

an e-GEOS (ASI / Telespazio) Company

Access to Indian data as ESA's Third Party Mission (IRS-1C/1D, Resourcesat-1/2, Cartosat-1) through GAF AG

Terms of Applicability

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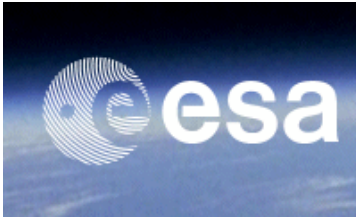
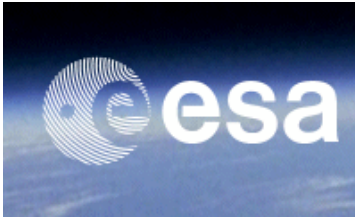


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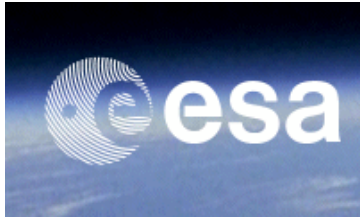
1 General

Within the Third Party Mission scheme, ESA provides to Earth Observation users data from non-ESA missions, so-called Third Party Missions, to complement the data from ESA EO missions and to support and build up the scientific user community for those data in Europe.

Since 2017, the Resourcesat-1, Resourcesat-2, IRS-1C, IRS-1D and Cartosat-1 Satellite Imagery are part of the Third Party Missions Program.

Within the ESA CAT-1 TPM Scheme, ESA offers to the CAT-1 user community the following services provided by GAF AG:

- On demand access to the entire Resourcesat-1, Resourcesat-2, IRS-1C, IRS-1D and Cartosat-1 satellite imagery archive
- On demand access to new Resourcesat-2
- Activities to be performed by GAF AG to provide satellite data for ESA and/or ESA approved science and application development users
- Standard Delivery of products (see below for more details)
- Resourcesat-2 programming delivered according to the standard tasking service (see below for more details)



2 Data Accessibility Conditions

Following products are available to ESA users:

- All Archive data (Neustrelitz and other archives) + Resourcesat-2 new acquisitions
- Coverage worldwide as per archive for IRS-1C/1D, Resourcesat-1 and Cartosat-1
- Coverage worldwide for Resourcesat-2

Mission	Sensor or product	Type	Resolution (m)	Coverage (km x km)	System or radiometrically corrected ¹	Ortho corrected		Neustrelitz archive ²	Global archive	New tasking possible
						DN	TOA reflectance			
IRS-1C	PAN	Panchromatic	5	70 x 70	X	X ⁴	-	1996 - 2004	1996 - 2007	-
	LISS-III	Multi-spectral	25	140 x 140	X	X ^{3,4}	-	1996 - 2004	1996 - 2007	-
	WiFS	Multi-spectral	180	800 x 800	X	X ⁷	-	1996 - 2004	1996 - 2007	-
IRS-1D	PAN	Panchromatic	5	70 x 70	X	X ⁴	-	1998 - 2005	1998 - 2009	-
	LISS-III	Multi-spectral	25	140 x 140	X	X ^{3,4}	-	1998 - 2005	1998 - 2009	-
	WiFS	Multi-spectral	180	800 x 800	X	X ⁷	-	1998 - 2005	1998 - 2009	-
Cartosat-1	PAN-Aft (backward)	Panchromatic	2.5	27 x 27	X	X ⁴	-	2007 - 2016	2005 - 2019	-
	PAN-Fore (forward)	Panchromatic	2.5	27 x 27	X	X ⁴	-	2007 - 2016	2005 - 2019	-
	Stereo (PAN-Aft+PAN-Fore)	Panchromatic	2.5	27 x 27	X	X ^{4,5}	-	2007 - 2016	2005 - 2019	-
Resourcesat-1	LISS-IV MN (Mono Mode)	Mono-Chromatic ⁶	5	70 x 70	X	X ⁴	-	2004 - 2010	2003 - 2013	-
	LISS-III	Multi-spectral	20	140 x 140	X	X ⁴	-	2004 - 2013	2003 - 2013	-
	AWiFS	Multi-spectral	60	370 x 370	X	X ⁷	-	2004 - 2013	2003 - 2013	-
Resourcesat-2	LISS-IV MN	Mono-Chromatic ⁶	5	70 x 70	X	X ⁴	-	2014 -	2011 -	X
	LISS-III	Multi-spectral	20	140 x 140	X	X ⁴	X ⁴	2014 -	2011 -	X
	AWiFS	Multi-spectral	60	370 x 370	X	X ⁷	X ⁷	2014 -	2011 -	X

For all products, users can browse EOWEB NG catalogue (http://euro-maps.gaf.de/products/serv_003.html) to search archive data over Neustrelitz station footprint (Europe). Users can request archive data worldwide (out of Neustrelitz footprint) but no catalogue is available. Minimum order size is one scene. Request has to be sent to GAF user support (tpm@gaf.de).

