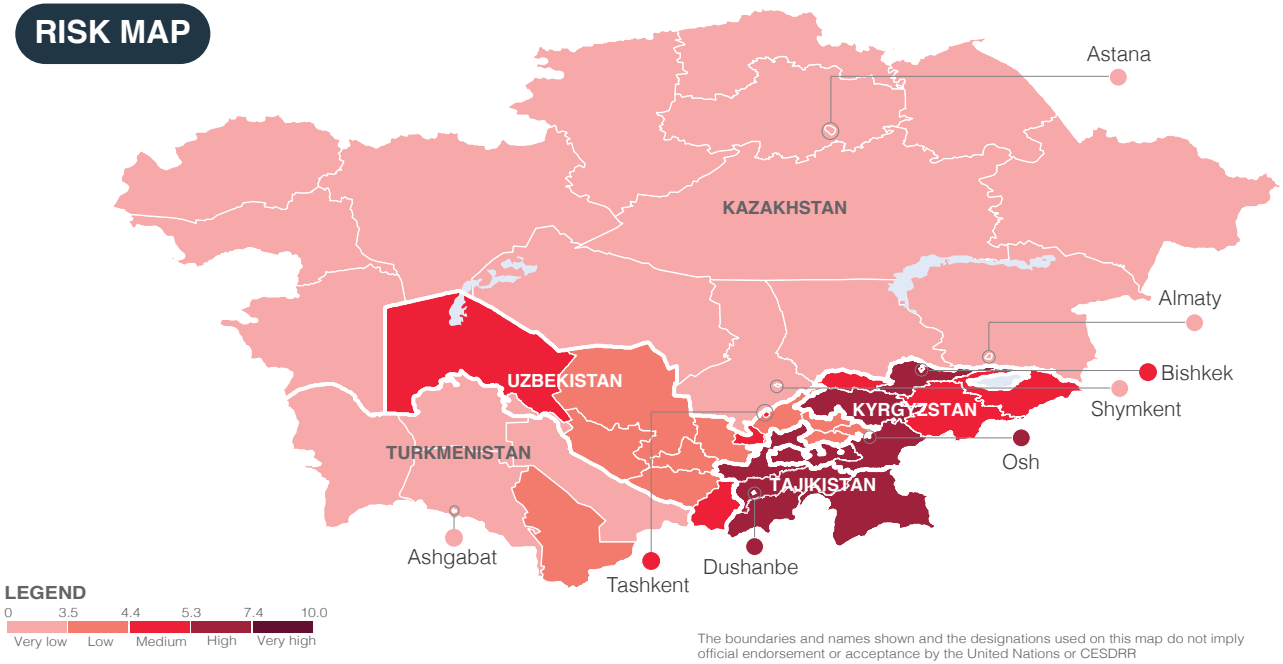
CENTRAL ASIA: Subnational INFORM risk 2022

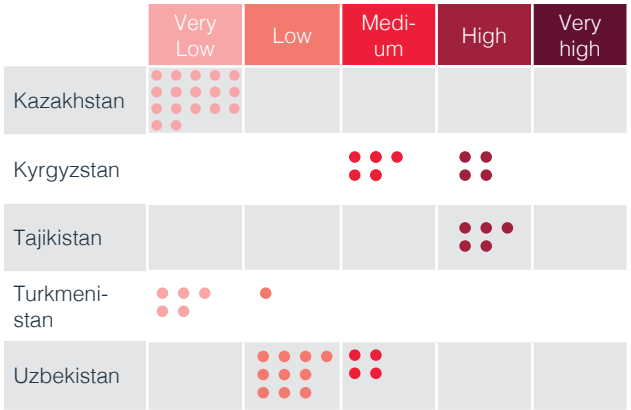
RISK MAP



The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations or CESDRR

RISK DISTRIBUTION

The graph below illustrates how risk levels are spread within a country and allows comparison across the region. In 2022, all regions in Tajikistan and a few in Kyrgyzstan remain more prone to risk than any other country in the Central Asia region.



DATA RELIABILITY

The model includes a lack of reliability index, which considers missing indicators, the recentness of the data, and the degree of subnational data that was included (national averages were used when subnational data was missing – a less desired practice). It scores data on a scale from 0 to 10, where 10 is least reliable. The lack of reliability index shows that results for all areas in Tajikistan are deemed less reliable due to the low ratio of data availability at subnational level compared to other countries. Despite, the full availability of all indicators for Tajikistan admin1s, only 43% of indicators are at subnational level that is the lowest percentage for the region.

