

## GEO-CRADLE in support to capacity building, stakeholder engagement and data sharing in the region

## Alexia Tsouni National Observatory of Athens



The GEO-CRADLE project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 690133

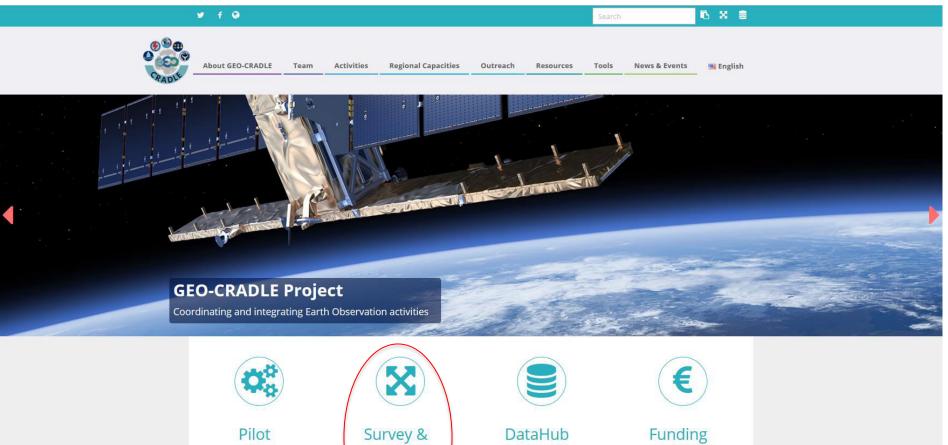








#### **Portal: Home page**



Activities

Follow our pilot activities in four thematic areas:



Networking Platform Take part in our

Access, search and share Earth Observation Data for the three regions.

## **Opportunities**

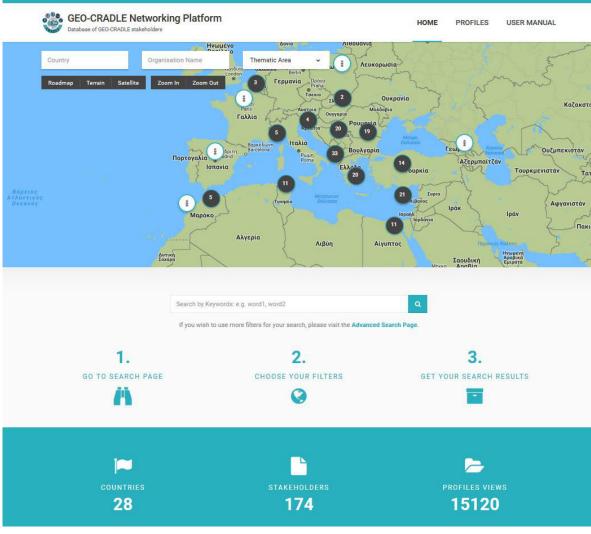
Explore the available funding opportunities and the benefit of







8 🖶



http://geocradle.eu/platform/

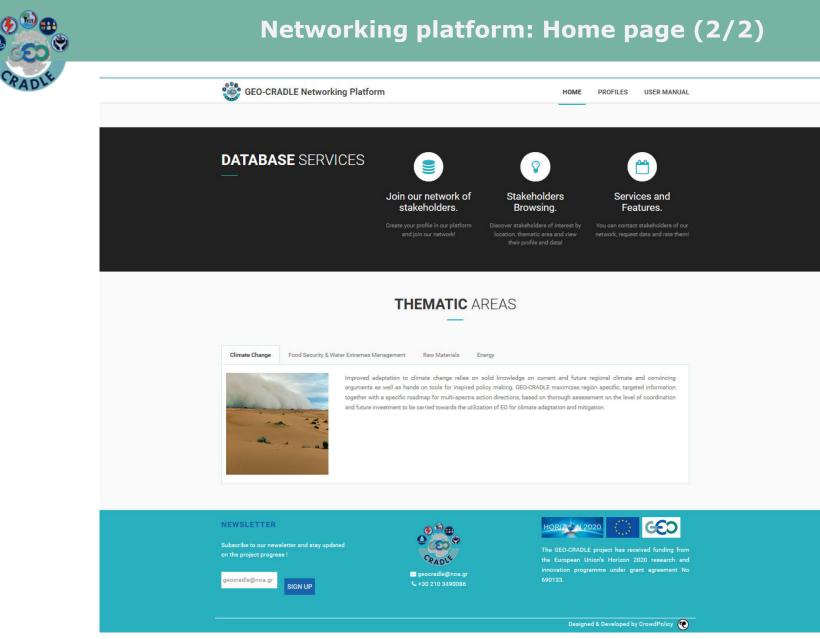
# Available for the first time in the Rol:

- inventory of regional capacities
- profiles of stakeholders
- assessment of country maturity
- potential partnerships

















## **Total responses: 250 STAKEHOLDERS PER REGION BA=Balkans; NA= North Africa; ME=Middle East** Other = 5.6% ME = 18% BA =53.2% NA = 23.2% **STAKEHOLDERS PER TYPE** I=institutional; C=Commercial; A= Academic & Research A = 34.4% I = 40%C = 25.6%

**IAASARS** 

#### **NUmber of Stakeholders** 37 26 20 2 1 1 1 2 AL - Albania BG - Bulgaria GR - Greece HR - Croatia XK - Kosovo Montenegro RO - Romania RS - Serbia SI - Slovenia TN - Tunisia MA - Morocco EG - Egypt CY - Cyprus TR - Turkey GE - Georgia CA - Canada Netherlands SK- Slovakia BE - Belgium BA - Bosnia and MK - FYROM JO - Jordan US - USA Switzerland ES - Spain FR - France IT - Italy PL - Poland IL - Israel -NL £ Ш

**STAKEHOLDERS PER COUNTRY** 

#### Balkans: 133, North Africa: 57, Middle East: 45, Other: 15

STAKEHOLDERS PER VALUE CHAIN ROLE	-
Raw data/provider	49.2%
Value-adder(data process-modelling)	64.0%
GIS/mapping service provider	45.2%
End User or End User with in house GIS/ mapping capabilities	50.4%





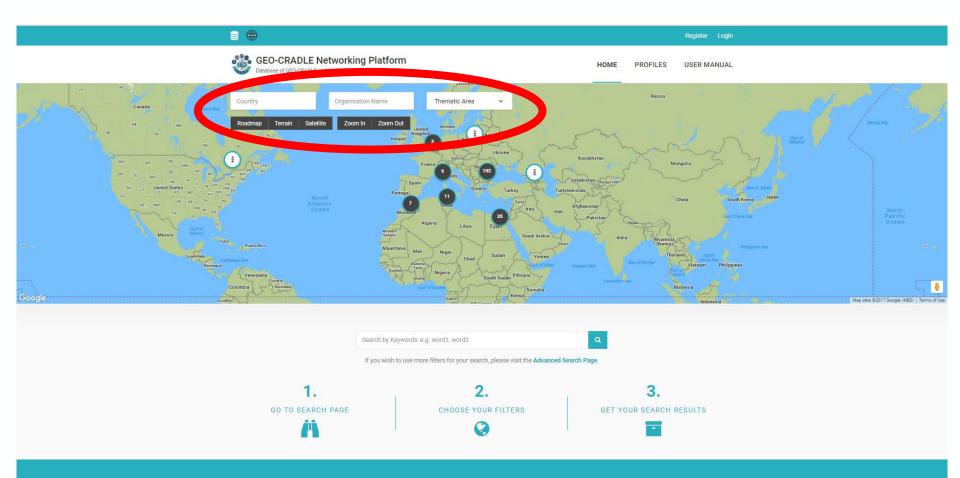
- Software: Wordpress.
- Access: Open access to all.
- **Profiles**: The profiles include exclusive and specific information collected by the GEO-CRADLE Survey.
- Validation: The profiles are validated by an administrator before publishing.
- **Filtering / search**: Three different mechanisms for filtering / search:
  - ✓ Map search: 3 filters to search the database & displays results on the map;
  - ✓ Keywords search: search by one or more keywords;
  - ✓ Advanced search page: 10 filters combined with "search by keywords" option.







