

Fact Sheet: Water Conflict Chronology Update

August 22, 2024

The Pacific Institute added 347 new instances of armed conflicts associated with water resources and water systems in 2023 to its [Water Conflict Chronology](#). The update demonstrates a disturbing trend, where access to water is regularly becoming a factor in armed conflicts around the world. The total number of events per year has been increasing rapidly in recent years. This trend is accelerating despite [a 2010 UN Resolution](#) that explicitly recognized the essential human right to water and sanitation. Extreme weather -- including drought and flooding -- due to a changing climate is further straining the water systems around the world.

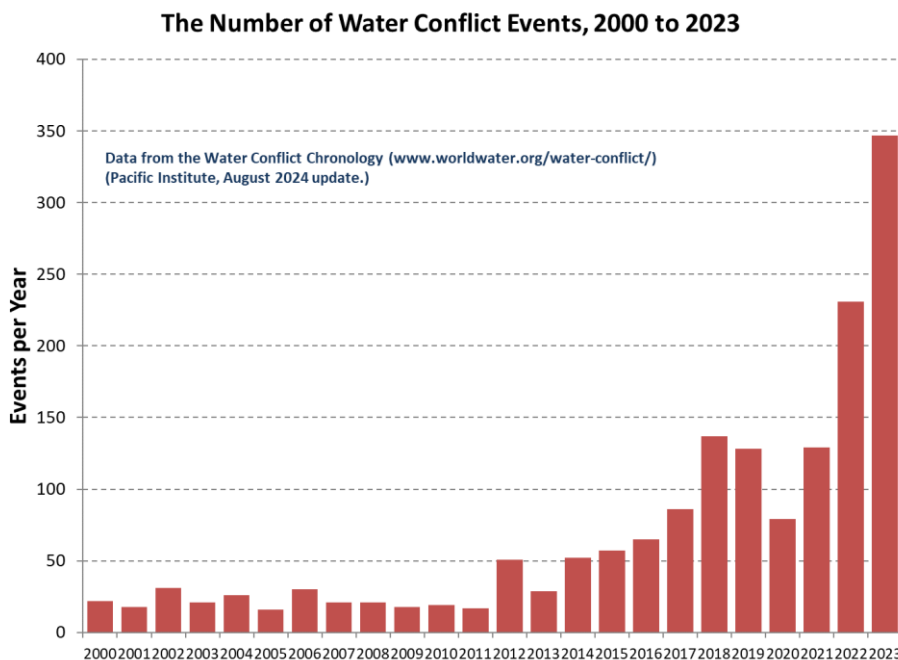


Figure 1: The number of water conflict events per year, from 2000 to 2023. ([Download image](#))

Focused analysis of events from 2000 to 2023 (1649 events representing 86% of entries)

The total number of events per year has been increasing rapidly in recent years. All three categories (trigger, casualty, weapon) are increasing over time, with a sharp uptick year over year over the past decade. 2023 incidents exceeded those of 2022 by 50% (347 events versus 231); and 2022 also showed a major increase over 2021.

The Pacific Institute’s Water Conflict Chronology

The [Water Conflict Chronology](#) is the world’s most comprehensive open-source database on water-related violence. Created by the [Pacific Institute](#) in the 1980s, it includes instances where water and water systems have been a (1) **trigger**; (2) **target or casualty**; or (3) **weapon** of violence. The data set extends back over 4,500 years. Each entry in the Chronology is identified with the date, location, category (trigger, weapon, or casualty), a short description, and a verifying citation or source. The Chronology now includes more than 1,920 cases of violence associated with water resources.

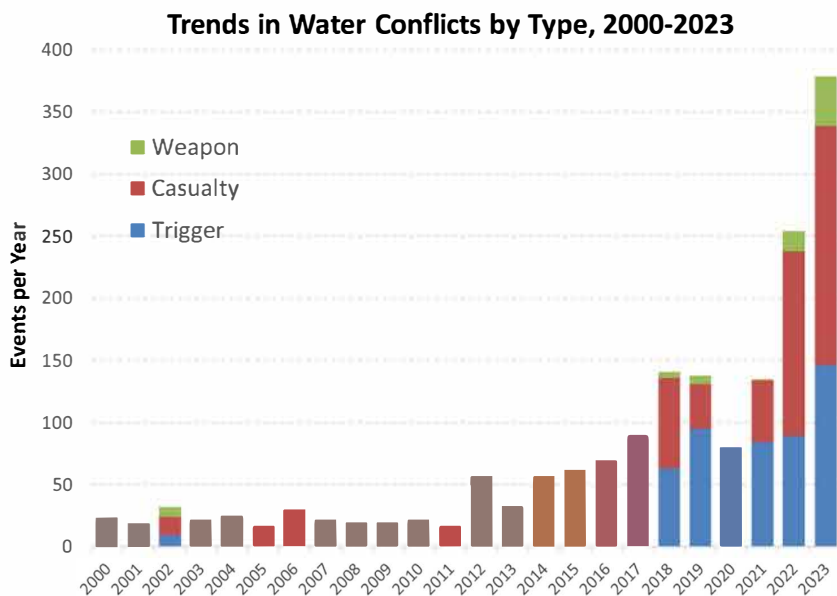


Figure 2: The number of water conflict events from 2000 to 2023, by “type” of conflict (water as a weapon, casualty, or trigger of violence). All categories show increases. ([Download image](#))

