Water Diplomacy

Proactive peace mediation

Introduction: Water Diplomacy and Finland

Water and related natural resources are crucial for human development and have therefore also strong connection to security[1]. While natural resources link in particular to environmental, economic and societal security, the effects of climate change and increasing resource scarcities highlight also the political and military aspects of security, both within and between countries[2].

Water is the only natural resource that crosses administrative boundaries in a concrete and easily measurable manner. While the use of shared water resources can create tensions between countries, water cooperation and water diplomacy have often not been linked with wider security discussion. On the other hand, the importance of water for development is well acknowledged, and for example the Sustainable Development Goals (SDGs) emphasise the importance of Integrated Water Resources Management (IWRM), also in shared waters[3]. Water should therefore not only be seen as a cause for conflict, but first and foremost as a source for cooperation[4]. Shared water resources and their joint economic, social and political benefits can form the cornerstone for regional cooperation between countries, promoting peace and security.

The concept of water diplomacy links water and its management with foreign policy and peace mediation at different scales. In this way, water diplomacy represents proactive peace mediation and conflict resolution and complements on-going efforts on both water cooperation and regional cooperation. The concept of water diplomacy has gained increasing attention during the past years both internationally and in the EU, with the Council of European Union publishing the Council Conclusions on Water Diplomacy in November 2018[5].

The EU Council conclusions call for increased attention for water diplomacy: "*The Council resolves to enhance EU diplomatic engagement on water, as a tool for peace, security and stability. EU water diplomacy must aim at facilitating the prevention, containment and resolution of conflicts, contributing to the equitable, sustainable and integrated management of water resources from source to sea, and promoting resilience to climate change impacts on water. Cooperation on water must be harnessed to promote regional integration, and address political instability*"[5]. While emphasising the importance of water diplomacy, the conclusions do not actually define what water diplomacy is or how water diplomacy could be systematically promoted.

This brief summarises the report "*Vesidiplomatia - ennakoivaa rauhanvälitystoimintaa*" [1] that was put together by a multidisciplinary team of researchers from Aalto University (Erik Salminen & Marko Keskinen) and the University of Eastern Finland (Tuula Honkonen & Antti Belinskij) for the Ministry of Foreign Affairs of Finland (MFA).

The Brief provides a definition for water diplomacy and presents a framework for its analysis. The framework was also tested in two case study areas: Central Asia and Iraq. However, due to time and resource constraints the case studies build on general literature review and limited number of expert interviews: they should therefore be seen as illustrative only, as their aim was just to test the developed analytical framework.

While the water diplomacy analysis presented in this brief is new, it builds on long-term Finnish expertise in crisis management and peace mediation as well as in international water cooperation. In this way, it brings together two thematic areas that Finland is internationally well-known of. This analysis supports also Finland's International Water Strategy "Finnish Water Way", which was updated in 2018. The strategy contains three main pillars: water for sustainable development water; water for people; and water for peace. This analysis supports in particular the third pillar that also includes water diplomacy as one of its themes.

Defining Water Diplomacy

We define water diplomacy as a means to prevent and mitigate water-related political tensions by making simultaneous use of water know-how and diplomatic tools and mechanisms. In this way, water diplomacy complements water cooperation through its focus on the 'political' and acknowledgement of the differing interests of relevant actors. Water diplomacy therefore combines key aspects of foreign and security policy with development policy and peace mediation, with focus on water and related resources under changing climate.

A well-coordinated water diplomacy approach prevents and mitigates both internal and external conflicts by building capacity, understanding and networks between different actors in a structured manner. It can be used to identify solutions to water-related conflict situations through combined use of technical and diplomatic tools. In this way the suggested approach for water diplomacy also contributes for the achievement of EU Council Conclusions on water diplomacy[5].

Water diplomacy can –similarly to water resources management and water cooperation– deal with various water uses, ranging from agriculture and food production to industry and households. Additionally, hydropower production is often a critical part of water diplomacy due to its remarkable transboundary impacts [e.g. 6]. Water-related tensions originate from different sources, with differences in water demand needs being typically particularly critical. Growing water scarcity and the effects of climate change on the temporal and spatial water availability heighten these tensions even further[7].

