

The Geography of Commercial Satellite Imagery Demand - What Commercial Satellite Imagery Acquisition Locations Reveal



Simon Hagmayer, 30.06.2026

In summary

Introduction

There are many commercial satellite providers meanwhile. The world of purchasable satellite imagery became much bigger throughout the last years with new competitors for long-established companies like Airbus or Planet Labs. Especially Chinese companies established themselves as an alternative to US, or European providers.

The thing is, a lot of these images can be acquired by literally anyone with enough money, in contrast to established military or national systems. Even if we will not buy the actual image and do an IMINT assessment here, we can draw a lot of conclusions from the information where an image was taken, at what time and by which provider. This information is publicly and available for free; we can get access to the satellite image footprints from reseller platforms.

Although we cannot create direct links from the satellite provider country of origin to the countries geopolitical interest, because again, basically anyone can acquire the images, it still holds some information. Most of these providers have some sort restrictions, for example as a Swiss citizen; I cannot buy an Image from Ukraine from a US provider, only, to some degree a few selected archive images. And even the absolute number of acquisitions per area can give us valuable information.

Conclusions

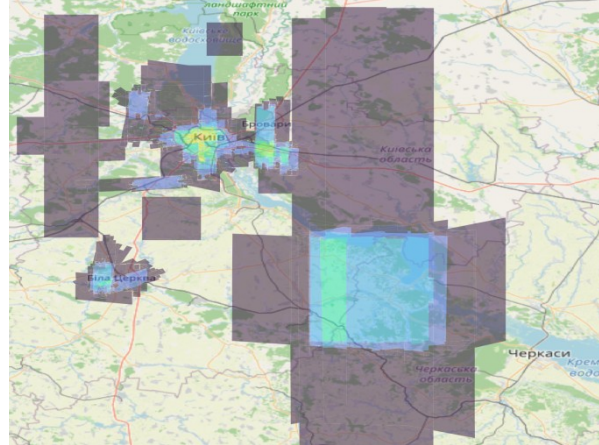
1. **Ukraine – European support, but US indifference?**

Conspicuously, US commercial satellite images were acquired a lot over Ukrainian territory, much more than over Russian controlled areas. When looking at the front, US satellites acquired significantly more images on the Ukrainian controlled side and also from the logistic hub in Poland, crucial for western military support for Ukraine. European providers almost exclusively acquired and sold images from the Russian controlled territory.

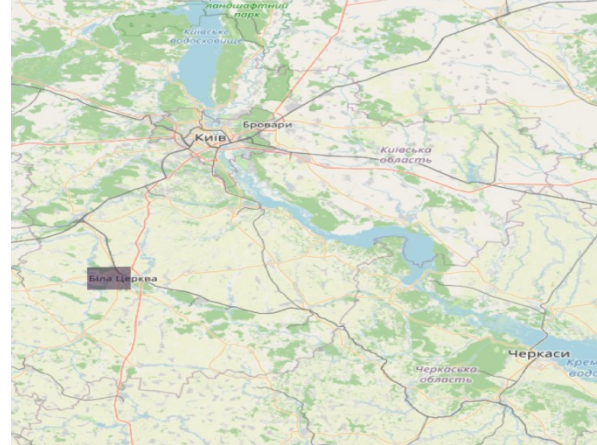
What could this tell us?

- a. US providers sell their images – directly, or much more likely, via intermediaries to Russian analysts, whereas European providers have a much stricter policy.
- b. US providers are actively helping the Russian war effort – not highly likely, but not impossible.
- c. US analysts themselves are very interested in monitoring the Ukrainian logistics, operations or in damage assessment.
- d. European providers sell their images in favor of the Ukrainian war effort, reconnoitering Russian held territory.

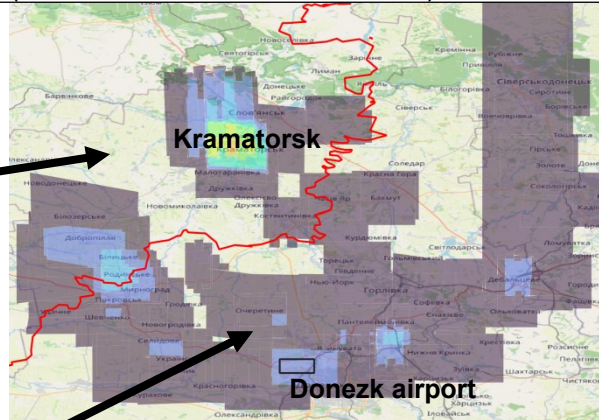
US provider images from Kyiv



European provider images

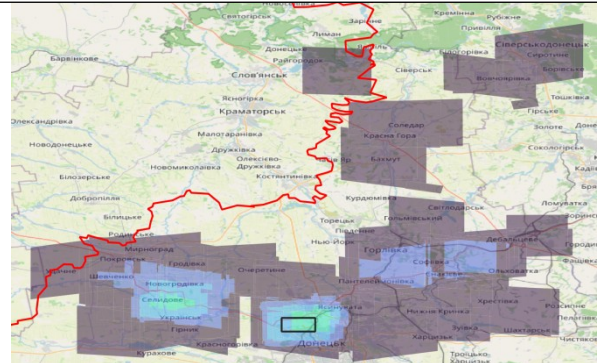


US provider images the front in Donbas (current frontline is shown in red)



Ukrainian-held territory

European provider images



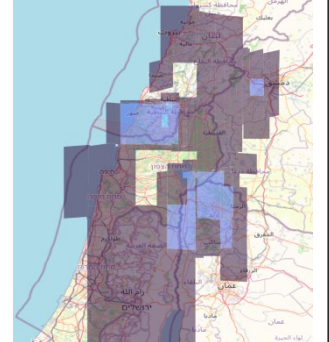
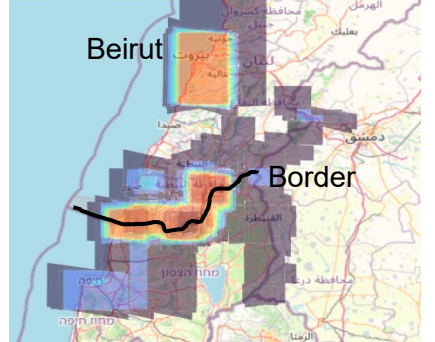
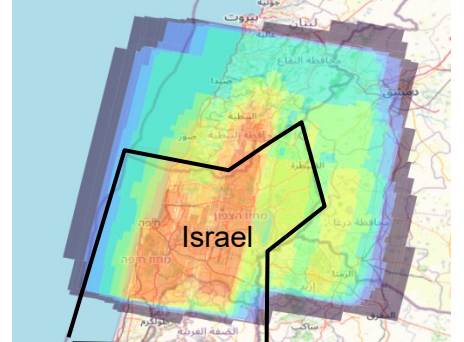
Russian occupied territory

2. Israel – Iran. US support for Israel and Chinese imagery filling the gap in imagery over Israel

Another major difference: US providers were overwhelmingly interested in images from Iran during the Iran war (start at 19th of February). But on the other hand, they acquired almost no image over Israeli controlled territory and also very few over Lebanon. European and Chinese providers acquired a lot of images during the same time span over the frontlines in southern Lebanon and, especially Chinese providers, also over Israeli territory.

What could this tell us?

- The US restricted its providers to sell images of its ally Israel.
- The US seems to not want to interfere with the Israeli war effort in southern Lebanon and keep it Israel's matter.
- Chinese providers were very interested in Israel's controlled territory, probably because many other providers restricted their image acquisition over this territory and they now fill the gap.

US provider images from the border Region between Israel and Lebanon	European provider images	Chinese provider images
		

3. Pacific – Of great interest for the US

US imagery sellers were very active over North Korea the last few months. The region of the Koksan airbase, the Kal-Gol missile base, the KPA 105th Tank Division and the Chiha-ri Missile Base has been imaged almost a hundred times in three months! European and Chinese providers did not show much interest in the same area. Basically the same can be said for the South China Sea, namely one of China's main military Islands, the Fiery Reef.

What could this tell us?

- The US is monitoring the North Korean military very closely, presumably together with South Korean and Japanese actors as part of its Pacific alliance.
- Together with the US's great interest in the South China Sea region it can be confirmed, that the US right now is very focused on the Pacific region and its rivalry with China there.
- There might be increased tensions between the North and South Koreas soon, which were absent from the main media as of now.

4. Chinese interests – US controlled areas?

The only area investigated here with a higher Chinese imagery count than Europe or the US was Bahrain. In Bahrain, the US Navy's 5th Fleet HQ is located, and it was presumably struck several times during the war with Iran.

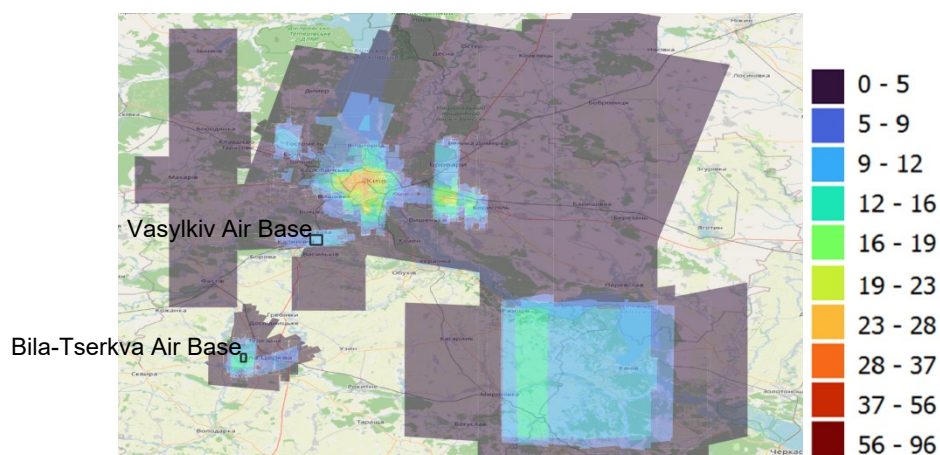
What could this tell us?

- China – or at least a buyer of its imagery is very interested in the damages dealt to US assets in the region during the Iran war.

