

Sentinel Asia in CA: Lessons learned of 2020-2023 and Search Potential Solutions

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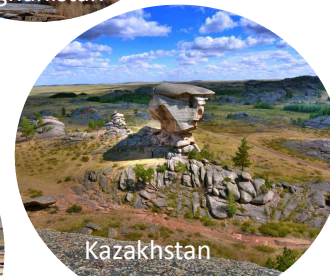
CAIAG

The logo for CAIAG is displayed in a bold, dark blue font. The background of the slide features a light blue sky with scattered white clouds and a range of snow-capped mountains in the lower right corner.

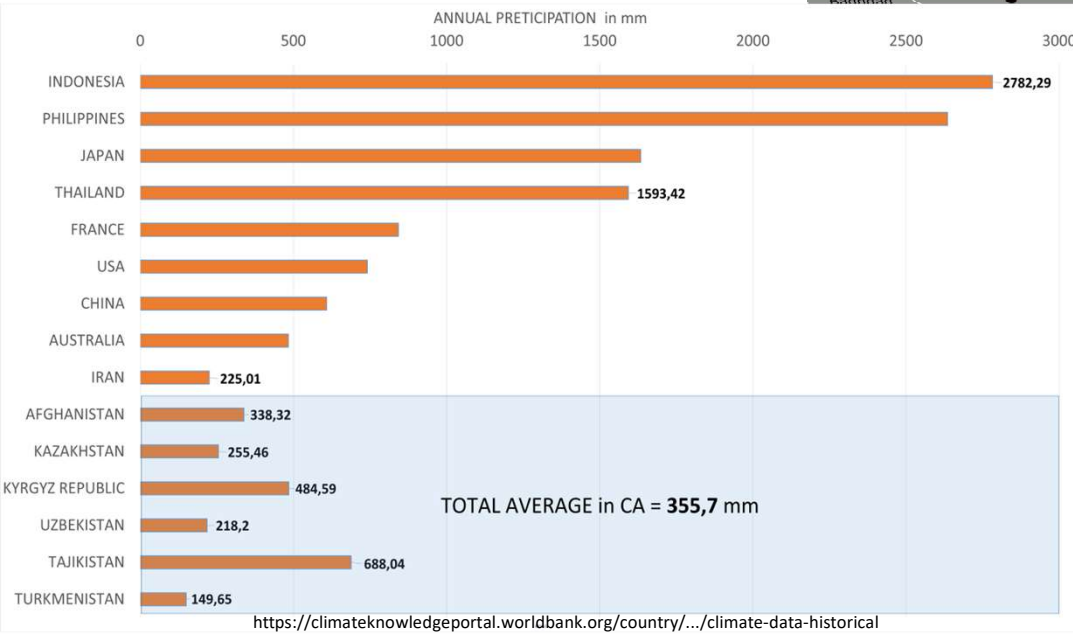
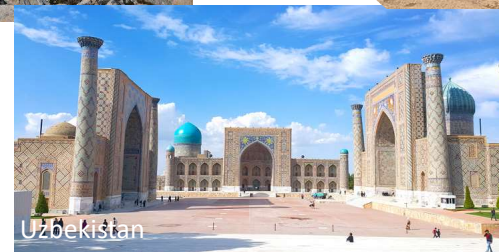
POPULATION on 2021 in million:

- Afghanistan: - 40,1
- Kazakhstan: - 19,0
- Kyrgyzstan: - 6,692
- Uzbekistan: - 34,92
- Tajikistan: - 9,75
- Turkmenistan: - 6,342