Subnational (intrastate) conflicts between farmers and pastoralists in Africa, urban and rural water users, religious groups, and family clans in 2023 (62% of the events) continue to far outnumber interstate events where two or more nations were involved (38% of the events).

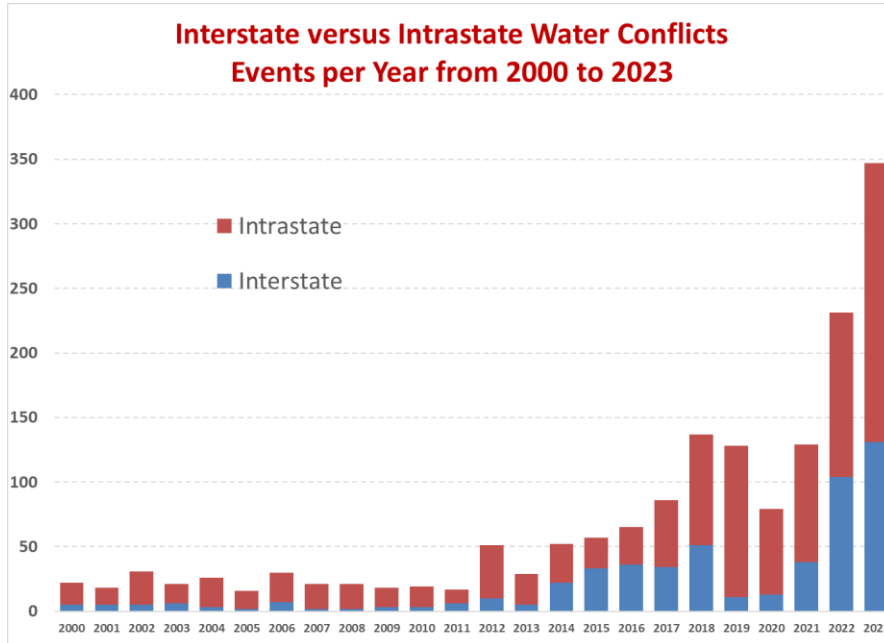


Figure 3: The number of interstate (nation to nation) versus intrastate (subnational) water conflicts, from 2000 to 2023, showing a jump in both categories in recent years. ([Download image](#))

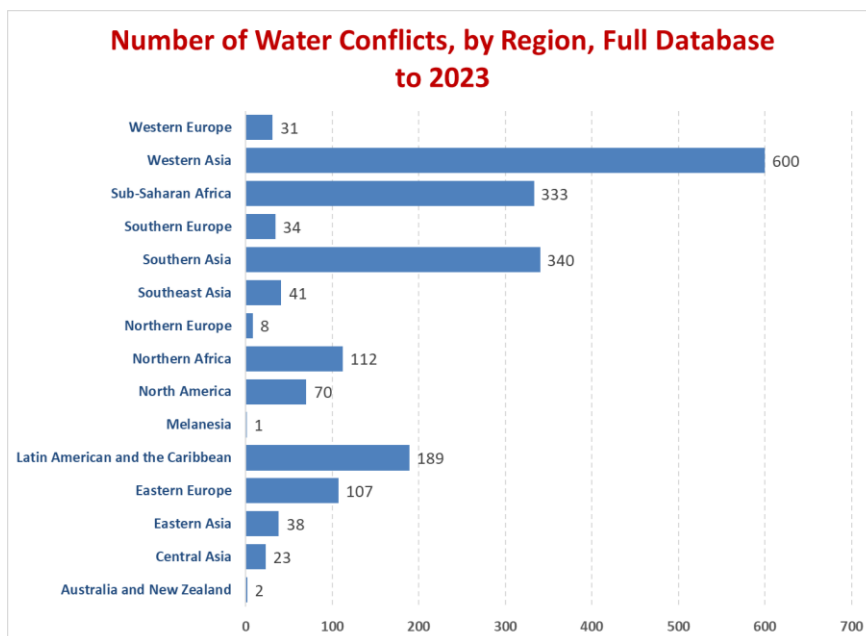


Figure 4: The number of water conflicts by official United Nations regions for the full Water Conflict Chronology database. Violence over water has been most prevalent in Western Asia (the Middle East), Southern Asia, and Sub-Saharan Africa, but events have been reported widely in other regions as well. ([Download image](#))