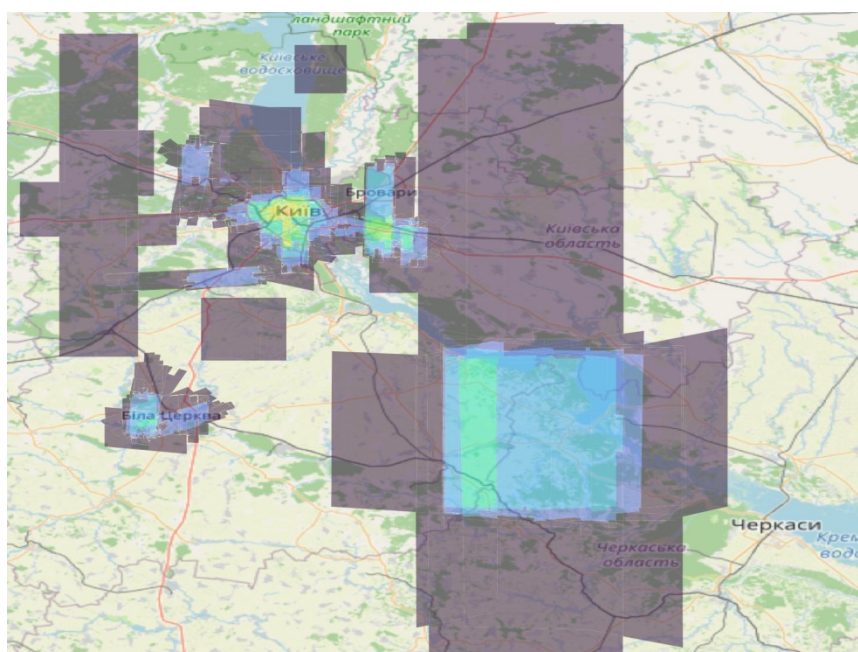
In Detail

Kyiv April – End of June

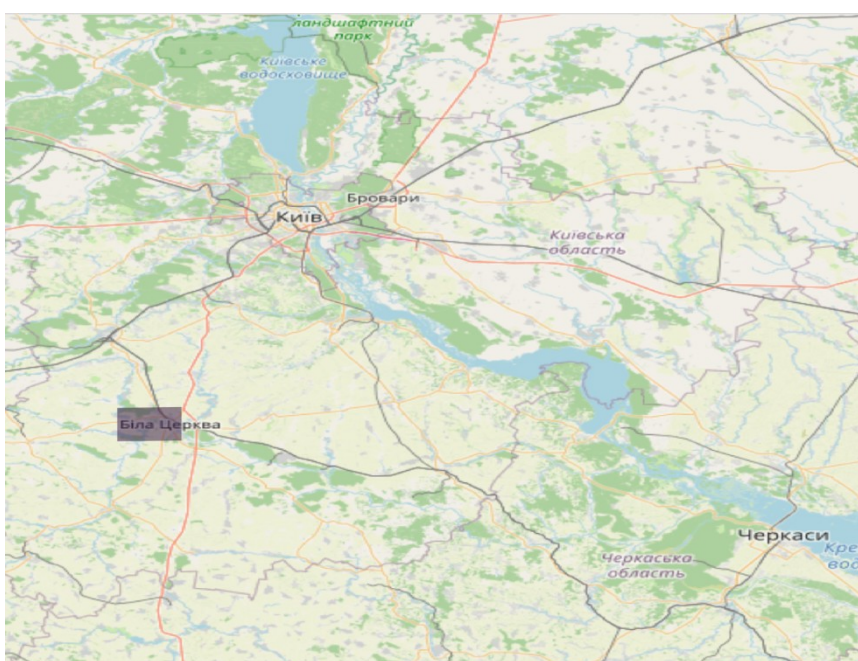
Total



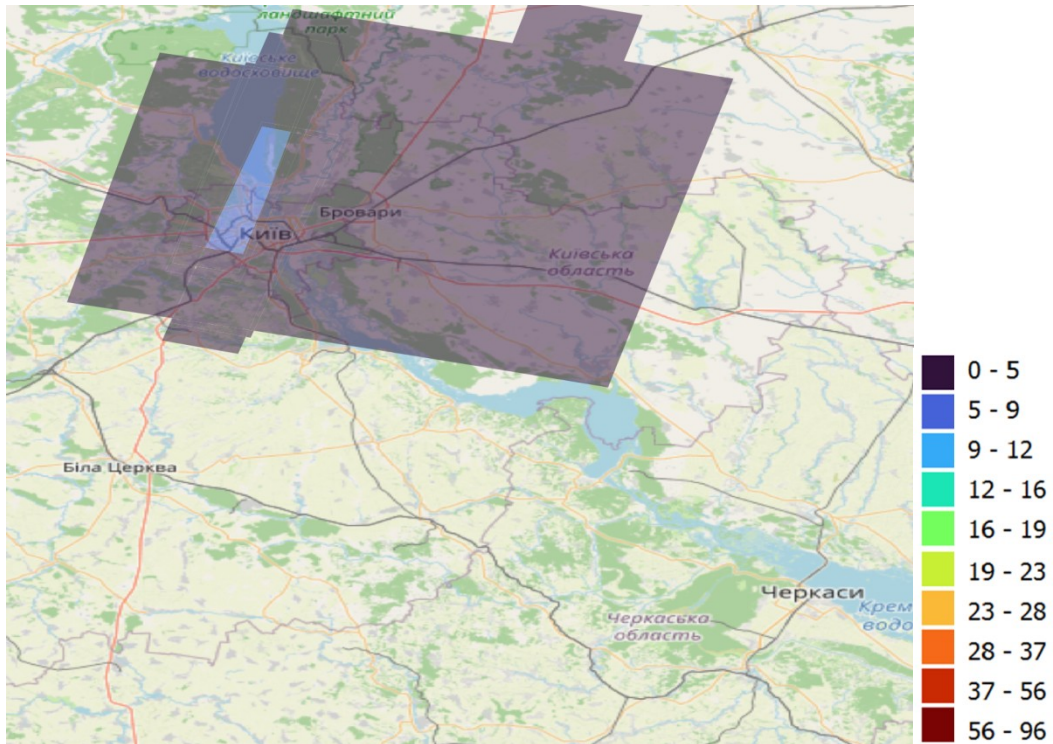
USA



EUR



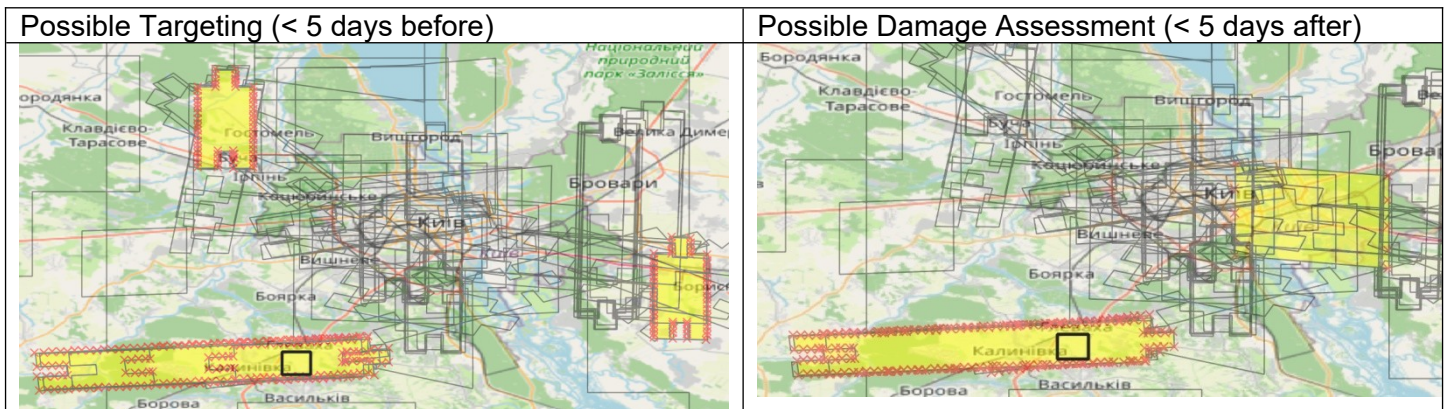
CHN



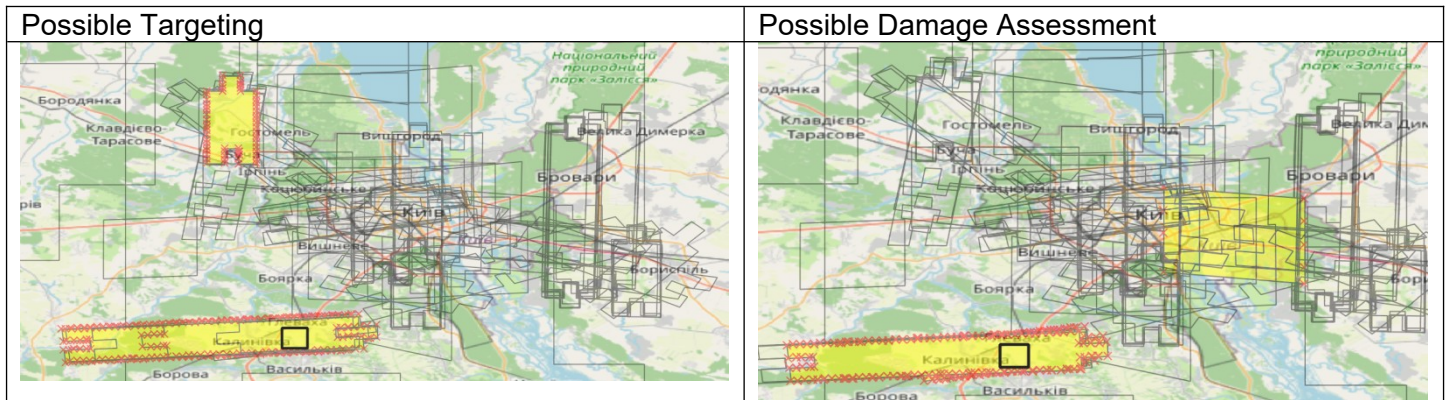
Kyiv and its surroundings were not mapped by European providers, but it was of great interest to Chinese and US providers. US providers really focused on military installations, such as the Vasylkiv Air Base, or the Bila-Tserkva Air Base. Furthermore, the area between Kaniv and Myronivka was mapped a lot. Chinese Providers were focused on Kyiv and its surroundings.

A temporal analysis of images acquired by US companies did not show a clear indication, whether the images were used by Russians for targeting, nor if they were used by other actors for damage assessment. The temporal distributions indicate a continuous monitoring of the sites of interest. For example the Vasylkiv Air Base was mapped regularly, although we can see an increased frequency since the end of May. For the analysis we considered images taken within five days before a large Russian attack on Kyiv as possible images used for targeting and images within five days after as possible damage assessment images:

