

Does Central Asia have water security and energy cooperation?

This report evaluates the state of water security and energy cooperation in Central Asia. It underscores the importance of these issues within the region's foreign policy agendas, given the growing environmental challenges and socio-economic demands.

How vulnerable is autumn water storage over Central Asia?

The terrestrial water storage anomaly (TWSA) of the GRACE satellite mission shows that the autumn terrestrial water storage over Central Asia is more vulnerable than that in other seasons. The autumn TWSA values simulated by the CMIP6 models are larger, and the declining TWS trends are weaker over Central Asia.

Is there a long-term monitoring of lake water storage change in Central Asia?

As most lakes in Central Asia lack in situ monitoring data, and satellite altimetry records are relatively short-term, the continuous long-term monitoring of lake water storage change (LWSC) in Central Asia is inadequate.

Does Central Asia have a regional water management system?

Existing Regional Cooperation Structures. The Interstate Commission for Water Coordination of Central Asia (ICWC), established in 1992, remains central to regional water management. The multilateral commission, which includes all Central Asian countries, coordinates water allocation, especially in times of urgency.

Why do Central Asian countries prioritize water and energy issues?

Central Asian nations are prioritising water and energy issues in their foreign policy agendas because of their impact on regional stability and economic development. Several cooperative frameworks and initiatives are in place to address both immediate needs and long-term sustainability of water and energy resources.

How does water security in Central Asia affect transboundary water bodies?

Changes to the water flow will (literally) have a trickle-down effect that will affect the two countries and the downstream nations, namely Kazakhstan, Uzbekistan, and Turkmenistan. In other words, water security in Central Asia is heavily linked to transboundary water bodies.

This hampers the attribution analysis of lake storage changes. Here, we combined long-term optical remote sensing and multi-source terrain elevation data to derive the monthly storage ...

Spatial variability of terrestrial water storage in Central Asia: (a) is annual spatial variations of total water storage in Central Asia from 2003 to 2013; (b-e) show seasonal spatial variations in ...

The water storage in the mountainous areas of Central Asia as a whole increases in summer and winter,

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whereas it decreases in autumn. The water storage is affected by precipitation to some ...

Abstract The Tienshan Mountains, with its status as "water tower", is the main water source and ecological barrier in Central Asia. The rapid warming affected precipitation amounts and ...

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Abstract Central Asia contains one of the largest internal drainage basins in the world, and its continental location results in limited availability of both surface and ground-water. Since the ...

Here, we combined long-term optical remote sensing and multi-source terrain elevation data to derive the monthly storage time series from 1990 to 2020 for 8544 lakes and reservoirs in ...

Changes in hydrological processes and water resources under climate change in the Tianshan Mountains of Central Asia have been investigated based on data analysis and paper review. ...

The terrestrial water storage anomaly (TWSA) is an important parameter for assessing the land water budget, and it interacts well with terrestrial ecosystems via complex ...

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