TOTAL: 116,804



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

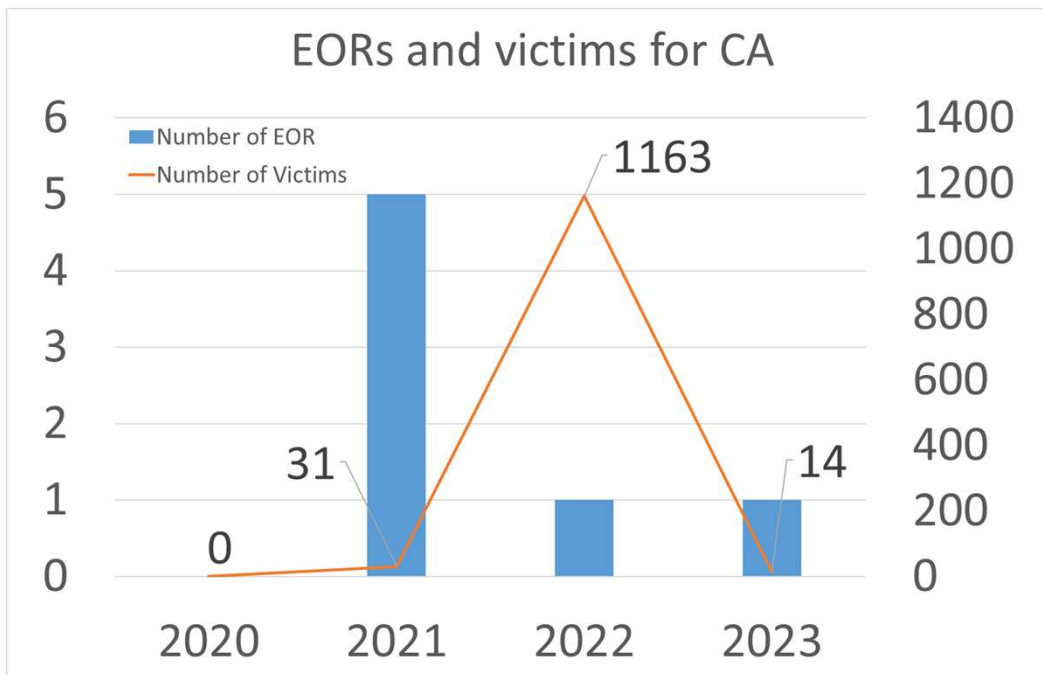


Why was 2020 -2023 chosen?

The goal is to identify the weaknesses and strengths of awareness, in the context of the events that have emerged in the Central Asian region during and after the pandemic *COVID-19*.

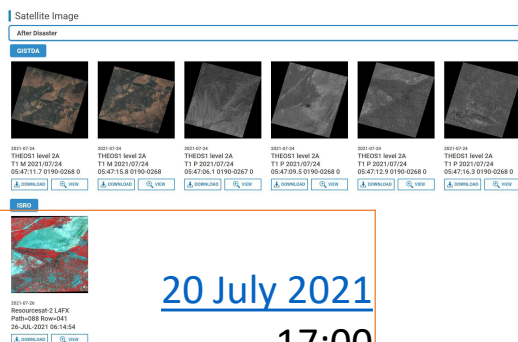


How many EORs in CA were declared in 2020 -2023 via *OPTEMIS Sentinel Asia* ?



Country	Phenomena	Total Victims
Afghanistan	EQ	1163
Kazakhstan	Forest Fire	14
Kyrgyzstan	Flashflood	9
Tajikistan	MF,LS and EQ	31
Uzbekistan	Flashflood	8
Turkmenistan	No Data	No Data

GOOD PRACTICE IN 2021, Kyrgyzstan



Card of event

Date Event
Time Event
Cause
Phenomena
Place
Victims
Other damage
Attracted potential

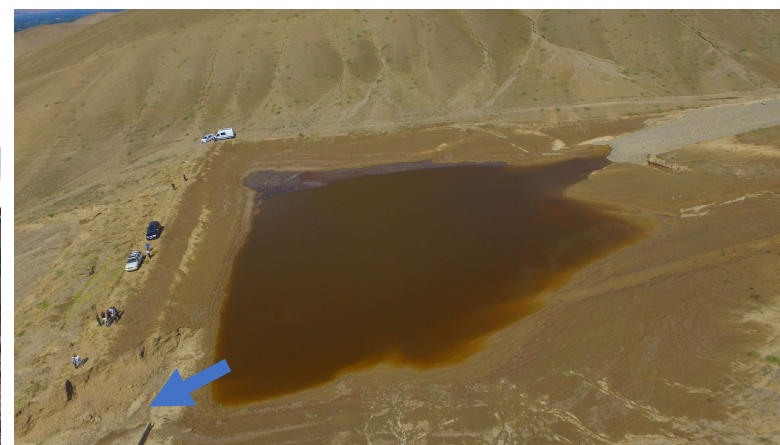
20 July 2021
 17:00
 Strong Rain
 Mudflow
 Dostuk and Changyr-Tash villages
 1 girlie
 flooded residential yards
 50 rescuers, 59 police officers and
 300 local residents.