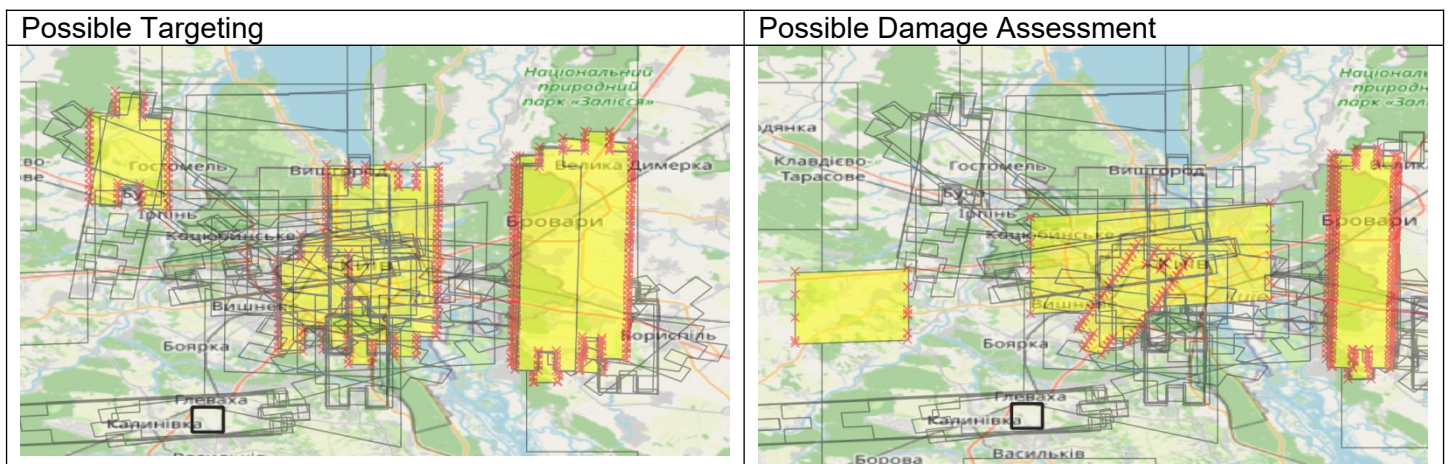
16. April



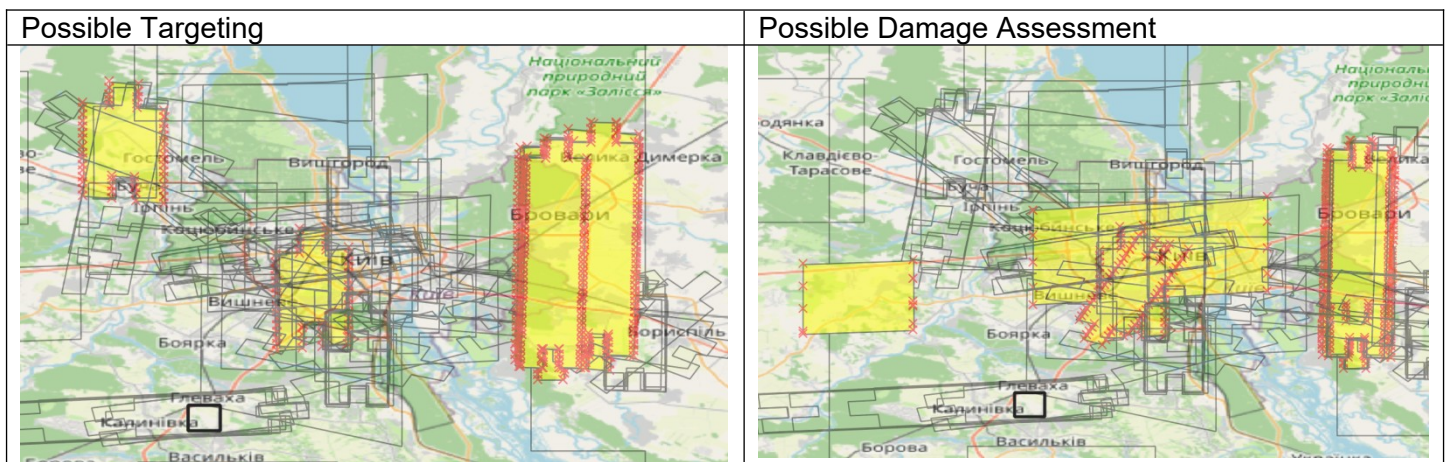
18. April



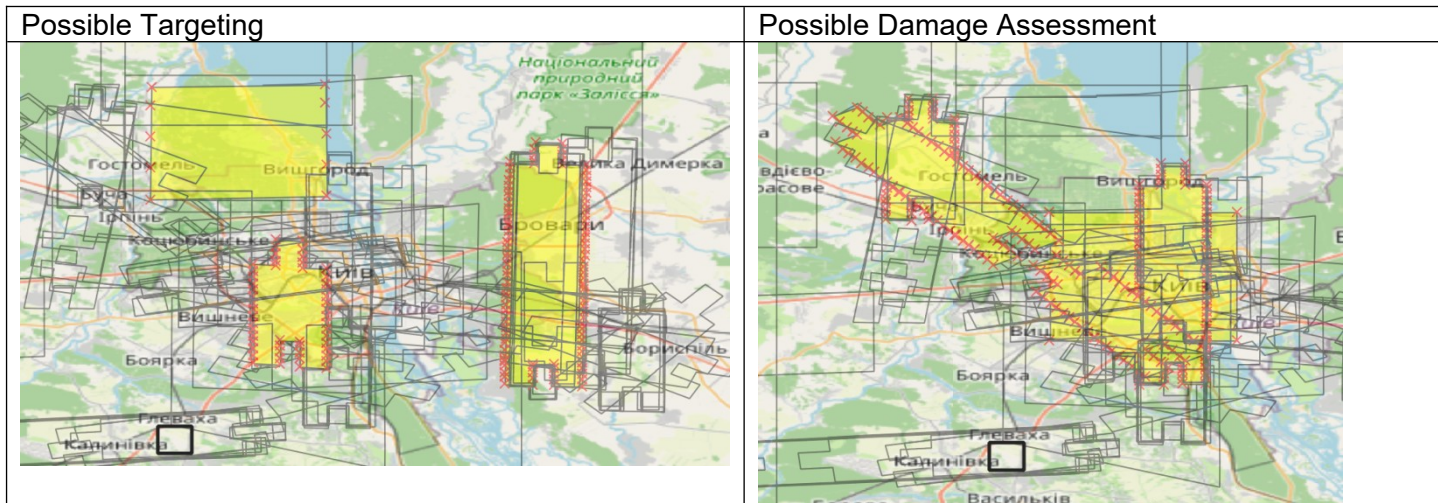
12 May



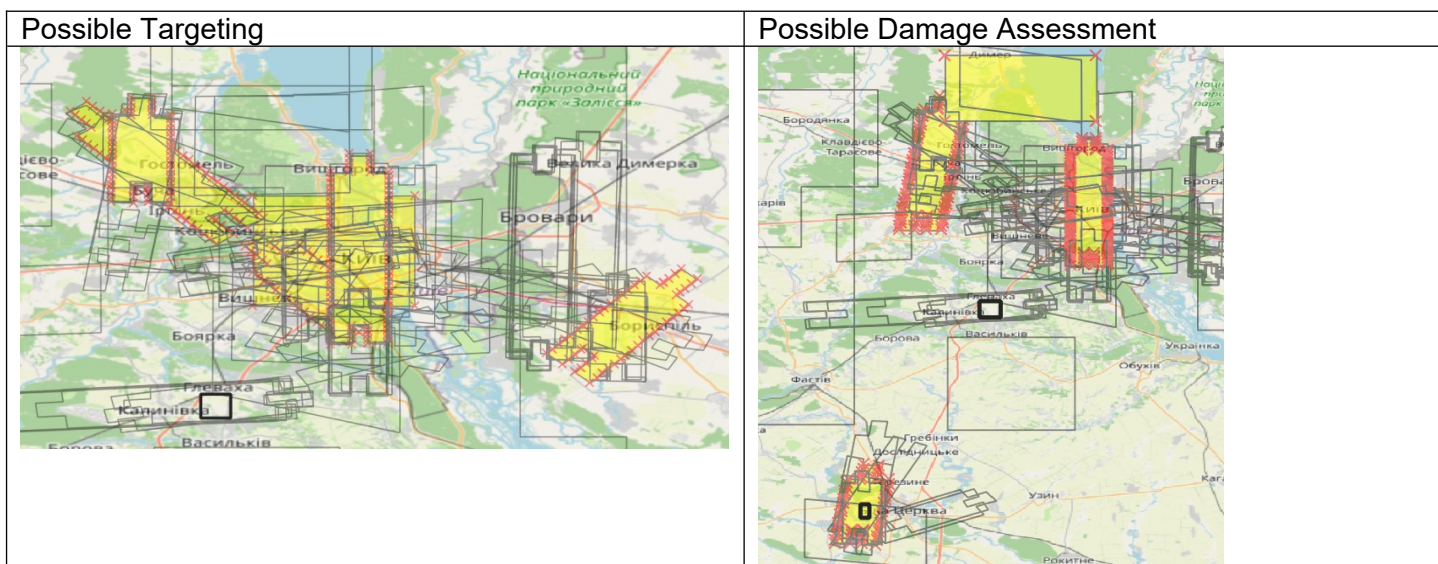
14. May



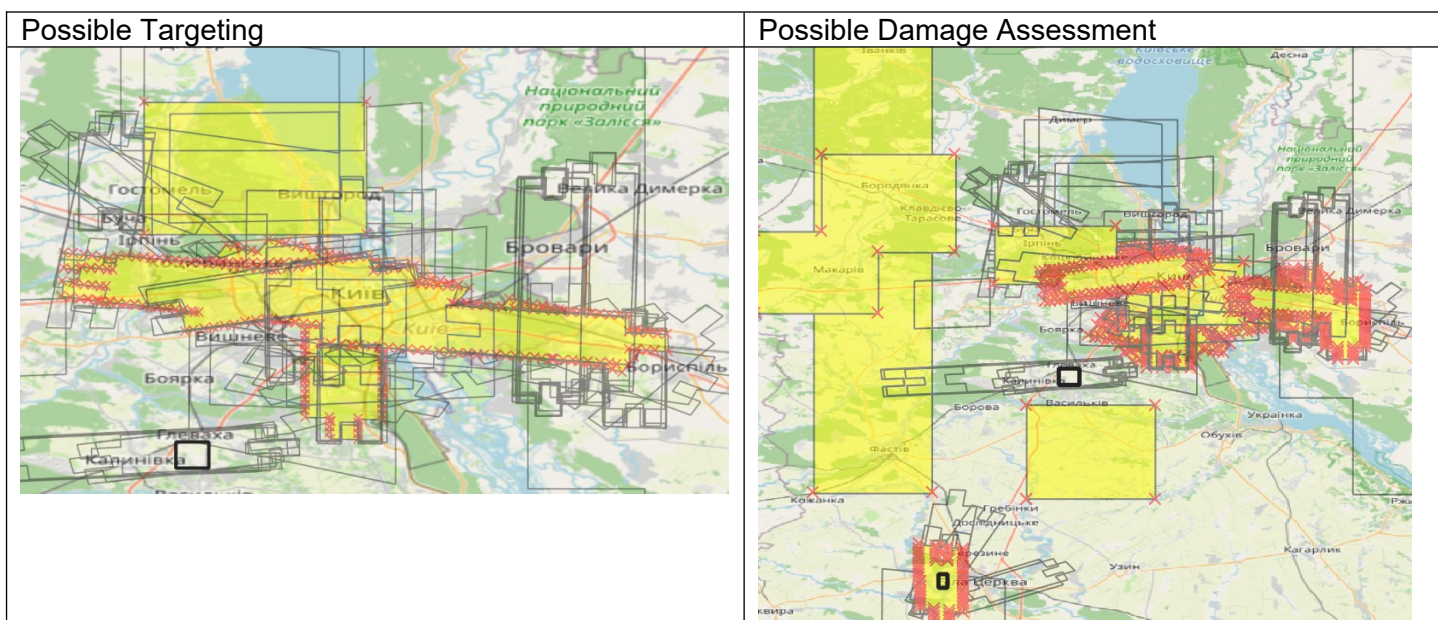
24. May



2. June

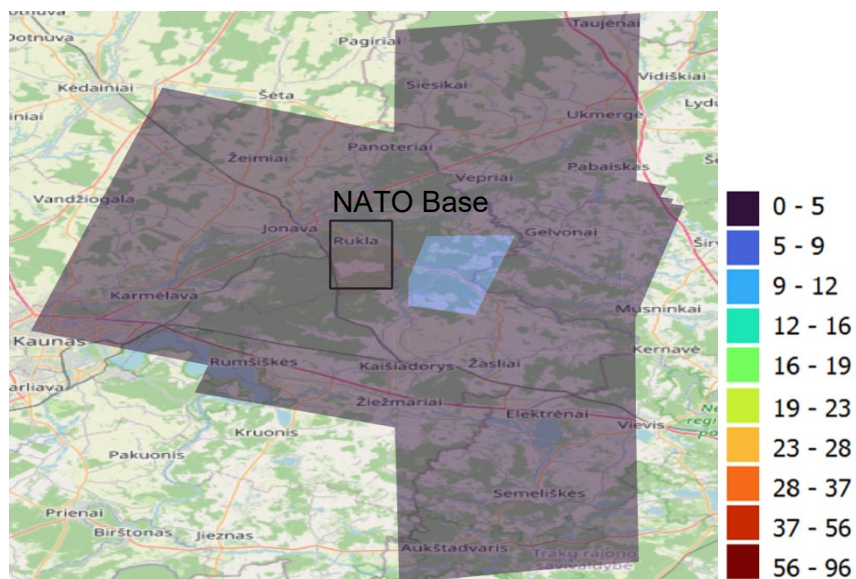


15. June

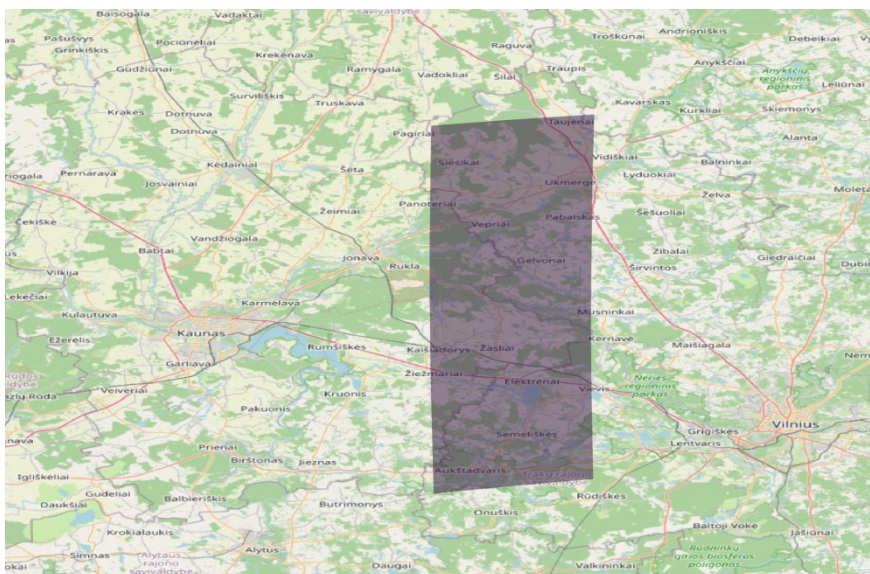


Rukla May – End of June

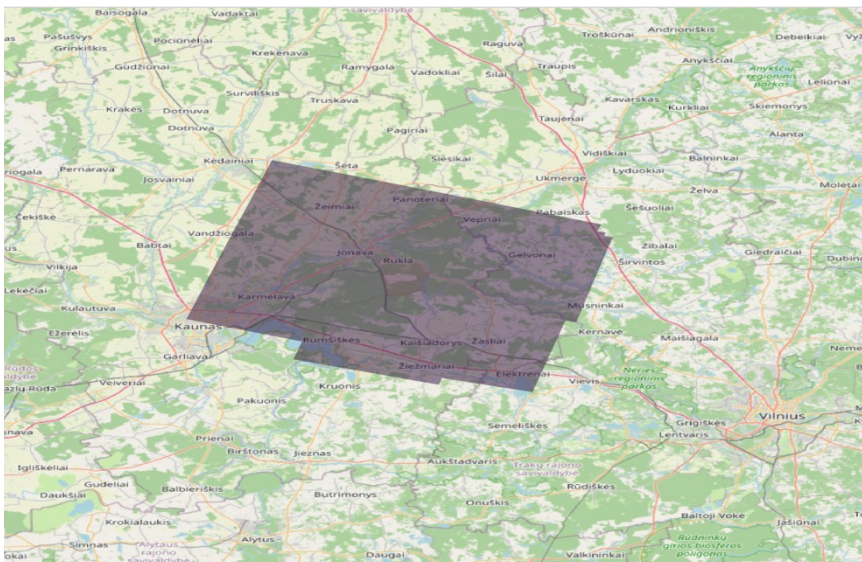
Total



EUR



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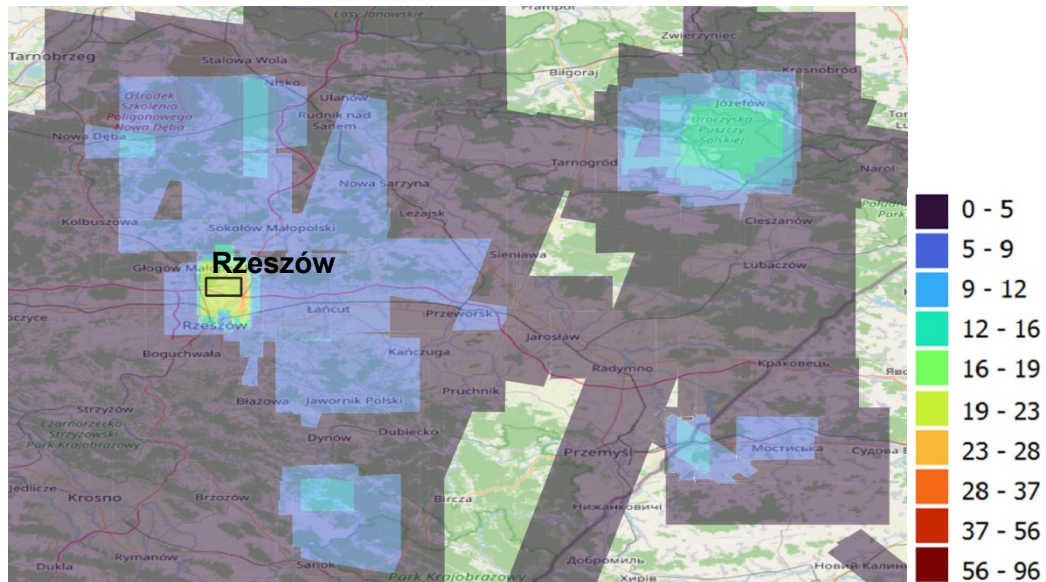


Rukla is an important NATO base with 4000 stationed soldiers, including German forces.