While water diplomacy is often seen synonymous to water cooperation, we see them in this brief and related report as different but closely connected and complementary concepts[1,4]. For us the main difference is that while water cooperation typically builds upon the assumption of shared objectives and mutual interests, water diplomacy concentrates on the 'political' related to water and its use, and therefore takes potential tensions and even conflicts as given and expected. For this reason, water diplomacy also makes active use of both diplomatic tools and mechanisms as well as of more technical approaches related to e.g. water-related impact assessment and modelling.

In our analysis, we look at water diplomacy through two complementary viewpoints: from the viewpoint of water ("bringing water into politics") and from the viewpoint of politics and diplomacy ("bringing politics into water"). In an optimal situation, water diplomacy actions lead to a collaborative process where diplomats and foreign policy experts gain enhanced understanding on water-related issues, and water experts learn more about geopolitical realities as well about as the tools that diplomacy and peace mediation can offer also for water field.

Four scales of water diplomacy were identified in the report[1]:

- Regional (several countries and rivers)
- Transboundary water (such as a transboundary river shared by several riparian countries)
- Bilateral (two countries and one or more shared water)
- National (different uses of water and one or more water bodies)

Depending on the scale and context, water diplomacy can have different objectives and actors. The most common level of water diplomacy is usually a single transboundary water body shared between two or more countries, where also a cooperative institution might be present. In addition, all four scales have links to the global scale through international water conventions as well as global value chains.

Legal and institutional frameworks

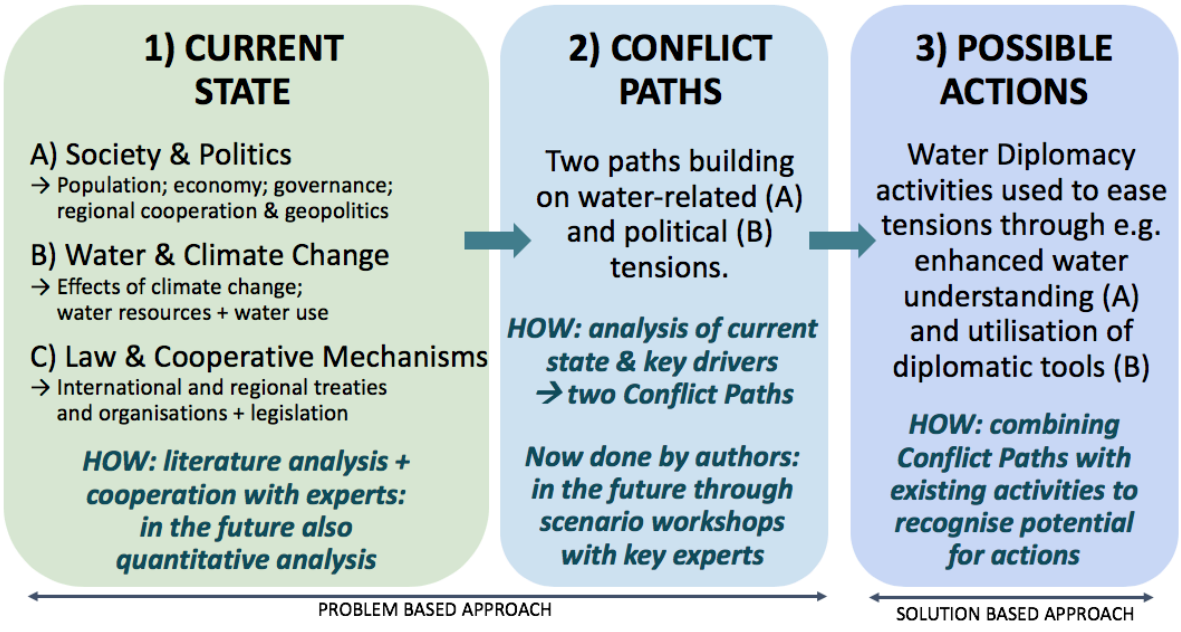
Several different legal and institutional frameworks support water diplomacy, ranging from regional and national organisations such as ministries and river basin organisations to different laws and agreements. In this brief, we focus on international water conventions, as they form a legal framework for both bilateral and regional water cooperation and are reflected also at the national level. Two key international water treaties were both initiated and actively supported by Finland: the UNECE Convention on the Protection and Use of Transboundary Watercourses and International Waters (1992) and the UN Convention on the Law of the Non-Navigational Uses of International Watercourses (1997).

The UNECE convention was signed in 1992 in Helsinki, Finland and entered into force in 1996. Its main contents relate to preventing, mitigating and controlling transboundary water problems. While its geographic focus was originally on UNECE region, it was in 2016 opened for all UN Member States. The UN convention was adopted in 1997 and it entered finally into force in 2014.

