and FAQ booklets

Based on the questions asked in five country consultations, two consultations with farmers, and individual consultations, we developed a document with answers to the most FREQUENTLY ASKED QUESTIONS

&

Booklet with explaining main features of Platform

CACIP Newsletters

CACIP Newsletter Issue 2

https://www.linkedin.com/groups/13804516/

https://www.facebook.com/groups/CACIP/

https://fb.me/centralasiaclimateinformationplatform

t.me/central_asian_climate_platform

Explore·more·about·other·CACIP·documents

Другие·документы·ЦАКИП

A HOME FOR CLIMATE INFORMATION IN CENTRAL ASIA

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The Central Asia Climate Information Platform (CACIP) brings comprehensive and up-to-date climate information directly to the screens of stakeholders in Central Asia, free of charge.

- Draws in public data from local, regional and global sources, making it available in one central location.
- Easily accessible from any computer or mobile device.
- Collates and analyzes information.
- Provides tools and interfaces for visualizing and interpreting data such as temperature, soil moisture and desertification.
- Combines information from multiple sources, e.g. merging national level datasets to generate a regional perspective.
- Analyzes trends and calculates future scenarios.
- Transforms data into maps to create a visual result.

The platform allows many different users like policy makers, researchers and farmers to access and analyze a wide range of climate relevant information, supporting improved awareness, assessment and decision-making.

CACIP covers the five Central Asian countries, providing both a regional outlook and country specific information. CACIP is available in Russian and English. In later stages, CACIP will include five Central Asian languages.

What does CACIP offer?

Navigating the platform

Four distinct sections make navigating the platform and finding information quick and easy.

Website: main entry point displaying climatic overview, recent news, blogs, social media feeds, and more. From here, users can navigate to other areas of the platform.

Knowledge Hub: digital library that collects and displays a variety documents such as journal articles, reports, training materials, multimedia, infographics, spatial and statistical data, and more.

Geo Portal: collects, manages and displays geospatial data and allows select types of analytics. Users can upload data from the field directly.

Discussion forum

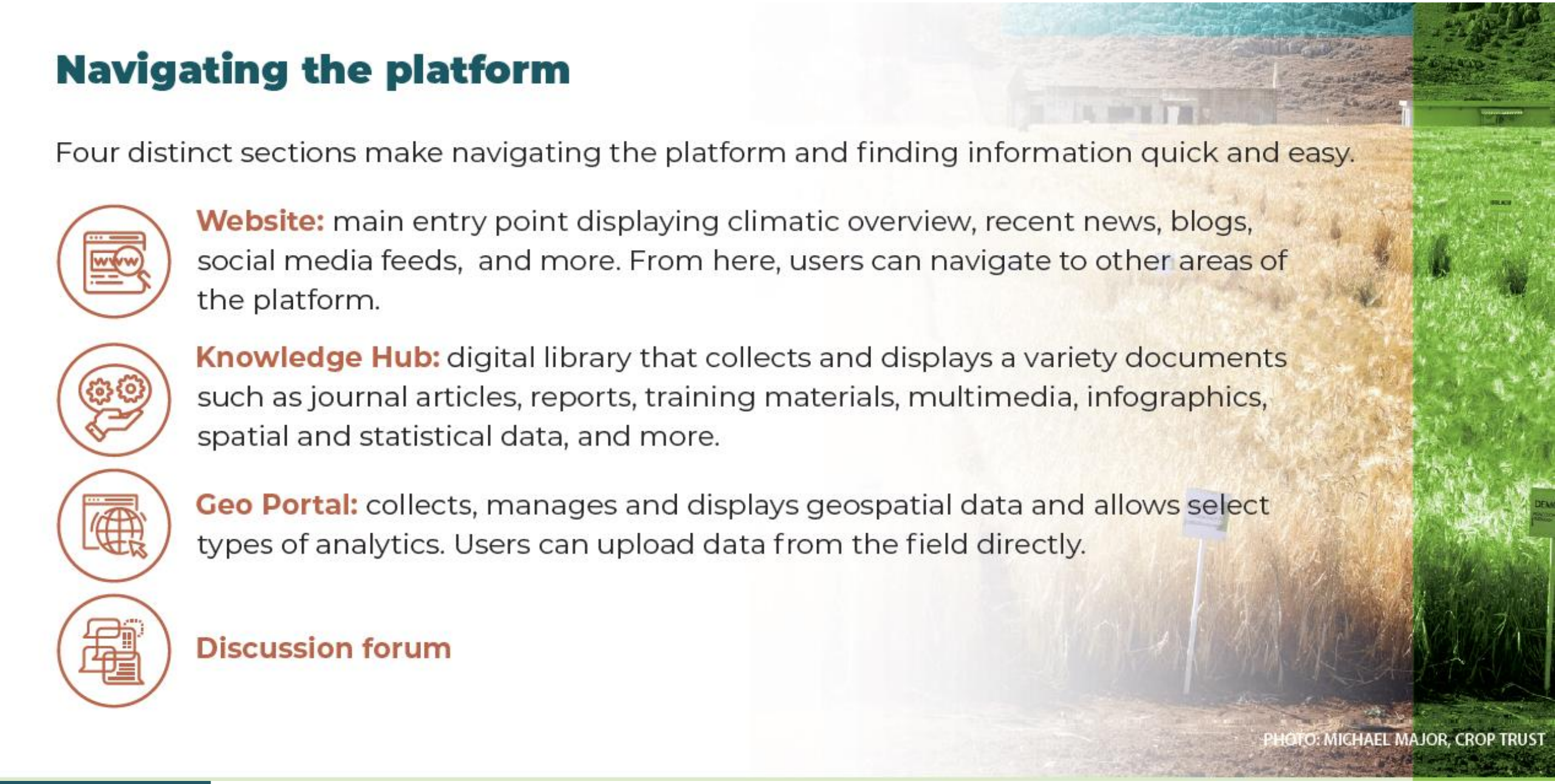


PHOTO: MICHAEL MAJOR, CROP TRUST

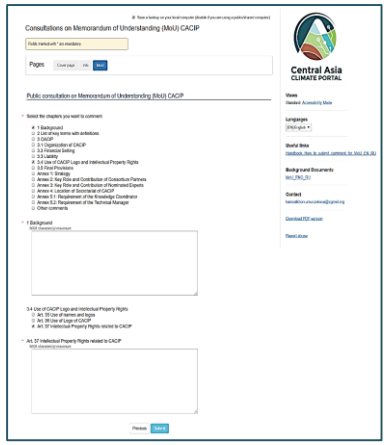
Sustainability

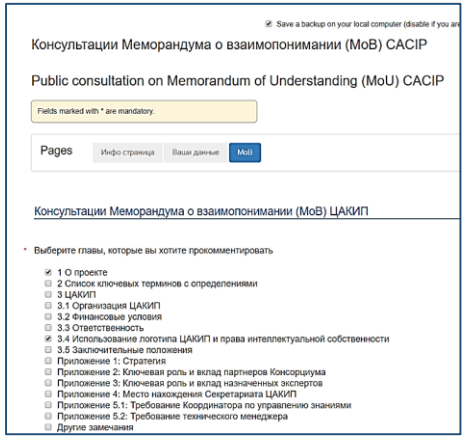
Ownership: Consortium convened by CAREC

Organizational: MoU among key stakeholders with human capital and presence in the region.

Draft MoU as per 23 Dec 2019

Consultations with parties





Final MoU

Financial: Linkages with initiatives, access to services, funding campaign, linkages with projects.

Community: engagement beyond CACIP with country awareness activities (Youth and Forum) and promotion of services;

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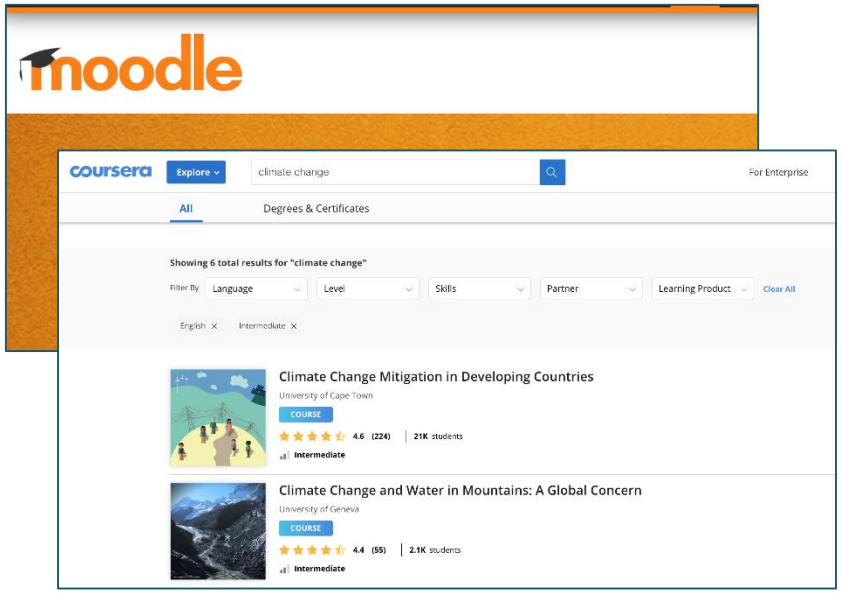
Learning the Platform

Individual learning



Training of Trainers

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Central Asia Climate Information Platform

Technical Updates

26 February 2020 – Almaty, Kazakhstan

Simone Maffei, Aya Mousa, Enrico Bonaiuti

ICARDA
Science for resilient livelihoods in dry areas

CACIP
Managing geographical data

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The CACIP Harvester, automatically collects metadata related to geographical data from many sources, for example:

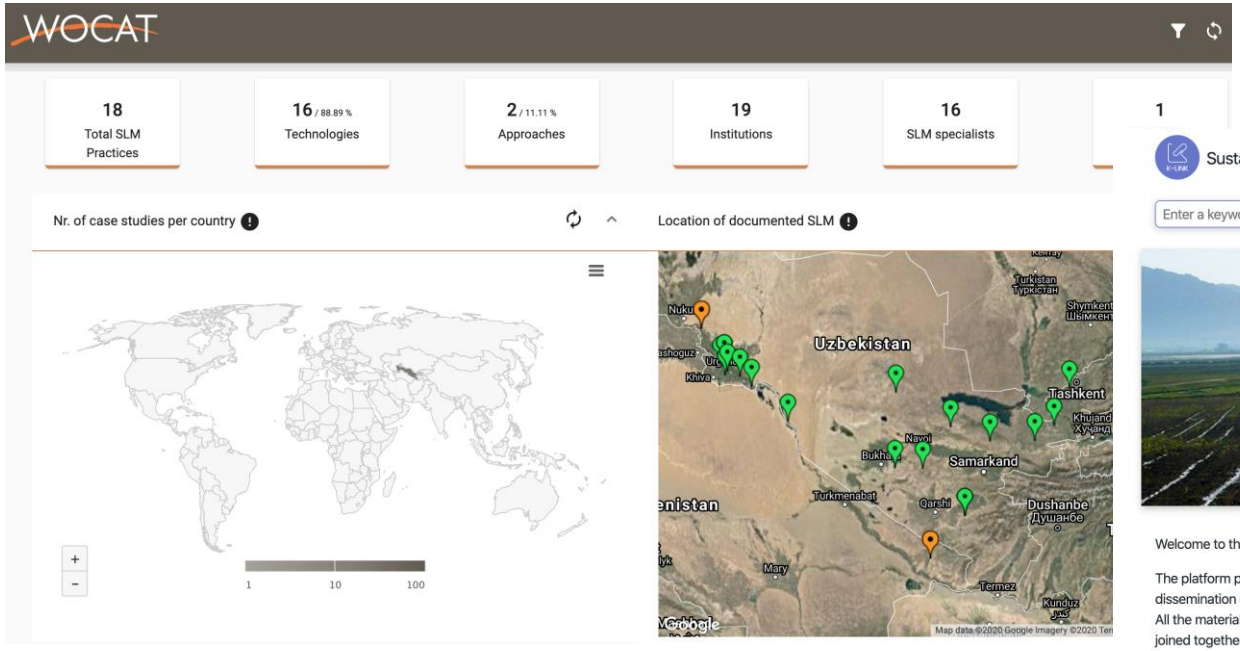
- Moderate Resolution Imaging Spectroradiometer (modis.gsfc.nasa.gov)
- Fire Information for Resource Management System (firms.modaps.eosdis.nasa.gov)
- Protected Planet (protectedplanet.net)
- National Snow and Data Center (nsidc.org)
- Kyrgyzstan Disaster Risk Data Platform (geonode.mes.kg)
- Wocat.net