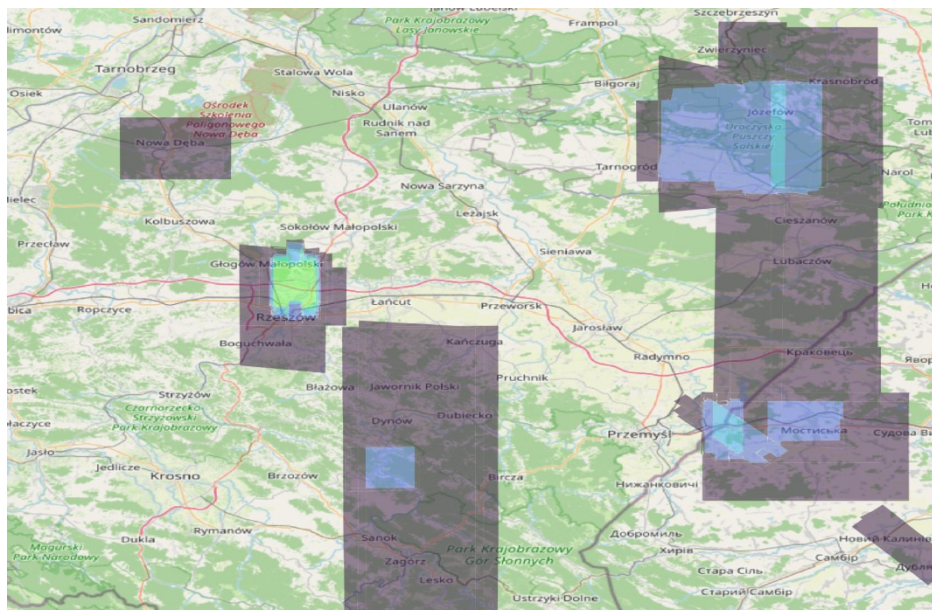
The base itself was only mapped with Chinese satellites during the investigating period. European satellites mapped some of the areas east of the actual military ground. Overall, there were only very few images acquired, showing no big interested from any side.

Rzeszów April – End of June

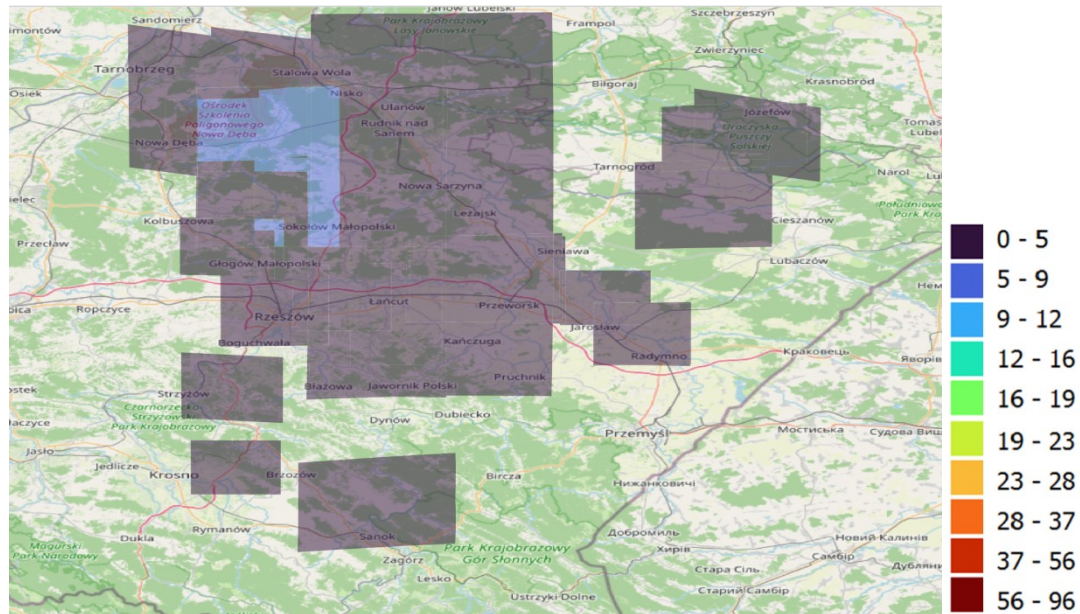
Total



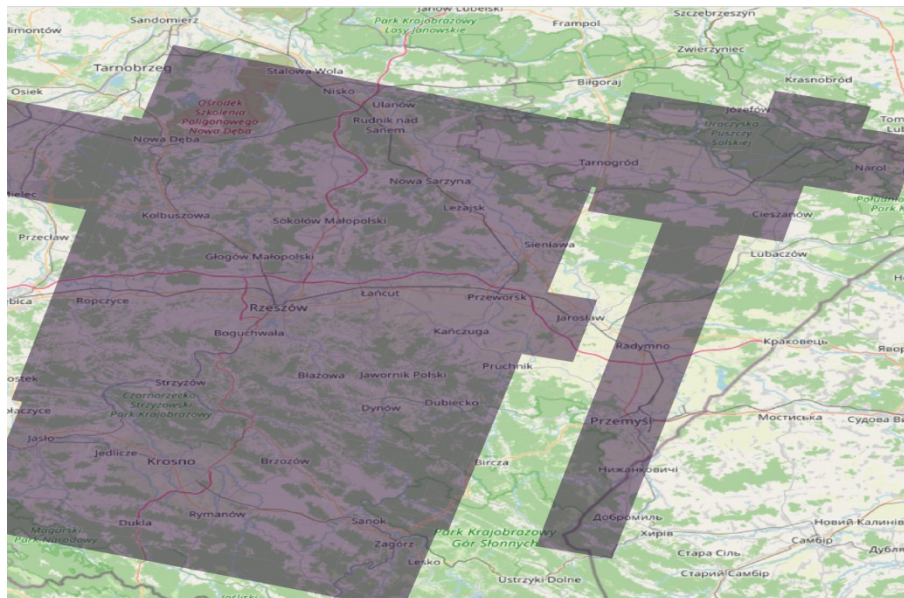
USA



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Rzeszów, Poland is the most important logistical hub for western support for the Ukrainian war effort. It has an international and a military airport and is connected to the western Ukrainian Town of Lviv via railway and highway.

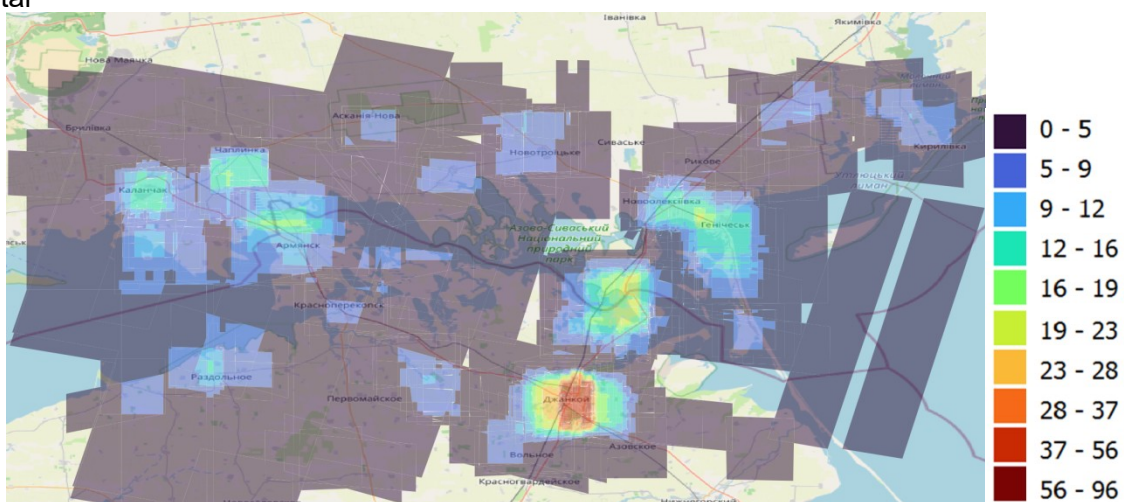
US satellites mapped the town with the airport the most, followed by the actual border town Medyka, where all the material gets transferred to Ukraine.

A large forest area northeast of Rzeszów was also mapped quite often for unknown reasons to me, maybe due to some environment monitoring projects. The same spot was also acquired by European and Chinese satellites.