Flooded site. Drone image, MES, T.K.Izabekov



Mudflow on road. Internet



Washout of mudflow storage. Drone image, MES, T.K.Izabekov

GOOD PRACTICE IN 2023, Kazakhstan

Card of event

Date Event	8 June 2023
Time Event	12:00
Cause	lightning discharge /lightning
Phenomena	Forest fire
Place	Semei-Ormany, Abai region
Victims	14 people
Other damage	burned more then 60 000 Ha of forest
Attracted potential	1 500 rescuers, 300 vehicles and 14 helicopters local residents.

Satellite Image

Before Disaster

JAXA

2023-06-08 ALOS-2 Level2.1
IMG HH ALOS2 47930/1000 2023/04/08
FBD R 2.1 GUA

2023-06-08 ALOS-2 Level2.1
IMG HH ALOS2 47930/1010 2023/04/08
FBD R 2.1 GUA

2023-06-08 ALOS-2 Level2.1
IMG HH ALOS2 47930/1020 2023/04/08
FBD R 2.1 GUA

After Disaster

JAXA

2023-06-17 ALOS-2 Level2.1
IMG HH ALOS2 48965/1000 2023/06/17
FBD R 2.1 GUA

2023-06-17 ALOS-2 Level2.1
IMG HH ALOS2 48965/1010 2023/06/17
FBD R 2.1 GUA

2023-06-17 ALOS-2 Level2.1
IMG HH ALOS2 48965/1020 2023/06/17
FBD R 2.1 GUA



Forest fire in Semei Ormany, Kazakhstan.
Photo by: Aibol Kalybaev, Internet

DETECTED FOREST FIRE IN ABAI REGION, KAZAKHSTAN

As observed by Sentinel-2 images on 19 June 2023

63,000 Ha OBSERVED BURNED AREA

14 NUMBER OF DEATHS

- Detected Burned Area
- District Boundary
- Kazakhstan Boundary
- Waterbody
- Road

Satellite Image: Post-disaster - Sentinel-2, 9, 11, 14 and 19 June 2023

Copyrights: © Contains modified Copernicus Sentinel data [2023]

GIS Data: Waterbody and Road © OSM (2023); Administrative Boundary © GADM (2023)

Map Scale 1:700,000
Coordinate System: WGS 1984 UTM Zone 44N
Unit: Meter

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

Forest Fire Map, Kazakhstan

As Observed By Sentinel 2 On 14 June, 2023

Location

Legend

- Forest Fire

Description

- This Map shows Fire effected area after fire disaster happened in Kazakhstan Forest on 8th June/23.
- Damage happend to forest Area and wild life
- Due to this disaster 60,000 Ha's Area got damaged
- Accuracy of this product is not validated.

Map Information

- Coordinate System: WGS_1984_UTM_zone_44N
- Unit Degree

Data Source

- Copernicus Open Access Hub ESA
- Satellite Product: Sentinel 2
- Pre Disaster: 2023-06-04
- Post Disaster: 2023-06-14



Kazakhstan - Forest fires (JRC-GWIS, media , media) (ECHO Daily Flash of 13 June 2023)

Missed opportunity in 2020 (transboundary event)

Water reservoir "Sardoba" with an approximate volume of water 922 million³

Card of event

Date Event	1 May 2020
Time Event	early morning
Cause	Strong Rain and broke through the dam
Phenomena	Flood
Place	Sardoba, Uzbekistan and Turkestan region of Kazakhstan
Victims	6 people
Other damage	flooded >1000 buildings, 3 schools, 5 kindergarten and other. Was evacuated >100 000 (in Uzbekistan+Kazakhstan)
Flooded area	175,3 km ²
Attracted potential	???