## **Search option 1: Map view**

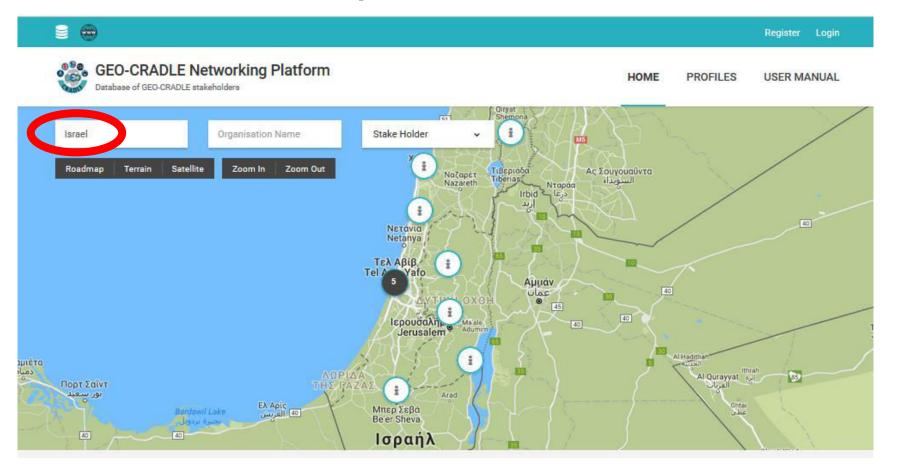








#### Filters: Country: Israel Results on the map: 12



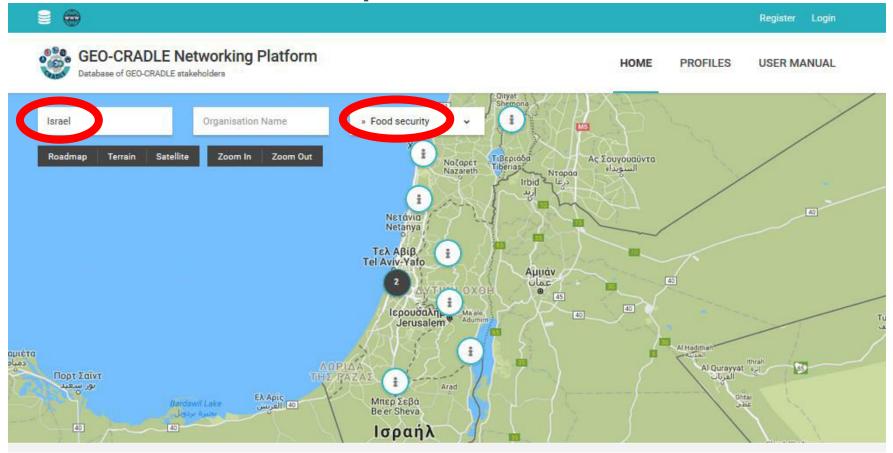






#### Filters:

#### Country: Israel Thematic Area: Food security **Results on the map: 9**



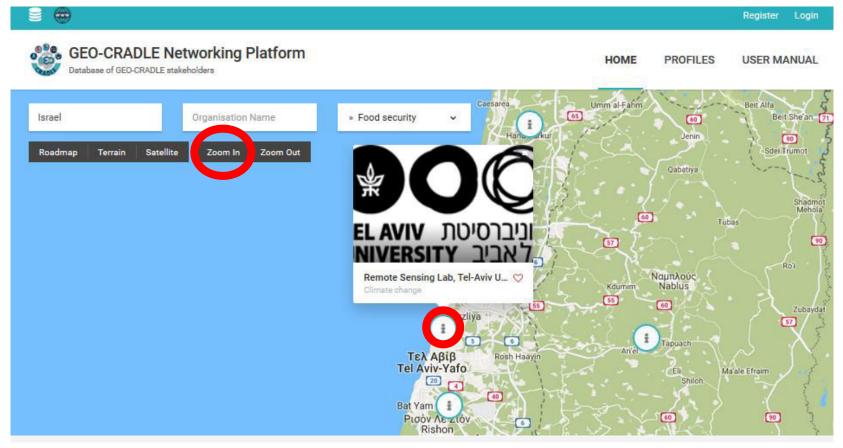






#### **Filters:**

#### Country: Israel Thematic Area: Food security Results on the map: 9 Zoom in Tel Aviv

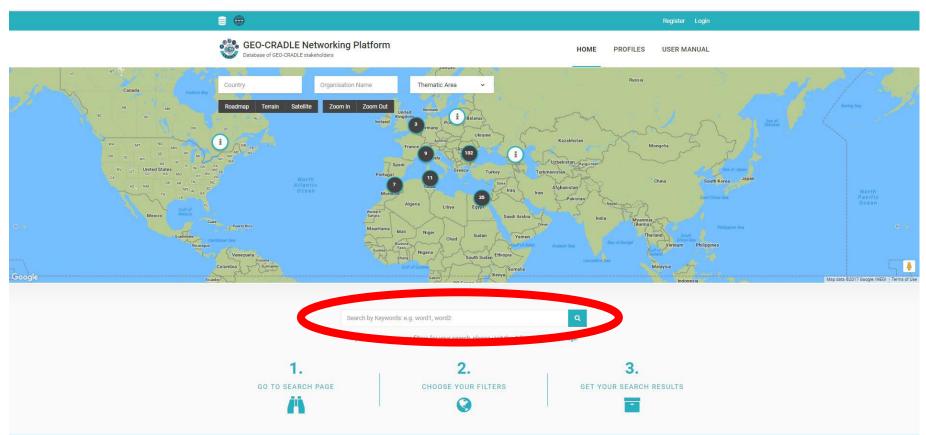








## Search option 2: Search by keywords (for quick search)



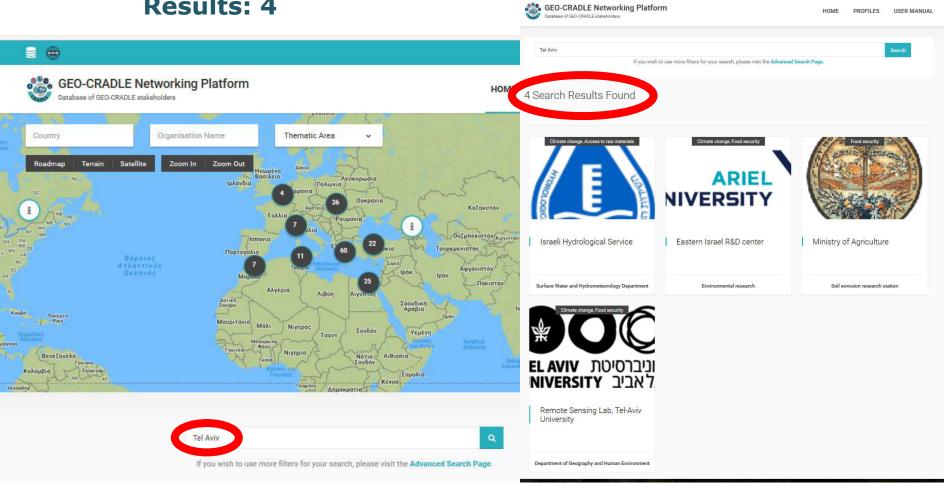






**=** 

#### Filters: Keywords: Tel Aviv Results: 4

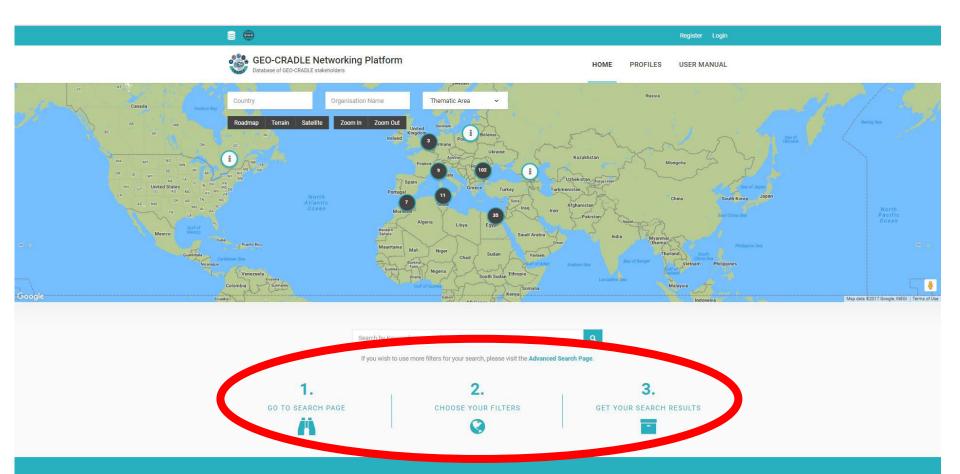








## Search option 3: Advanced search page





http://geocradle.eu/



GROUP ON



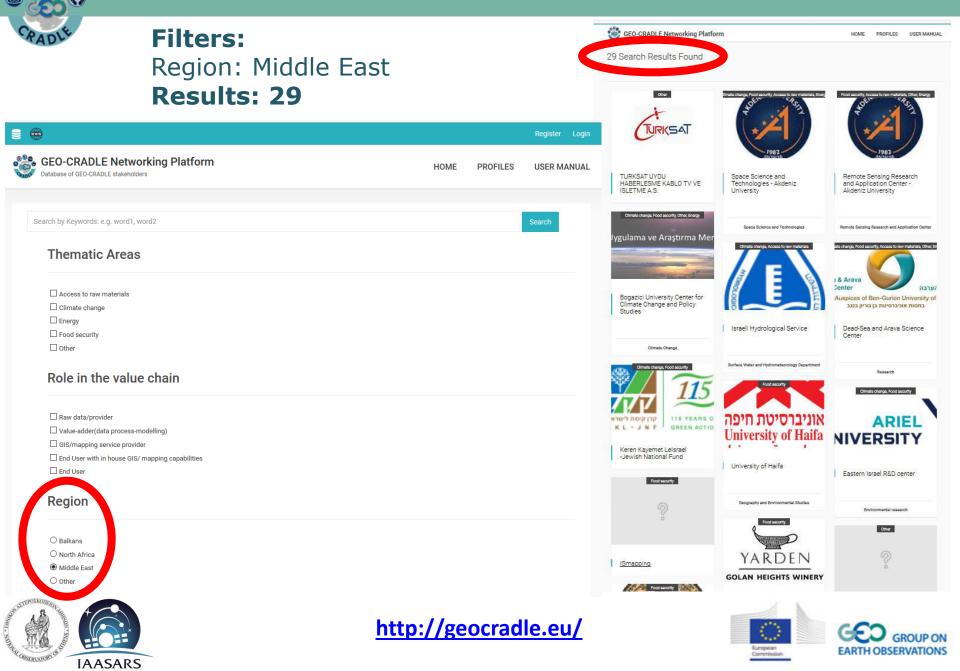
ADU		The source of EO data used in the model.
Search by Keywords: e.g. word1, word2	Search	Geospatial data (e.g.DTM)  Remote sensing data (e.g.raw satellite high-level images)  In situ data (e.g. temperature pressure-humidity)  Other
Access to raw materials     Climate change     Energy	Space-borne capacities	Organisation has sufficient available computing resources for the processing and exploitation of EO data and the models running
Food security	<ul> <li>Do you own/operate EO satellite systems? e.g. Sentinel 1, RASAT</li> <li>Do you own/operate EO Ground Segment facilities, for reception storage and redistribution of satellite data? e.g. ESA Mirror Site</li> </ul>	Server Clusters HPC Clusters Cloud Infrastructure
Role in the value chain	Ground-based/In-situ monitoring networks/facilities	Virtualization Infrastructure Processing Power Capacity (CPU-RAM-Storage Capacity)
Raw data/provider      Value-adder(data process-modelling)      GIS/mapping service provider      End User with in house GIS/ mapping capabilities	Meteorological/Climatic  Atmospheric Composition/Profiling  Hydrometric/Water Quality Soil attributes/Spectra	EO data exploitation for the provision of value-adding services and products