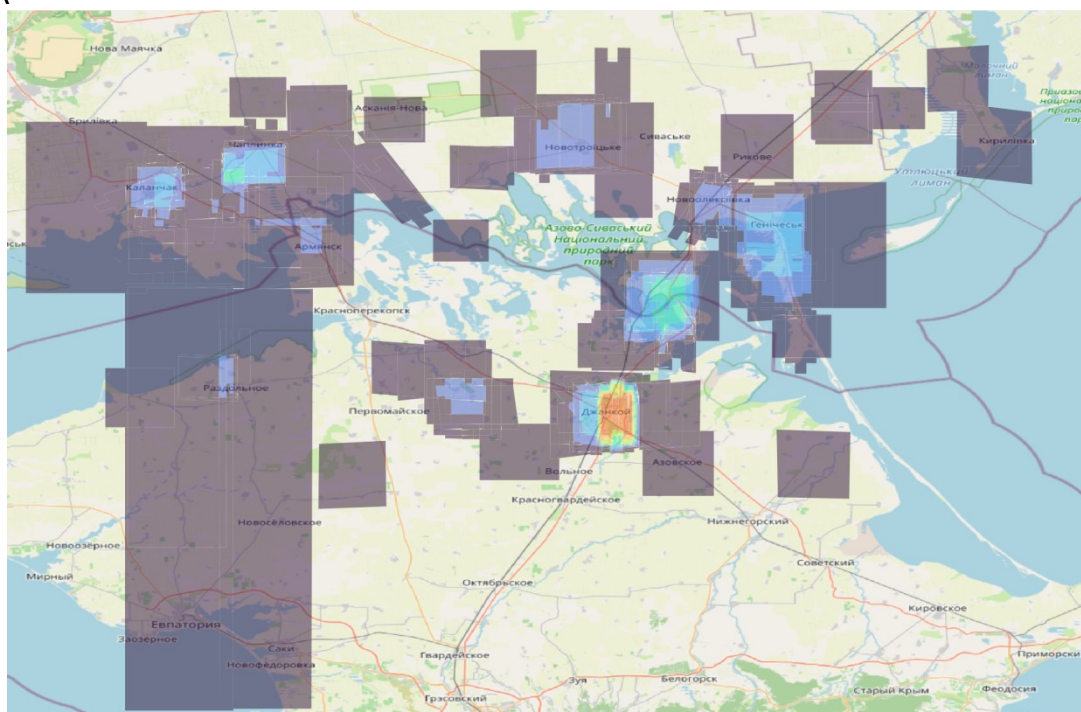
Crimea

April – End of June

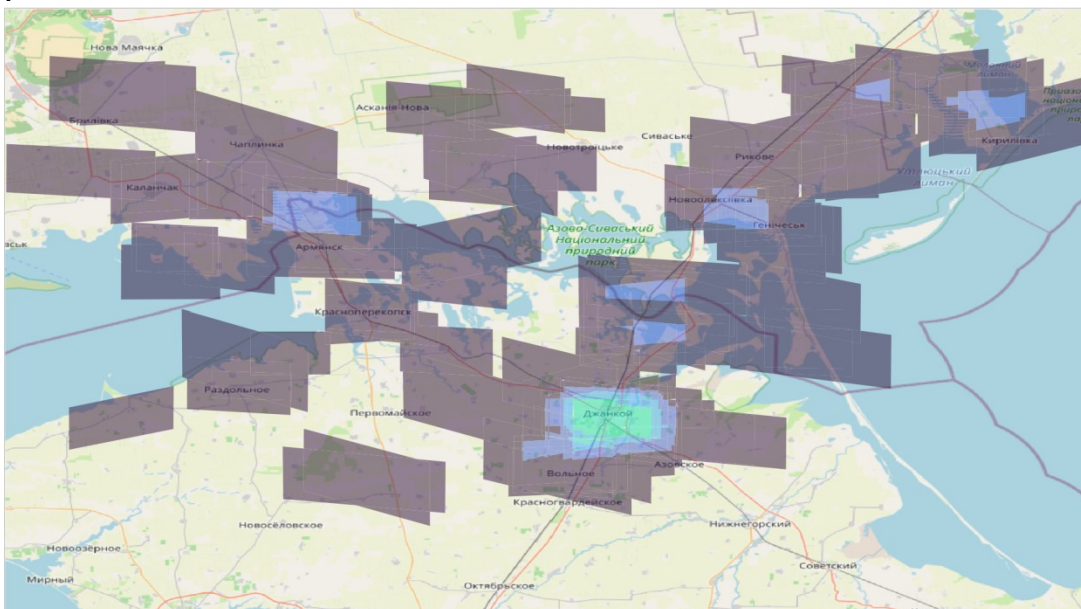
Total



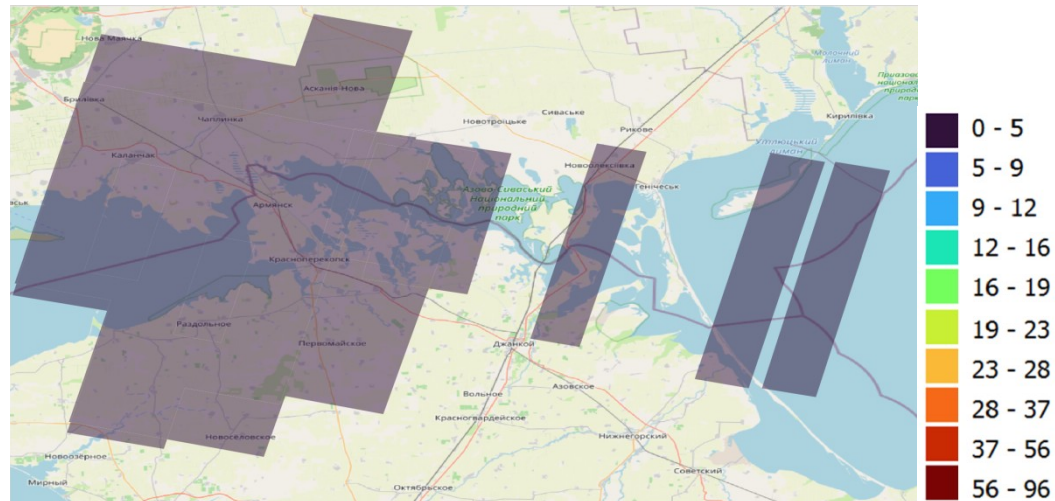
USA



EUR



CHN

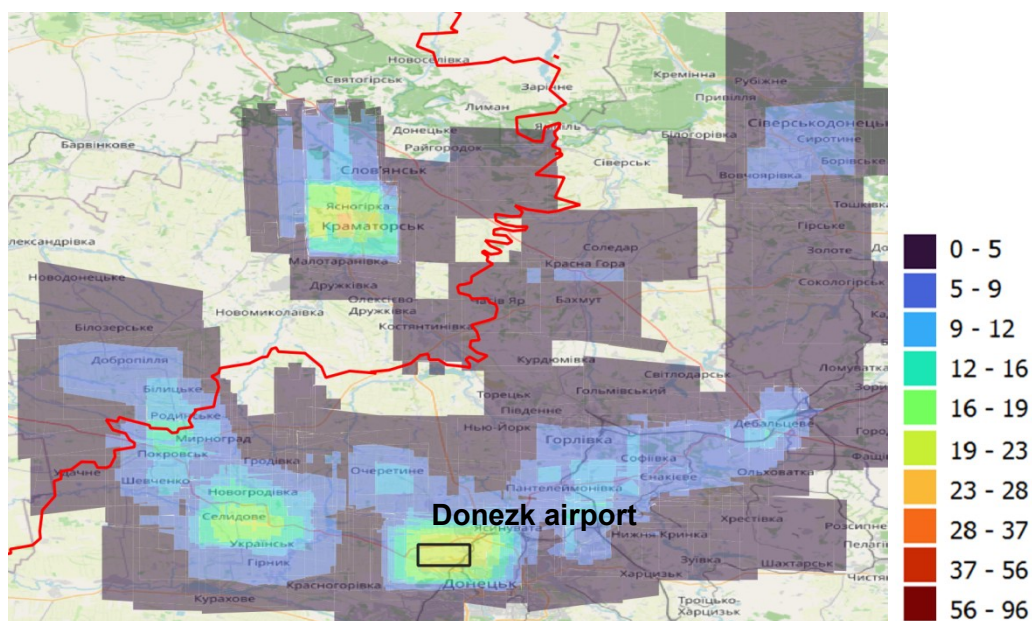


An analysis of Crimea shows no real salience. Both, European and US providers took and sold images from important Russian military and logistic areas, like the Donetsk Military Air Base, or logistic routes, including important bridges. The same bridges were targeted by Ukrainian strikes in the last few months, cutting Russian logistic routes from Crimea to Zaporizhzhia and Donbas. Chinese providers on the other hand, were quite reluctant in imaging Russian controlled areas.

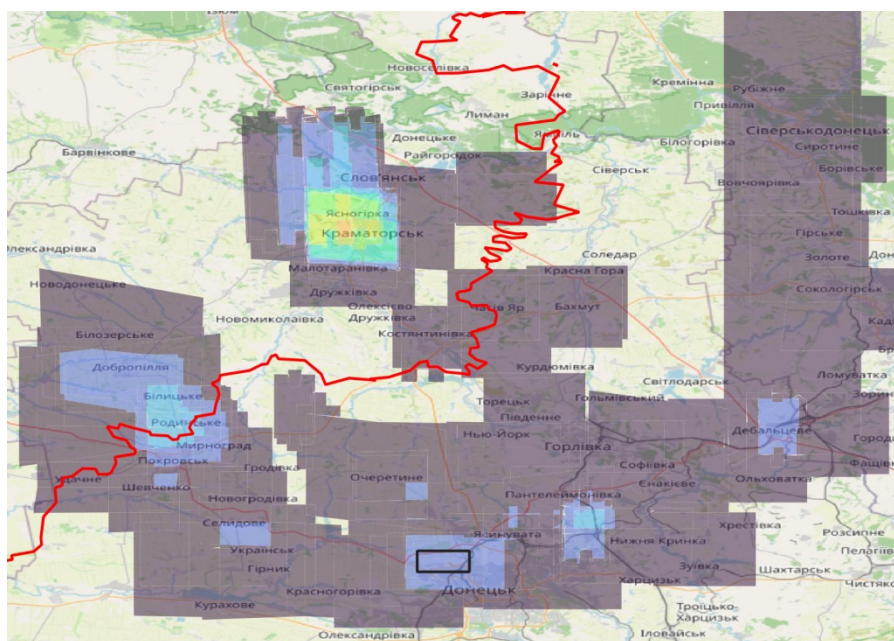
Kostyantynivka

April – End of June

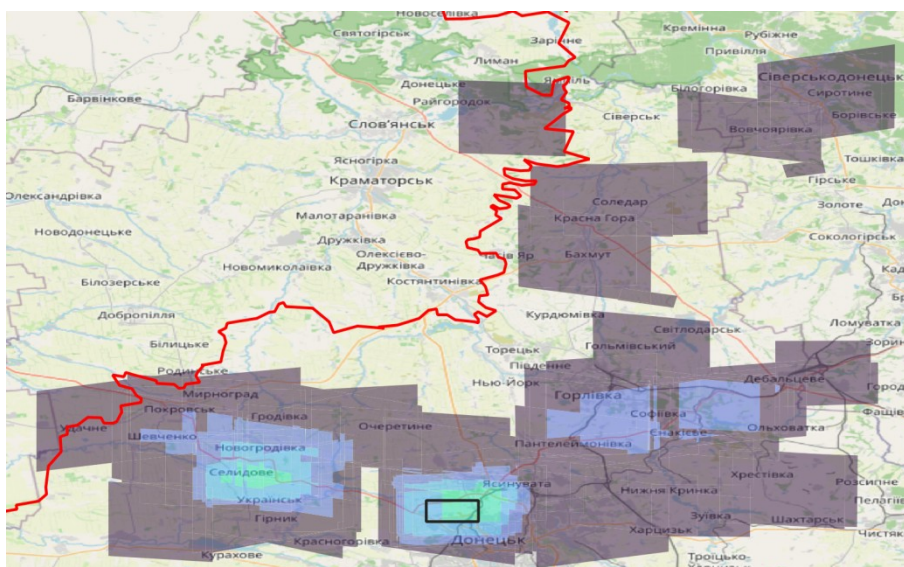
Total



USA



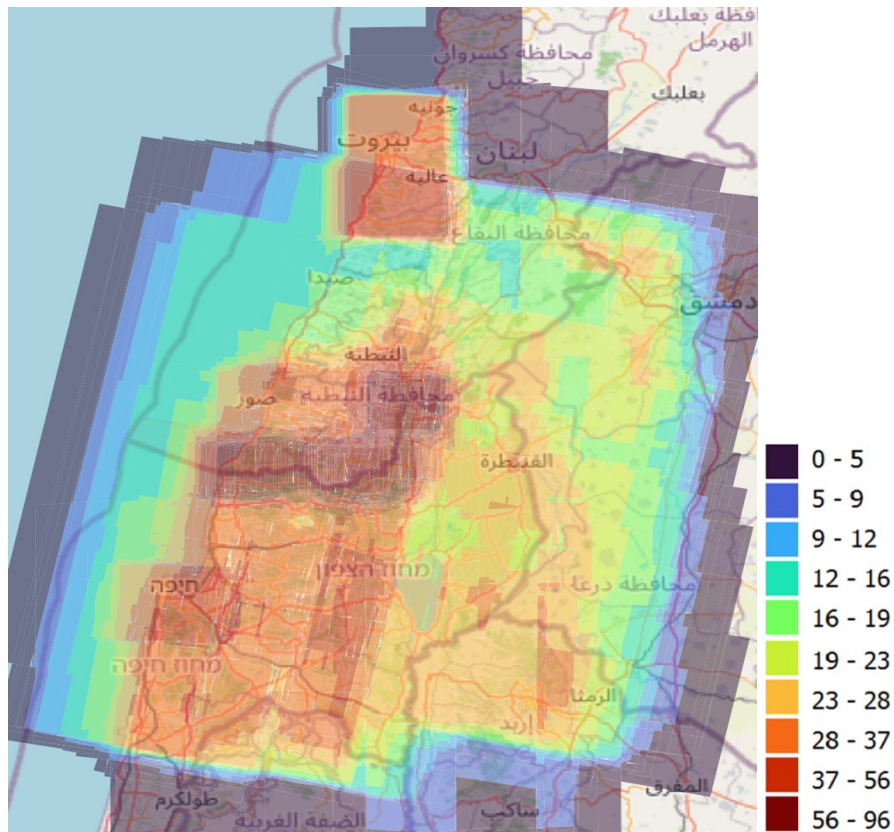
EUR



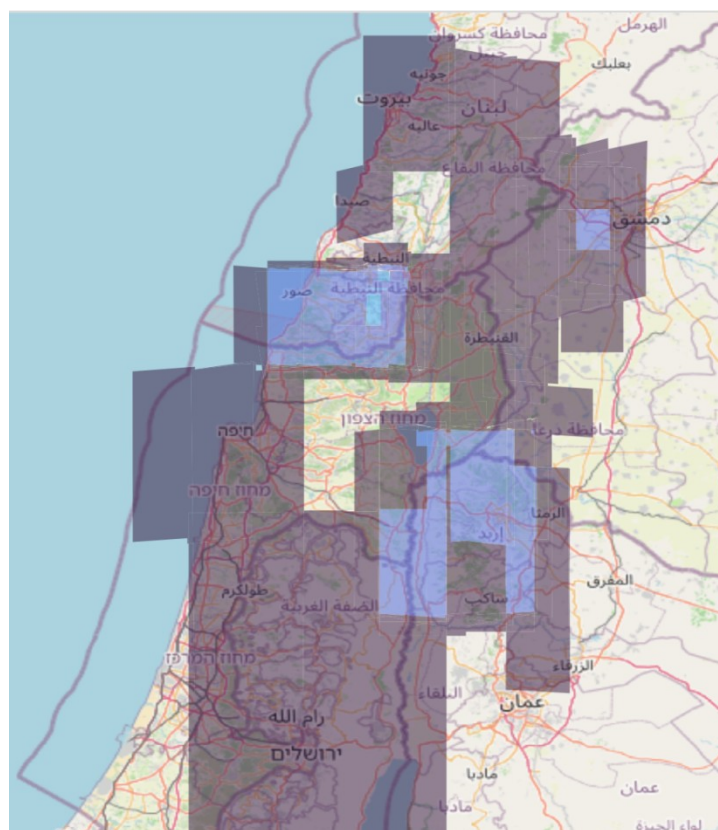
The frontline in Donbas shows a sharp contrast between European and US providers. European firms almost exclusively imaged Russian controlled territory, while US providers were more interested in the Ukrainian controlled city of Kramatorsk or Rodynske. Notably, not a single image was acquired here from a Chinese provider.