¹ Whether system corrected or radiometrically corrected products are available depends on mission, sensor and processing centre

² Years of first and last acquisition, including sporadic acquisitions during installation, are given. Acquisitions may have been systematic, seasonal or demand driven

³ Band 5 not included

⁴ If unavailable, customer has to supply ground control information and DEM in suitable quality

⁵ Only one of the data sets will be ortho corrected

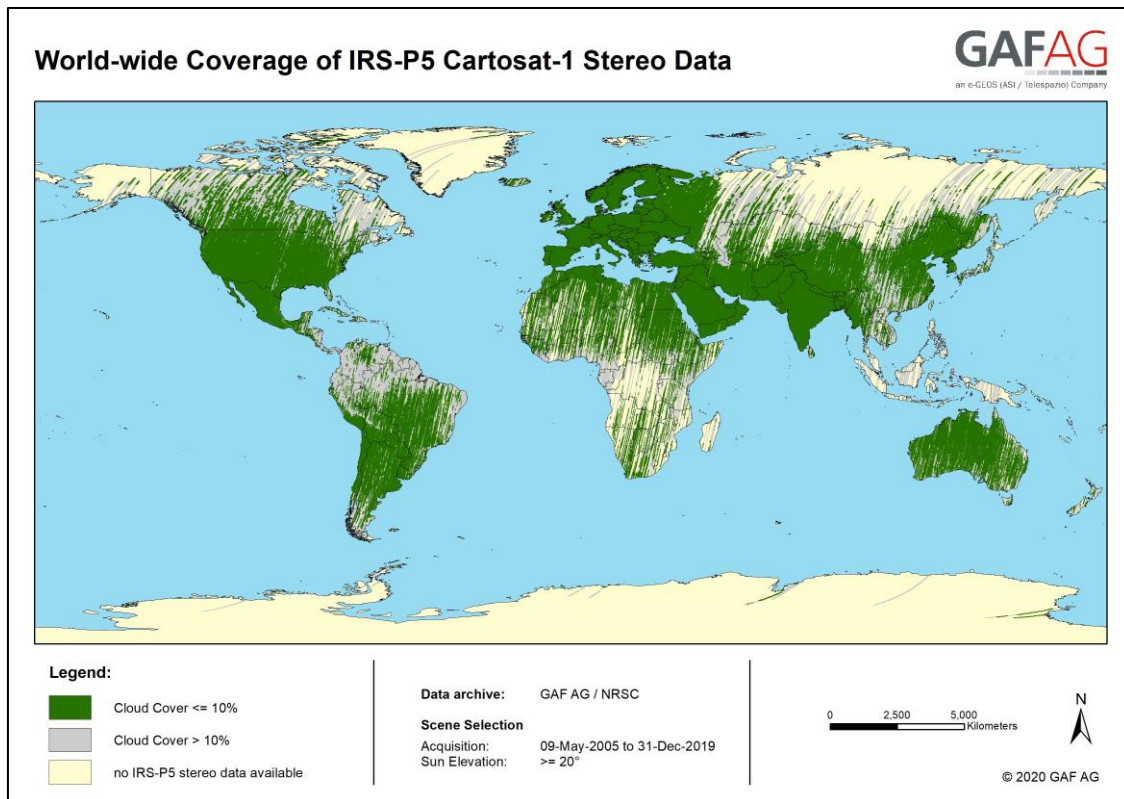
⁶ The band is selectable. In praxis the red is used

⁷ Service based on in house available ground control information and DEM

Cartosat-1 Euro-Maps 3D Digital Surface Model

In addition to Cartosat-1 archive imagery products, the ESA's TPM scheme offers the Cartosat-1 Euro-Maps 3D Digital Surface Model (DSM) products.

- Euro-Maps 3D DSM products available as Level A (DSM only) and Level A+ (DSM + Ortho)
- Minimum AOI size, with AOI meaning one single contiguous area: 700 km²
- Minimum AOI width: 14 km
- Archived coverage worldwide:

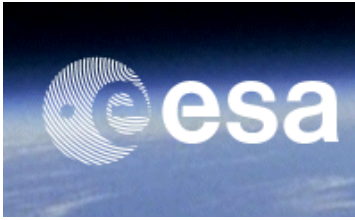


No catalogue for DSM products. Users can verify availability of DSM products by asking GAF user support (tpm@gaf.de).