The two water conventions contain three key principles of international water law: equitable and reasonable use, the avoidance of significant harm, and the prior notification of works. These key principles can be seen to guide also the countries that have not signed the conventions themselves. At the same time, however, the conventions provide just general framework for water cooperation, and its actual enforcement and implementation happen through bilateral and regional treaties and organisations as well as national legislation.

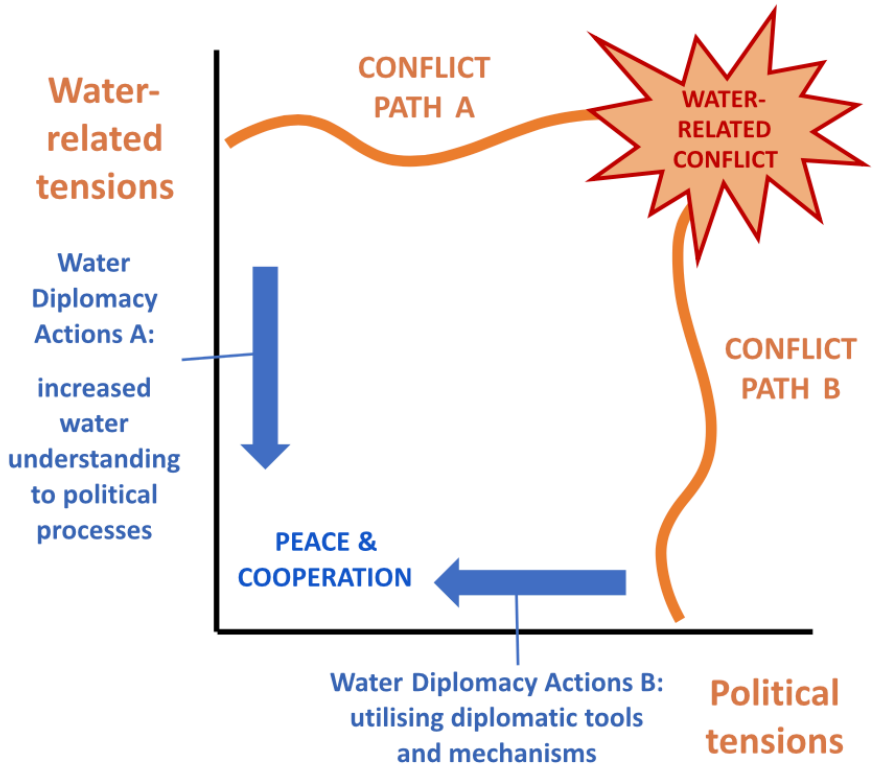
Establishing an Analytical Framework

While water diplomacy in its different forms has been discussed and studied in the past [e.g. 4,8–14], there has so far been only limited amount of practical approaches for its analysis. We thus developed a three-step analytical framework for water diplomacy and tested it in two case study areas. It is important to notice that due to time and resource constraints, the two case study analyses were conducted by the authors and built therefore on a limited, English-language literature review. In possible future analyses, close cooperation with the relevant organisations and local actors would be needed to ensure that all relevant expertise is utilised: in ideal situation this would also include co-learning e.g. with the help of co-writing and scenario workshops.



The analytical framework aims to identify opportunities for water diplomacy with the help of a three-step process. First, the current state of the case study area is analysed in terms of three key themes: society and politics; water and climate change; and law and cooperative mechanisms (1st step). Then, two undesirable Conflict Paths until year 2030 are created, making use of the current state analysis and selected regional drivers (2nd step). Finally, the information created in first two steps is used to identify possible water diplomacy actions that can be used to prevent and mitigate potential water-related conflicts (3rd step).

The logic of establishing the Conflict Paths and related water diplomacy actions is presented in the figure on right. In Conflict Path A, water conflict escalates through water-related tensions (i.e. water getting to politics), while in Conflict Path B the political tensions make also water use political. Similarly, water diplomacy actions are then either water-related i.e. linked to increased water understanding (A) or diplomacy-related i.e. utilisation of diplomatic tools and mechanisms also in water cooperation (B). Together these actions form a possible water diplomacy strategy for the case study regions.



