

2025 GLOF and Landslide Events in the Kyrgyz Republic:

Validation Results and Good Practices

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10th Joint Project Team Meeting for Sentinel Asia STEP-3 (JPTM2025)

10th – 12th February 2026

Dubai, UAE

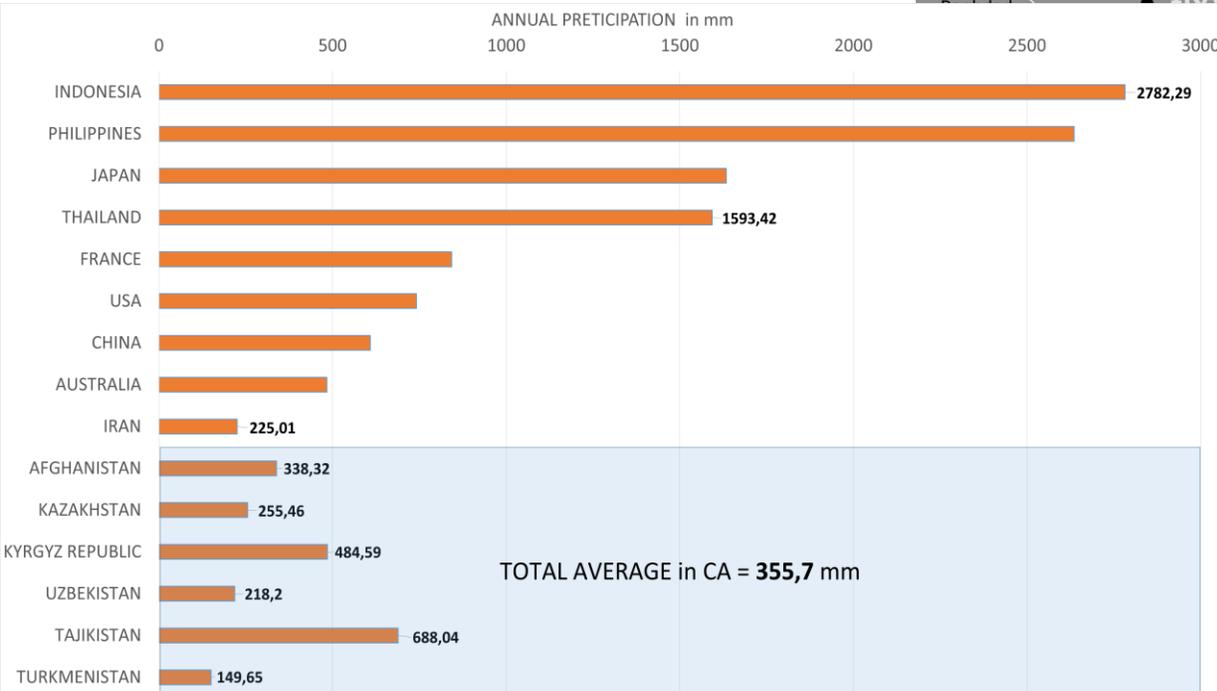
POPULATION on 2025 in million:

- Afghanistan: - 35,0–50,0
- Kazakhstan: - 20,286,084
- Kyrgyzstan: - 7,3
- Uzbekistan: - 38,256,514
- Tajikistan: - 10,786,734
- Turkmenistan: - 7,057,841 (2022)

TOTAL: 118,687,173 – 133,687,173



https://en.wikivoyage.org/wiki/Central_Asia#/media/File:Map_of_Central_Asia.png



<https://climateknowledgeportal.worldbank.org/country/.../climate-data-historical>

How many EORs in CA were declared in 2025 via *OPTEMIS Sentinel Asia* ?



