



Conflict Factsheet

Water Scarcity in Northern China

Type of conflict
Main

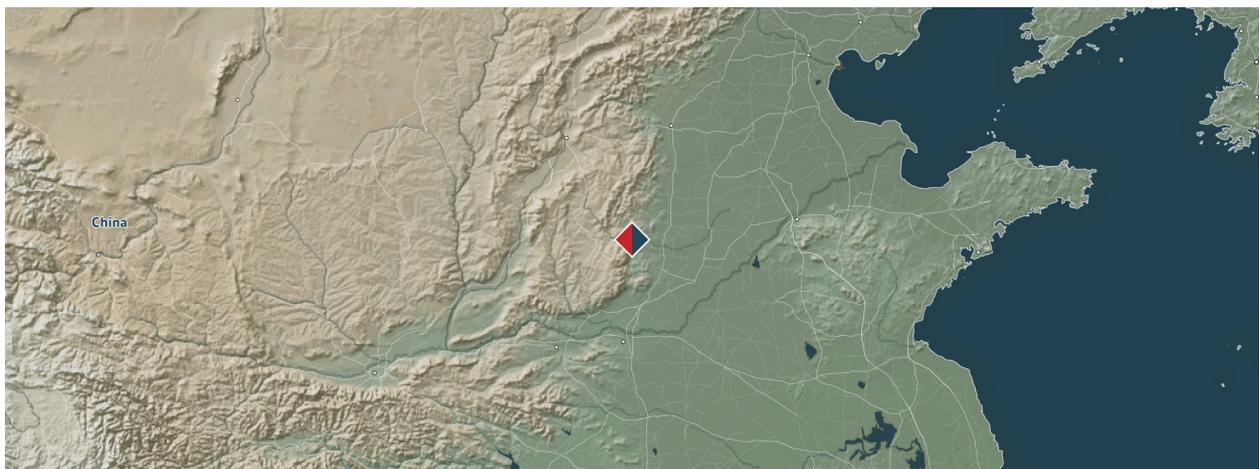
Intensity
1

Conflict Locality
Eastern Asia

Time
1980 –ongoing

Countries
China

Resources
Biodiversity, Agricultural / Pastoral Land, Water

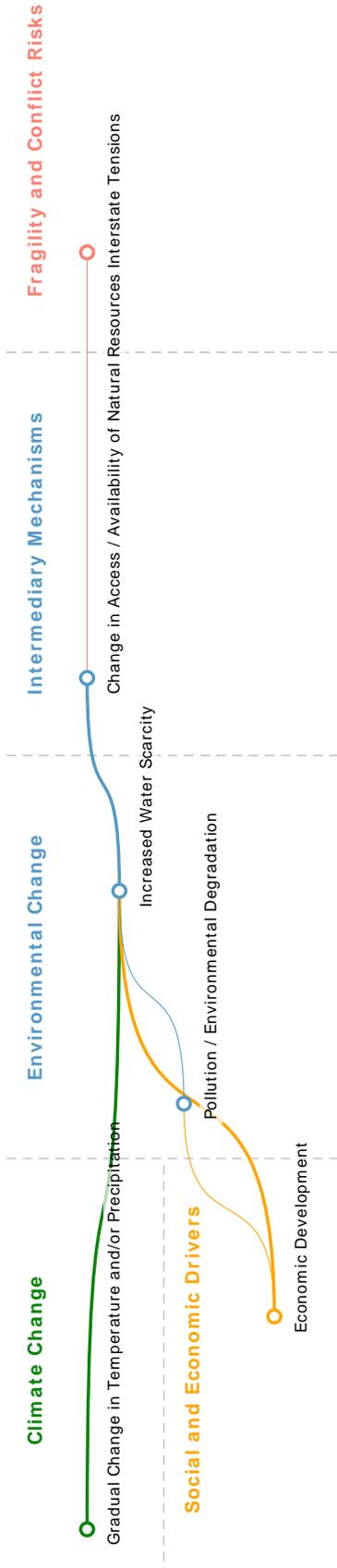


Conflict Summary

Water scarcity has become an increasingly severe issue in northern China. Over-withdrawal of surface water and groundwater for industry, farmland and domestic consumption has led to decreasing water levels, ground subsidence, salinity intrusion, and ecosystem deterioration. Climate change, which has already induced a measurable impact on China's drought cycle and precipitation rate, is intensifying an already fragile situation. Water scarcity is perceived to be a security threat by the Chinese central government and, against a backdrop of increasing environmental awareness and localised activism in China, has the potential to induce social unrest.



Conceptual Model



Context Factors



Biodiversity, Agricultural / Pastoral Land, Water





Conflict History

Since the 1980s, China has faced water shortages of increasing magnitude and frequency for urban industry, domestic consumption and irrigated agriculture. Per capita water resources in China are just over 25% of the world average and, further complicating the issue, these resources are extremely unevenly distributed. Whilst southern China has an abundance of water and receives roughly 80% of the country's total precipitation, northern China, which comprises approximately 40% of the country's total population, 50% of its GDP and half its agricultural land, receives a mere 12% of total precipitation ([Council on Foreign Relations, 2013](#)). Limited precipitation in the north, coupled with human over-exploitation of existing resources and the effects of global climate change have led to decreasing water levels and desertification. According to the 2030 Water Resources Group, if China continues on with 'business as usual' in relation to current water usage, the supply of water will not be able to meet the demand for water by 2030. The predicted shortage, in this scenario, would be [at least 200bn cubic metres \(The 2030 Water Resources Group, 2009, p. 10\)](#).