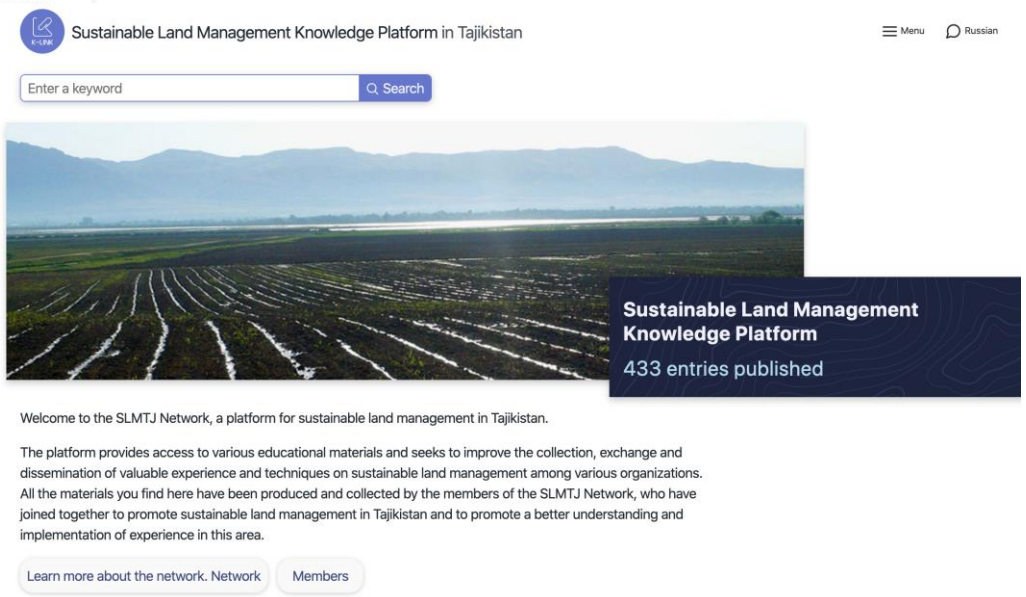
But data can be also manually uploaded/managed

below a short tour through this feature

Technologies and practices in the region

- **WOCAT** as Global interoperable database, maintained by a consortium and recommended by UNCCD for advance applications (e.g. Carbon Benefit, LDN Targeting, etc).
- **SLMTJ** Network is well known country level database collecting knowledge suitable for farmers and practitioners at field level





Technologies and practices in the region

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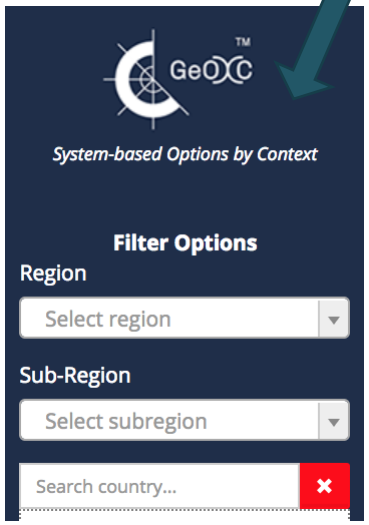
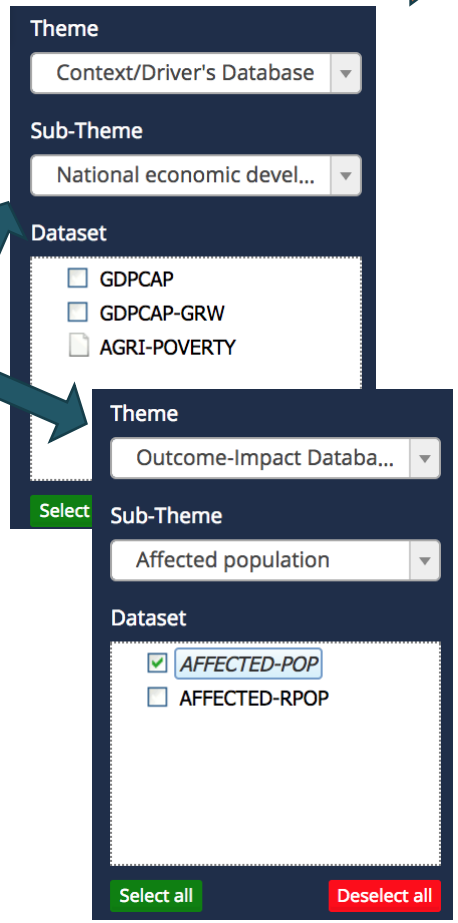
Select

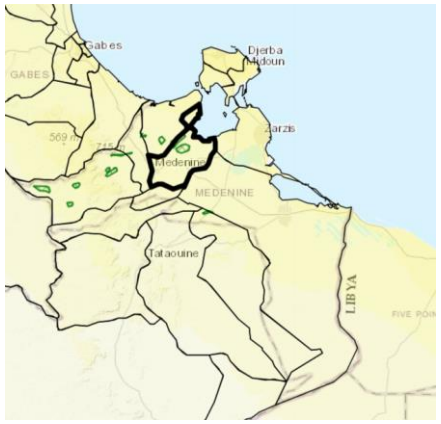
Visualize

Rank

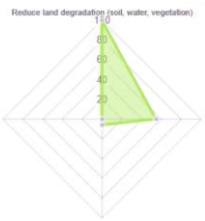
Scale



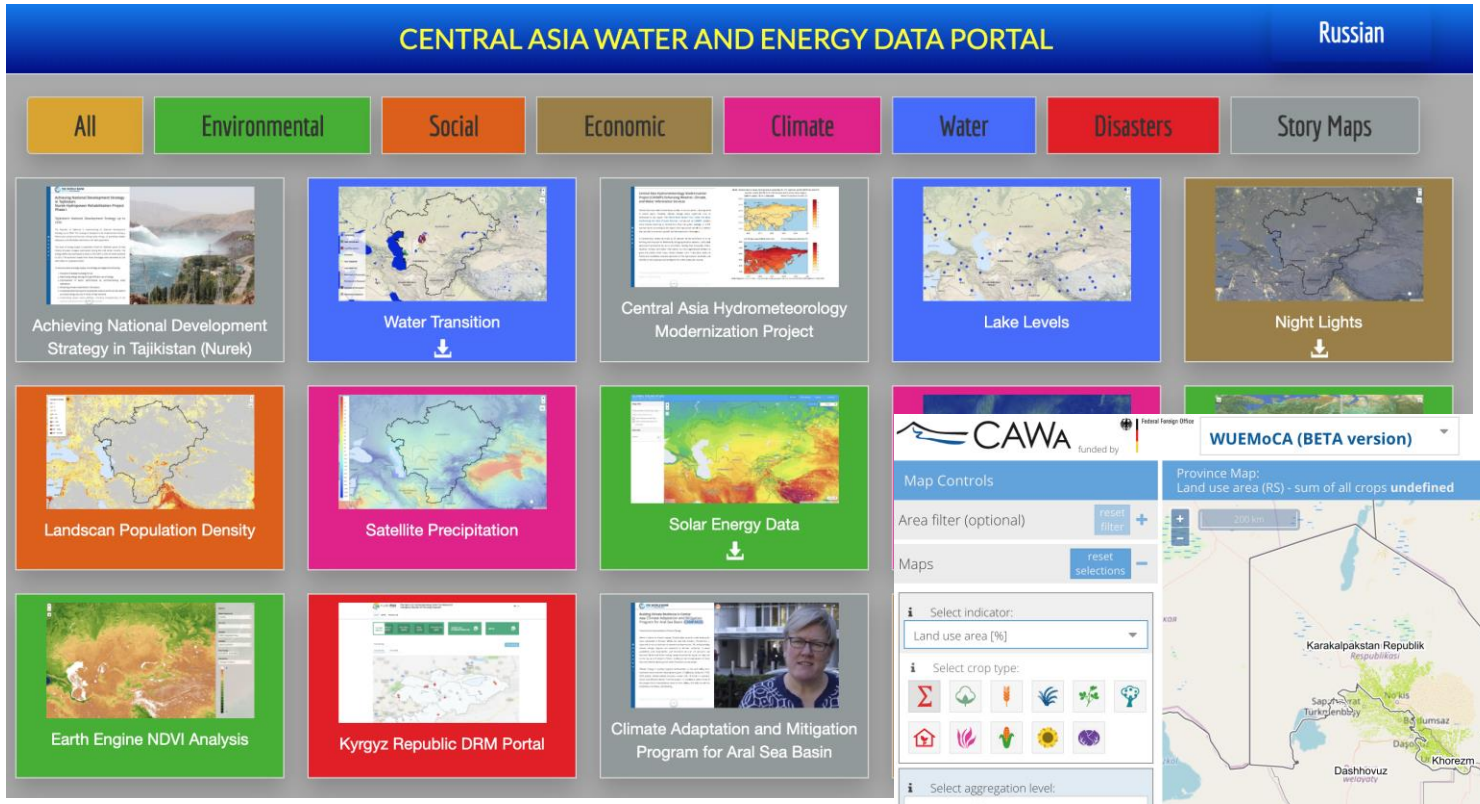


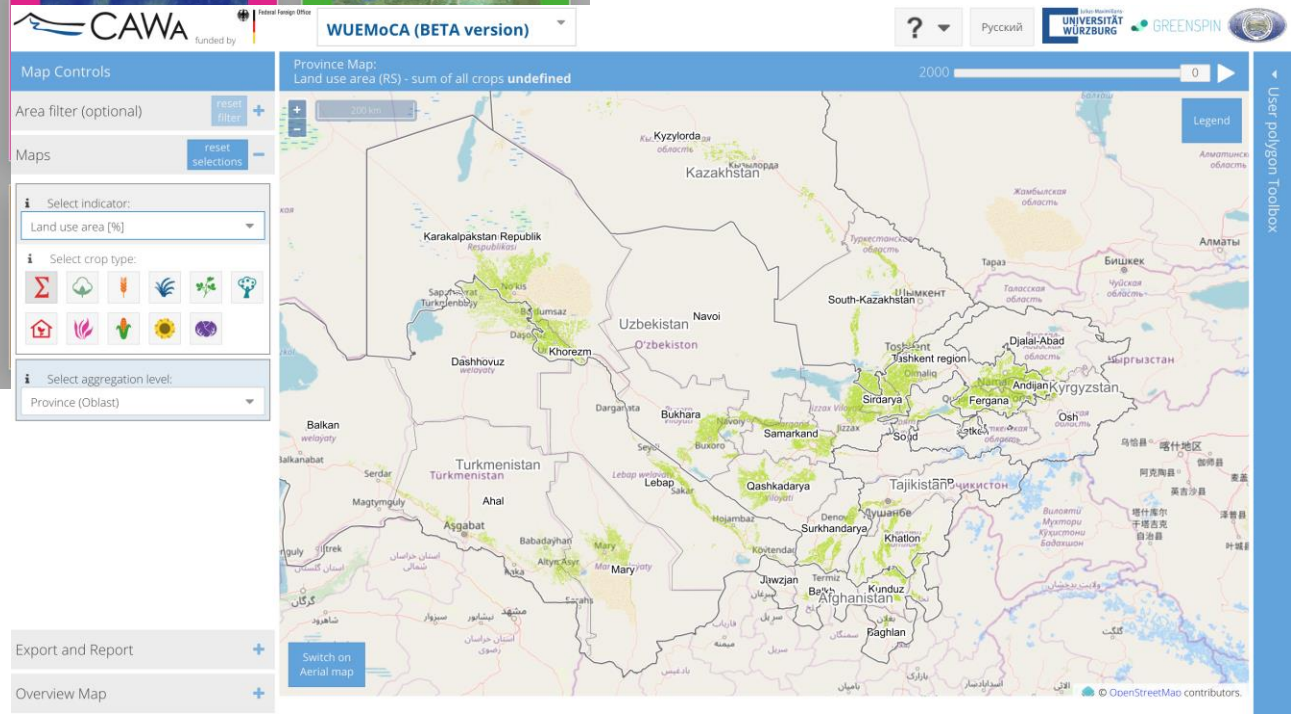


SLMs in the area of interest	Socio-economic impacts-Production
Afforestation	Slightly positive
Area enclosure	Very positive
Biological fixation of sand dunes	Very positive
Buried diffuser	Very positive
Cisterns	Slightly positive
Cisterns	Slightly positive