Spilled water only in Kazakhstan caused flooding in an area of 175.29 km², almost 3 times the area of the reservoir itself - 67.4 km².

<http://cawater-info.net/bk/dam-safety/sardoba.htm>



<https://kun.uz/ru/news/2020/05/07/tragediya-v-sardobe-vinovnyye-v-proryve-veka-ne-doljny-vyiti-suximi-iz-vody>

Missed opportunity in 2021-2022, Kazakhstan

Card of event	
Date Event	10 May 2021
Time Event	unknown
Cause	???
Phenomena	Forest fire
Place	Ridder, East region of KZ
Victims	1 female
Other damage	burned more then 300 Ha of forest, 31 buildings, 6 vechiles and other
Attracted potential	500 rescuers, 86 vehicles and 2 helicopters local residents.

Card of event	
Date Event	7 September 2022
Time Event	unknown
Cause	???
Phenomena	Forest fire
Place	Amankaragai forest, Kostanai region of KZ
Victims	no
Other damage	burned more then 43 000 Ha of forest, 108 buildings and other. Was evacuated 1 841 people
Attracted potential	unknown

Card of event	
Date Event	26 August 2021
Time Event	19:00
Cause	fire near one of the warehouses in the military unit
Phenomena	Fire and Explosions
Place	Bayzak raion, Jambyl oblast of KZ
Victims	17 people+1 Lost
Other damage	???
Attracted potential	???



Photo: Orda.kz

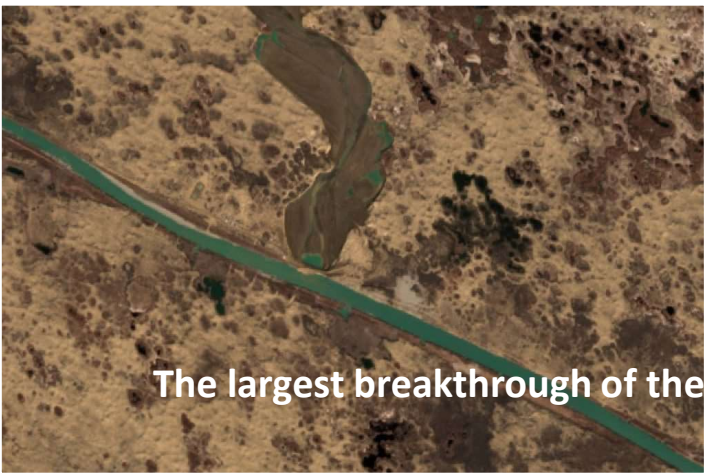
Missed opportunity in 2022, Uzbekistan and in February 2023 in Turkmenistan



Card of event	
Date Event	20 April 2022
Time Event	unknown
Cause	Strong Rain
Phenomena	Flood
Place	Forish raion, Djizak oblast, Uzbekistan
Victims	4
Other damage	flooded >260 buildings in Egizbulak village. Of them were destroyed - 53, and 44 was damaged. Was evacuated 100 people.
Attracted potential	???

Card of event	
Date Event	17-20 January 2023
Time Event	unknown
Cause	Ice Jams
Phenomena	Flood
Place	site of Kairakum chanel, Turkmenistan
Victims	no
Other damage	Lost 1 bulldozer
Attracted potential	???

The main damage is the huge loss of water that has gone into the sands. Most of the runoff went into the sands for almost 20 days. Possible volume - 100 million m3.



The largest breakthrough of the Karakum Channel Turkmenistan

We see:

The **best practice** we have seen is the interaction and solidarity within the Sentinel Asia community, which is truly a key element in achieving sustainability and effectiveness in responding to catastrophic events.

and

The **omission** we observed is related not only to the limited availability of news information in other countries but also to restrictions in accessing diverse sources of information, which collectively limit awareness of these events.



To address this task, we suggest involving experts/volunteers who could to help create a **website aggregator** oriented towards the Central Asian region.

THANK YOU FOR ATTENTION!