3 Data users

- Only users located in the territory of ESA Member States (including Canada) and in the Member States of European Commission are eligible to access all data worldwide (subject to ESA approval).
- If users (PI or Co-Pi) is from sensitive country, GAF proceeds with an additional user/order approval procedure which may delay delivery times or lead to order rejection
- Sensitive countries:

- Afghanistan	- Cyprus	- Mali	- Syria
- Angola	- Egypt	- Myanmar	- Tanzania
- Belarus	- Eritrea	- Nicaragua	- Turkey
- Burundi	- Ethiopia	- North Korea	- Uganda
- Cambodia	- Haiti	- Russia	- Ukraine
- Central African Republic	- Hong Kong	- Rwanda	- United Arab Emirates
- China	- Iran	- Saudi Arabia	- Venezuela
- Congo, Democratic Republic of the	- Iraq	- Somalia	- Yemen
- Congo, Republic of the	- Lebanon	- Sudan	- Zambia
- Cuba	- Libya	- Sudan, Southern	- Zimbabwe
	- Macao		



4 Assignment and usage of quota

Assignment of quota

During the project submission, the user shall specify his need as:

- A number of archived scenes for IRS-1C, IRS-1D, Resourcesat-1, Resourcesat-2 and Cartosat-1 products (products are delivered as scenes)
- A number of square kilometers for Euro-Maps 3D Digital Surface Model (products are delivered as tiles)

After ESA evaluation, if the project is approved, a quota is granted to the PI which allows the project to order:

- A number of archived scenes for IRS-1C, IRS-1D, Resourcesat-1, Resourcesat-2 and Cartosat-1 products (products are delivered as scenes)
- A number of square kilometers for Euro-Maps 3D Digital Surface Model (products are delivered as tiles)

Usage of quota

During the evaluation process, the scientific content of a submitted project proposal is evaluated against the data requirements of the PI and a respective quota will be assigned to the project. The PI (and Co-PIs if any) is allowed to order the products corresponding to the quota.

The PI (and Co-PIs if any) is allowed to order the products from GAF AG within the limit of the quota assigned by ESA.

The ordering is done directly through GAF AG (tpm@gaf.de) by following the procedure received by EOHelp@esa.int after final acceptance of the project.

The PI (and Co-PIs if any) is not strictly constrained to order exactly the products corresponding to the quota assigned to his project.

In case the PI (and Co-PIs if any) intends to order something different than the quota (but within the list of available products above), he should take into consideration that the products are not equivalent between them. A quota for a certain number of scenes (or km²) for one Mission/Sensor/Processing level doesn't consume the quota in the same way than the same amount of scenes (or km²) for a different Mission/Sensor/Processing level.

PIs (and Co-PIs if any) willing to order something different than the quota (but within the list of available products above) are invited to contact GAF AG (tpm@gaf.de) prior to submit the order to evaluate the impact on the quota.

Data delivery

- Products are delivered free of charge in the limit of the quota approved by ESA
- Archive data delivery times are:

Region & Archive	Mission or Product	Delivery time [days]
Neustrelitz foot-print and GAF archive	IRS-1C/1D	2 – 14
	IRS-P5 Cartosat-1	2 – 7
	IRS-P6 Resourcesat-1, IRS-R2 Resourcesat-2	2 – 7
	Euro-Maps 3D Level A	4 – 14
	Euro-Maps 3D Level A+	4 – 14
Rest of the World, other archives	IRS-1C/1D	21 – 28
	IRS-P5 Cartosat-1	21 – 28
	IRS-P6 Resourcesat-1, IRS-R2 Resourcesat-2	21 – 28
	Euro-Maps 3D Level A	21 – 28
	Euro-Maps 3D Level A+	21 – 28

- Once a tasking order is received by GAF AG (tpm@gaf.de), a feasibility analysis is performed. A tasking order is considered finalized once the feasibility is confirmed by GAF AG and the user.
- New tasking orders over Neustrelitz station footprint shall be finalized at least 10 days before the acquisition week. Products are usually delivered to users in 2 to 3 working days
- New tasking orders over areas not covered by Neustrelitz station footprint shall be finalized at least 14 days before the acquisition window. Products are usually delivered to users in 2 to 3 weeks after acquisition (DSM delivery after tasking are nominally delivered 4 weeks after acquisition)