Hosting/linkages with other applications





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Central Asia Climate Information Platform

A quick introduction on manually harvesting data the case of “FAO spatial data”

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A quick introduction on manually harvesting data the case of “FAO spatial data”

CACIP
MDH Meta Data Harvester

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A GENERAL INTRODUCTION OF MDH

The CACIP platform embeds an engine (MDH Meta Data Harvester) that harvest data from different sources:

- harvesting is **automatic** – the MDH engine is set to
  - connect to the source of data
  - exchange information
  - “standardize” this information according with the internal CACIP database structure
  - store the metadata in the internal database (with the link to the original data)
- harvesting **run once every 24 hours**, then the internal database is updated every day to include all the useful products available in the connected remote server (..the theoretical delay on the visualization of new data is maximum 24 hours)

CACIP
MDH Meta Data Harvester

SOME EXCEPTIONS

Harvesting information from different sources is not an easy task, because on **different interfaces to the data**, **different type of information/metadata provided**, etc..

For this reason, in some cases, some manual activities are needed to refine the metadata entered in the CACIP database.

below a quick tour based on the manual harvesting of FAO spatial data

CACIP
Manual harvesting of FAO Spatial data

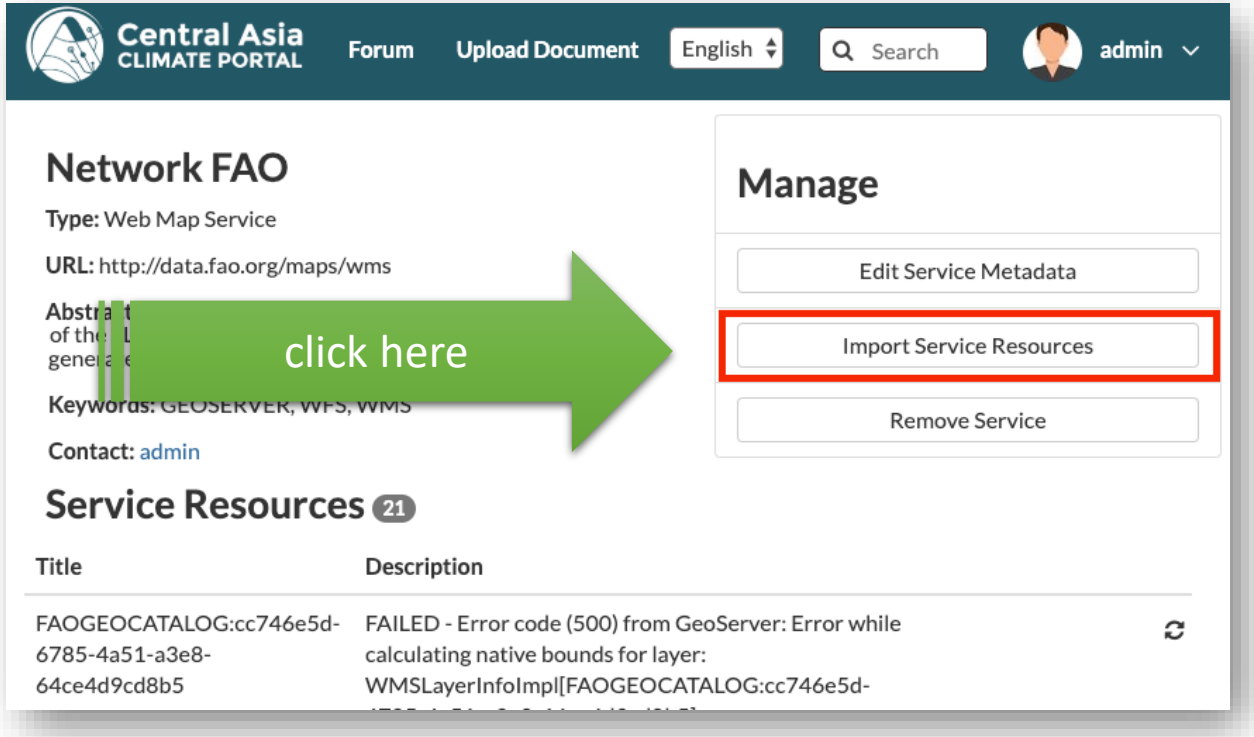
Step 1

The FAO manual harvesting page is available, for admin users, at the following link:

http://geonode.centralasiaclimateportal.org/services/25953/

To start harvesting it is necessary to press the button

IMPORT SERVICE RESOURCES



CACIP
Manual harvesting of FAO Spatial data

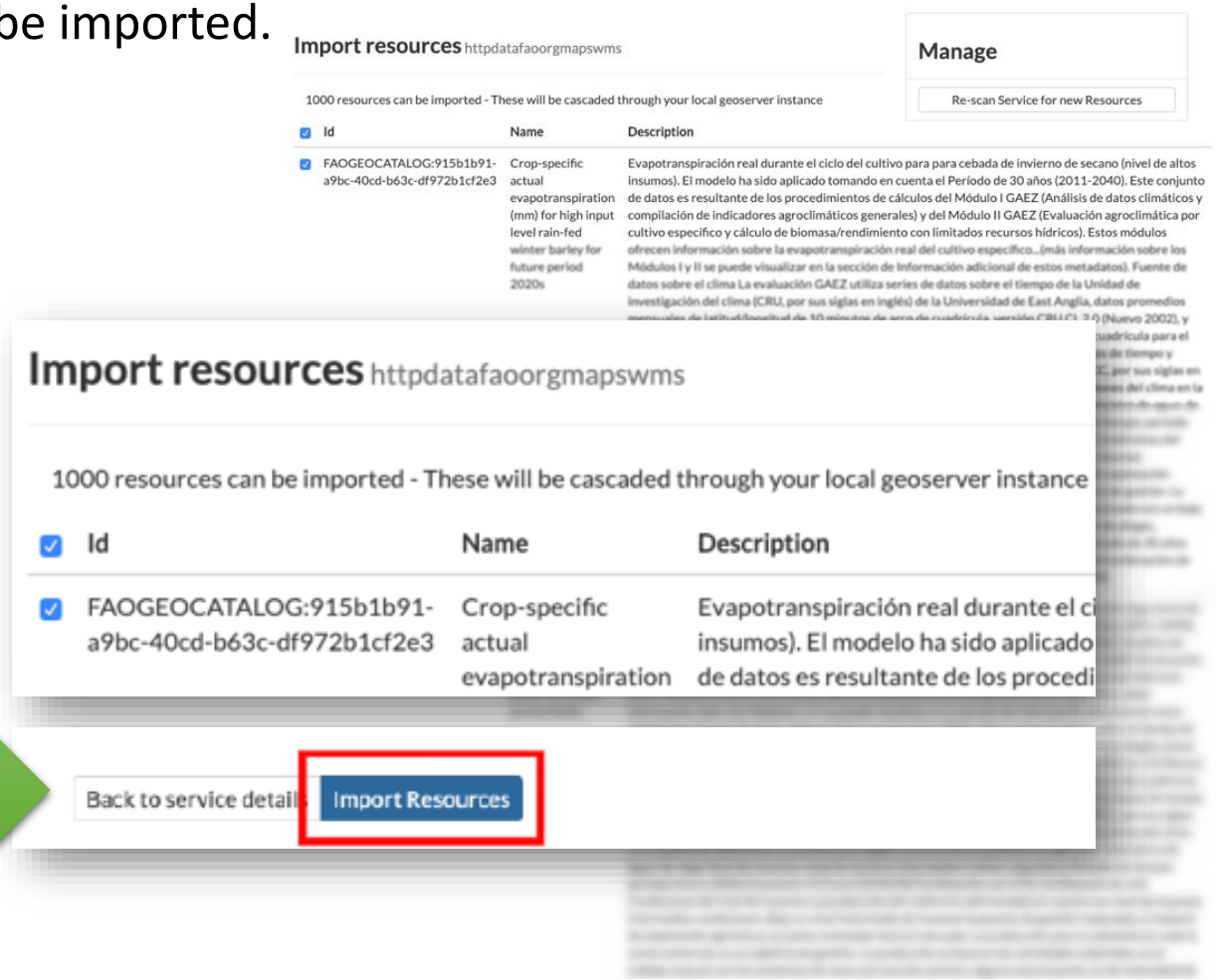
Step 2

After pressing “Import Service Resources”, the administrator will be prompted with the list of resources available to be imported.

To import the resources it is necessary to scroll to the end of the page and press the button

IMPORT RESOURCES

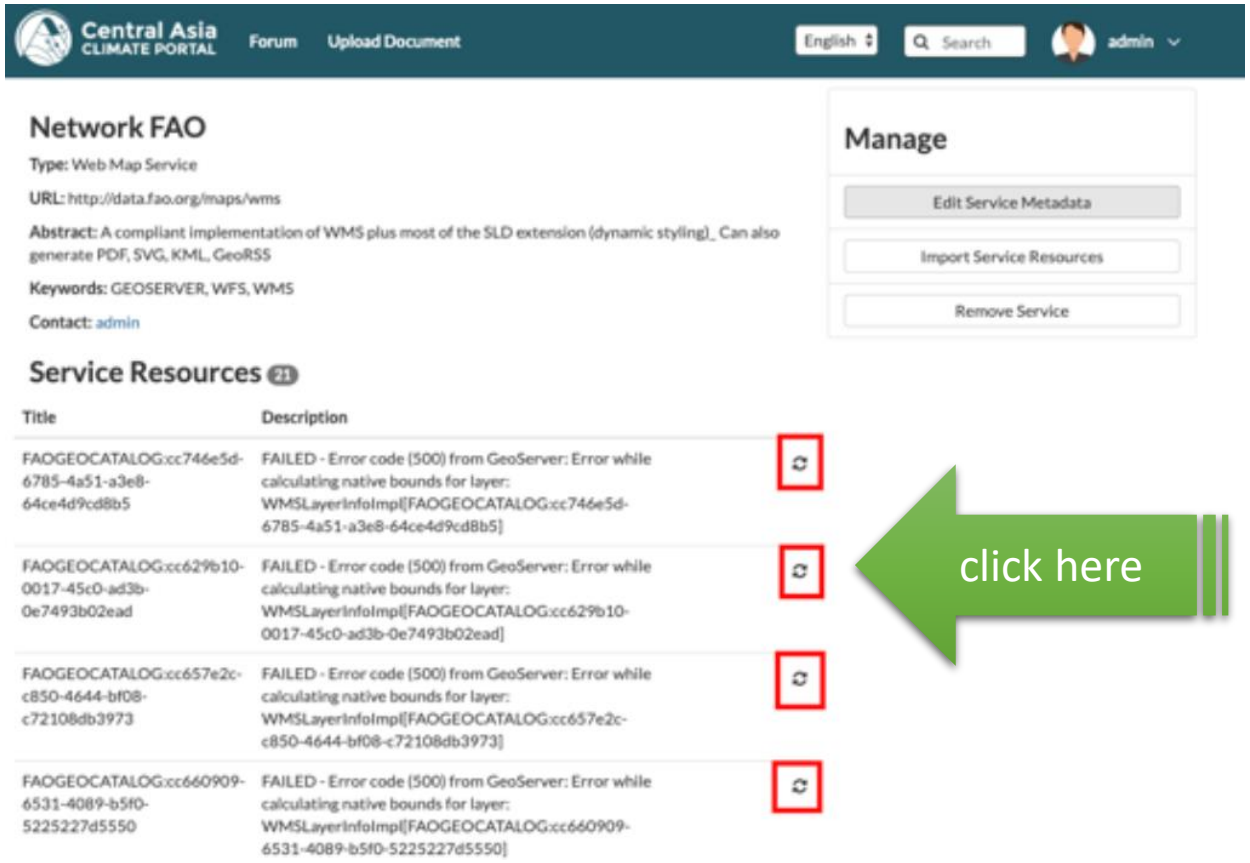
click here



CACIP
Manual harvesting of FAO Spatial data

Step 3

The final step is to **CONFIRM THE IMPORT OF EACH RESOURCE** by pressing the "refresh" button beside each resource