HOW TO USE THIS MODEL

National government or intergovernmental risk assessment and development planning can be updated to include INFORM results and components.

By relying on shared risk analysis, government, donors, humanitarian & development actors can align their actions and funding decisions towards risk reduction and management.

INFORM can help integrate disaster risk management into ongoing government, development, DRR, humanitarian, and preparedness planning processes.

Validated to global standards, INFORM can support inter-agency processes: Common Country Assessment, UN Development Assistance Framework, Sendai Framework for DRR, etc.

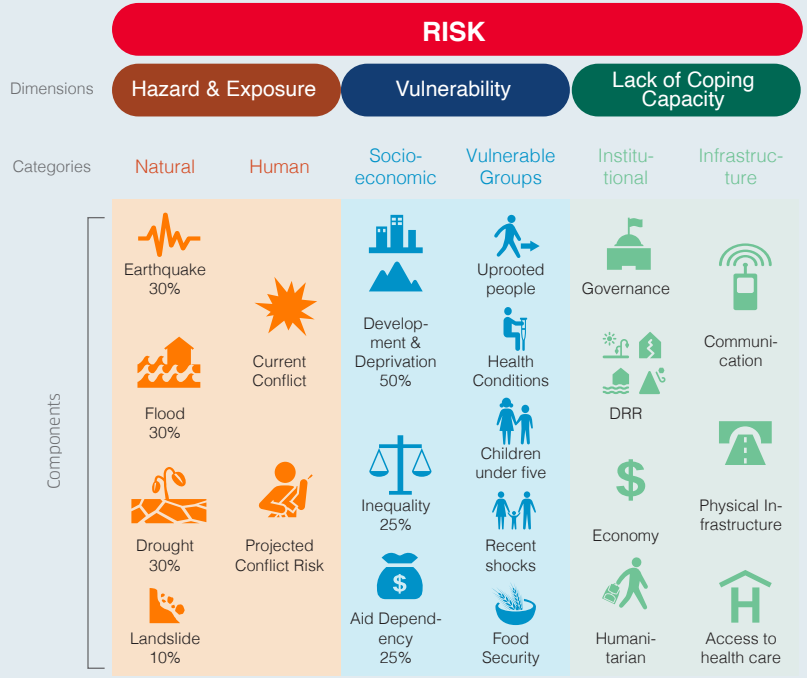
OVERVIEW

INFORM RISK
SUBNATIONAL
CENTRAL ASIA

The subnational Index for Risk Management (INFORM) is a way to understand and measure the risk of disasters. It helps identify where and why humanitarian crises are likely to occur, and shows how risks differ within each country across its subnational units and between subnational units of different countries.

Data on 51 first admin levels
The first administrative level is the largest subdivision of a country. There are 51 such subdivisions in the five countries of Central Asia (CA), and commonly include oblasts, regions, capital and independent cities.

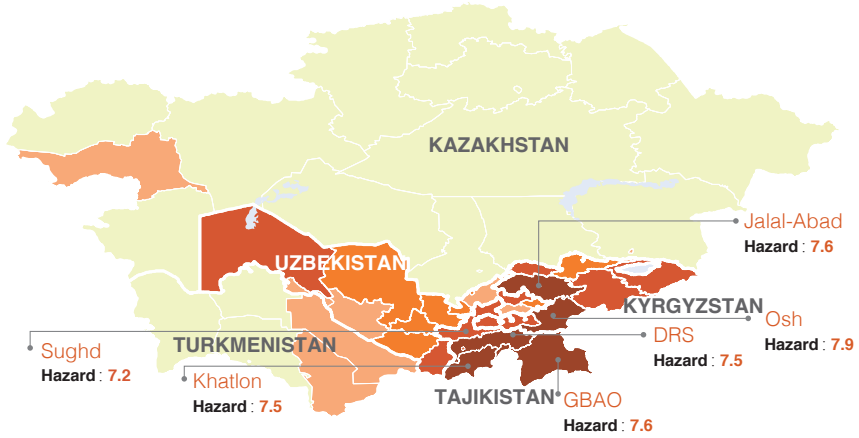
61 indicators
The model builds up a picture of risk by bringing together 61 different indicators that measure three dimensions of risk: hazard and exposure, vulnerability, and lack of coping capacity. Each dimension is composed of a number of risk categories, e.g. natural hazards, vulnerable groups, or infrastructure capacity. Categories comprise a number of components. While the dimensions and categories are constant across all INFORM models, the components are carefully chosen sets of indicators that capture a specific topic that is relevant and specific to the region, e.g. landslides, children under five, or physical infrastructure. Indicators are the individual datasets that make up INFORM risk index, e.g. the physical exposure to earthquakes of a certain magnitude, child mortality rate, or road density. Below, the structure of INFORM for Central Asia is presented.