Lebanon April – End of June

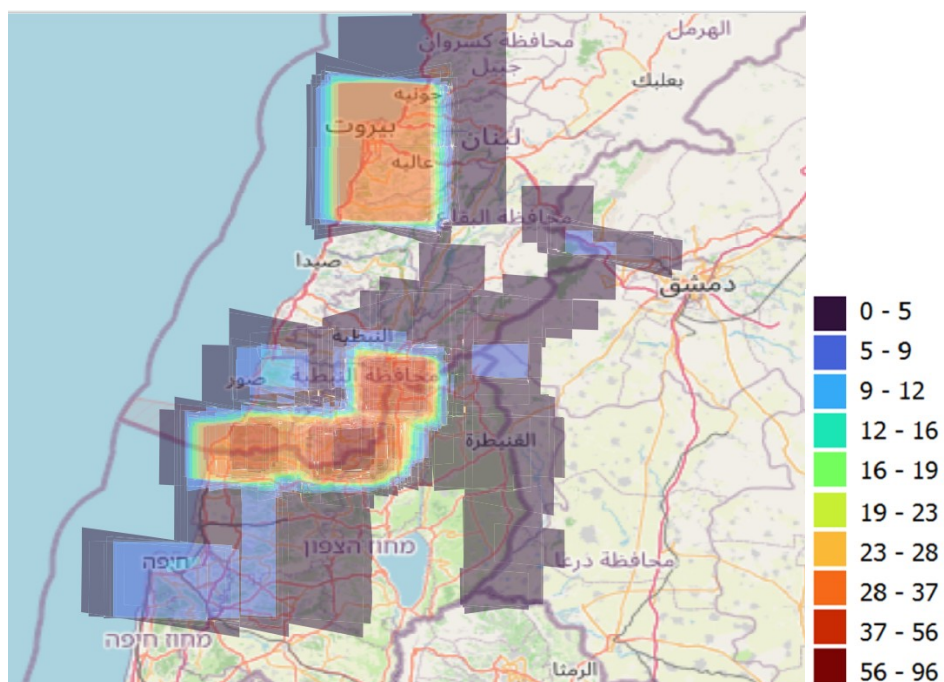
Total



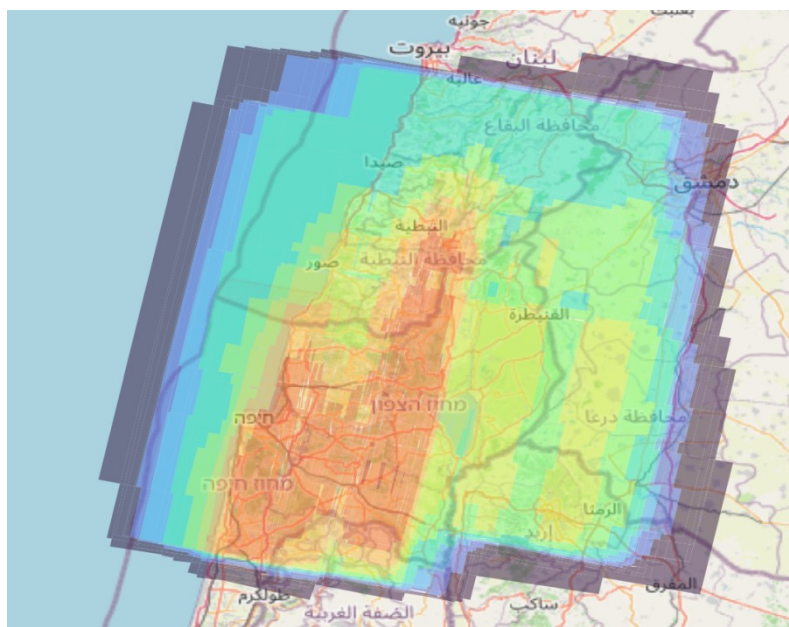
USA



EUR



CHN



KAZ



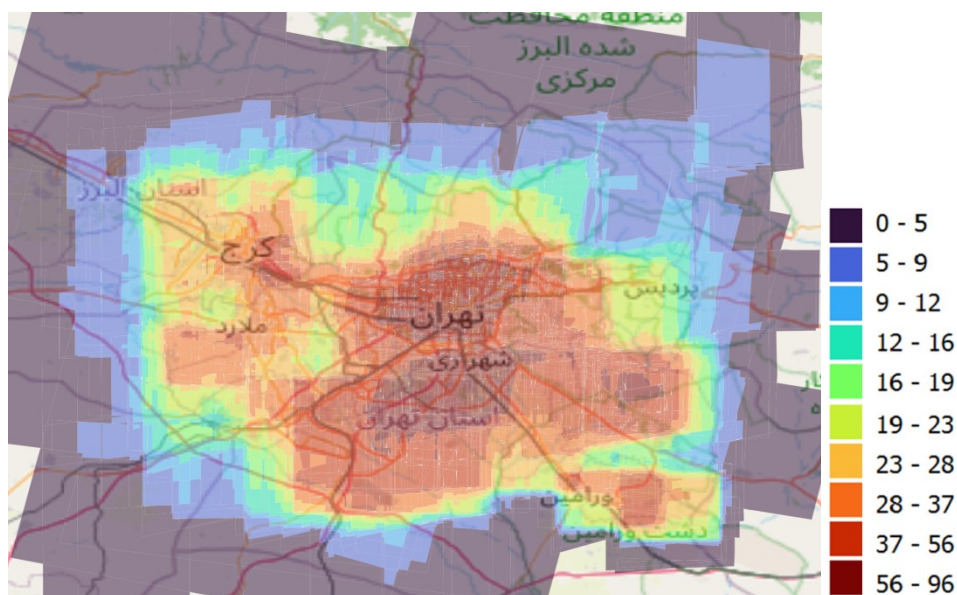
A strong discrepancy can be seen as well at the border of Lebanon and Israel. US providers were quite absent from this area, with a focus on southern Lebanon and Syrian territory. European providers were heavily focused on the border region and Beirut. Chinese providers were almost exclusively focused on the Israeli territory with a very high number of acquisitions.

The satellite KazEOSat-1 from Kazakhstan took an image from Damascus in the same time period.