Region	Soli attrbutes/Spectra Energy/Radiation Other (e.g. Earthquake/Landslide)	Ecosystems(desertification-environmental impact- pollution)  Land Motion/Ground Movement  Inland Water (rivers and lakes)
O Balkans North Africa Middle East	Modelling and computing processing capacities	Indure rester (views and lakes)     Land Use/Over & Change (classified activities and statistics)     Metocean (wind-waves)     Geology     Uthan Areas
O Other	Meteorological/Climatic Atmospheric Composition/Profiling	Infrastructure (buildings-telecommunications and energy supply) Forest
Organization type	Hydrometric/Water Quality Soil attributes/Spectra Energy/Radiation	Snov&lce  Air Quality Climate
O Institutional O Research & Academic	Energy/Radiation     Other (e.g. Earthquake/Landslide)	Cinitate     Marine Ecosystems (including pollution-oil spills)     Vleather     Floods
O Commercial		Fires  Agriculture (farming-crops-yield-etc.)  Other (e.g. landslide-earthquakes-etc.)
- MARCON -		









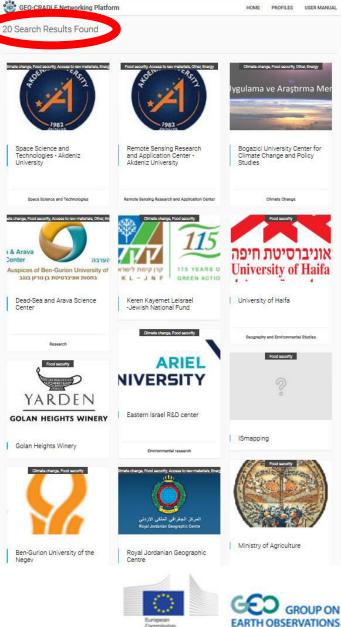




## Filters:

Region: Middle East Thematic area: Food security **Results: 20** 

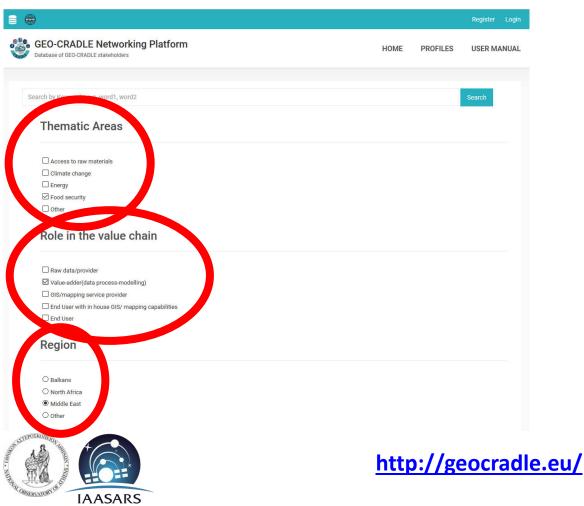
	Register Login	192
GEO-CRADLE Networking Platform Database of GEO-CRADLE stakeholders	HOME PROFILES LISED MANUAL Tech	ace Science chnologies - versity
Search by Keywoodes e.g. word1, word2	Search	Space Science a
Thematic Areas	1 & Ara	2
Access to raw materials	2enter Auspict	
□ Climate change □ Energy ☑ Food security	Deal	ad-Sea and Anter
□ other Role in the value chain		Reso
		YAR
Raw data/provider     Value-adder(data process-modelling)     GIS/mapping service provider		AN HEIG
End User with in house GIS/ mapping capabilities     End User		an Heights
Region		
◯ Balkans ◯ North Africa		Υ
Middle East     Other	Ben Neg	n-Gurion Uni gev
LAASARS	http://geocradle.eu/	
IAASARS		