Country	Phenomena	Total Victims	Number of EOR	Remarks
Afghanistan	No Data	No Data		
Kazakhstan	Forest Fire (in mountain) & Flood	3	3	1 EOR cancelled
Kyrgyzstan	Forest fire & GLOF, Rockslide	--	3	
Tajikistan	EQ & Moved large glacier	1	2	
Uzbekistan	Forest fire	--	1	
Turkmenistan	Mudflow	No Data	1	

Total in 2024 is 11 EORs

Total in 2025 is 10 EORs

VALIDATION RESULTS

EOR SA-00587 – Glacial lake outburst and flood (GLOF)



27 June 2025 at 17:30



This map shows flood affected areas in the Issyk-Ata District, Chuy Region, Kyrgyzstan, on June 27, 2025, caused by a glacial lake outburst from the high-mountain Lake Tekyi-Ir.

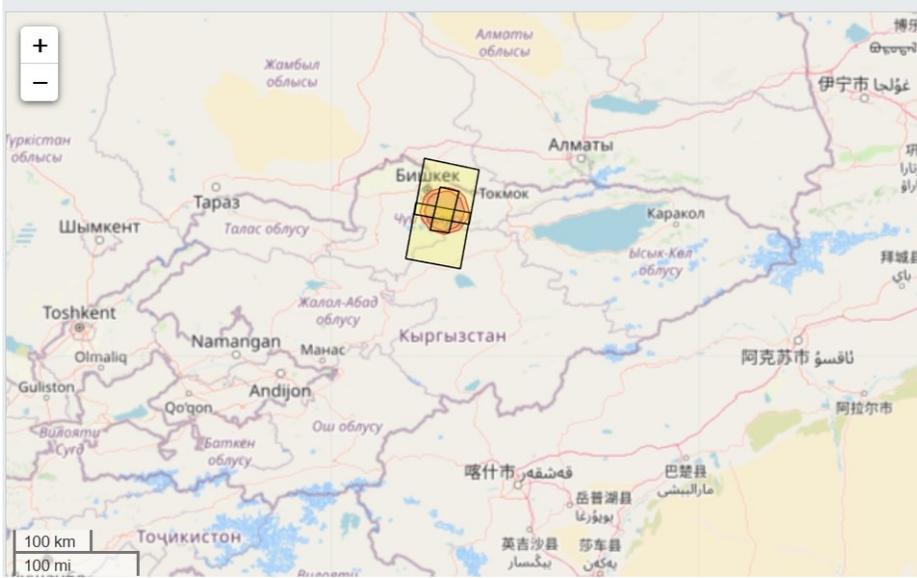
Satellite Images:
 Post disaster image : SPOT-6; 2 July 2025

Includes materia © AIRBUS DS (2025)

GIS Data:
 Roads © OSM (2025)

Map product made by GIC AIT (v1.0).
 Disclaimer: the accuracy of this product is not validated.

REQUEST INFORMATION AND TRACKING Ended
 EOR Number: 20250627-Kyrgyzstan-Other-00587



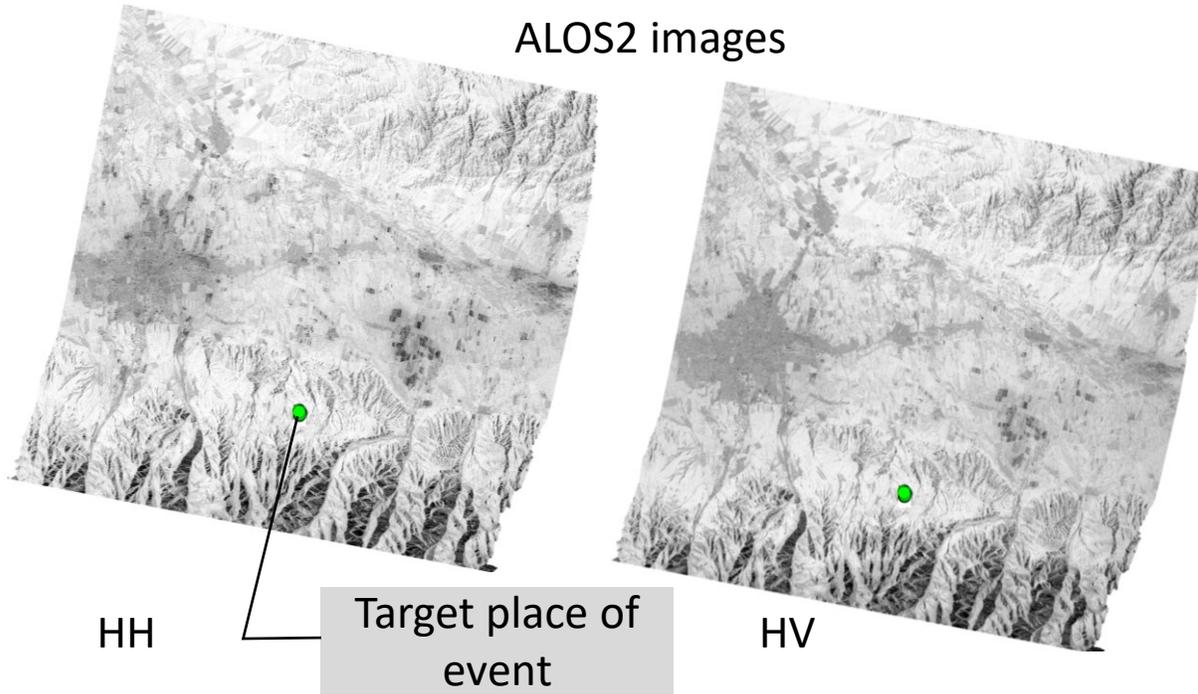
the product was received as part of activation the Charter