CACIP
Managing geographical data

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Main topics

MANUAL UPLOAD of VECTOR GEOGRAPHICAL DATA

CUSTOMIZATION of the METADATA

MANUAL UPLOAD of RASTER GEOGRAPHICAL DATA

SHARING INFORMATION (DOWNLOAD DATA from CACIP)

CACIP
Uploading geographical data

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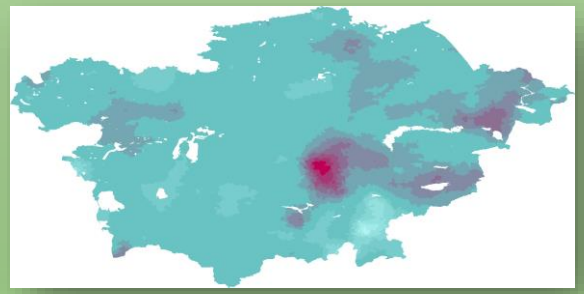
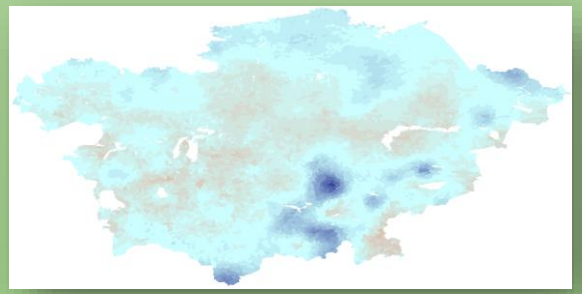
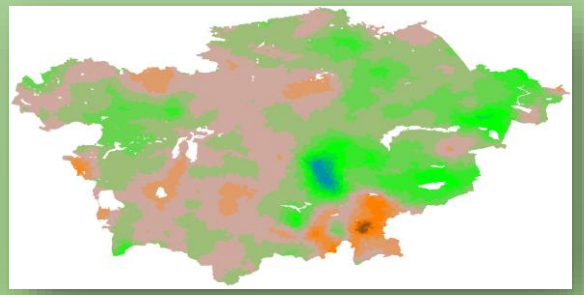
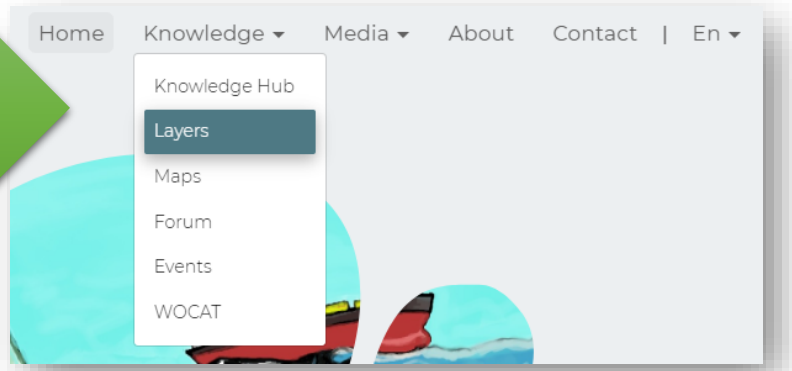
MANUAL UPLOAD OF SHAPE FILE DATA & METADATA CUSTOMIZATION

CACIP
SHAPEFILE: uploading geographical data

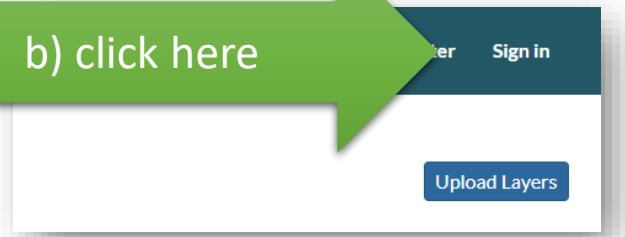
a) uploading activities are located in the “knowledge hub”

a) click here



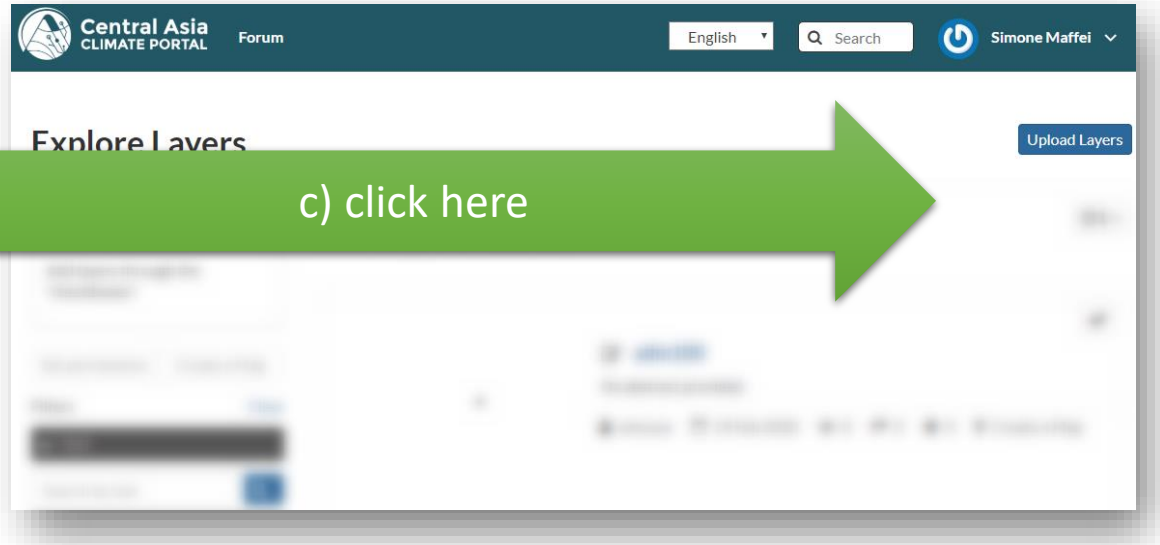
B) to upload data the user must sign in to the CACIP portal

b) click here



c) A specific form allows users to upload their own data

c) click here



CACIP

SHAPEFILE: uploading geographical data

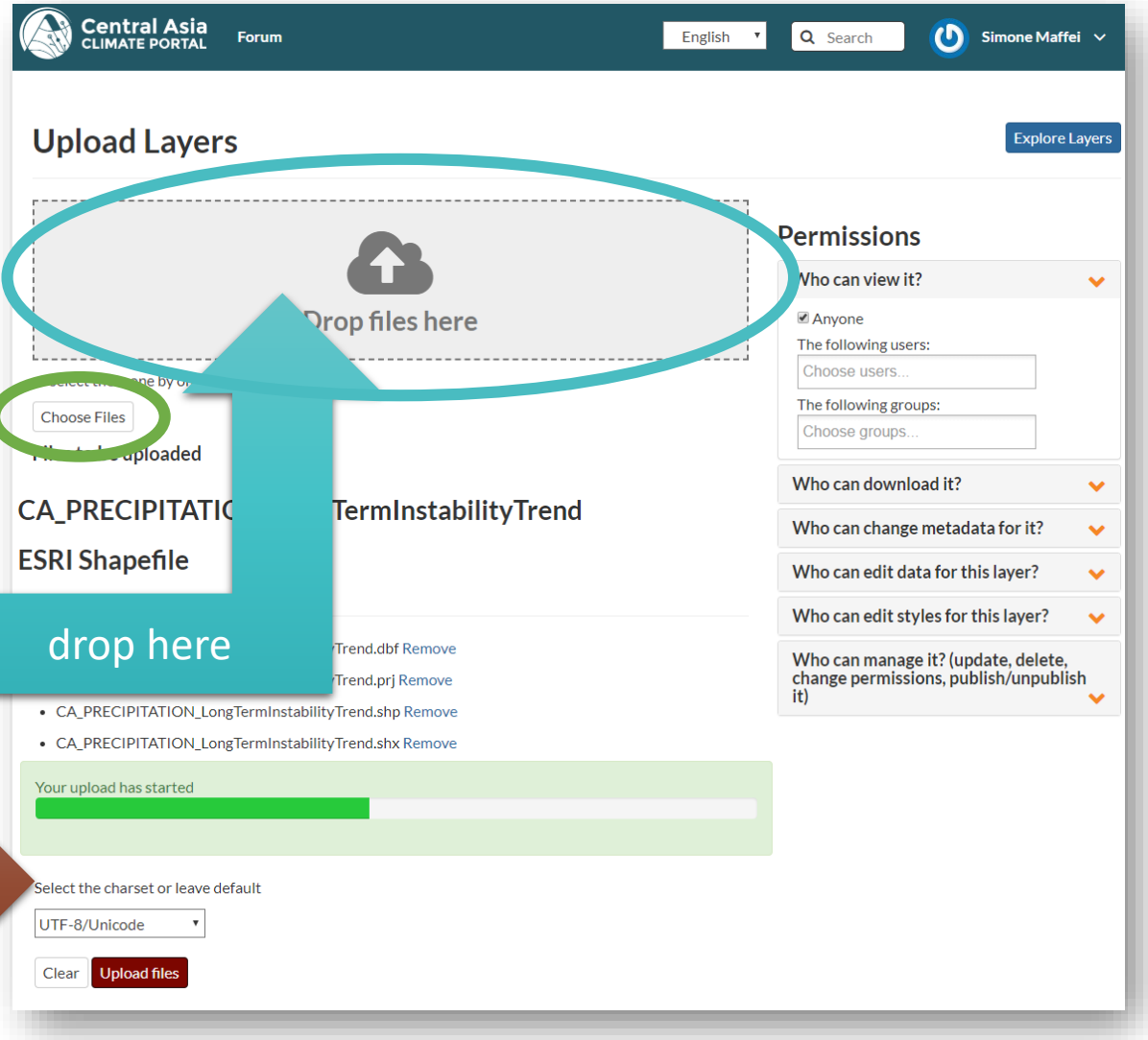
UPLOAD FILES

<u>Select files (2 methods):</u>

1. choose files from your hard drive

2. drop files in the “active box”