The structure for the analytical framework was inspired partly by a *multiple plausible futures* approach that creates alternative scenarios with the help of *predictive, explorative and normative methods* [15]. These methods can also be linked with the three steps in the analytical framework: 1) Predictive method: current state and megatrend analyses (*what will happen?*), 2) Explorative method: conflict paths (*what could happen*?), and 3) Normative method: possible actions (*how can a specific target be met?*).

Case Study: Central Asia

The first water diplomacy case study had a regional focus, with Central Asia (CA) as focus area. This brief provides just a short summary of our full case study analysis presented in the report[1].

The region is located on the crossroads of the ancient silk road and consists of five former Soviet Socialist Republics: Kazakhstan, the Kyrgyz Republic, Tadzhikistan, Turkmenistan and Uzbekistan.

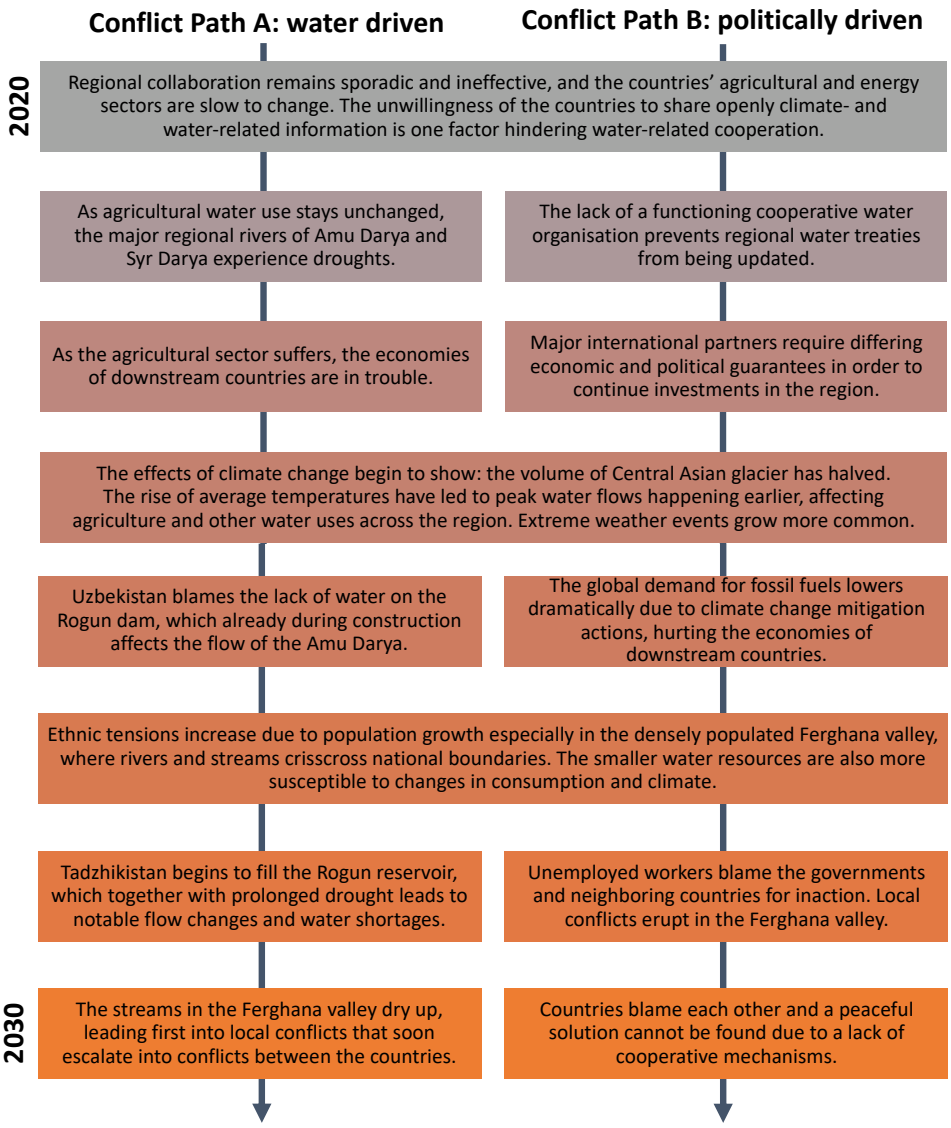
The objective of the regional water diplomacy analysis in Central Asia was to identify the opportunities of water diplomacy for proactive peace mediation in Central Asia through three steps: analysis of the current state; potential conflict paths; and possible water diplomacy actions.