https://drive.google.com/file/d/1Jr_mKPEZ6hANeYrRv2N_QvSFyStREpTn/view

*History events of GLOFs were recorded - in 1994 and 2004.

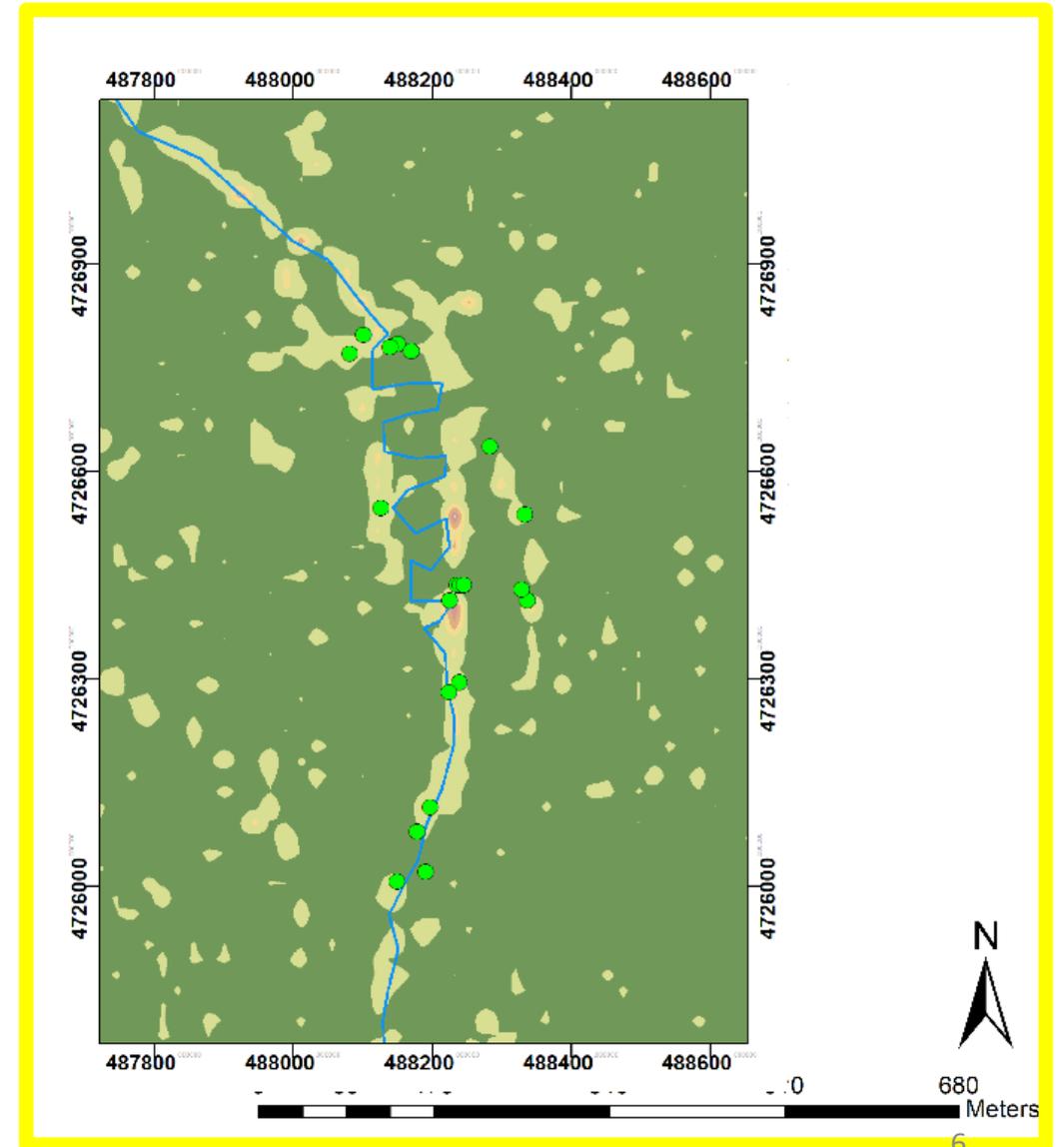