Water and Conflict in 2023: 347 events

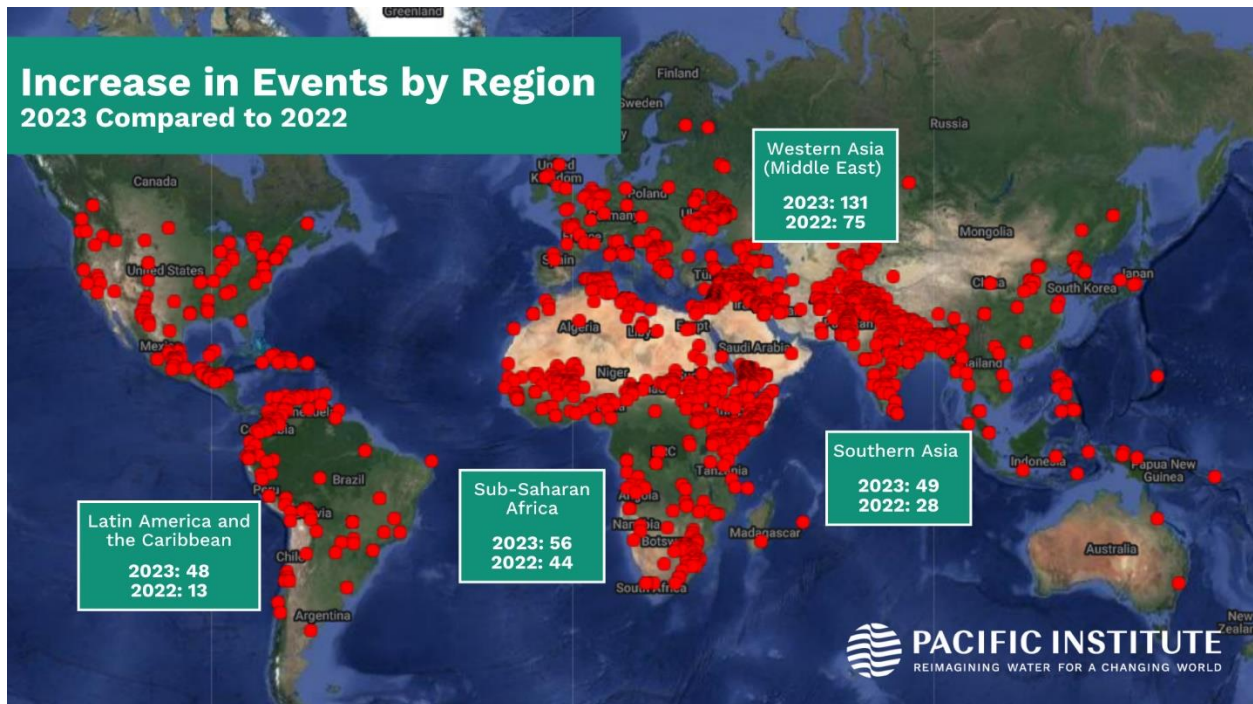
Since 2022, the number of events where water was trigger, casualty or weapon of violence increased to 347 events, up from 231 events in 2022 (a 50% increase over 2022).

Categories: 2023 Data Show Increases in All Categories

- Trigger: 146
- Casualty: 193
- Weapon: 40

Regional information (2023 compared to 2022)

- Latin America and the Caribbean (48 versus 13)
- Southern Asia (49 versus 28)
- Western Asia (131 versus 75)
- Sub-Saharan Africa (56 versus 44)



2023 saw a particular increase of water violence in Israel/Palestine/Lebanon (95 events), India (25 events), Mexico (18 events) and a slight decrease only in Eastern Europe (Ukraine/Russia) (32 in 2023 versus 43 in 2022).

Areas of special regional concern in 2023 include:

- A major jump in violence over water between Israel and Palestine, especially with persistent attacks by Israel on water systems in the West Bank and Gaza;
- A large increase in events in India and Latin America associated with drought and disputes over control and access to water; and
- Continued expansion of violence over access to water and land between clans, pastoralists, farmers, and herders in Sub-Saharan Africa.

A slight decrease in the large number of attacks on water systems in the Russia-Ukraine war were reported in 2023 versus 2022, but the number remains high (32 reported events in 2023 compared to 43 in 2022).

Some Key Examples from 2023

Ukraine and Russia

- The city of Odesa, Ukraine, population 1 million, is temporarily left without water in late January 2023 in one example of widespread Russian attacks on urban energy and water systems.
- The Dnipro hydropower plant near Zaporizhzhia is attacked by Russia in February 2023.
- The massive Kakhovka Dam on the Dnipro River is destroyed on June 6, 2023, presumably by Russian occupying forces, causing massive flooding, more than 50 deaths, and ecological devastation downstream, and cutting off water supply for cities, power plants, and irrigation systems.