<u>Start uploading</u>



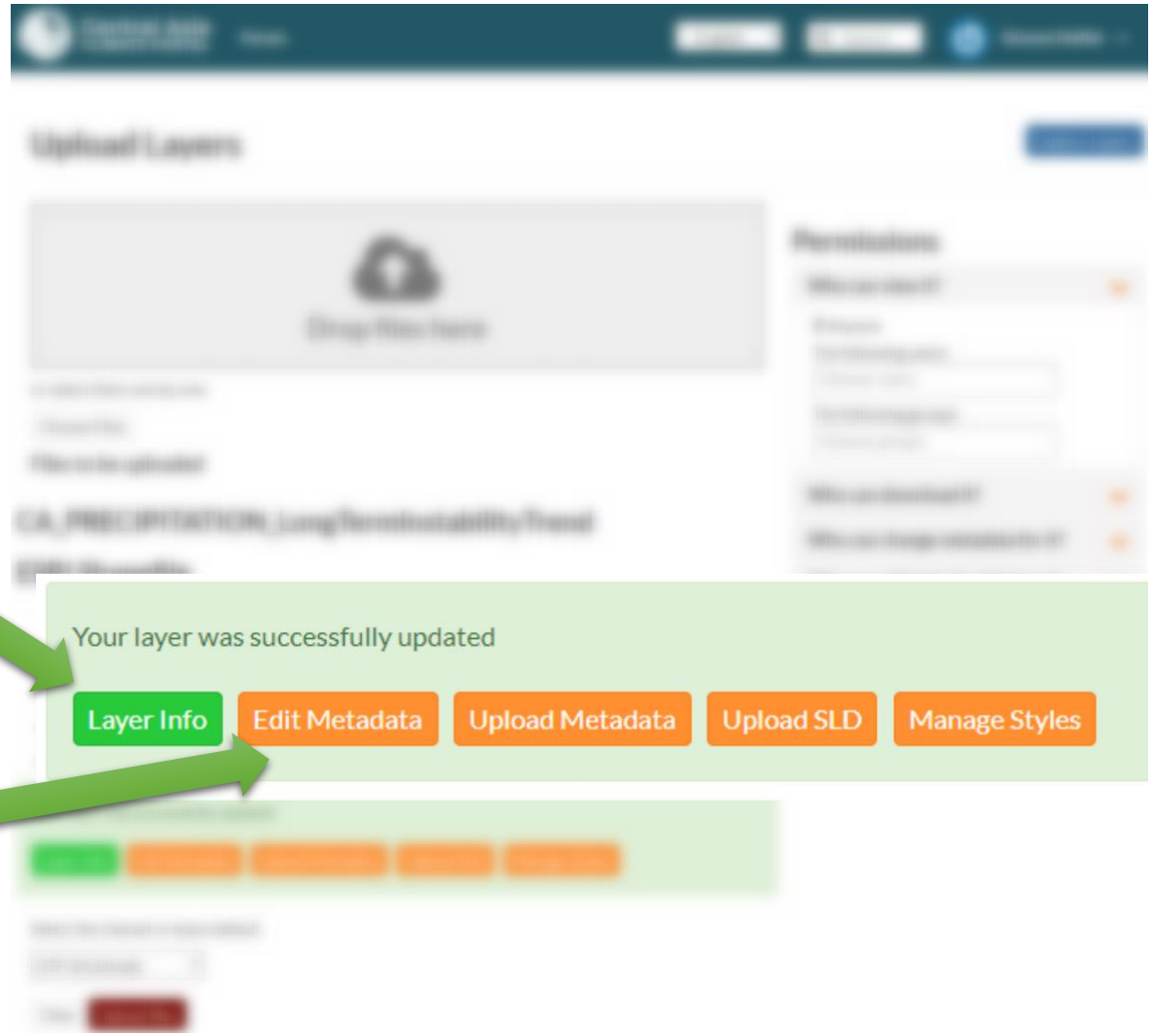
CACIP

SHAPEFILE: uploading geographical data

DISPLAY/CUSTOMIZE METADATA

<u>After uploading of data it is possible</u>

1. Display later info
2. Edit metadata



CACIP

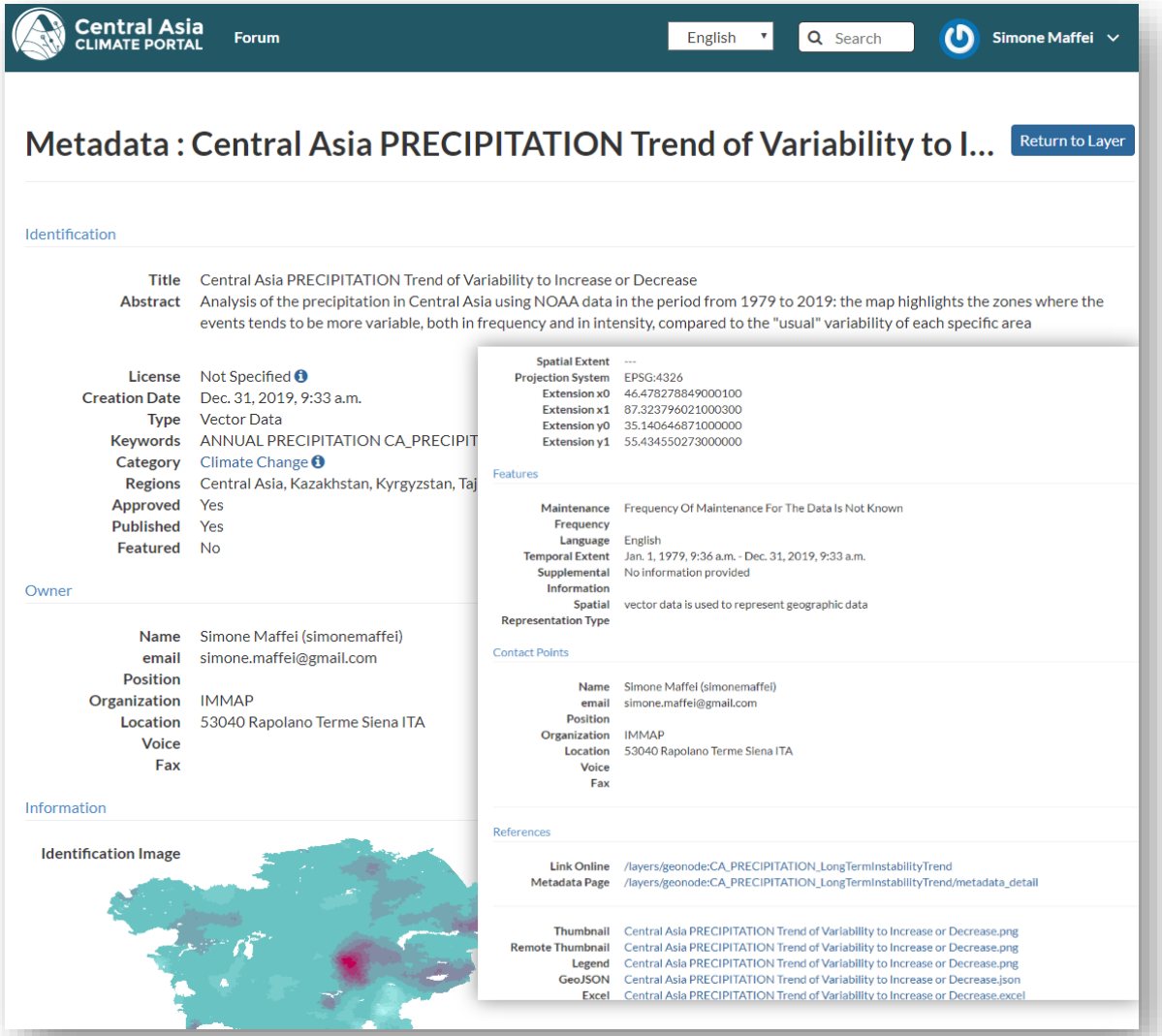
SHAPEFILE: uploading geographical data

DISPLAY LAYER INFO

<u>After uploading of data it is possible</u>

the set of metadata provides full information about the layer:

- Identification of the layer (title, abstract, license, type, topic, geographical coverage, ..
- Owner information
- Extents
- Specific detail about maintenance, language, temporal extents, ...
- Contact points and references



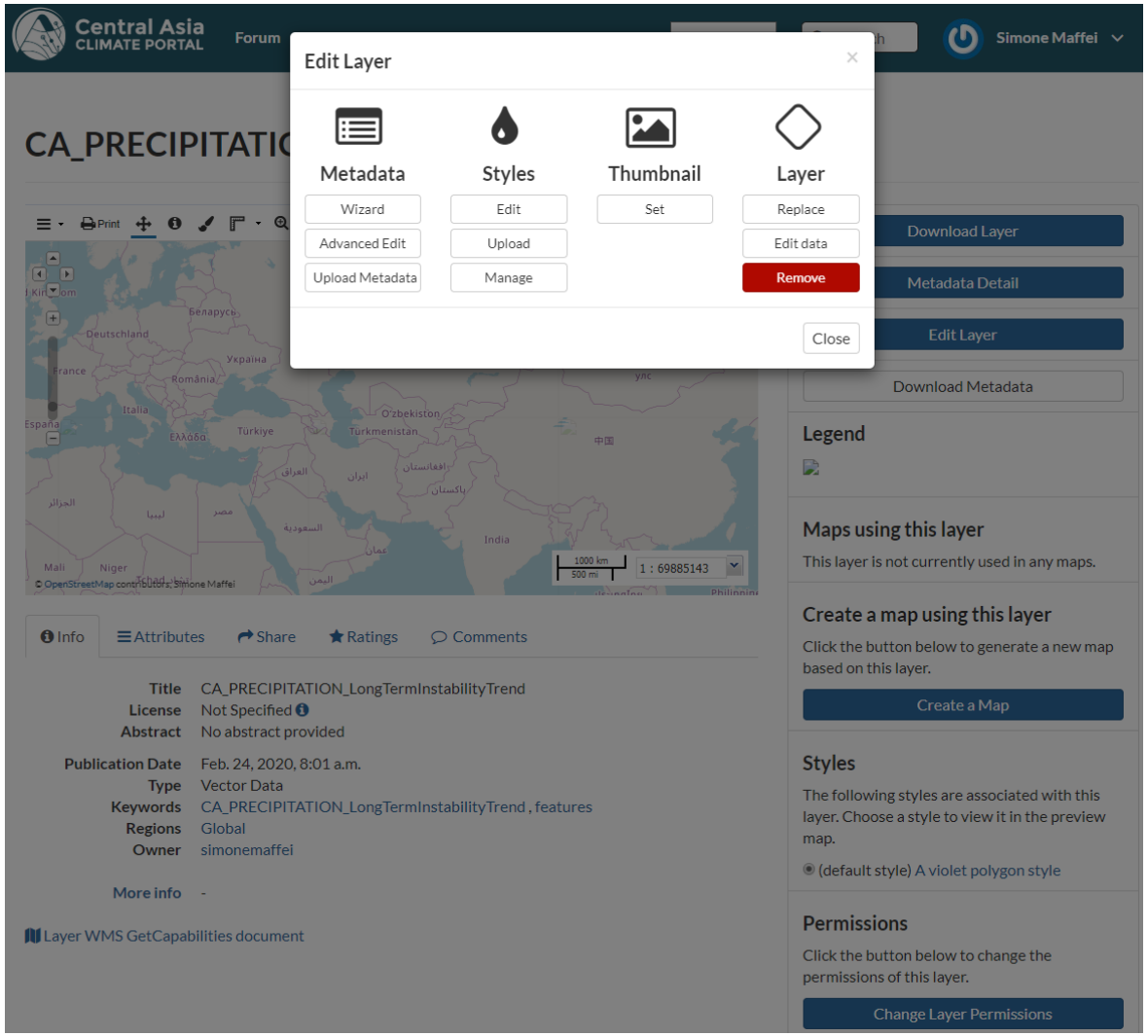
CACIP

SHAPEFILE: uploading geographical data

EDIT METADATA

The information linked to each layer can be customized to allow the final users to fully understand the contents of each layer, process of creation, the quality, etc. It is possible to:

- use a wizard to be guided in the customization process
- use direct editing tools (for advanced users)
- embed predefined style
- etc.