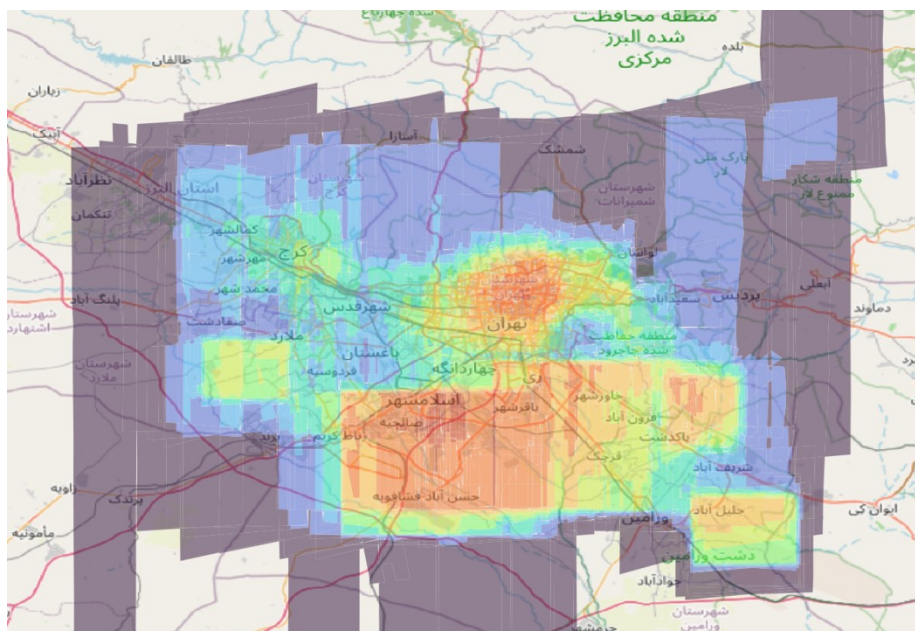
Tehran

19. Feb – End of May

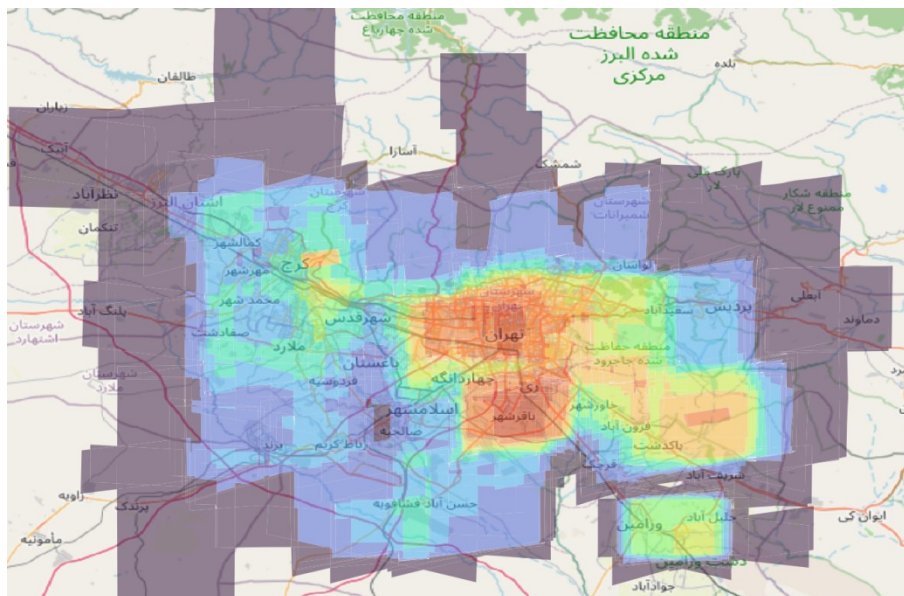
Total



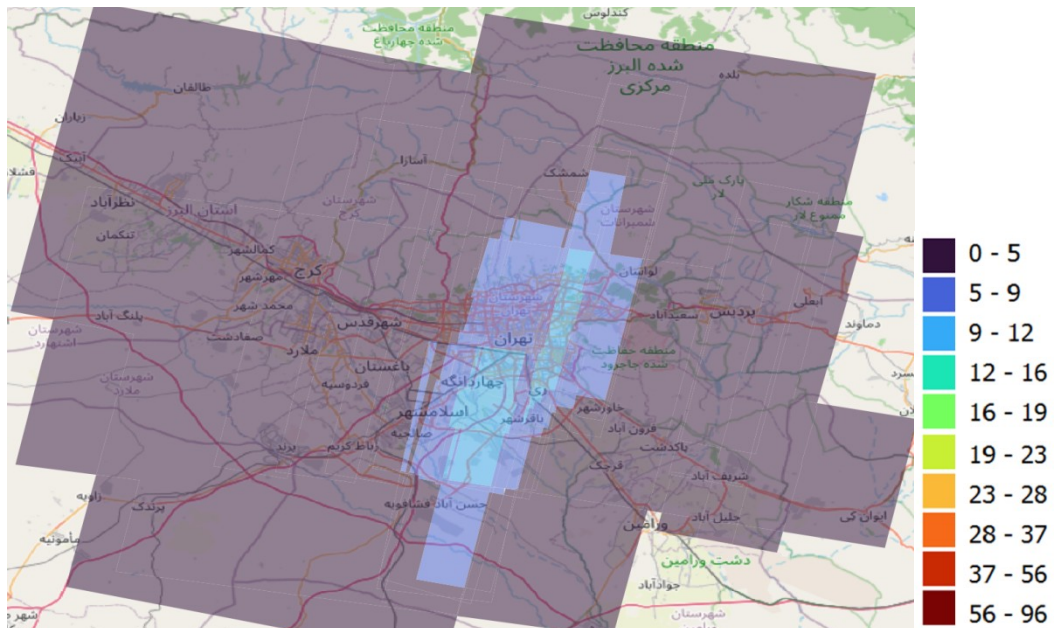
USA



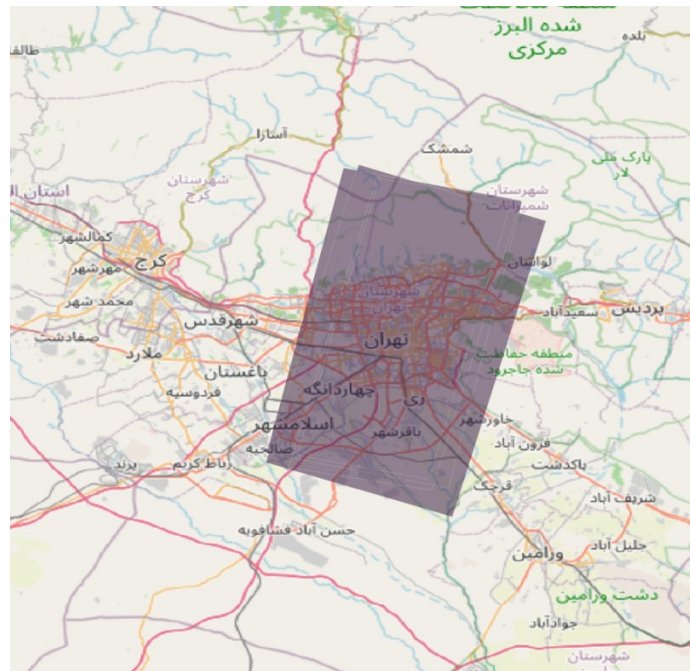
EUR



CHN



KAZ

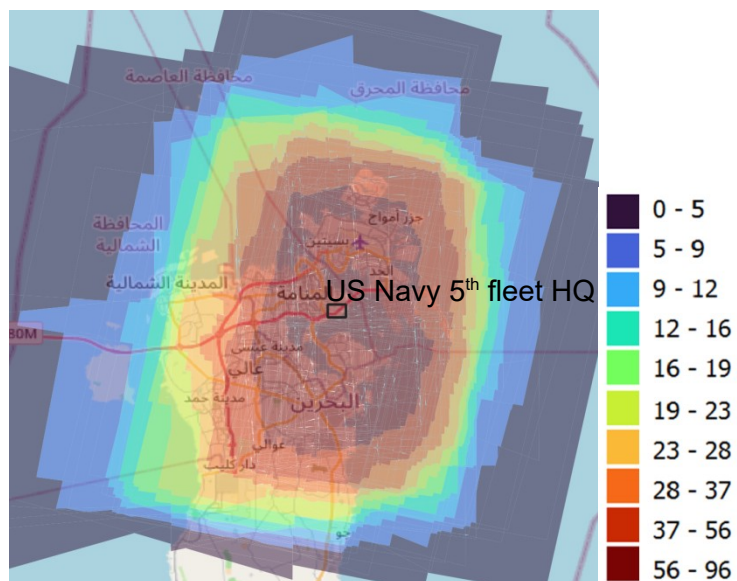


Teheran shows no surprises. All providers and actors were interested in monitoring the city and its surroundings throughout the war since February.

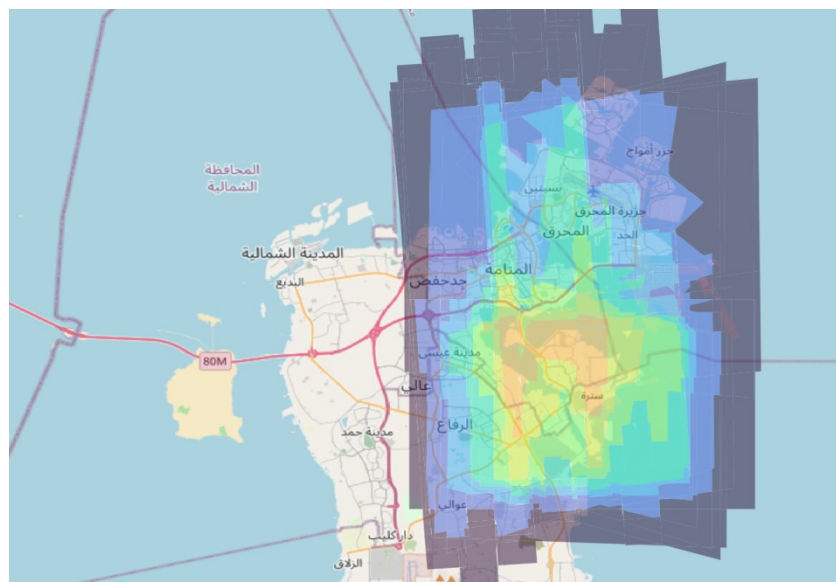
Bahrain

January – End of June

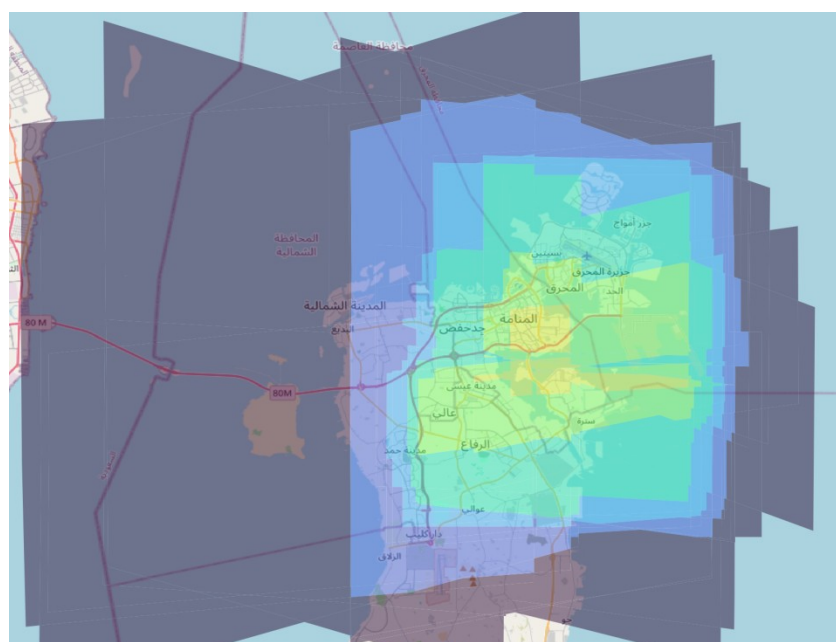
Total



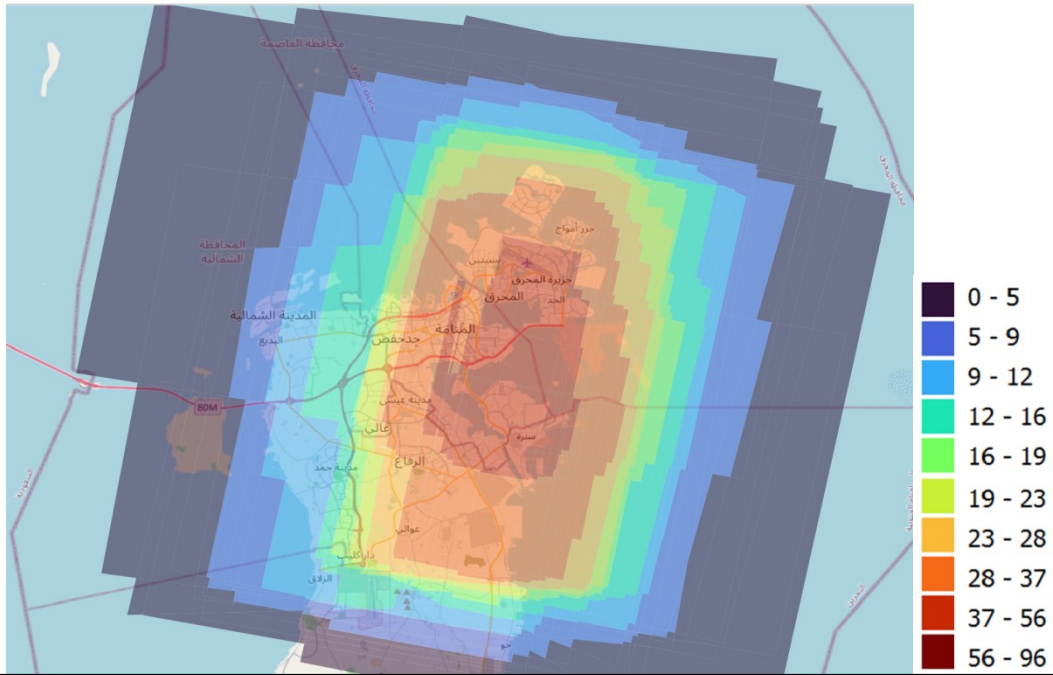
USA



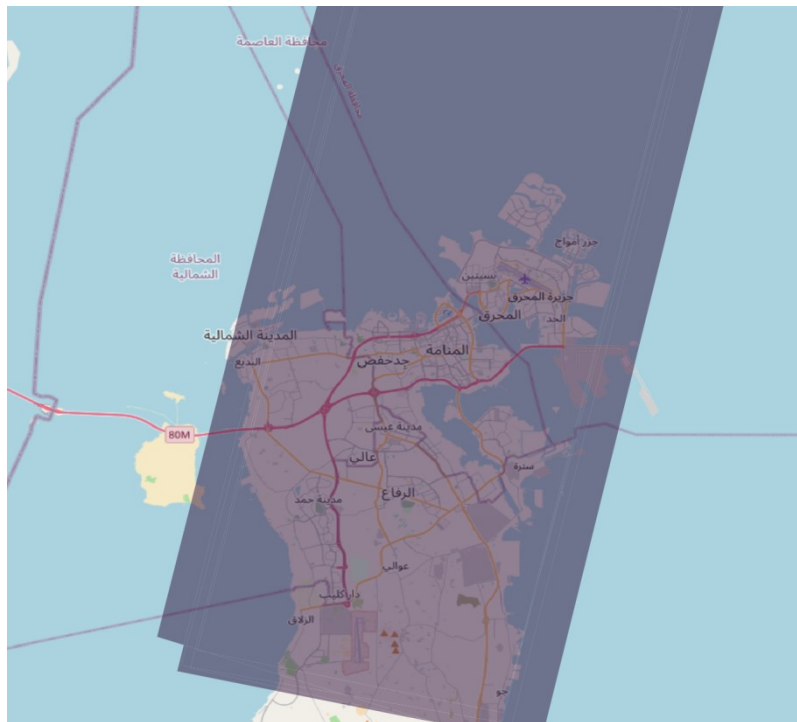
EUR



CHN



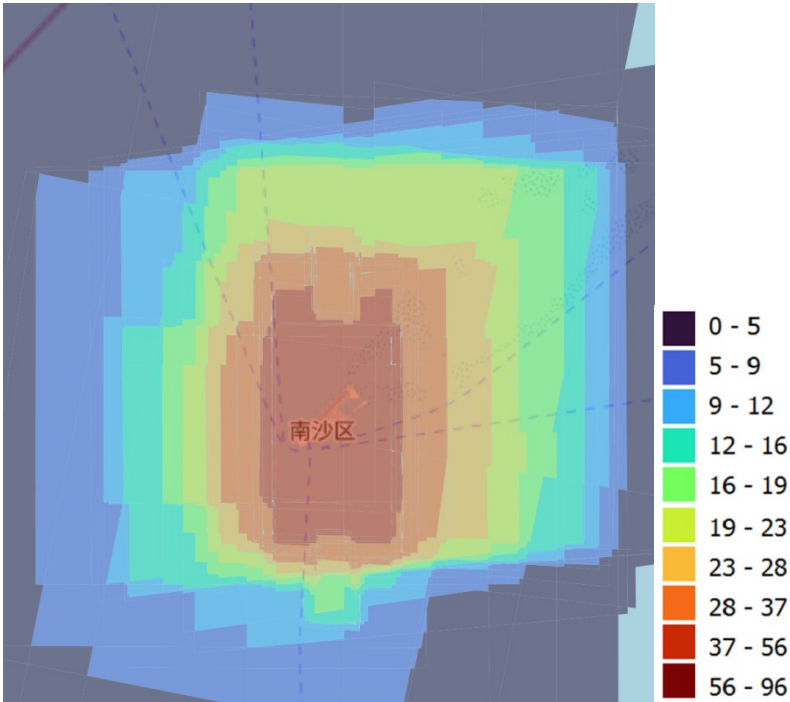
KAZ



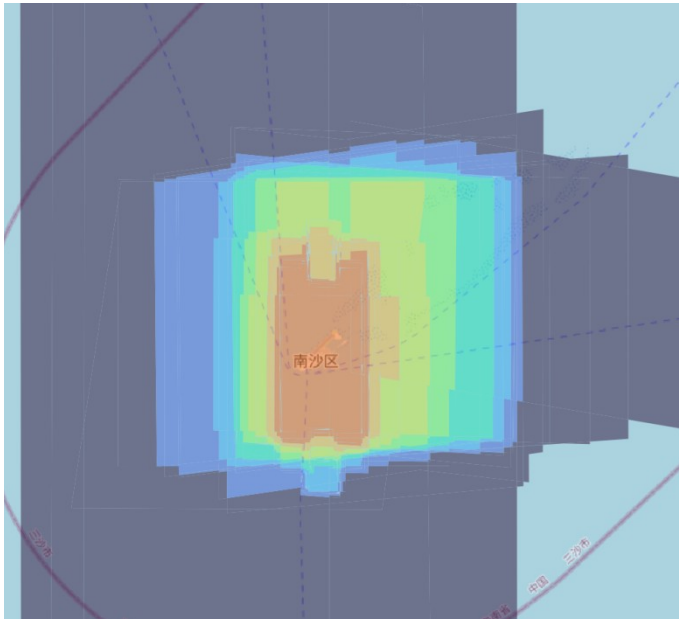
Interestingly, Chinese providers sold the most images of Beirut in the investigated time period. Beirut was struck several times during the war between the US and Iran. Beirut also hosts the US Navy's 5th fleet HQ, which reportedly got struck several times throughout the war.