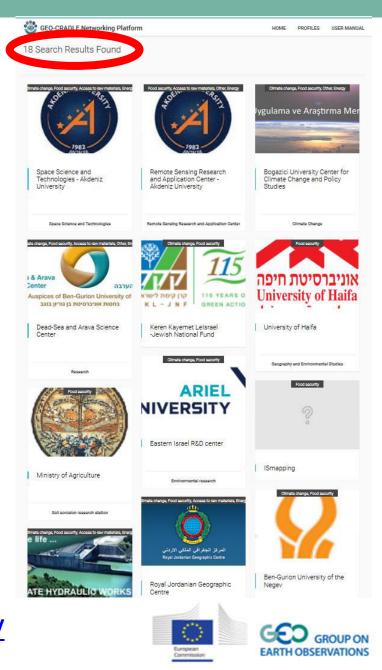




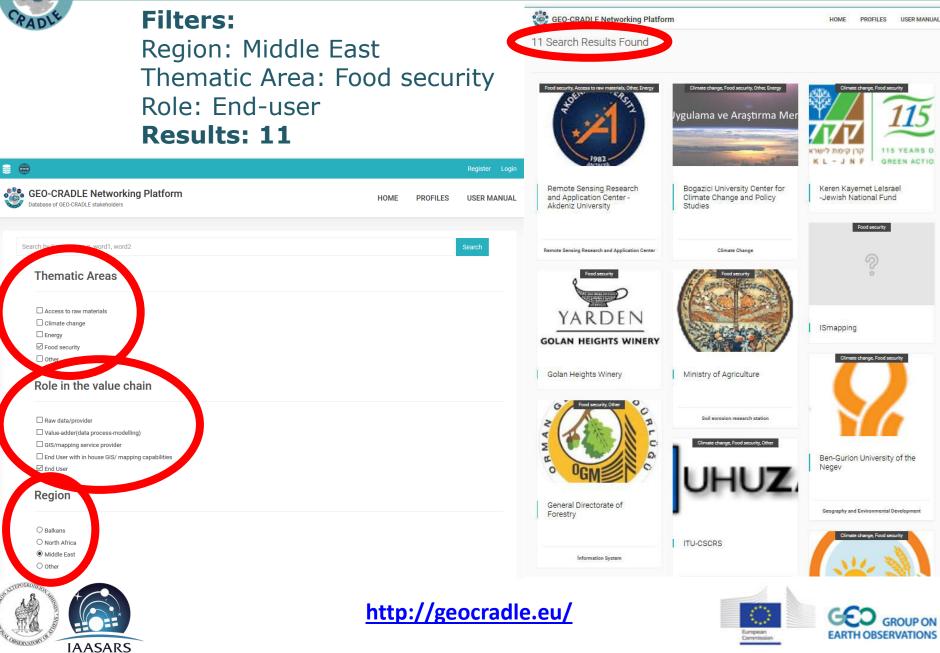
#### **Filters:**

Region: Middle East Thematic Area: Food security Role: Value-adder **Results: 18** 









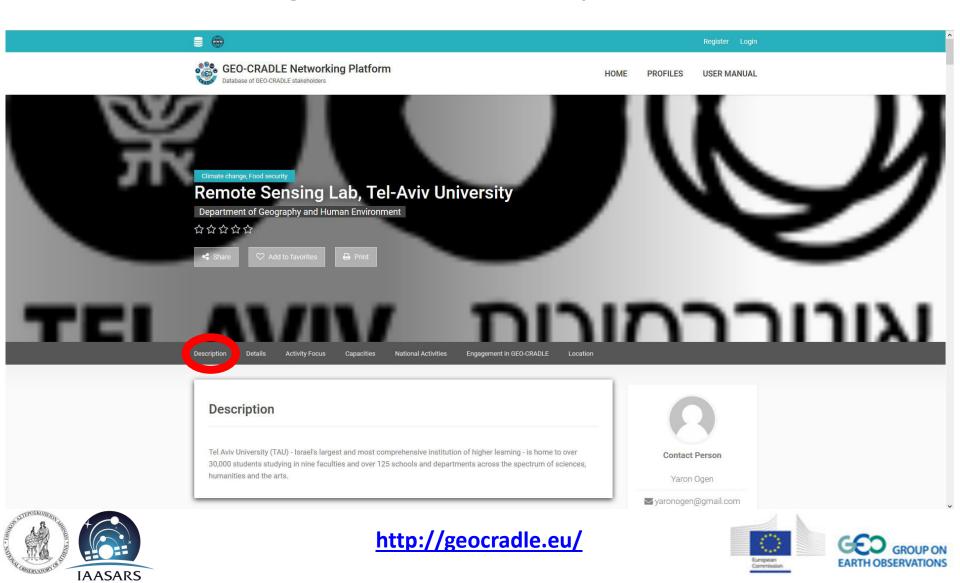




#### **Example Profile:**

Remote Sensing Lab, Tel-Aviv University

#### **Section: Description**





### **Section: Details**

GEO-CRADLE Netwo						
ription Details Activity For	cus Capacities Nati	onal Activities	Engagement in GEO-CRADLE	Location		@gmail.com
						4475510 sage
Details						
First Name	Yaron				126 views	
Last Name	Ogen					
Title	Remote	e Sensing Lab, T	el-Aviv University		Contact us	
Position	Ph.D st	udent			Contact us	
Email 1	yarono	gen@gmail.com	L		Send to Geo Cradle T	eam your ideas
Phone 1	972544	1475510			Name	
Organisation Name	Tel Aviv	V University (TAL	(L		Name	
Department	Departi	ment of Geogra	ohy and Human Environment		E-mail	
Туре	Institut	ional			Phone	
Thematic Area	Climate	e change			Subject	
	Food S	ecurity			Subject	
Website(s)	http://v	www.tau.ac.il/~r	slweb/index.html		Message	
Street Name	Zelig					
Street No	10					
Postal Code	696935	52			Send Message	
Town	Tel Avi	/				
Country	Israel					







**Section: Activity Focus** 

**GEO-CRADLE Networking Platform** HOME PROFILES **USER MANUAL** Engagement in GEO-CRADLE Activity Focus Capacities National Activities Location Details **Activity Focus** 1. Which of these statements best describe your Organisation's role in the value chain? Raw data/provider Value-adder(data process-modelling) End User with in house GIS/ mapping capabilities End User 2. What are the main thematic areas of activity of your Organisation? Climate change (e.g. climatology- meteorology atmospheric composition- air quality- radiation) Food security (including agriculture and water extremes i.e. floods and droughts) 3. Has your organisation participated in EO-related projects? Yes Please provide links where applicable (e.g. FP& BEYOND - website URL), or any other information that you find useful EO-miners, EUFAR-1, EUFAR-2 4. Has your Organisation participated in any Copernicus service provision, Copernicus User requirements definition or Copernicus Research & Innovation action? No 5. Has your Organisation participated in any GEO/GEOSS SBA Tasks, community activities or initiatives? Yes Please provide some additional information GeoMIN and energy 6. How would you rate your Organisation's level of collaboration with other EO actors in your country or abroad?









**Section: Capacities** 

GEO-CRADLE Networking Platform	HOME	PROFILES	USER
xription Details Activity Focus Capacities National Activities Engagement in GEO-CRADLE Location			
Capacities			
From the list below, please choose all the domains in which your organisation has capacities.			
<ol> <li>Ground-based/In-situ monitoring networks/facilities (of active or passive remote sensors- meteo/atmospheric /water sensors- etc)</li> </ol>			
3) Modelling and computing processing capacities			
4) EO data exploitation for the provision of value-adding services and products			
Do you own/operate EO satellite systems? e.g. Sentinel 1, RASAT			
No			
Do you own/operate EO Ground Segment facilities, for reception storage and redistribution of satellite data? e.g. ESA	4		
Mirror Site			
No			
Ground-based/In-situ monitoring networks/facilities			
1. What type of ground-based/in-situ networks or facilities do you operate?			
Meteorological/Climatic			
Atmospheric Composition/Profiling			
Soil attributes/Spectra			
Energy/Radiation			
Meteorological/Climatic			
Number of stations			
9 portable meteorological stations			
What is the geographic coverage/extent?			









### **Example Profile:**

**Section: National Activities** 

Remote Sensing Lab, Tel-Aviv University

GEO-CRADLE Networking Platform	HOME	PROFILES	USER MANUA
ription Details Activity Focus Capacities National Activities Engagement in GEO-CRADLE Location			
National Activities			
1. Is there funding for EO activities available in your country?			
Yes			
If yes, specify the case(s).			
Yes-for infrastructure development			
Yes- for R&D			
Please specify			
ISA and ministry of science and infrastructure support, ERC - European Research Community, Israel Science Fundation, Governmental ministries, Israe Space Agency			
2. Is there a National Space Policy/Strategy?			
Yes			
Please specify			
by ISA headquarter			
3. Is there a Space Agency in your country?			
Yes			
4. Which of the following best describes the level of coordination of EO activities in your country?			
Fully Integrated			
Please provide examples of collaboration between research and private sector entities in your country.			
Research between ISA and ASI for vicarious			
calibration of HSR orbital sensors (SHALOM			
and PRISMA) with relation to electrooptic and aerospace companies such as: IAI, ELOP			