Updated by CESDRR in collaboration with UNDRR & with the financial support from the European Commission in December 2022. The first model developed by OCHA & EC's Joint Research Center for the RIASC Task Force for the C&CA region in April 2017. **More info:** https://drmkc.jrc.ec.europa.eu/inform-index/INFORM-Subnational-Risk/Central-Asia-Caucasus
Subnational data sources: Bureau of National Statistics of the Agency for the Strategic Planning and Reforms of the Republic of Kazakhstan, National Statistical Committee of the Kyrgyz Republic, Agency on Statistics under President of the Republic of Tajikistan, State Committee on Statistics of Turkmenistan, State Committee of the Republic of Uzbekistan on Statistics, EC-JRC, EM-DAT, ETH Zürich, FAO, GADM, GEM, GDL, HIIK, IFRC, National Red Cross/Crescent Societies, OPHI, OSM, UNDP, UNHCR, UNICEF, UNDRR, GADM, WHO. **National data sources:** Central Bank of Russian Federation, National Ministries of Health, National Agencies on Emergency Management (Sendai Monitor Platform), Inter-Parliamentary Union, OCHA, OECD, The Heritage Foundation, UNHCR, UNICEF, UNDRR, World Bank, XE. **Feedback:** cesdrr@cesdrr.org, undrr-roeca@un.org

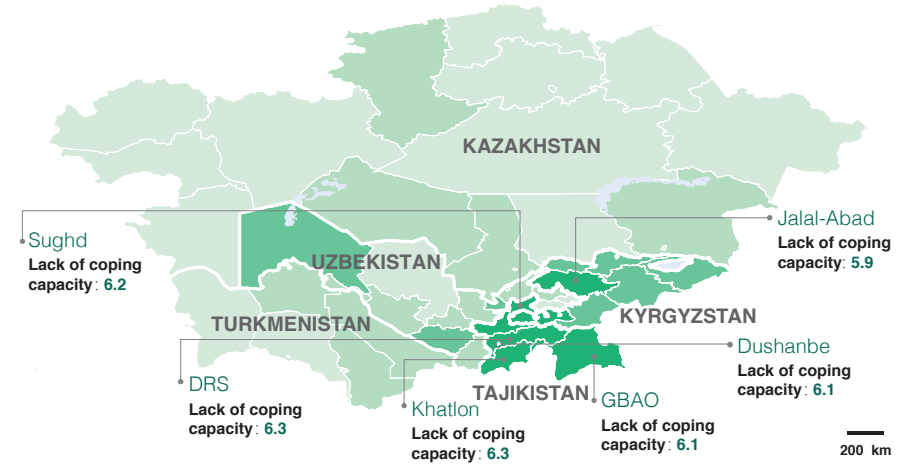
CENTRAL ASIA

		Natural	Human
TJK	Sughd	7.7	6.7
TJK	Khatlon	8.2	6.7
TJK	GBAO	8.3	6.7
TJK	DRS	8.2	6.7
KGZ	Osh	8.2	7.5
KGZ	Jalal-Abad	8.6	6.3



		Socio-economic vulnera-bility	Vulner-able groups
TJK	Sughd	5.3	3.3
TJK	Dushanbe	5.3	5.0
TJK	Khatlon	5.9	4.7
TJK	GBAO	6.0	7.0
TJK	DRS	5.8	5.3
KGZ	Osh city	5.5	3.9

		Institutional	Infra-struc-ture
TJK	DRS	6.9	5.5
TJK	Khatlon	7.1	5.3
TJK	Sughd	7.0	5.3
TJK	Dushanbe	7.2	4.6
TJK	GBAO	6.6	5.6
KGZ	Jalal-Abad	6.1	5.6



INFORM RISK
SUBNATIONAL
CENTRAL ASIA

HAZARD AND EXPOSURE

This dimension of INFORM measures hazardous events that could occur and the people or assets potentially affected by them. It is made up of two categories – natural hazards and human hazards. These maps show details for the six subnational units in each sub-region with the highest values in the hazard & exposure dimension.

LEGEND

0 | 3.7 | 5.0 | 5.9 | 7.3 | 10.0

Very low | Low | Medium | High | Very high

VULNERABILITY

This dimension of INFORM measures the susceptibility of people to potential hazards. It is made up of two categories – socio-economic vulnerability and vulnerable groups. These maps show details for the six subnational units in each sub-region with the highest values in the vulnerability dimension.