Current State: Central Asia [16–22]

Society and Politics	Water and Climate Change	Law and Cooperation
The population of CA is divided unevenly due to harsh climate conditions and uneven water availability. Fergana valley is the population center of the region.	The Amu Darya and Syr Darya river basins contain 37 % of the area and 80 % of the population of CA. There are numerous small but geopolitically meaningful rivers, which transcend national borders.	Only a few of the Central Asian countries have signed international water treaties. Especially the upstream countries are wary of the treaties.
The economies are based on agriculture, industry and mining. Natural resources (especially fossil fuels) are unevenly distributed between the downstream and upstream countries.	Upstream countries have substantial hydropower potential. Dam projects and their effects are crucial to the stability and security of the region (e.g. Rogun Dam).	Several regional water treaties have been signed, but many of them are outdated or act more as declarations. Some mechanisms have proven to be functional.
All the Central Asian countries have been classified as fragile. The security situation is aggravated by illegal drug trade, human trafficking, extremism and the nearby Afghan war (Fragile States Index).	Water intensive agriculture is prevalent throughout the region. Practices such as cotton production have led to the drying of the Aral Sea as well as extensive soil degradation and salinisation.	On a national level, the Kyrgyz water law regards water as an economic commodity, which means that other nations need to compensate for their share of water flowing downstream.
Central Asia is located in a geopolitically important intersection, with differing interest from China, Russia and USA. China's Belt and Road Initiative has been of regional importance lately.	Due to climate change, the crucial glaciers of the region are in danger of melting, which could endanger water availability and food security throughout the region.	There is a clear need for a trusted and efficient regional organisation, which specialises on water cooperation and management.

Conflict Paths: Central Asia

Formulating the Conflict Paths for the case study areas built on the analysis of current state, complemented with relevant key trends and drivers. It should be noted, however, that both Conflict Paths are intended to describe an undesirable and even unlikely chain of events that could ultimately lead to a water-related conflict in the case study area. For more, see the full report[1].



One relevant future driver in Central Asia will be climate change, as its impacts are expected to be severe in the region. Dry periods are estimated to become longer, seasonal rainfall more erratic, extreme weather events more frequent and the mean temperature in the whole region will rise. The average temperature of Central Asia has risen by 0.5°C during the last three decades and is expected to rise between 2.0°C to 5.7°C by 2085 [17]. The glaciers, which work as a carbon sink will be affected the most with a quarter of the glacial volume having disappeared already since the 1950s and another quarter expected to disappear by 2025. Seasonal water availability spikes will happen earlier due to climate change, which has a detrimental effect on the agriculture of the downstream countries.

The current population of Central Asia is around 73 million, and it is growing at an annual rate of 1.4 %: projected population in the area will thus be around 82 million in 2030 and 94 million in 2050. The growth is significant when taking into account the uneven population density in CA. In 2019, 39.1 % of the people lived in cities, which is expected to rise to 41.5 % in 2030 and 49.2 % in 2050.

The key elements of Conflict Paths for Central Asia are illustrated in the diagram above. Building on our analytical framework, the two paths were built through water-related tensions (A) and political tensions related to geopolitics and a lack of regional cooperation (B). Given the importance of climate change as key driver in the region, both paths are influenced by climate change. The timeframe for both Conflict Paths is until 2030.

Possible Water Diplomacy Actions: Central Asia

The third and final step in the analytical framework is the recognition of possible water diplomacy actions. In accordance with the Conflict Paths, the actions are also divided into water-related actions (A) as well as into policy- and diplomacy-related actions (B), and they build partly on already on-going activities in the region. It must be noted, however, that the recognised actions are indicative only, as they provide just the authors' view building on the current state analysis and the defined Conflict Paths. In actual water diplomacy analysis, recognition of such actions should be done in close collaboration with key international, regional and national actors working on the region.

Open access to climate change-related data (A)

Climate change related data in the Central Asian countries is currently not entirely open due to national security concerns. Given the importance of climate change as key driver for water management in the region, a neutral and open database for detailed climate change data -including its estimated impacts to water resources- could enhance understanding of water-related pressures in the region.

Revitalising and revising regional water treaties (A)

While Central Asia has some existing water treaties, they are partly outdated and/or not functioning very well. Current treaties also focus on only certain aspects of water use and management, such as regulating water use for agricultural needs. As a longer-term water diplomacy action, it would therefore be crucial that existing water treaties are first of all revitalised i.e. returned to use and also revised so that they take the different water uses and users equally into consideration, building on the general principles provided by international water conventions.