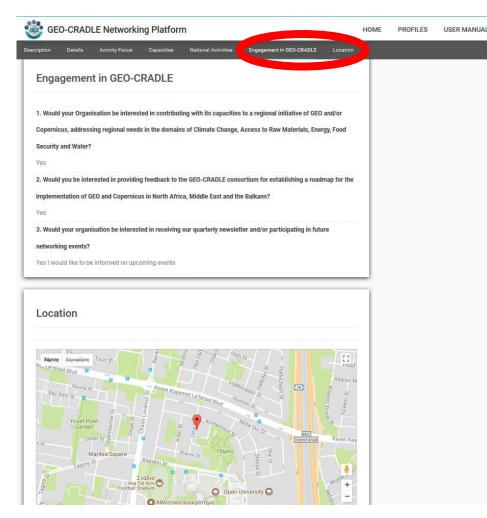








# Sections: Engagement in GEO-CRADLE & Location









#### Networking platform: Registration / Survey

GEO-CRADLE Networking Plat	form	HOME	PROFILES USER MAN
	Registration		
	Username		
	E-mail		
	Password		
	Retype Password		
	I agree with terms & conditions		
	Sign Up		
	You can read the User Manual here.		
NEWSLETTER	6 B a	HORIZON 20	20 🔿 GEO
Subscribe to our newsletter and stay updated	0.000		
on the project progress !	CRADLE	the European Un	project has received funding f ion's Horizon 2020 research
geocradle@noa.gr	🔄 geocradle@noa.gr 🌭 +30 210 3490086	innovation progra 690133.	imme under grant agreement
SIGNOR			









#### **Networking platform: Registration / Survey**

You have been successfully registered.		
GEO-CRADLE Networking Platform Database of GEO-CRADLE stakeholders		My Profile Logout
Home / My Profile		
My Profile		
		+ Create Profile
You don't have any profile, yet. Start by creating new one.		
NEWSLETTER	<b>A B A</b>	
Subscribe to our newsletter and stay updated	ల్యాల	The GEO-CRADLE project has received funding from
on the project progress !	CRADLE	the European Union's Horizon 2020 research and
geocradle@noa.gr	ॼ geocradle@noa.gr ६ +30 210 3490086	innovation programme under grant agreement No 690133.









#### **Networking platform: Registration / Survey**

				My Profile Logout
GEO-CRADLE Networking Platform Database of GEO-CRADLE stakeholders		HOME	PROFILES	USER MANUAL
Home // Create Profile				
Create Profile <		Proç	jress	
Stakeholder Name (This will be displayed as your Profile name)*				
			1	Profile Info
rescription			2	General Info
			2.	General IIIO
			3.	Activity Focus
Profile Photo			4.	Capacities
Stakeholder Name (This will be displayed as your Profile name)*				
			5.	National Activity
Cover Photo No image selected				
Add Image			6.	Engagement in 0
Save				
NEWSLETTER	но	RIZ ON 202	• 🔅	GED
Subscribe to our newsletter and stay updated	The	GEO-CRADLE p	roject has ree	ceived funding from









## **General info**

- Personal Information
- Your Organization

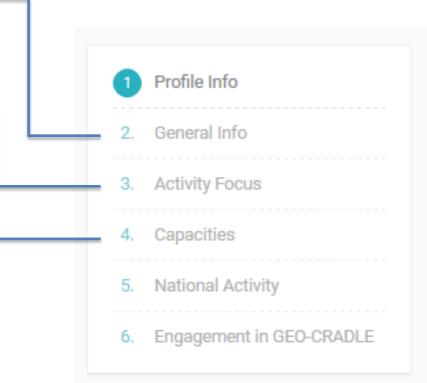
## **Activity Focus**

- Your Organisation's role in the value chain
- Main thematic areas of activity
- Participation in EO-related projects
- Participation in Copernicus
- Participation in GEO/GEOSS SBA Tasks
- Collaboration with other EO actors

## Capacities

- Space-borne capacities
- Ground-based/In-situ monitoring networks/facilities
- Modelling and computing processing capacities
- EO data exploitation









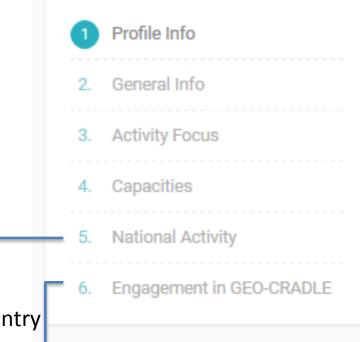
## National Activities

- National funding for EO activities
- National Space Policy/Strategy
- Existence of National Space Agency
- Coordination of EO activities in the country
- Interaction between the EO community and decision makers in the country
- Organisation of EO dedicated workshops in the country

## **Engagement in GEO-CRADLE**

- Contribute with your capacities to a regional initiative of GEO and/or Copernicus?
- Provide feedback for establishing a roadmap for the implementation of GEO and Copernicus in the region?
- Participate in future GEO-CRADLE networking events and portal?









#### **Networking platform: Login**

Seo-Cradle Portal X Login – Superlist X	UserManual.pdf $ imes  $ +						-	o ×
( I gdev.crowdpolicy.com/geo-cradle-stakeholders/login/				90% C	Q Αναζήτηση	z	ነ 🗴 🖡	â E
🔊 Πιο συχνά αναγνωσμ 👖 Ξεκινώντας 🌄 Suggested Sites 🚺 Web Slice	Gallery				$\frown$			
					Register Login			
	GEO-CRADLE Networking Platform Database of GEO-CRADLE stakeholders		HOME	PROFILES	USER MANUAL			
		Login						
		Username						
		Password						
		Log in						
		I've forgotten my password.						
	NEWSLETTER	4 <b>9</b> •		20 :	660			

geocradle@noa.gr



igeocradle@noa.gr



Designed & Developed by CrowdPolicy 💽

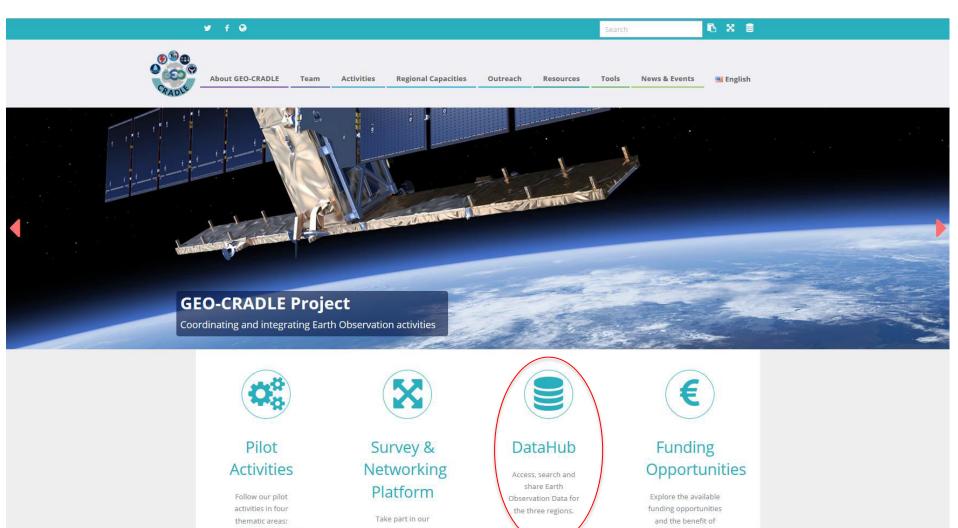








#### **Portal: Home page**





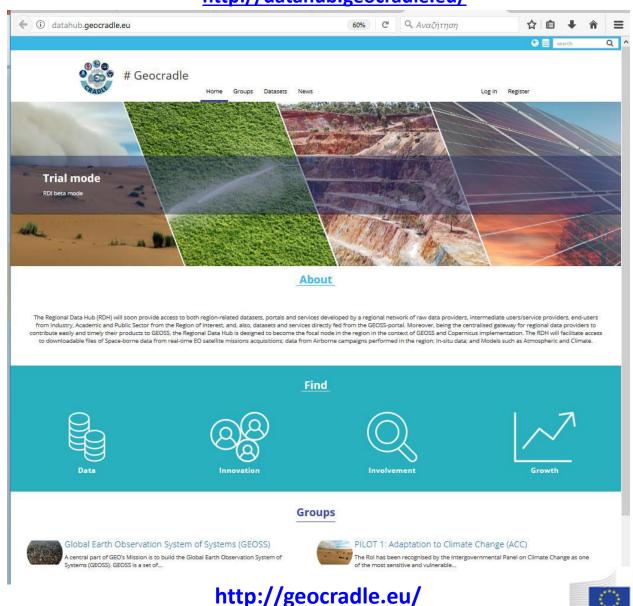




#### **Regional Data Hub: Home page**

#### http://datahub.geocradle.eu/

An alpha version of the tool is currently available and online providing an almost complete connection with the GCI and **GEOSS** datasets that are related with the Rol and the project's thematic areas.