LEGEND

0 | 2.0 | 3.2 | 4.6 | 6.1 | 10.0

Very low | Low | Medium | High | Very high

LACK OF COPING CAPACITY

This dimension of INFORM measures the lack of resources available that can help people cope with hazardous events. It is made up of two categories – institutions and infrastructure. These maps show details for the six subnational units in each sub-region with the highest values in the lack of coping capacity dimension.

LEGEND

0 | 3.9 | 4.7 | 5.8 | 7.0 | 10.0

Very low | Low | Medium | High | Very high

KAZ – Kazakhstan
KGZ – Kyrgyzstan
TJK – Tajikistan
UZB - Uzbekistan
TKM – Turkmenistan

DETAILED RESULTS

COUNTRY	FIRST ADMINISTRATIVE LEVEL	Natural	Human	HAZARD & EXPOSURE	Socio-Economic Vulnerability	Vulnerable Groups	VULNERABILITY	Institutional	Infrastructure	LACK OF COPING CAPACITY	INFORM RISK	RISK CLASS	Rank	Reliability Index (*)
(a-z)	(a-z)	(0-10)	(0-10)	(0-10)	(0-10)	(0-10)	(0-10)	(0-10)	(0-10)	(0-10)	(0-10)	(V.Low-V. High)	(1-83)	(0-10)
Kazakhstan	Akmola	3.5	0.2	2.0	1.6	2.1	1.9	3.4	3.8	3.6	2.4	Very Low	43	0.6
	Aktobe	2.2	0.2	1.3	2.1	2.0	2.1	3.1	4.5	3.8	2.2	Very Low	45	0.6
	Almaty	5.7	0.2	3.4	1.9	2.9	2.4	4.2	3.9	4.1	3.2	Very Low	33	0.6
	Almaty (city)	4.3	2.9	3.6	1.6	2.5	2.1	3.2	2.5	2.9	2.8	Very Low	36	0.9
	Astana (city)	4.3	2.9	3.6	1.6	2.5	2.1	3.2	2.5	2.9	2.8	Very Low	36	0.9
	Atyrau	6.4	0.2	3.9	2.0	2.2	2.1	3.0	4.4	3.7	3.1	Very Low	34	0.9
	East Kazakhstan	2.8	0.2	1.6	1.8	3.2	2.5	3.5	3.8	3.7	2.5	Very Low	42	0.6
	Karaganda	1.8	0.2	1.0	1.9	2.9	2.4	2.5	4.2	3.4	2.0	Very Low	51	0.6
	Kostanai	2.2	0.2	1.3	1.8	2.9	2.4	3.4	4.5	4.0	2.3	Very Low	44	0.9
	Kyzylorda	4.0	0.2	2.3	2.1	2.0	2.1	3.8	4.3	4.1	2.7	Very Low	38	0.9
	Mangistau	2.3	0.2	1.3	1.5	2.3	1.9	3.2	4.2	3.7	2.1	Very Low	50	1.1
	North Kazakhstan	2.1	0.2	1.2	1.8	2.8	2.3	3.0	4.3	3.7	2.2	Very Low	45	0.9
	Pavlodar	2.5	0.2	1.4	1.6	3.0	2.3	2.8	3.7	3.3	2.2	Very Low	45	0.9
	Shymkent (city)	2.8	0.2	1.6	1.8	2.1	2.0	3.7	3.0	3.4	2.2	Very Low	45	2.0
	Turkestan	5.3	0.2	3.1	1.7	3.0	2.4	4.4	3.4	3.9	3.1	Very Low	34	0.9
	West Kazakhstan	4.2	0.2	2.4	1.5	2.2	1.9	3.4	3.9	3.7	2.6	Very Low	40	0.9
	Zhambyl	4.7	0.2	2.7	1.7	1.7	1.7	3.6	3.8	3.7	2.6	Very Low	40	0.9
Kyrgyzstan	Batken	7.0	6.3	6.7	4.6	3.0	3.8	6.3	4.9	5.6	5.2	Medium	10	4.3