Post-processing

Our Objective: An SAR-Based Approach for Flood Detection in Mountainous Terrain

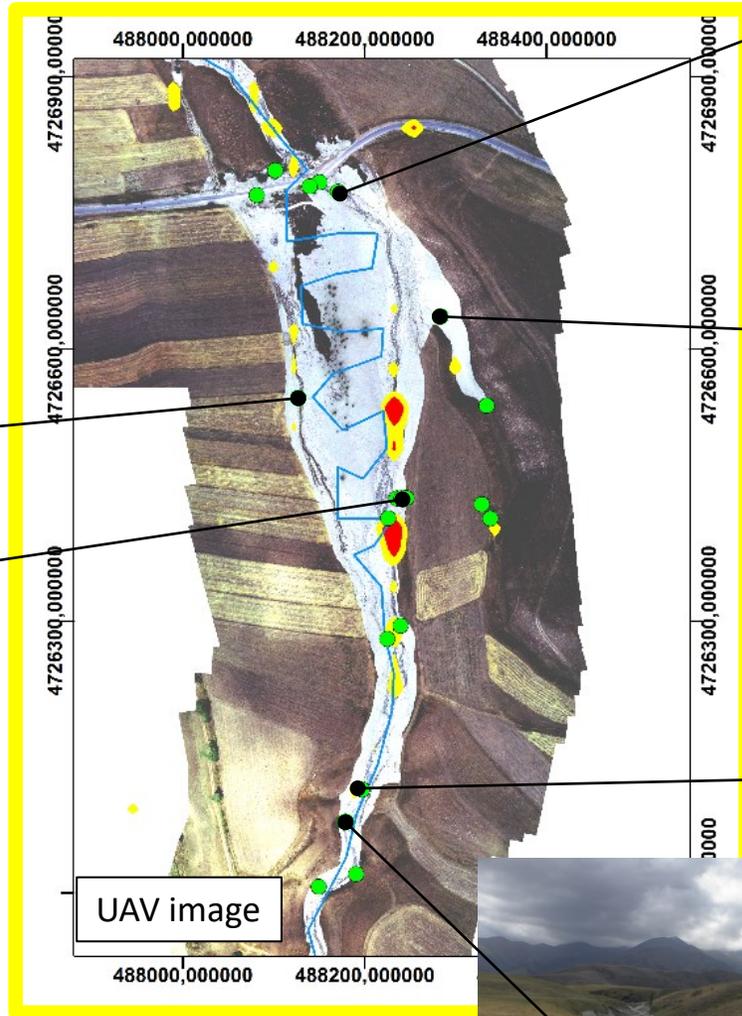
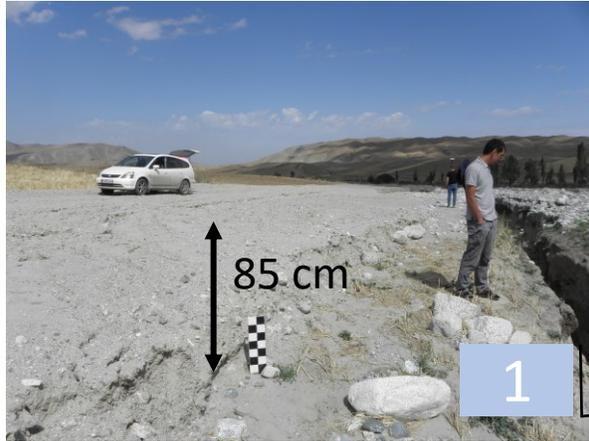