Improved water efficiency (A)

Agriculture in Central Asia is water intensive, meaning that improvements in water efficiency could bring benefits to the entire region, including both bigger and smaller transboundary water bodies. This process can be supported by international partners, including Finland and the EU.

Joint regional organisation for natural disaster forecasting and relief (B)

One possible way forward in terms of more general regional cooperation would be an establishment of joint regional organisation for disaster forecasting and relief. This could be beneficial for local populations, particularly in highly populated the Fergana valley, and could thus enhance collaboration both at local and national scales.

Enhanced economic cooperation (B)

Central Asian countries have a remarkable potential to diversify their economies and enhance their economic cooperation in the region due to the populations' relatively high education level, remarkable natural resources and important geopolitical situation.

Case Study: Iraq

The second water diplomacy case study had national scale focus, with Iraq as the actual case. This brief provides just a short summary of our full case study analysis presented in the actual report.

Iraq is situated in the area historically known as the *fertile crescent* between and around the Euphrates and Tigris rivers. The recent history of Iraq is plagued by both internal and external conflicts. The objective of this national (and bilateral) analysis was to identify the opportunities of water diplomacy for proactive peace mediation in Iraq, through three steps: current state analysis, potential conflict paths and possible actions.

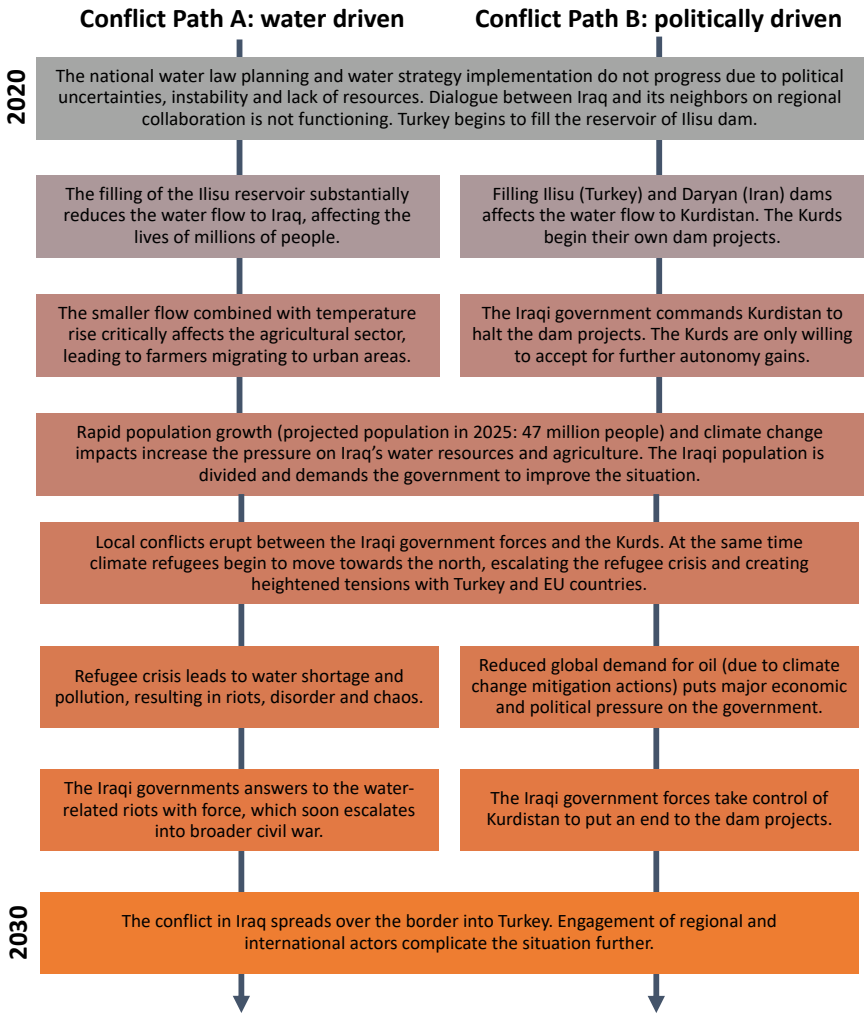
Current State: Iraq [23–25]