Southern Asia

- In late May 2023, violent encounters between Iranian and Afghan forces along their shared border occur related to a water rights dispute on the Helmand River, leading to multiple deaths and injuries.
- In India on November 30, hundreds of police from Andhra Pradesh clash with Telangana state police forces guarding the Nagarjunasagar dam on Krishna River in a long-standing dispute over water sharing and releases of irrigation water.
- Widespread clashes and protests are also reported in a dispute between the Indian states of Karnataka and Tamil Nadu over access to and control of Cauvery river water. In mob and caste violence

several people assault and kill a man from the Dalit community in Uttar Pradesh, India for using a public tap to drink water.

- In Uttar Pradesh, violence over access to irrigation water and water infrastructure leads to several deaths. Numerous reports of violence over access to irrigation water are reported in Pakistan.
- In June, Jakhrani tribal members in the Kashmir district, Pakistan clash over water sharing for agricultural lands, resulting in one death and 14 injuries.

France

- In late March 2023, as many as 200 protesters and 50 police officers sustain injuries in a battle in Sainte-Soline, France to stop the construction of giant water "basins" to irrigate crops. Protesters throw projectiles including improvised explosives; police respond with tear gas, water cannons, and rubber bullets.

Northern and Sub-Saharan Africa

- Widespread protests in many regions of South Africa, Ethiopia, and elsewhere in sub-Saharan Africa over lack of access to safe water and sanitation are reported throughout 2023, with numerous deaths and injuries.
- In February 2023, residents in Gauteng, South Africa barricade roads with burning tires, rocks, and debris to protest water and electricity shortages and one man is fatally shot.
- In May, three protestors demanding water supply clash with local authorities in KwaZulu-Natal, South Africa and are shot and hospitalized.
- Rival ethnic groups engage in violent confrontations in North Kordofan, Sudan due to a conflict over access to water resources.
- Ethnic militias and clans in Somalia, Ethiopia, Burkina Faso, Mali, and elsewhere fight throughout the region over access to drinking water and grazing land, resulting in hundreds of deaths and injuries and the destruction of water wells and infrastructure.
- In Cameroon and Chad, Boko Haram and Islamic State West Africa Province militants launch attacks on fishing communities as part of longstanding land and water disputes, abducting around 25 people and killing at least seven. Thousands flee water-related violence in the region.

Middle East/Western Asia

- Widespread and repeated attacks are reported throughout 2023 on West Bank Palestinian water systems, irrigation, and agricultural land by Israeli settlers and military. These attacks expand after the October attack on Israel by Hamas.
- On October 9, 2023, Israel threatens a complete cutoff of water to Gaza. Israeli Defense Minister Yoav Gallant says that “no electricity, no food, no water, no fuel” would be allowed into Gaza. By mid-October, Gaza’s last remaining seawater desalination plant shuts down due to lack of fuel as do all of Gaza’s wastewater treatment plants. Water supply from Israel to southern Gaza comes to a halt on 30 October and for some time no water is provided to Gaza from Israel.
- Iranian schoolgirls are targeted in a spate of poisoning attacks on school water systems. In Qom on February 14, 2023 more than 100 students from 13 schools were taken to hospitals after what the state-affiliated Tasnim news agency described as “serial poisonings.”
- In July, residents in Divandarreh, Iran protest drinking water outages and clash with police.

North America

- In November 2023, an Iranian-linked group, "Cyber Avengers," targets multiple U.S. water-providing organizations, including a small Pennsylvania town's water provider.

Latin America and the Caribbean

- In Bolivar, Colombia, residents block a highway in response to a ten-day water service outage. Colombian National Police riot control forces fire their guns and use tear gas to disperse protesters, resulting in injuries to four demonstrators.
- On World Water Day, March 23, 2023, around 100 people march in Merida, Mexico to demand improved water services and clash with police, leading to injuries and arrests.
- In Guapinol, Colon, Honduras unidentified armed men shoot and kill a water defender, after killing the brother of another environmental activist earlier in the year. A few months later, another Honduran environmentalist who advocated for water rights and opposed a hydroelectric project on the Mezapa River is killed.

- In September, borders between Haiti and the Dominican Republic are closed and military are deployed, in a dispute between the two countries over a Haitian canal project on the Massacre River.
- In Brazil, Indigenous people block access to a dam in Jose Boiteux (Santa Catarina), Brazil by setting obstacles on fire to protest the closing of the dam over concerns it would flood part of their Indigenous reserve. Military police use tear gas bombs and rubber bullets to disperse the demonstrators, injuring two.