	Bishkek (city)	3.9	7.5	6.0	4.1	4.2	4.2	5.5	3.4	4.5	4.8	Medium	14	4.3
	Chui	4.7	6.3	5.6	4.2	3.5	3.9	6.6	4.7	5.7	5.0	Medium	11	4.3
	Issyk-Kul	6.2	6.3	6.3	4.4	2.7	3.6	5.7	5.2	5.5	5.0	Medium	11	4.3
	Jalal-Abad	8.6	6.3	7.6	4.7	2.7	3.8	6.1	5.6	5.9	5.5	High	7	4.3
	Naryn	5.6	6.3	6.0	4.4	4.7	4.6	6.0	5.0	5.5	5.3	High	9	4.3
	Osh	8.2	7.5	7.9	4.4	2.7	3.6	6.0	4.7	5.4	5.4	High	8	4.3
	Osh (city)	6.8	7.5	7.2	5.5	3.9	4.8	6.3	3.5	5.1	5.6	High	6	4.7
	Talas	5.8	6.3	6.1	4.9	2.5	3.8	5.8	5.0	5.4	5.0	Medium	11	4.3
Tajikistan	Districts of Republican Subordination	8.2	6.7	7.5	5.8	5.3	5.6	6.9	5.5	6.3	6.4	High	2	7.5
	Dushanbe (city)	5.1	6.7	6.0	5.3	5.0	5.2	7.2	4.6	6.1	5.8	High	4	7.6
	Mountain Badakhshon Autonomous Region (GBAO)	8.3	6.7	7.6	6.0	7.0	6.5	6.6	5.6	6.1	6.7	High	1	7.5
	Khatlon	8.2	6.7	7.5	5.9	4.7	5.3	7.1	5.3	6.3	6.3	High	3	7.5
	Sughd	7.7	6.7	7.2	5.3	3.3	4.4	7.0	5.3	6.2	5.8	High	4	7.5
Turkmenistan	Ahal	5.0	0.3	3.0	3.4	3.1	3.3	3.5	4.1	3.8	3.4	Very Low	30	4.7
	Ashgabat (city)	2.4	0.3	1.4	2.4	3.0	2.7	3.5	2.4	3.0	2.2	Very Low	45	5.3
	Balkan	5.6	0.3	3.4	2.9	2.8	2.9	3.0	3.9	3.5	3.3	Very Low	31	4.7
	Daşoguz	2.6	0.3	1.5	3.7	2.9	3.3	3.8	4.3	4.1	2.7	Very Low	38	4.7
	Lebap	6.2	0.3	3.8	2.9	1.9	2.4	3.8	4.2	4.0	3.3	Very Low	31	4.7
	Mary	7.4	0.3	4.8	4.4	3.5	4.0	3.9	4.3	4.1	4.3	Low	19	4.7
Uzbekistan	Andizhan	6.4	6.3	6.4	3.3	2.4	2.9	3.5	3.9	3.7	4.1	Low	22	0.6
	Bukhara	5.0	6.3	5.7	2.9	2.4	2.7	3.4	4.7	4.1	4.0	Low	25	0.6
	Fergana	4.8	6.3	5.6	3.0	2.4	2.7	3.6	3.7	3.7	3.8	Low	26	0.9
	Jizzakh	4.6	6.3	5.5	3.0	2.5	2.8	4.0	4.8	4.4	4.1	Low	22	0.6
	Kashkadarya	4.9	6.3	5.6	3.3	2.3	2.8	4.9	5.0	5.0	4.3	Low	19	0.6
	Khorezm	3.0	6.3	4.9	3.1	2.4	2.8	4.8	3.4	4.1	3.8	Low	26	0.9
	Namangan	6.7	6.3	6.5	3.2	2.5	2.9	3.6	4.7	4.2	4.3	Low	19	0.9
	Navoi	4.2	6.3	5.3	2.8	2.3	2.6	2.7	4.6	3.7	3.7	Low	28	0.9
	Republic of Karakalpakstan	6.0	6.3	6.2	3.2	2.7	3.0	4.0	5.4	4.7	4.4	Medium	17	0.6
	Samarkand	5.0	6.3	5.7	3.2	2.6	2.9	3.6	4.6	4.1	4.1	Low	22	0.9
	Surkhandarya	6.6	6.3	6.5	3.6	3.3	3.5	3.6	5.4	4.6	4.7	Medium	15	0.9
	Syrdarya	4.5	6.3	5.5	3.0	5.5	4.4	3.6	4.4	4.0	4.6	Medium	16	0.9
	Tashkent	6.7	6.3	6.5	3.0	2.6	2.8	4.8	4.4	4.6	4.4	Medium	17	0.6
	Tashkent (city)	2.5	6.3	4.7	3.0	2.7	2.9	4.2	2.2	3.3	3.6	Low	29	0.6

(*) Reliability Index: 0 more reliable, 10 less reliable.