were utilized:

IMG-HH-ALOS2599882750-250702-FBDR2.1GUD
IMG-HV-ALOS2599882750-250702-FBDR2.1GUD
IMG-HH-ALOS2426002750-220413-FBDR2.1GUD
IMG-HV-ALOS2426002750-220413-FBDR2.1GUD



In Situ Measurements for Validation



We are currently working on improving the quality of information for extraction from SAR images to ensure its reliability for similar future events.

EOR SA-00596 – Rockslide on the road

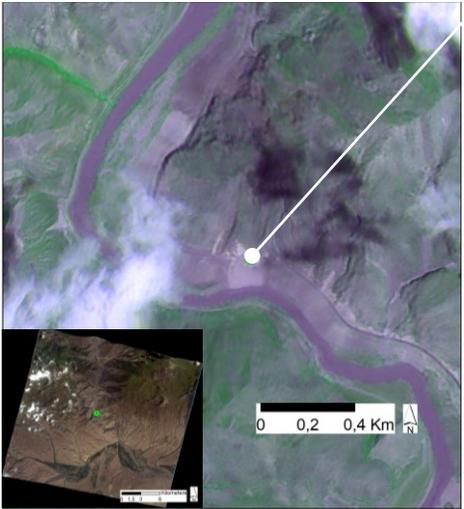
REQUEST INFORMATION AND TRACKING Ended
 EOR Number: 20250724-Kyrgyzstan-Other-00596



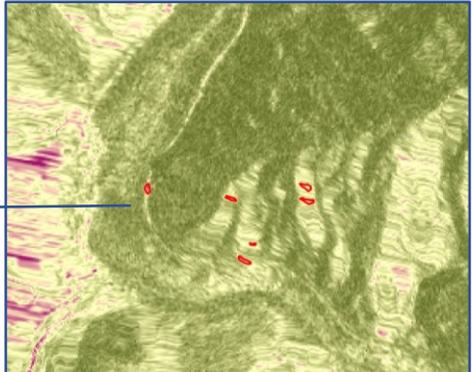
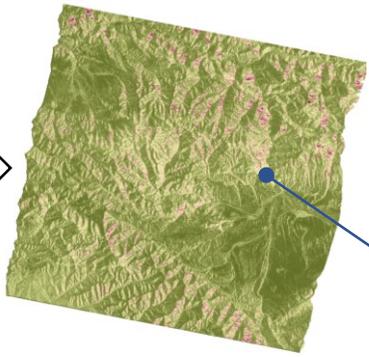
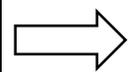
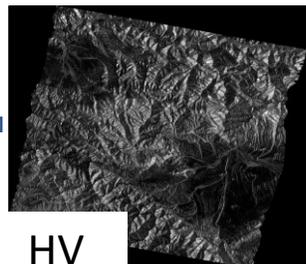
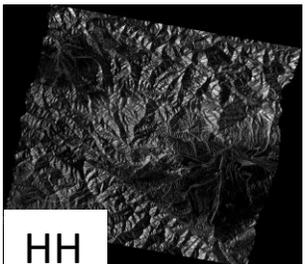
24 July 2025 at 12:00