Fiery Reef January – End of June

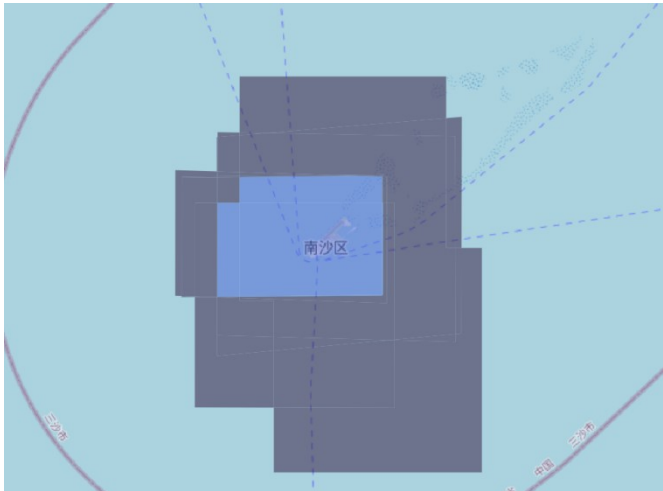
Total



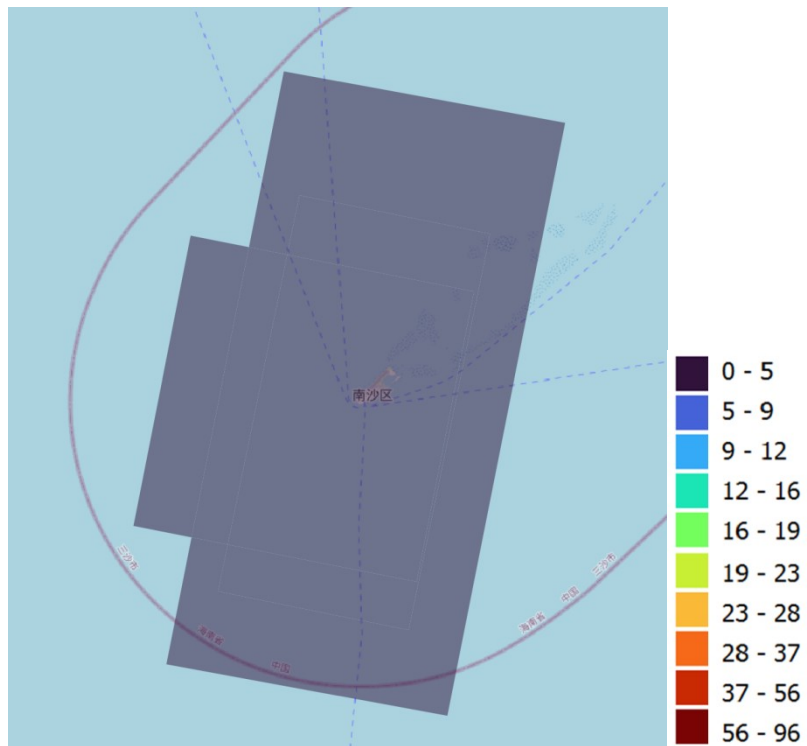
USA



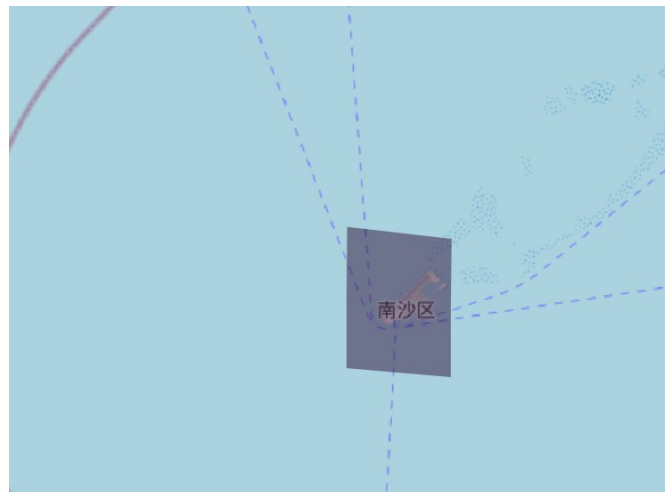
EUR



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ISR

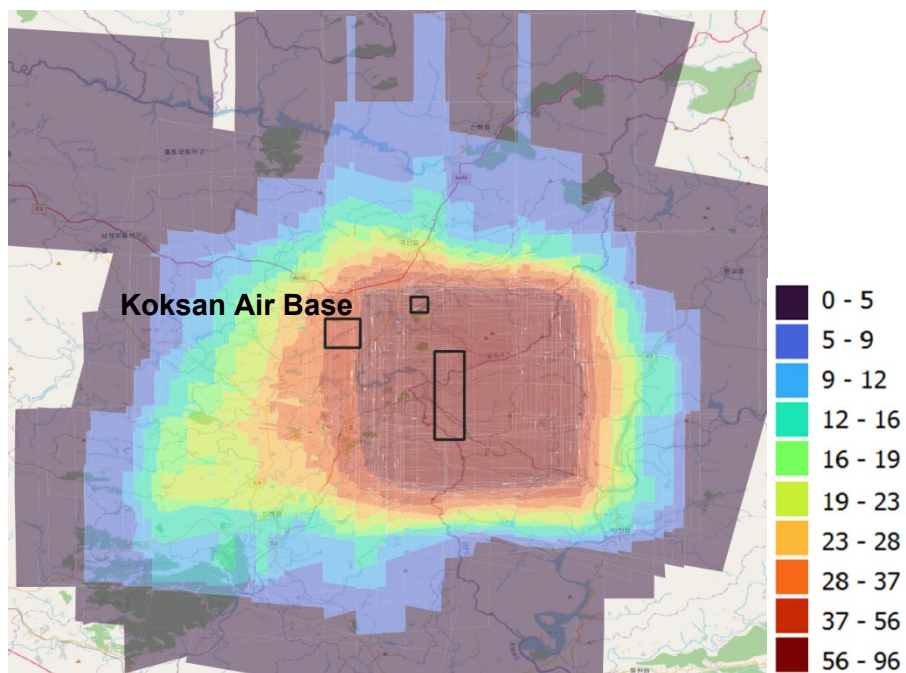


The US seems to be interested in the artificial Chinese military base Island “Fiery Reef”. European firms also provided some images, as well as an Israeli company.

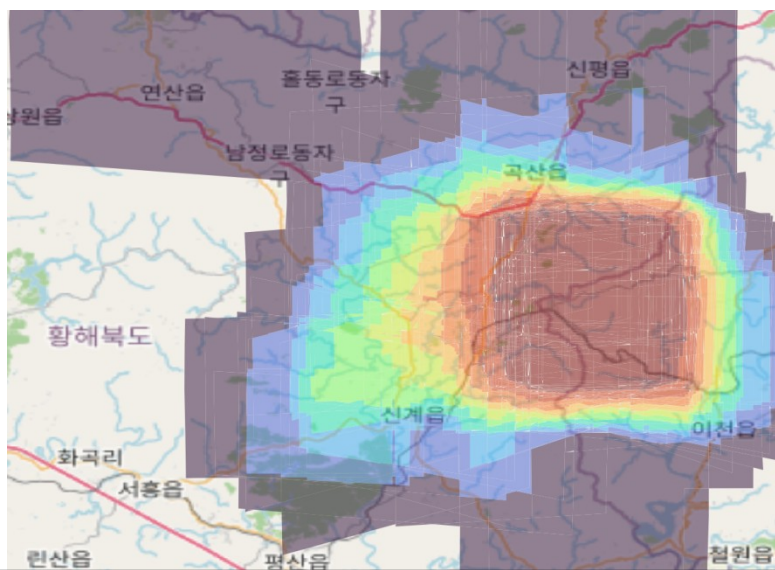
Koksan

April – End of June

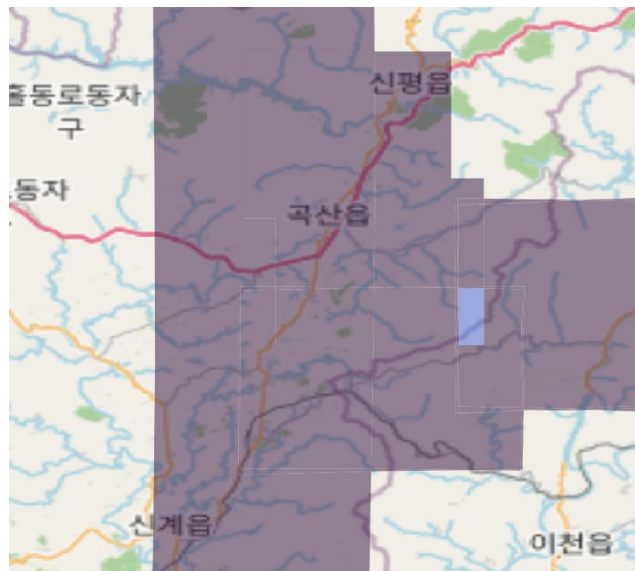
Total



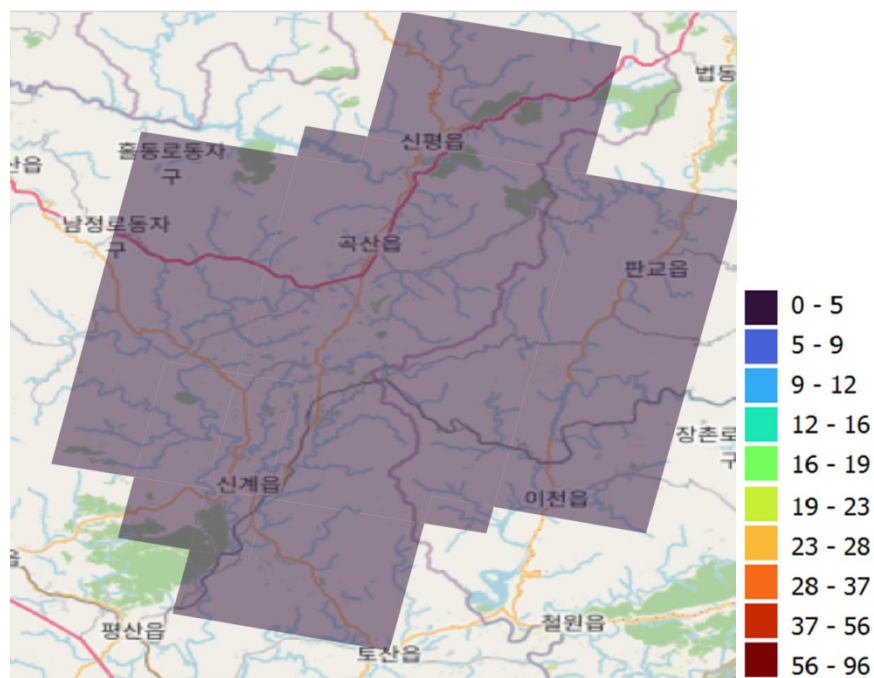
USA



EUR



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The US is also enormously interested in this North Korean area. An analysis from the same time period but last year showed the US only imaged the area about 20 times – meaning an increase of about five times in a year.

Technical Information

Time series and areas of interest analyzed:

Kyiv	April – End of June
Crimea	April – End of June
Kostyantynivka	April – End of June
Rzeszów	April – End of June
Rukla	May – End of June
Lebanon	April – End of June
Tehran	19. Feb – End of May
Bahrain	January – End of June
Fiery Reef	January – End of June
Koksan	April – End of June

Satellite systems analyzed in this study (note: many more systems were considered but were not present at the given locations and times):

China	BJ3N (BJ3N); 30-cm 4-band
	Jilin-1 4-Band (J14); 30-cm to 1.06-m 4-band; DP/GF/KF/Optical series
	SuperView-2 (SV2); 40-cm 4-band
	SuperView Neo-1 (SVN1); 25-cm to 30-cm 4-band
	SuperView Neo-3 (SVN3); 50-cm 8-band
Israel	EROS-B (EB); 70-cm Pan
USA	GeoEye-1 (GE1); 40-cm 4-band
	Legion (LG); 30-cm 8-band
	SkySat Collect (SKYC); 50-cm 4-band merged tiles
	WorldView-1 (WV1); 50-cm Pan
	WorldView-2 (WV2); 40-cm 8-band
	WorldView-3 (WV3); 30-cm 8-band
Europe	GEOSAT-2 (GS2); 75-cm 4-band
	Pléiades-1 (P1); 50-cm 4-band
	Pléiades Neo 3/4 (PNEO); 30-cm 6-band
	TerraSAR-X High Resolution SpotLight (THS); up to 1-m X-band SAR
	TerraSAR-X Staring SpotLight (TST); up to 25-cm X-band SAR
Kazakhstan	KazEOSat-1 (KZ1); 1-m 4-band