The **beta** version will be released soon providing a more stable service and full interoperability with GCI and **GEO DAB APIS**, as well as a first level connection with data available through the project pilots.



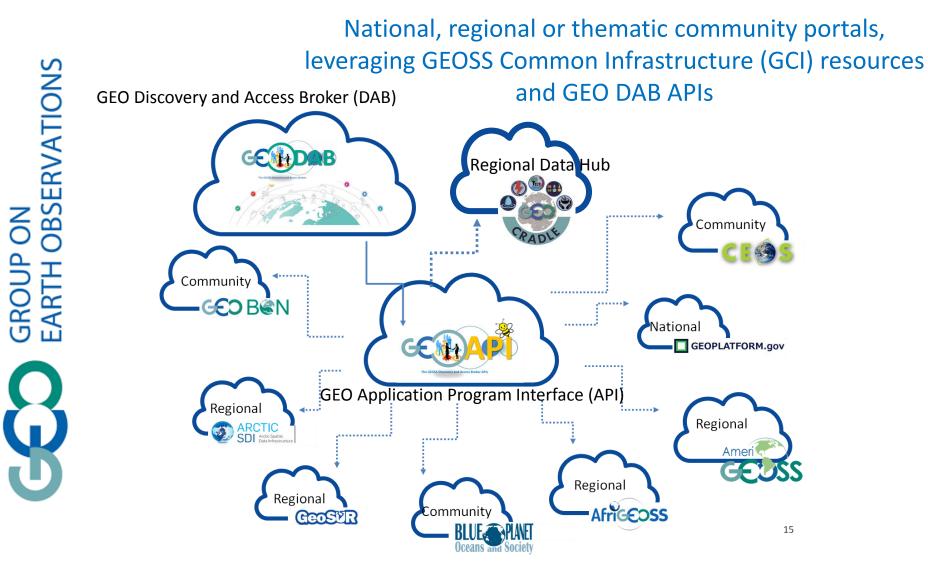








## Users/GEO Portals





- ✓ RDH is designed to become the focal node in the region in the context of GEOSS and Copernicus implementation.
- It is an open data web management tool / portal (developed using web technologies such as PHP, HTML5, JavaScript, CSS, etc.) that provides access to region-related datasets and services, directly fed from GCI, and at the same time being the central gateway for regional data providers to contribute easily and timely their products to GEOSS.
- It advances the current state of the art by integrating DKAN, which is a complementary implementation of CKAN (Comprehensive Knowledge Archive Network) over Drupal/PHP, with the GEO DAB APIs. DKAN CMS (Content Management System) is an open-source data management platform that treats data as content, facilitating the subsequent publication, management, and maintenance of these, no matter the administration team, its size and level of technical expertise.



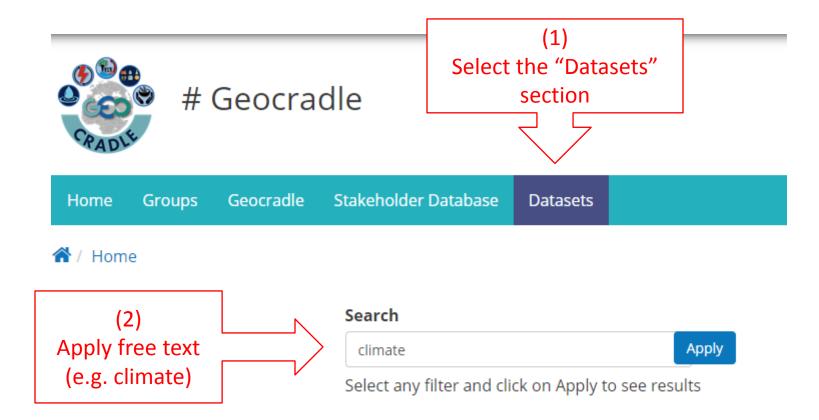
Several achievements were accomplished for the RDH to be able to provide its users the functionalities described above:

- Search in multiple sources (although by default DKAN looks up for datasets and resources in a single local database).
- Search for datasets in remote resources (integration of the GEO DAB APIs in the DKAN environment).
- Display the remote datasets and resources on-the-fly and with high performance (using a rendering cache mechanism which also implements an Adaptive Time-to-Live consistency mechanism to periodically check the consistency of the cached rendering structures with the original data to assure that users do not receive stale data).
- Cleaning data mechanism (cleans identical or duplicate data, discovers missing information for data, discovers URL that have changed or that are not working anymore, discards data with invalid URL schemes, etc.)
- Preview mechanism (to preview data of various formats and services, such as CSV files, Web Map Services, Zip files, etc.)

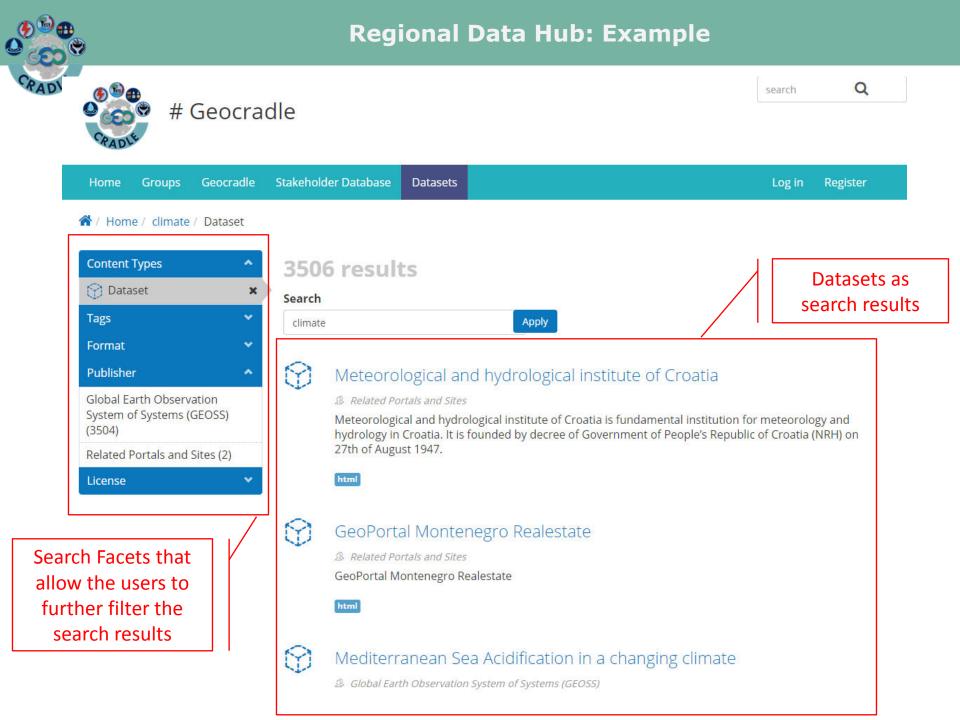
An integrated Search and Display mechanism that offers the users unified, centralized and user-friendly interface.