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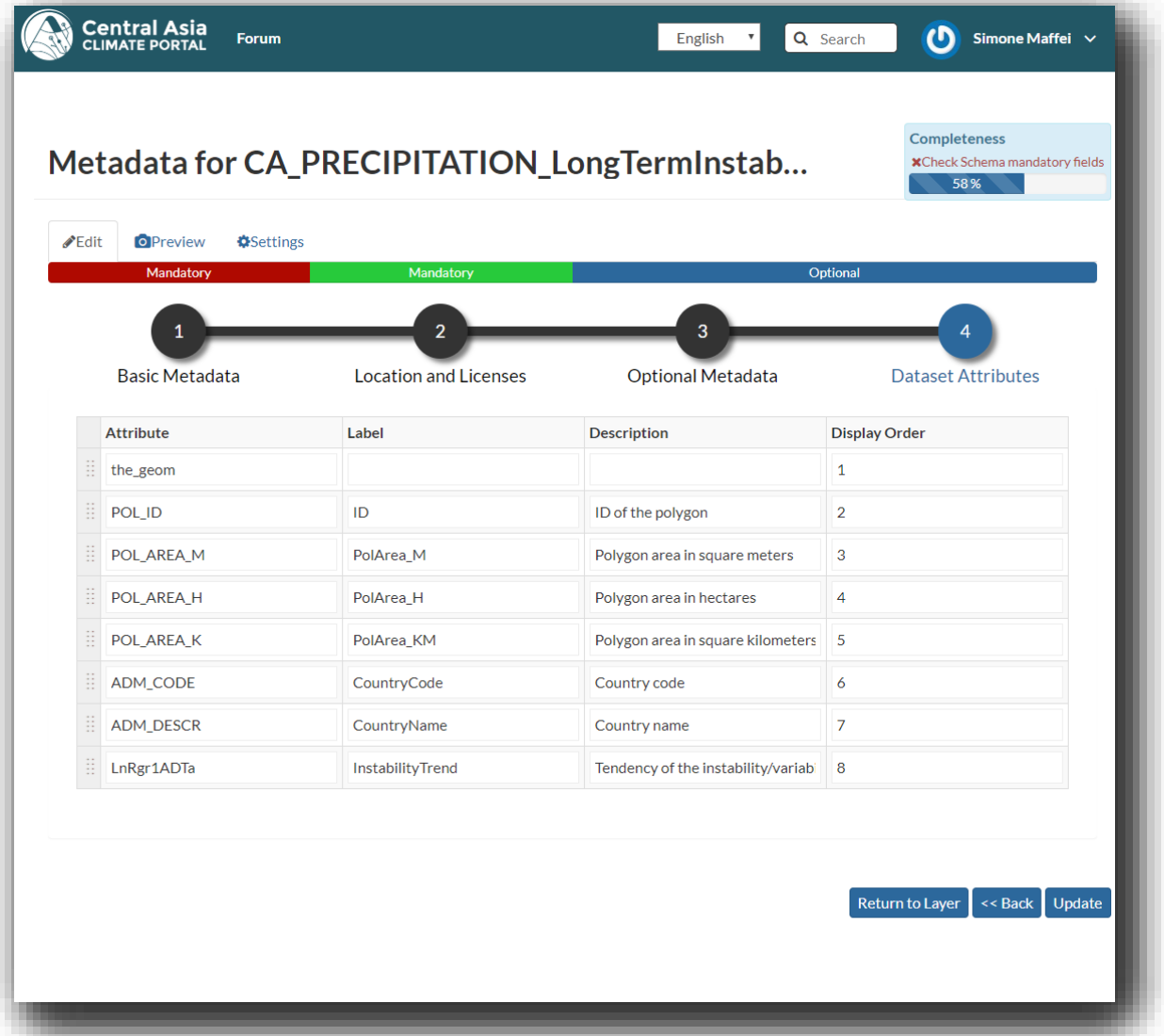
USING THE WIZARD

The wizard guides the user to enter:

- all mandatory information
- optional information



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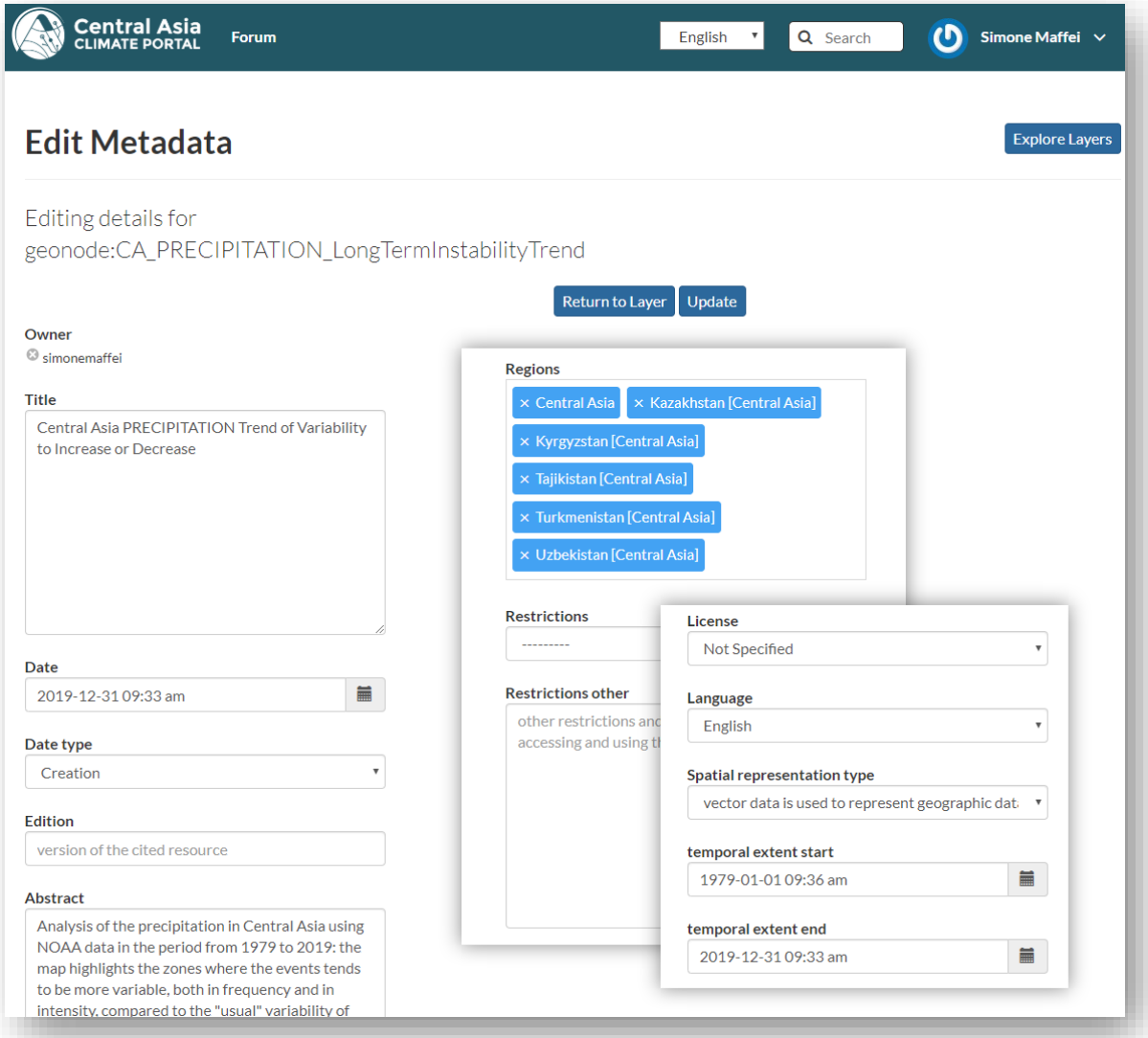
DIRECT EDITING

The direct editing form can be used to customize single metadata items



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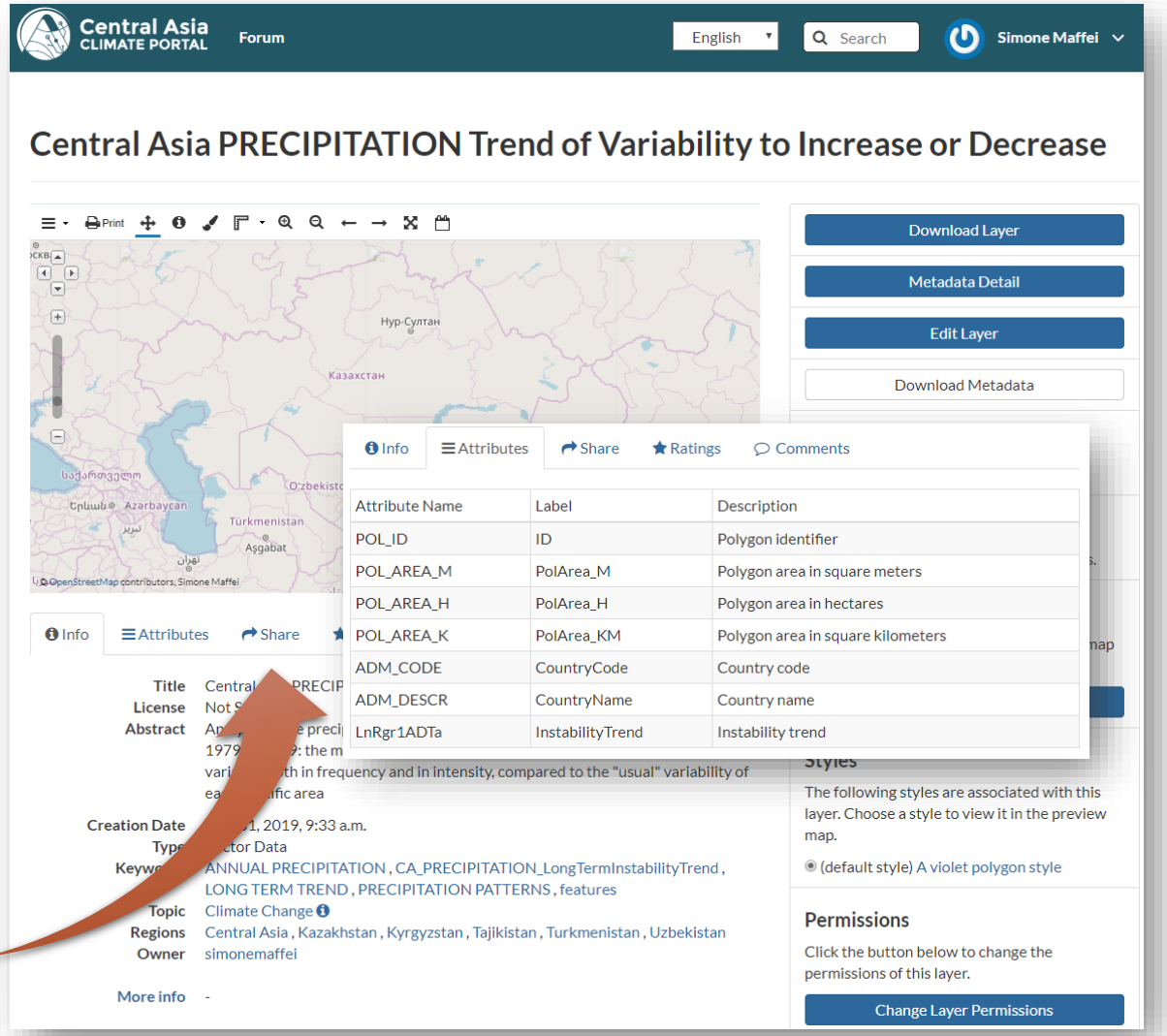
FINALLY …
THE LAYER LOOKS LIKE THIS

After the uploading of the data, and the customization of the metadata, the layer can be used by all the CACIP visitors (*excluding specific permission policy*)