Society and Politics	Water and Climate Change	Law and Cooperation
The median age of Iraqi citizens is approximately 20 years and the annual population growth is 3 %. 70 % of the population lives in urban areas.	Iraq is completely dependent on the water resources of its neighbours. The sources of both the Euphrates and Tigris are located in Turkey.	Iraq has signed or is on the verge of signing international water treaties. Many of the principles of the treaties are already binding as customary law norms.
Iraqi economy is extremely dependent on oil exports (over 90 % of national income). Agriculture constitutes about 25 % of national livelihoods.	Iraqi water resources are highly vulnerable to agricultural effects, upstream dam projects and climate change.	The treaties signed by Iraq are bilateral. They do not cover the overall management of the Euphrates and Tigris rivers.
Recently, the security situation has been aggravated by extremist organisations, such as ISIS, which at the top of its power held over a third of the country.	Turkey completed the Ilisu dam on the Tigris in 2018. If the filling of the dam begins, it could lower the flow of water from Tigris to Iraq by up to 60 %.	Water management is covered in the Iraqi constitution, but a national water law is still waiting ratification.
Corruption is widespread, and the principles of good governance are not achieved (Transparency International). USA still has troops stationed in Iraq.	Iraq lacks a national water management plan and does not have funds to execute its water resource strategy.	There are currently no actively working river basin organisations in the Euphrates or Tigris.

Conflict Paths: Iraq

Formulating the Conflict Paths for the case study areas built on the analysis of current state, complemented with relevant key trends and drivers. It should be noted, however, that both Conflict Paths are intended to describe an undesirable and even unlikely chain of events that could ultimately lead to a water-related conflict in the case study area. For more, see the full report[1].

One major future driver in relation to water in Iraq is climate change. It is estimated that precipitation will decrease by 9 %, while the average temperature will rise by 2 °C by 2050 [23]. Heat waves, sand storms and desertification will increase, with dire consequences on the water resources and agricultural sector.



The potential future water scarcity in Iraq was analysed with the help of Aalto University's Water Scarcity Atlas[7]. Its findings indicate that by improving the water efficiency of agricultural methods, it is possible to substantially decrease the population living in water scarce areas.

The current population of Iraq is around 39 million, but it is rising rapidly. According to UN Population Division, the population of Iraq is expected to reach 53 million people by 2030 and over 81 million people by 2050). Urbanisation in Iraq is at 70% very high and might further increase due to climate change and other factors.

The key elements of Conflict Paths for Iraq are illustrated in the diagram above. Building on our analytical framework, the two paths were built through water-related tensions (A) and political tensions related to geopolitics and a lack of regional cooperation (B). Given the importance of climate change as key driver in the region, both paths are influenced heavily by climate change. The timeframe for both Conflict Paths is until 2030.

Possible Water Diplomacy Actions: Iraq

The third and final step in the analytical framework is the recognition of possible water diplomacy actions. In accordance with the Conflict Paths, the actions are also divided into water-related actions (A) as well as into policy- and diplomacy-related actions (B), and they build partly on already on-going activities in the region. It must be noted, however, that the recognised actions are indicative only, as they provide just the authors' view building on the current state analysis and the defined Conflict Paths. In actual water diplomacy analysis, recognition of such actions should be done in close collaboration with key international, regional and national actors working on the region.

Monitoring climate-related risks (A)

Iraq's water resources are expected to be significantly impacted by climate change, and climate change will also affect the water resources in other countries -such as Turkey and Syria- in the region. As a result, systematic and open database for climate change and its estimated impacts would benefit water resources management both nationally and regionally.

Enhancing active water cooperation through dialogue (A)

Establishing active water cooperation between Iraq and its neighbours can be seen as a priority in terms of water cooperation and water diplomacy. A possible first step could be the introduction of (national and/or regional) river basin organisations, either independently or as a part of a larger regional cooperation mechanism. International actors could support dialogue between the countries as well as provide technical support for the organisations.

Capacity building through scenarios (B)

Failing infrastructure, outdated agricultural practices, political instability, corruption and climate change all need forward-looking solutions. One way to build understanding and capacity to respond to these major challenges could be a multisectoral scenario process.

Revising national water and climate policy (B)

The population living in water scarce areas in Iraq is expected to double by 2050. The Iraqi government aims to search for new groundwater sources and improve current infrastructure, but this requires firm policies as well as financial and technical support. One practical step forward would be to establish a revised water and climate policy for Iraq, considering economic, social and environmental implications of water-related plans.