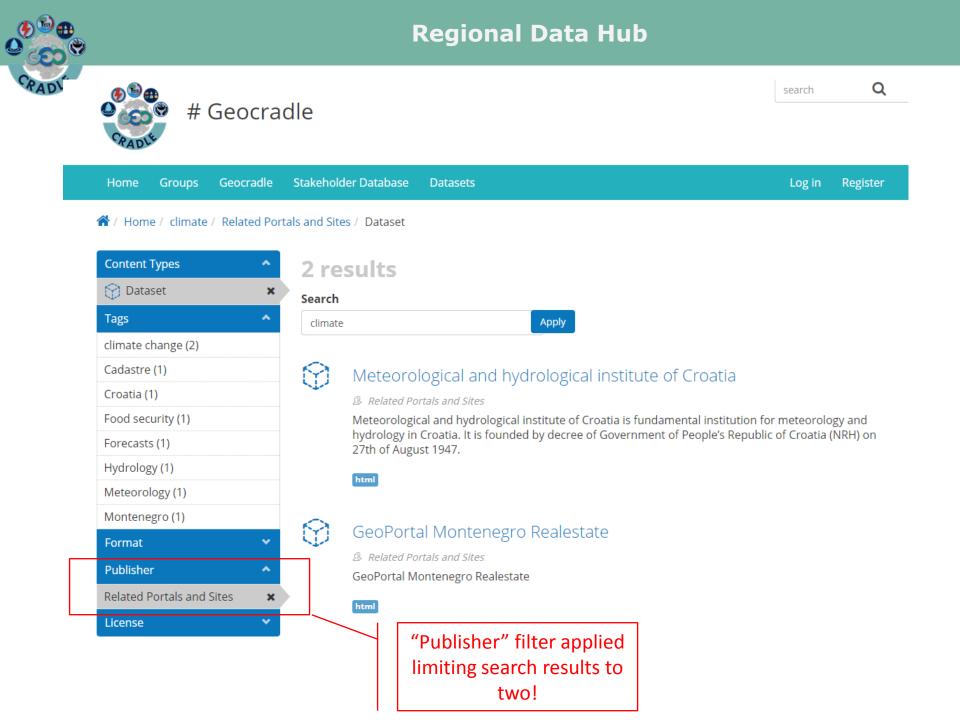


# A First Search Example (that returns datasets local to RDH)

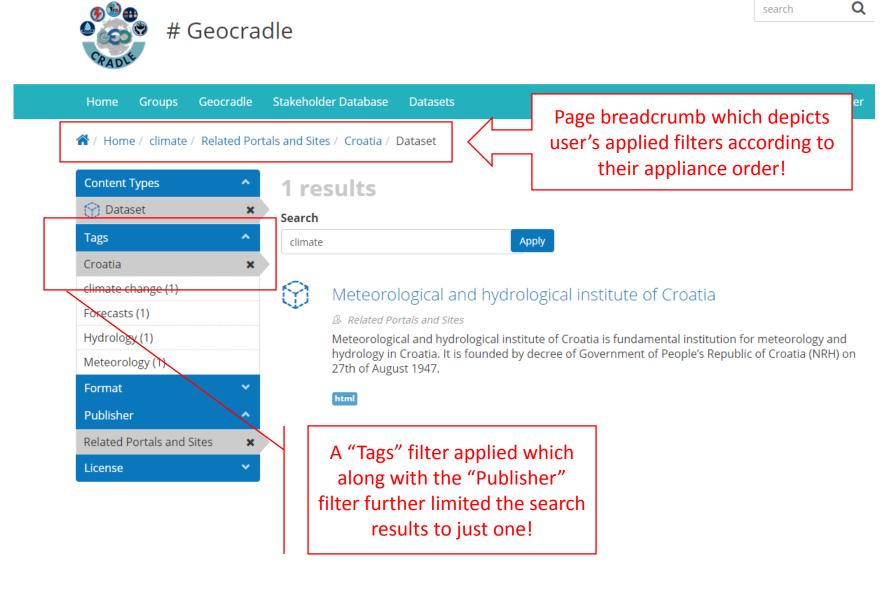




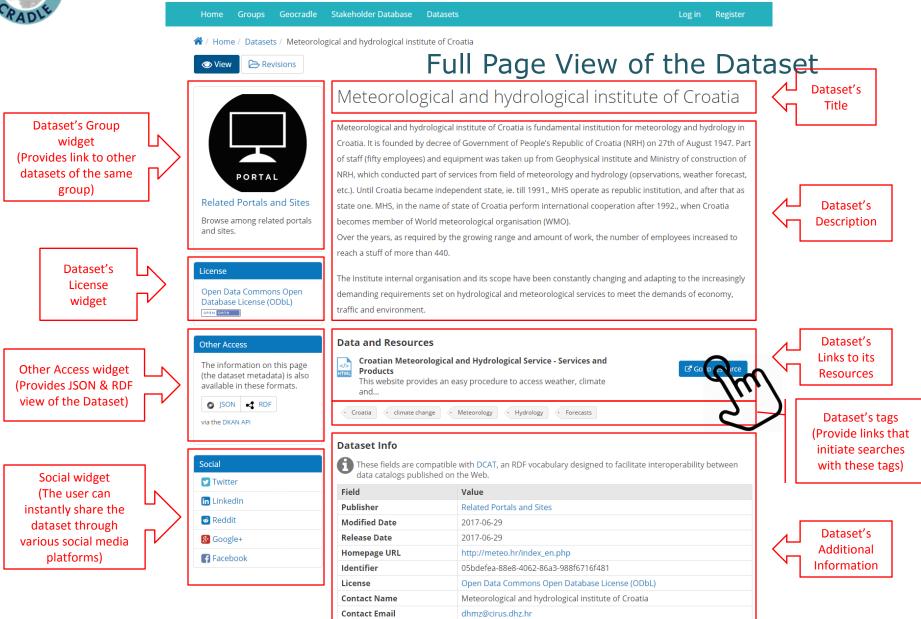












Public

**Public Access Level** 



Various useful links (Direct link to the resource, Link to the resource's dataset, etc.)

#### Stakeholder Database Datasets Home Page 🌴 / Home / Datasets / Meteorological and hydrological institute of Croatia / Croatian Meteorological and Hydrological Service - Services and Products breadcrumb 🕐 View Back to dataset Revisions 📥 Go to resource Croatian Meteorological and Hydrological Service - Services and Resource's Products Title This website provides an easy procedure to access weather, climate and hydrological data in Croatia, whether they are needed for private or business purposes. The most commonly sought information is that concerned with the weather conditions (including weather forecast) and climatological data, and can be obtained in the textual or graphical form (tables, graphs etc) or in a form of your choice. The information provided must be paid according to the current price-list of the Croatian Meteorological and Hydrological Service. The price-list is provided with the offer. Resource's Description If you are satisfied with terms and conditions of the offer, and after the payment is completed, the requested data and the invoice will be delivered by registered post within ten days (or e-mail if the request is urgent). If the data requested are needed as for high school or university thesis, or for scientific research, they are free of charge. We hope that we may help you and that our data will be of use to you! </> Meteorological and Hydrological Service Weather Forecast Climate > Home Services and Products 7 DHMZ Dear Users! This website provides an easy procedure to access weather, climate and hydrological data in Croatia whether they are needed for private or business purposes. The most commonly sought information is that concerned with the weather conditions (including weather forecast) and climatological data, and can be obtained in the textual or graphical form (tables, graphs etc) or in a form of your choice. The information provided must be paid according to the current price-list of the Croatian Meteorological and Live preview of About us Hydrological Service. The price-list is provided with the offer. Services Resource's Remote Link, If you are satisfied with terms and conditions of the offer, and after the payment is completed, the Events requested data and the invoice will be delivered by registered post within ten days (or e-mail if the News **API or File** request is urgent). Cooperation If the data requested are needed as for high school or university thesis, or for scientific research, they are free of charge. We hope that we may help you and that our data will be of use to you! Projects Please click on the Request Form below! Contact us Links Request form for meteorological data and information (doc) (PDE) Request form for hydrological data and information (doc) (PDF) Request form for climatological maps for CLINOperiods (doc) (PDF) Request form for climatological map - wind (doc) (PDF)

**Regional Data Hub** 

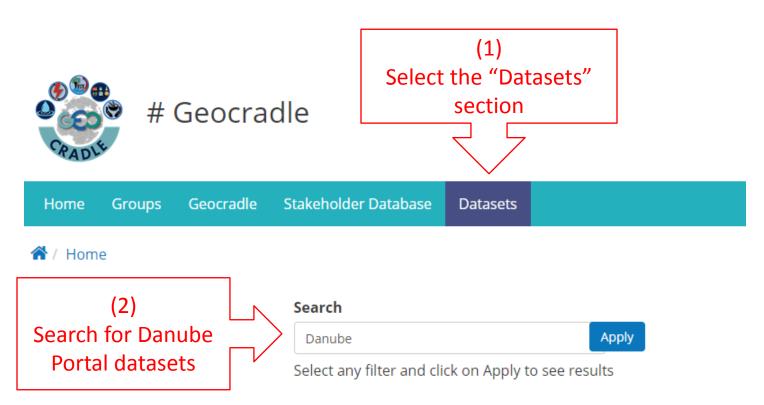
## Full Page View of the Dataset's Resource