These tabs allow going inside to specific types of information



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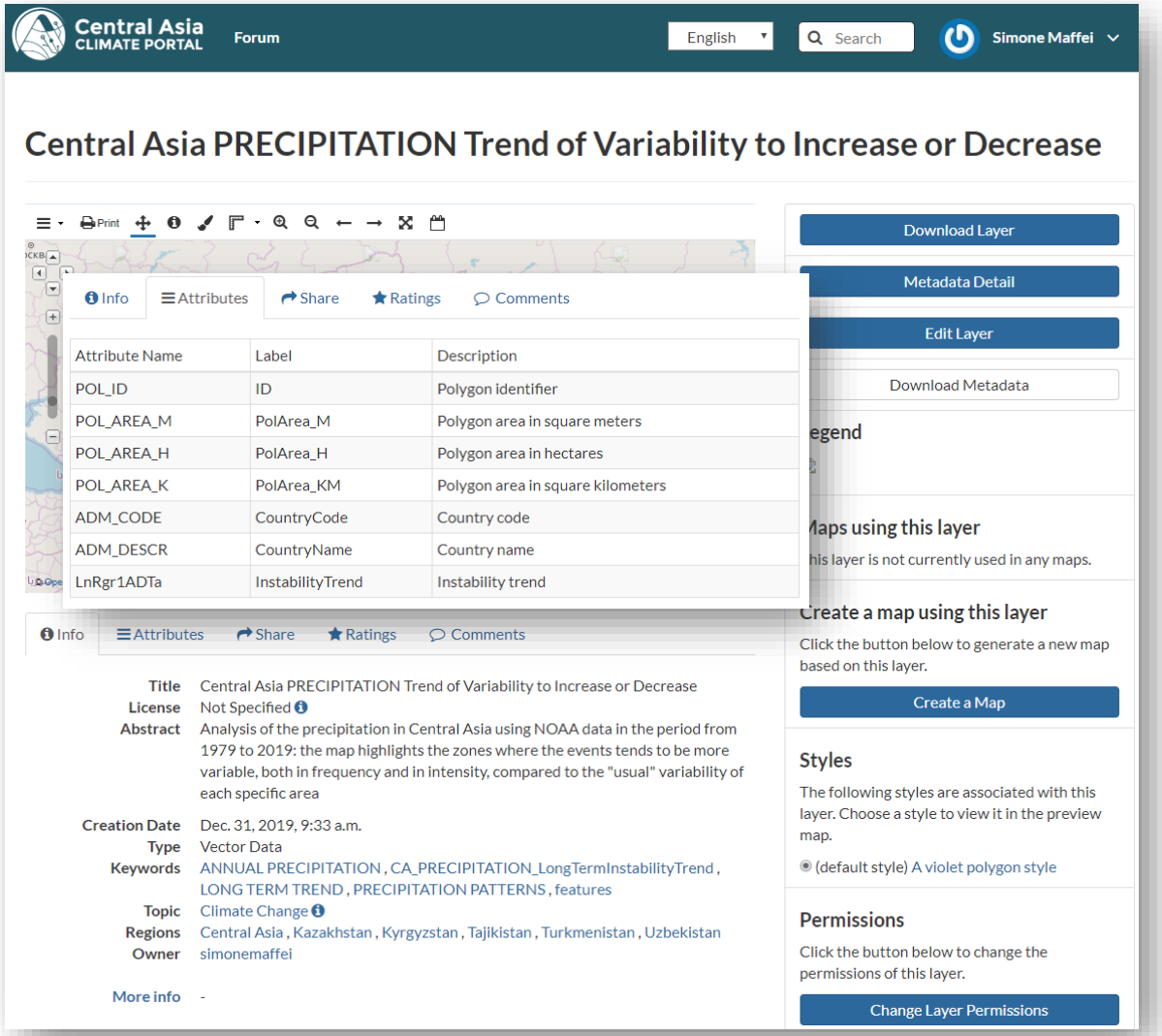
FINALLY …
THE LAYER LOOKS LIKE THIS

The different tabs shows:

- general info
- the list of attributes



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Uploading geographical data

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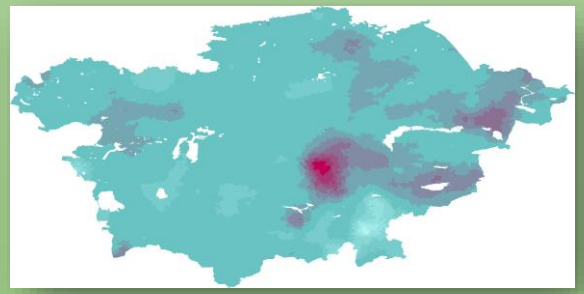
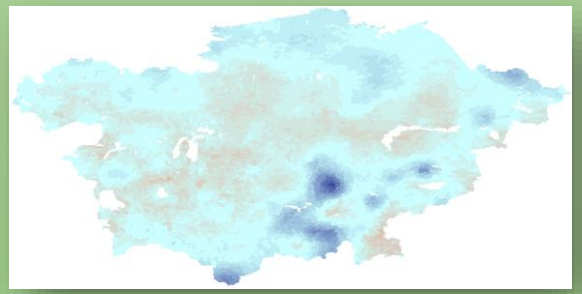
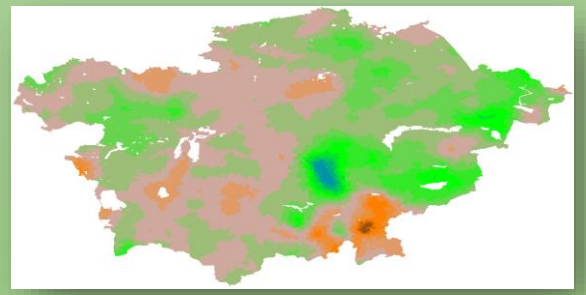
MANUAL UPLOAD OF GEOTIFF DATA & METADATA CUSTOMIZATION

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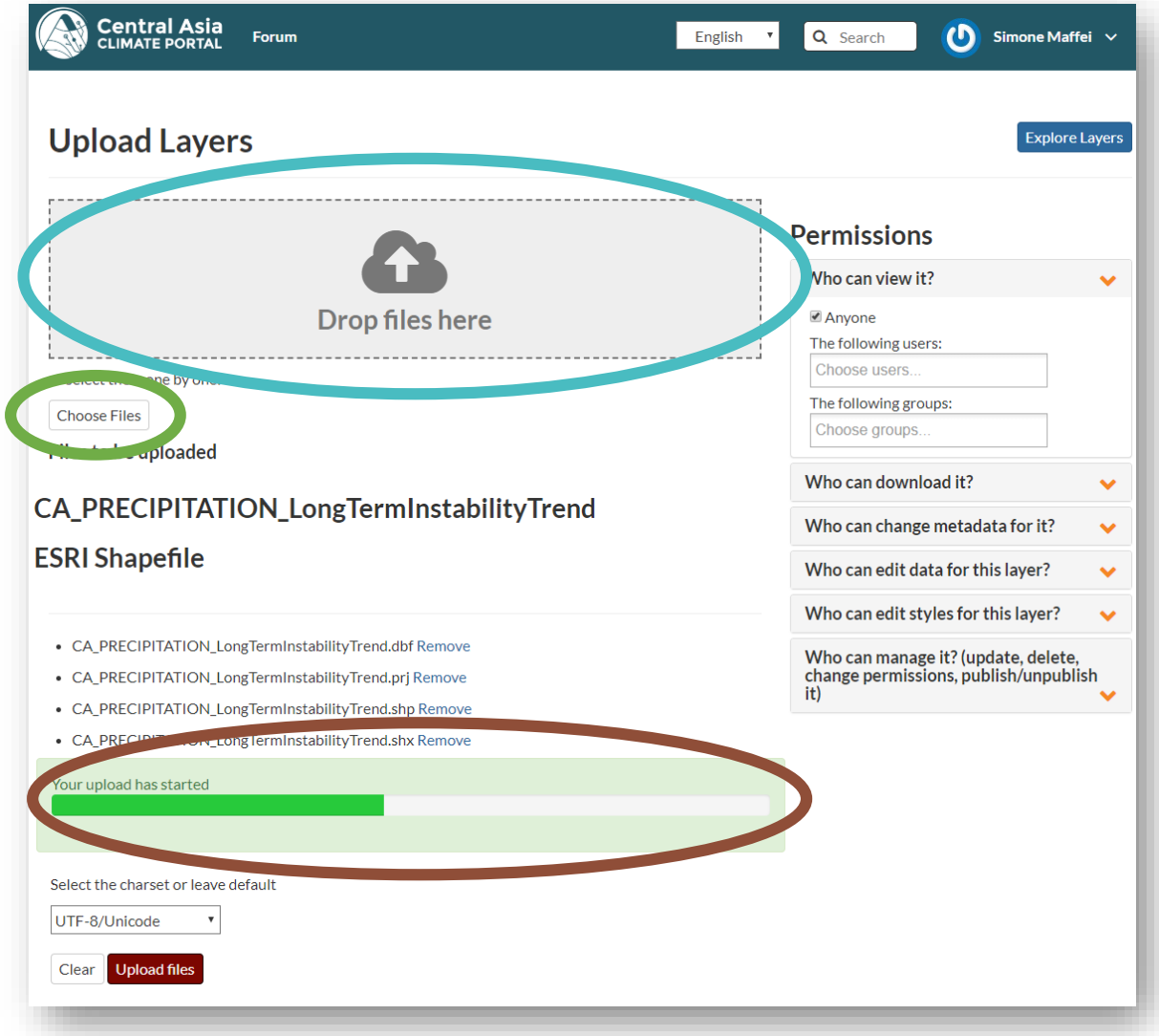
GEOTIFF: uploading geographical data

UPLOAD FILES

Uploading follows the same steps as shapefile:

- selection or dropping of the files to be uploaded
- run of uploading task by pressing “upload files”
- editing of metadata or using the metadata wizard, or directly setting the single metadata items in advanced mode



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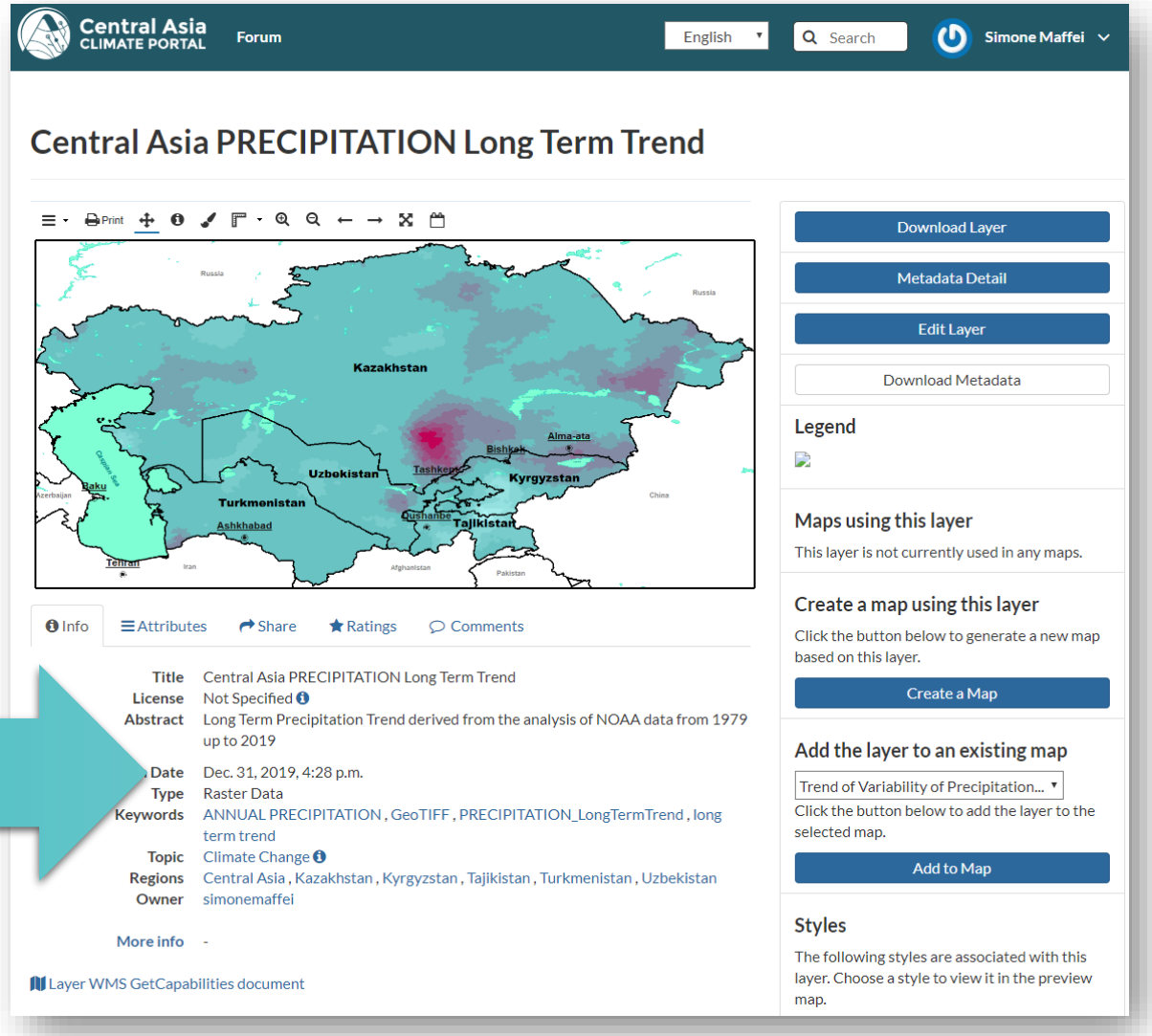
GeoTIFF Layer