Increasing Environmental Awareness in China

Against this backdrop, there has been increasing environmental awareness and activism in China. In 2013, the environment surpassed land expropriation as the leading cause of social unrest in the country ([Council on Foreign Relations, 2013](#)). This environmental activism has tended to focus on more visible and localised environmental polluters, for instance, within the immediate vicinities of proposed industrial plants. In 2013, for example, a thousand people protested in the streets of the Songjiang district in Shanghai against a proposed lithium battery factory amid concerns about water and air pollution. In the same year, over a thousand protesters took to the streets in the southern city of Kunming to voice concerns over the environmental impacts of a planned chemical refinery by China National Petroleum Corporation ([Duggan, 2013](#)). Although these protests have not directly addressed the issue of water scarcity in China, the situation is volatile and therein lies the potential for future social unrest. In an earlier instance recounted by David Pietz, armed villagers had clashed over water at the border between Hebei and Henan provinces in 1992 ([Pietz, 2015](#)).

Climate Change Intensifying the Situation

Climate change is continuing to exasperate a shortage of water in northern China. According to the Intergovernmental Panel on Climate (IPCC)'s Fourth Assessment Report, rainfall is expected to decrease in the north of China and increase in the south. The IPCC's Fifth Assessment Report, issued in 2013, predicts threats to both water and food security, including a reduction in grain yields ([Tiezzi, 2014](#)). The summer following these saw groundwater levels in northern China hit historic lows, forcing some agricultural provinces, including the province of Henan, to introduce emergency measures as reservoirs grew dry ([Chang, 2014](#)). Additionally, the northern province of Liaoning, a region known to be the 'bread basket' of China because of high corn production, experienced its worst drought in 63 years ([Larson, 2014](#)).

Global Implications

Water scarcity in northern China also has global implications. As water is increasingly diverted from the south to the north and more water projects are constructed, the water supplies of neighbouring countries, including Vietnam, Laos, Cambodia, India, Thailand and Bangladesh will most certainly be affected. Indeed,



in order to resolve the water scarcity in northern China, the Chinese central government has embarked on a vast engineering project: the South-North Water Transfer Project, a 2400km network of canals and tunnels designed to divert 44.8bn cubic metres of water annually to China's northern regions ([Kaiman, 2014](#); see [South-North Water Transfer Project in China](#)). However, the implications of the net water loss to the south of China and neighbouring countries remain unclear.

Resolution Efforts

Although water scarcity has not catalysed conflict or social unrest as such, it does possess potential triggers for social unrest in the future. Due to this, and against the backdrop of increasing environmental awareness within China, water scarcity now features predominantly within Chinese domestic politics. Indeed, in recognition of the continuing threat of water scarcity, the Chinese central government elevated water to top of the agenda in 2011, displacing agriculture which had previously held the top position. The Chinese central government has also introduced water efficiency targets and national water usage caps by 2015, 2020 and 2030 respectively ([China Water Risk, 2011](#)), the results of which remain to be seen.

The [South-North Water Transfer Project](#), although a highly visible attempt to mitigate water scarcity in the north, has been criticised by prominent scientists and environmentalists who have argued that the diversion poses potentially serious ecological consequences, including salt-water intrusion and habitat destruction ([Freeman, 2010](#)). The knock-on implications for water reserves in the south and China's neighbours are, as yet, still unknown.



Intensities & Influences

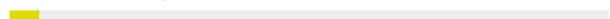


INTENSITIES

International / Geopolitical Intensity

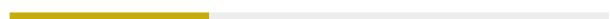


Human Suffering

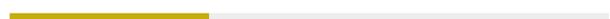


INFLUENCES

Environmental Influences



Societal Influences



Violent Conflict

No



Salience with nation

National



Mass displacement

Less than 100.000 and less than 10% of the country's population are displaced within the country.



Cross Border Mass Displacement

No



Resolution Success

Resolve of displacement problems

Displacement continues to cause discontent and/or other problems.



Reduction in geographical scope

There has been no reduction in geographical scope.



Increased capacity to address grievance in the future

There is no increased capacity to address grievances in the future.



Grievance Resolution

Grievances have been partially addressed.



Causal Attribution of Decrease in Conflict Intensity

There has been no reduction in intensity





Entry Points for Resilience and Peace Building

Improving infrastructure & services 3

The Chinese government has set in motion the South-North Water Transfer Project in an attempt to mitigate water scarcity in the north. However, the project has been highly criticized for its potentially serious ecological consequences.

Improving resource efficiency 2

The Chinese central government has elevated water to the top of its agenda and introduced water efficiency targets and national water usage caps by 2015, 2020 and 2030 respectively.

Resources and Materials

Conflict References

[South-North Water Transfer Project in China](#)

References with URL

[Chang, J., \(2014\). Drought worsens China's Long-term Water Crisis](#)

[China Water Risks \(2015\). China Water Crisis](#)

[Council on Foreign Relations \(2013\). China's Water Challenge. Implications for U.S. Rebalance to Asia](#)

[Duggan, J. \(2013\). Kunming pollution protest is tip of rising Chinese environmental activism](#)

[Freeman, C. \(2010\). Quenching the Dragon's Thirst. The South- North Water Project. Old Plumbing for new China.](#)

[Kaiman, J. \(2014\). China's water diversion project starts to flow to Beijing](#)

[Larson, C. \(2014\). Severe Drought In China's Northern Bread Basket Threatens Harvests](#)

[Tiezzi, S. \(2014\). In China, Climate Change Is Already Here](#)

[Pietz, D. \(2015\). How History Shaped China's Water Crisis. The Diplomat, September 3, 2015](#)

Further information

<https://factbook.ecc-platform.org/conflicts/water-scarcity-northern-china>