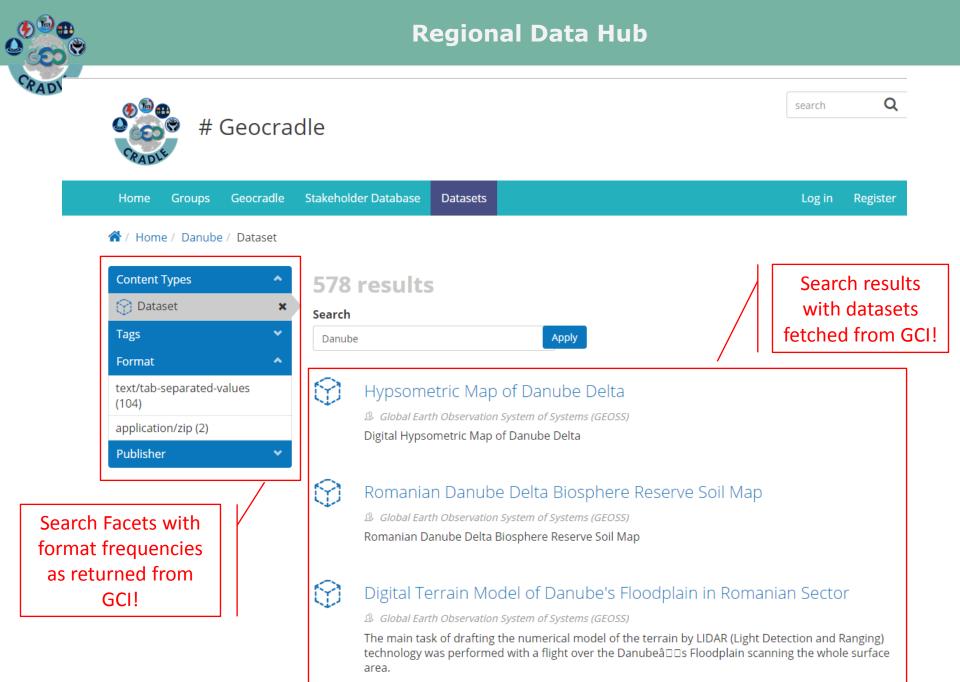
### Resources

Croatian Meteorological and Hydrological Service - Services and Products

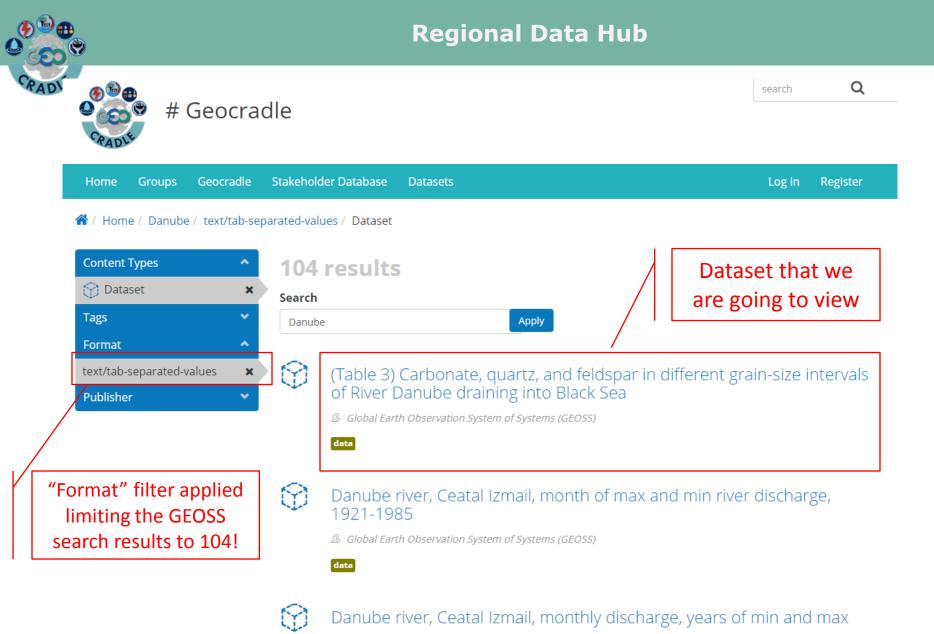


# A Second Search Example (that returns datasets from GEOSS)



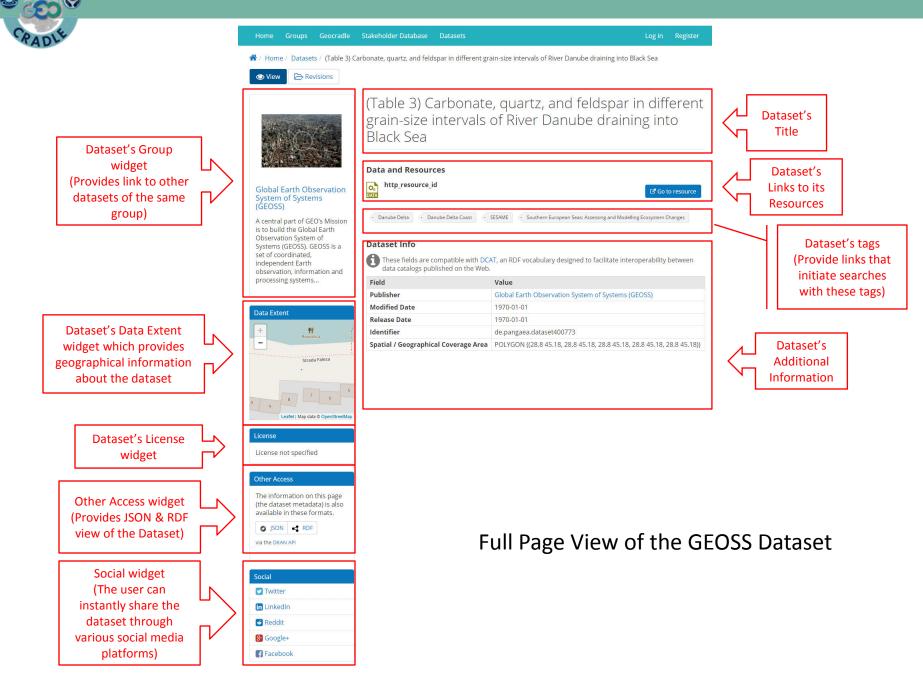


data



Global Earth Observation System of Systems (GEOSS)

data





## **Regional Data Hub: Israel**

		en e	
CRADIS	# Geoci	adle Home Groups Datasets News Log in Register	
希 / Home / israel / Dataset			
Content Types	Dat	asets	
🛄 Dataset	×		
Tags	<b>~</b> 143	22 results	
Format	✓ Search		
Publisher	∧ israel	Apply	
Global Earth Observation System of Systems (GEOSS) (14319)		Related Portals and Sites	
Related Portals and Sites (3)			
Author	~	The Government Data and Services Portal contains a variety of meteorological data (temperature, relative humidity, pressure, precipitation, wind, etc.) from measurement stations operating throughout the country at different Attached Resources:	
License	~		
		Audited Resources.	
		Envista - Air Resources Manager	
		Related Portals and Sites	
		The portal offers free access at Meteorological and Environmental data, and enables free downloads	

but, it is operated by the government and it is available only in Hebrew.

Attached Resources: 1



### Solar Med Atlas

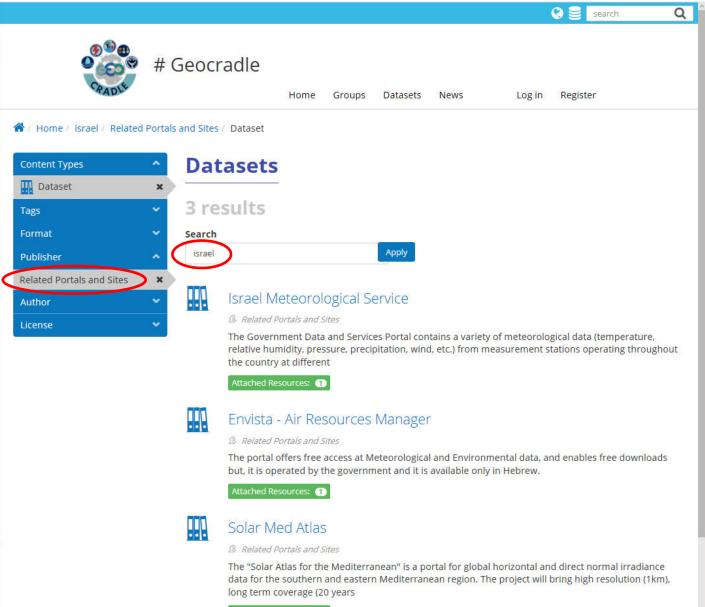
Related Portals and Sites

The "Solar Atlas for the Mediterranean" is a portal for global horizontal and direct normal irradiance data for the southern and eastern Mediterranean region. The project will bring high resolution (1km), long term coverage (20 years

Attached Resources: (2)



## **Regional Data Hub: Israel**



Attached Resources: 2





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