Conclusions

This brief summarised the key findings from the Finnish-language water diplomacy report done for the Ministry for Foreign Affairs of Finland[1]. We see that the novelty of our water diplomacy analysis is a clear definition for water diplomacy, combined with a three-step analytical framework to recognise practical actions to support water diplomacy both at national and regional scales. The two case studies included into the brief provided then simplified examples for the application of that framework. We welcome comments on our study: please send them to Marko Keskinen at marko.keskinen@aalto.fi.

Selected references

1. Salminen, E., Honkonen, T., Belinskij, A. & Keskinen, M. 2019. Vesidiplomatia - ennakoivaa rauhanvälitystoimintaa. (Aalto University & University of Eastern Finland for the Ministry for Foreign Affairs of Finland).
2. Buzan, B. 1991. New Patterns of Global Security in the Twenty-First Century. International Affairs 67, 431–451.
3. United Nations 2015. Transforming our world: the 2030 Agenda for Sustainable Development.
4. Keskinen, M., Inkinen, A., Hakanen, U., Rautavaara, A. & Niinioja, M. 2014. Water diplomacy: bringing diplomacy into water cooperation and water into diplomacy. In Pangare, G. (Ed.): Hydro diplomacy: Sharing water across borders 35–40 (Academic Foundation).
5. Council of the European Union 2018. Council Conclusions on Water Diplomacy.
6. Altingoz, M. et al. 2018. Promoting Development in Shared River Basins: Case Studies from International Experience. (World Bank Group).
7. Water Scarcity Atlas 2019. Available at: https://waterscarcityatlas.org.
8. Leight, N. 2012. Policy Brief: Water & Public Diplomacy. (CPD Water Diplomacy Initiative, USC Center on Public Diplomacy).
9. Islam, S. & Susskind, L. E. 2013. Water Diplomacy: A Negotiated Approach to Managing Complex Water Networks. (Routledge).
10. Water Diplomacy Consortium 2013. Water Security and Peace Conference Proceedings.
11. Pohl, B. 2014. The rise of hydro-diplomacy: Strengthening foreign policy for transboundary waters.
12. Pangare, G. (Ed.) 2014. Hydro Diplomacy: Sharing Water Across Borders. (IUCN with Academic Foundation.
13. Huntjens, P. & de Man, R. 2017. Water diplomacy: Making water cooperation work (Planetary Security Initiative).
14. Farinosi, F. et al. 2018. An innovative approach to the assessment of hydro-political risk: A spatially explicit, data driven indicator of hydro-political issues. Global Environmental Change 52, 286–313.
15. Maier, H.R. et al. 2016. An uncertain future, deep uncertainty, scenarios, robustness and adaptation: How do they fit together? Environmental Modelling & Software 81, 154–164.
16. Keskinen, M. et al. 2016. The Water-Energy-Food Nexus and the Transboundary Context: Insights from Large Asian Rivers. Water 8, 193.
17. Russel, M. 2018. Water in Central Asia: An increasingly scarce resource. (European Parliamentary Research Service).
18. Murthy, S.L. & Mendikulova, F. 2017. Water, Conflict and Cooperation in Central Asia: The role of International Law and Diplomacy. Vermont Journal of Environmental Law 18, 401–454.
19. Rahaman, M.M. & Varis, O. (Ed.) 2008. Central Asian Waters: Social, economic, environmental and governance puzzle. (Water & Development Publications, Helsinki University of Technology).
20. Janusz-Pawletta, B. & Gubaidullina, M. 2015. Transboundary Water Management in Central Asia: Legal Framework to Strengthen Interstate Cooperation and Increase Regional Security. Cahiers d'Asie centrale 25.
21. Mirimanova, N., Born, C., Nordqvist, P. & Eklöw, K. 2018. Central Asia: Climate-related security risk assessment. (The Expert Working Group on Climate-related Security Risks).
22. Varis, O. 2014. Resources: Curb vast water use in central Asia. Nature 514, 27–29.
23. Hassan, K., Born, C. & Nordqvist, P. 2018. Iraq: Climate-related security risk assessment. (The Expert Working Group on Climate-related Security Risks).
24. Fanack Water 2019. Water Resources in Iraq. Available at: https://water.fanack.com/iraq/water-resources-in-iraq
25. Patel, D.S. 2018. How Oil and Demography Shape Post-Saddam Iraq. (Brandeis University).

For full list of references, see the water diplomacy report "Vesidiplomatia – ennakoivaa rauhanvälitystoimintaa": http://bit.ly/Vesidiplomatia

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