Place of event

ALOS2 images



Taiwan Space Agency (TASA)



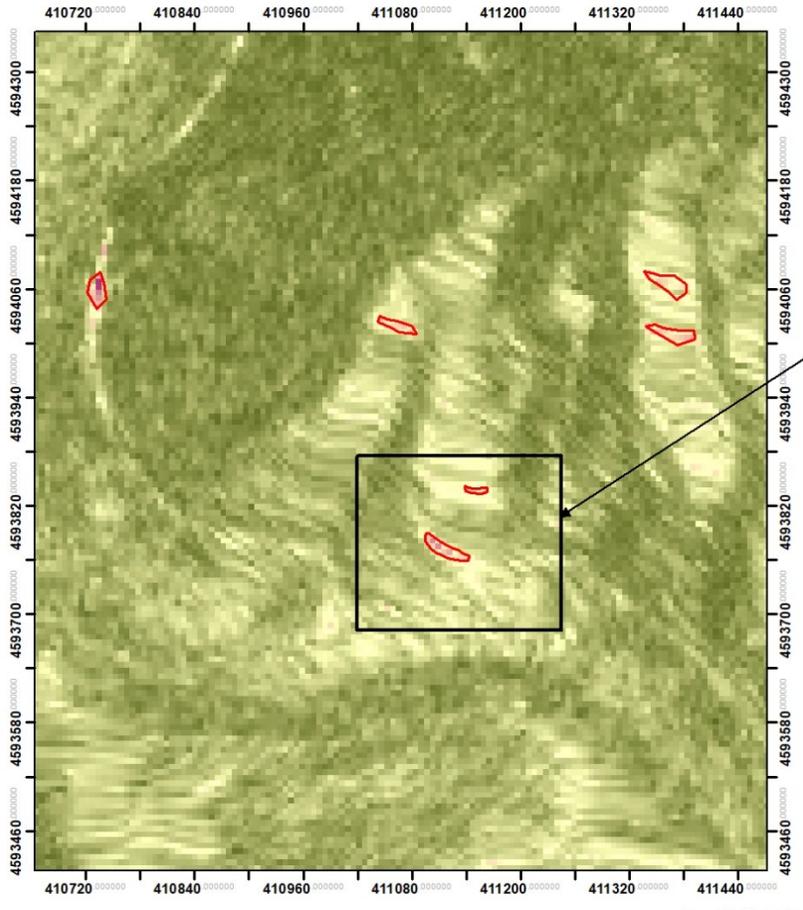
Post processed

- IMG-HH-ALOS2604022780-250730-FBDR2.1GUD
- IMG-HV-ALOS2604022780-250730-FBDR2.1GUD
- IMG-HH-ALOS2434282780-220608-FBDR2.1GUD
- IMG-HV-ALOS2434282780-220608-FBDR2.1GUD

FS5_G000_PMS_L4UTM_20250802_060950.tif
 FS5_G000_MS_L4UTM_20250731_060955.tif

EOR SA-00596 (Landslide, Rockslide) In Situ Measurements for Validation

The road North-South on 283-284 km



UAV image 14.08.2025



Another sites of events a long this road



The final results will be submitted to the Ministry of Transport and Communications and Ministry of Emergences Situation.

GOOD PRACTICE in 2024 & 2025

GOOD PRACTICE IN 2025, Uzbekistan

Card of event

Date Event

[23 July 2025](#)

Time Event

16:00

Cause

Drought, high temperature and wind

Phenomena

Forest fire

Place

Surkhandarya State Nature Reserve

Victims

--

Other damage

5 ha fired/ in totally 794 ha

Attracted potential

Emergency Ministry rescuers, forestry workers and military personnel (more than 200 people in total).