The management of the metadata of raster (in this case GeoTIFF data) is similar as the shapefiles



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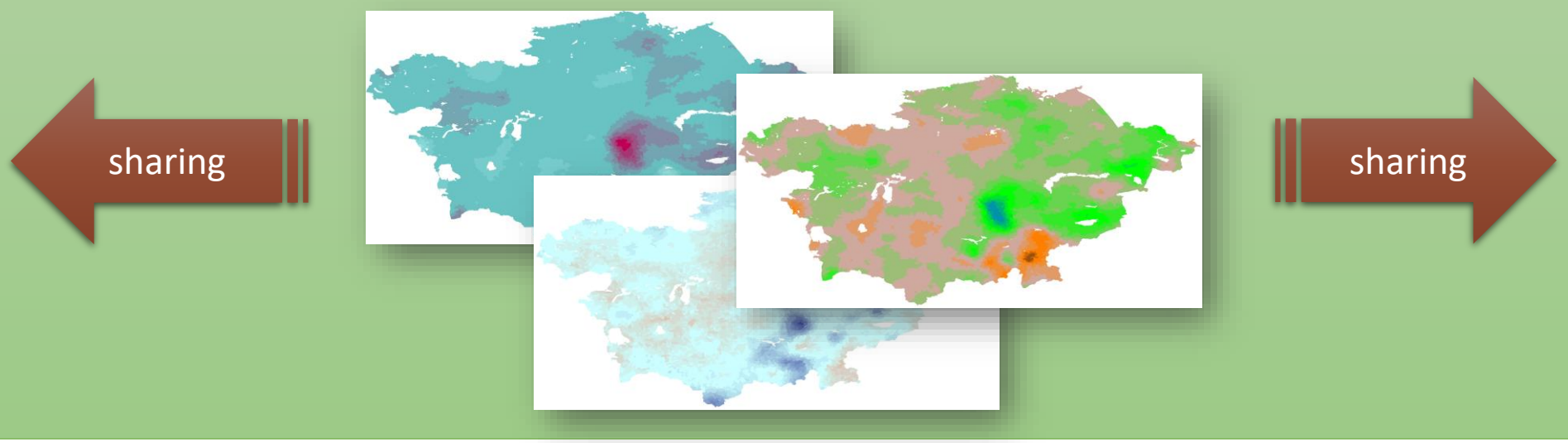
SHARING INFORMATION



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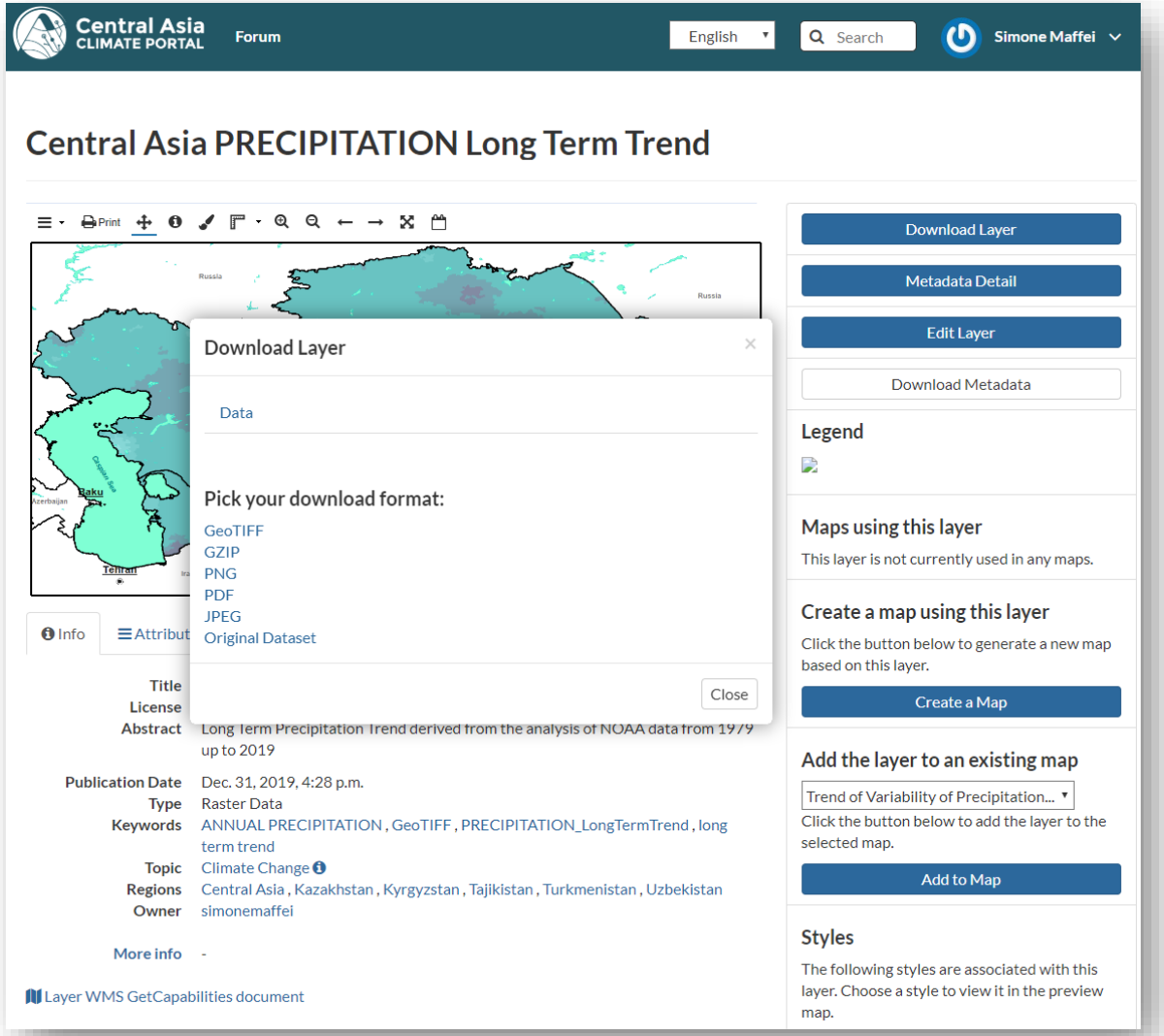
Downloading data

DOWNLOADING DATA

After the uploading of the data, the geographical data can be downloaded in the user computer (*excluding specific permission policy*)

Data can be downloaded:

- in the **original format** (the same of the uploaded files)
- in other standard formats (for this options it is necessary to set the style of visualization of the layer)



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Downloading formats

VECTOR DATA CAN BE DOWNLOAD AS

GeoJSON	Excel
CSV	GML 3.1.1
GML 2.0	ZIPPED Shapefile
PNG	PDF
JPEG	Original Dataset

For some options it is necessary to set the style of visualization of the layer

RASTER DATA CAN BE DOWNLOAD AS

GeoTIFF	GZIP
PNG	PDF
JPEG	Original Dataset

For some options it is necessary to set the style of visualization of the layer

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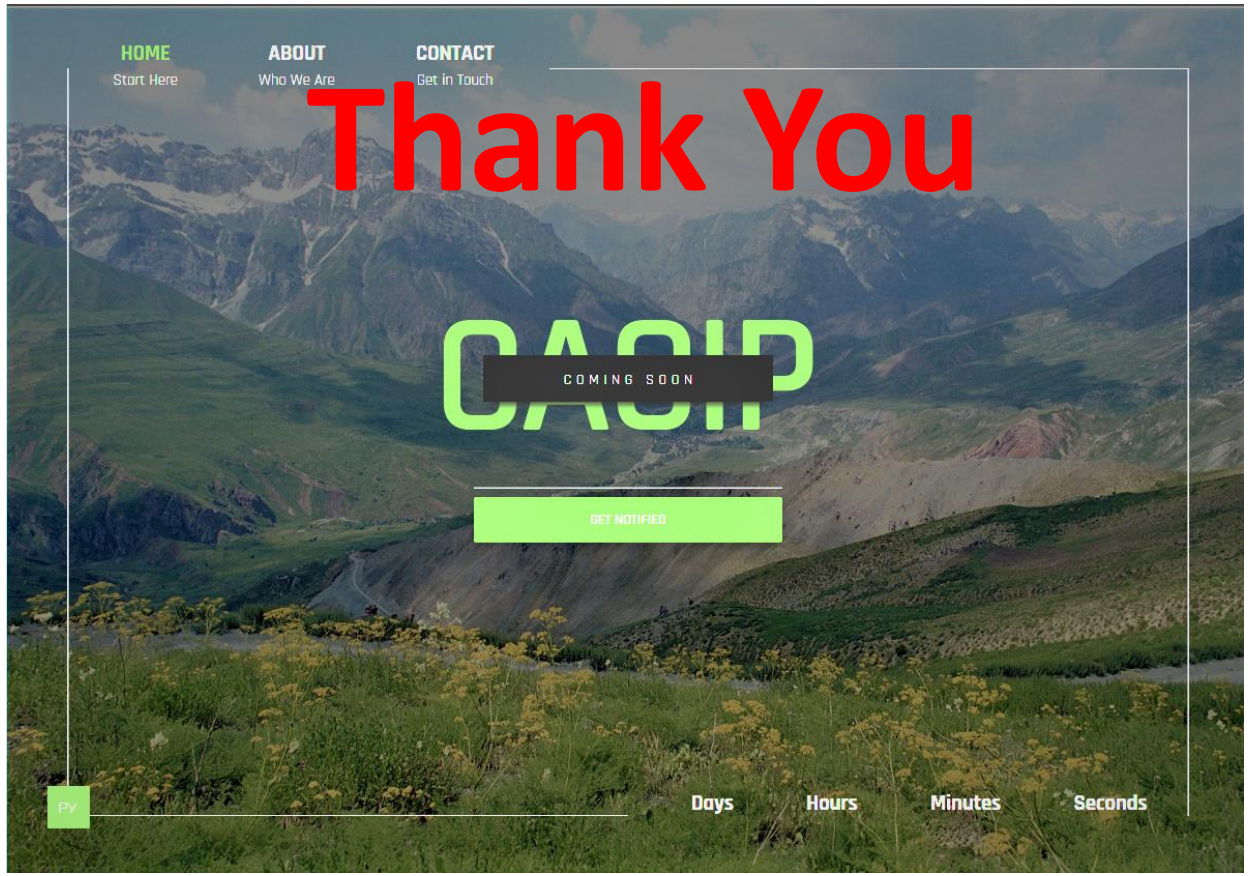
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