Satellite Image

Before Disaster

After Disaster

TASA

ISRO

2024-09-15
FORMOSAT-5 Level4
FSS G000 PMS L4UTM
2024/09/15 06:56:30
[DOWNLOAD] [VIEW]

2025-07-30
FORMOSAT-5 Level4
FSS G000 PMS L4UTM
[DOWNLOAD] [VIEW]

2025-08-01
FORMOSAT-5 Level4
FSS G000 PMS L4UTM
[DOWNLOAD] [VIEW]

2025-08-03
FORMOSAT-5 Level4
FSS G000 PMS L4UTM
06:59:31
[DOWNLOAD] [VIEW]

2025-07-29
Resourcesat-2A AW
Path=086
Row=045
29-JUL-2025 06:04:43
[DOWNLOAD] [VIEW]

2025-07-30
EOS-04 SAR HH
StripNumber=26069
SceneNumber=4
30-JUL-2025 13:29:06
[DOWNLOAD] [VIEW]

2025-07-30
EOS-04 SAR HV
StripNumber=26069
SceneNumber=4
30-JUL-2025 13:29:06
[DOWNLOAD] [VIEW]

Web GIS

Forest Fire in Uzbekistan on 23 July, 2025

REQUEST INFORMATION AND TRACKING Ended

EOR Number: 20250723-Uzbekistan-Forest-Fire-00598

Location of event



FOREST FIRE IN SHERABAD DISTRICT, SURKHANDARYA REGION

UZBEKISTAN

As observed by Sentinel-2 images on 27 July 2025

FOREST FIRE

APPECS

Prepared by: Mohammed Bin Rashid Space Centre (MBRSC)

Post-Disaster Forest Fire Assessment in Uzbekistan (23 July 2025)

Prepared by: Mohammed Bin Rashid Space Centre (MBRSC)

Post-Disaster Forest Fire Assessment in Uzbekistan (23 July 2025)

Prepared by: Mohammed Bin Rashid Space Centre (MBRSC)

VAP. Sentinel Asia / <https://sentinel-asia.org/EO/2025/article20250723UZ.html>

Through the forest fire event, we found a specialist in Uzbekistan interested in applying remote sensing methods. This experience confirms our earlier observation that the SA platform can effectively enhance cooperation among professional communities across the Asian region, illustrating an example of good practice.

GOOD PRACTICE:

#2 EOR 20240818-Kyrgyzstan-Other-00535

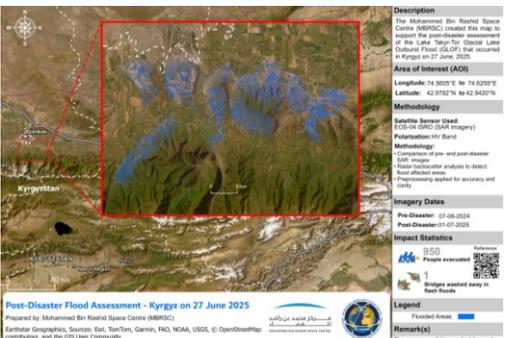
The mudflow event, the Charter was activated and the VAP shared with office of the World Bank in Bishkek. Their use supported the inclusion of Cholpon-Ata town in the 2025 action plan to reduce mudflow risk through nature-based solutions under the [RESILAND CA+](#) project. This demonstrates a scalable good practice in using space-based data to support decision-making and strengthen regional resilience.



#3 Call 969/1110: Flood in Kyrgyzstan, #EOR 20250627-Kyrgyzstan-Other-00587

Vittorio Trivigno, EO Expert and Operations Engineer at Starion Group, Italy, initiated a joint online training with CAIAG for specialized agencies in Kyrgyzstan. The initiative is based on the analysis of the “Flood in Kyrgyzstan” event (Act 969/1110), the Charter products, and participant feedback, which highlighted the need to clarify certain materials. The training aims to strengthen professional competencies in Kyrgyzstan and, in the future, across Central Asia.

Also this example we are consider as a good practice.



Initiatives for discussion:

Consider holding one of the future JPTM meetings in the Kyrgyz Republic.

Initiating expanded cooperation between JPTM and ADRC members through the preparation of joint project initiatives to attract financing from ADB, the World Bank and other international financial institutions.

THANK YOU FOR ATTENTION!



Alai Range, Kyrgyz Republic