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WATER DIPLOMACY IN CENTRAL ASIA:
Discourse Analysis of the Rogun Dam

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ABSTRACT

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Water related conflicts are likely to increase due to global warming and population growth. The effects are greatly impacting regions such as Central Asia, where the territory is divided between upstream and downstream countries. Here, Tajikistan and Uzbekistan have been disagreeing on the management of transboundary water since the dissolution of the Soviet Union and, in 2016, Tajikistan started to build the Rogun dam. The energy that will be produced from the dam will help Tajikistan to be independent from Uzbekistan's imported petroleum resources. However, constructing the dam means decreasing the water intake of Uzbekistan, which can affect greatly the agriculture production of the country, the environment and the inhabitants living next to the water source. Thus, the relation between the two states have tightened up.

The purpose of this research is to study the Rogun dam case through the water diplomacy framework (WDF). The framework studies the complexities of water problems in the context of possible conflicting relations between entities that are involved in the transboundary water management. Using the WDF as an analytical tool, the research seeks to identify elements that can contribute to the political stability and peace between Tajikistan and Uzbekistan.

As discursive elements play a key role in diplomacy, discourse analysis was chosen as the method used to study the speeches and the official statements that are revolting around the Rogun dam project. The coding process is based on the elements of the WDF: values, interests and tools. The analysis involved categorizing the recurrent discourses used by the presidents of Tajikistan and Uzbekistan, which led to understand their representations of the Rogun dam. From Tajikistan's perspective, the following representations were identified: strength, symbol of the country, independency, energy supplier and national investment. From Uzbekistan's perspective, the following were identified: political instrument, high-risk construction, water security and environmental problem, distrust but a possible point of reconciliation.

The data shows that Tajikistan has never changed its discourses concerning the dam throughout the years of planning the construction of the Rogun dam. Despite the high costs, the dam symbolizes the empowerment and the growth of the country, that are reached thanks to the contribution of the inhabitants and the national institutions. On the other hand, Uzbekistan has been hostile to the construction of the dam due to the great damage that it can cause to the country and to the environment. However, the research has also identified that with the new president Shavkat Mirziyoyev, who assumed office in December 2016, the discourse of Uzbekistan has changed. The president begun to establish a different foreign policy with neighboring countries, as a result of which the discourses of danger and threat of the Rogun dam have also disappeared in the last two years. This means that there has been a change in the discourses of Uzbekistan: from a discourse of distrust, now the discourse is shifting to a discourse of economic and political cooperation with Tajikistan. This discourse can also include the participation of the construction of the dam, which contributes significantly to the peace and stability of the two countries.

Keywords: water diplomacy framework, discourse analysis, Rogun dam, Uzbekistan, Tajikistan, water management, wicked problem.

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1. INTRODUCTION

Water related conflicts are likely to intensify in international relations in the future, due to recent changes and events impacting the availability of fresh water in many countries. The continuous growth of population, the effects of human activities on the environment and the effects of global warming are few of the main causes that affect the level of water, especially for territories that geographically speaking already have limited access to fresh water. Inevitably, more disputes over the accessibility of water will arise, causing more tensions between the users of water. This master's thesis turns attention to the problem of water management in Central Asia, where there are already existing political tensions regarding the use of shared water among the states. In particular, the water management of Tajikistan through the Rogun dam, and the Uzbekistan's opposition to the project are considered in this research.

The Rogun dam project on the Vakhsh River is an important plan designed by the Soviet Union and planned to be constructed by Tajikistan, with the main purpose to produce energy for the state. It is forecasted to be the tallest dam in the world and to produce a capacity of 3,600 MW (Ito, Khatib, & Nakayama, 2016). In 2016, the project was reopened by Tajikistan's government to improve its own energy activities in the country, mainly through the production of hydroelectricity. However, the bordering state Uzbekistan has problematized the construction of the dam. Indeed, Uzbekistan's main product of exportation is cotton, and, if the dam will be eventually built, the country will not receive a sufficient amount of water for its cotton production, causing several economic problems. In addition, the state of Uzbekistan is worried that it will not receive enough water for its own use.

In this context, water has become an element of dispute between the two states sharing the same resource. If mutual collaboration is absent and the quantity of exploited water is inequal between the parties, the relations of the countries will eventually and progressively degenerate, evoking more disagreements at an economic, political and social levels. Thus, from Uzbekistan's point of view, what from the perspective of Tajikistan appears as "water management" (i.e. the construction of the Rogun dam) is seen to threat its economy and well-being. This will possibly have repercussions in the long-run.

In this study, the case of the Rogun dam will be analysed within the water diplomacy framework, which focuses on issues and problems related to the sharing of water at an interstate level. Indeed, water diplomacy can be defined as a negotiation approach on the

allotment of water among parties (Grech-Madin, Döring, Kim & Swain, 2018, p. 100). Accordingly, the focus of this thesis is on the political and social impact of the Rogun dam project on the already fragile relation between Tajikistan and Uzbekistan, which is feeding the existing disagreements over natural resource management in Central Asia.

1.1. Water and its role in international relations

Water is a fundamental element for every living species. Without it, animals and humans would perish. Indeed, tons of water are used to provide sustenance to our planet, from simply drinking it to elaborate food, such as grains, plants or meat. However, one of the biggest challenges that the world is facing today is the lack of adequate awareness of water scarcity. As a matter of fact, although we have been taught that water will lack in the future if not properly managed, people seem not to be fully aware of the consequences on nature. Consequently, water is one of the most underappreciated commodities in the world, since it is not only used to nourish life, but also as a great resource of energy production (Chellaney, 2015).

Water can be used everywhere: it is required to hydrate and keep alive species, from humans to animals. It is used to produce food and employed in the energy sector. In fact, water has been recognised as a powerful tool to produce energy for over two millennia. One of the best representations of water's strength is the watermill: though it was likely to be invented during the Ancients Times, the watermill is a tool which is capable of "converting natural sources of energy into mechanical power to operate some form of machinery" (Munro, 2002, p. 224). If first it was employed with the of producing food, during the Industrialisation revolution (18^{th} century) the watermill was upgraded into an energy source for the textile industry, in particular for wool and cotton (Munro, 2002, p. 245).

Nowadays, the management of water has been developed to the point that it is essential for the production of energy, in particular in countries that are rich with water resources but scarce of natural oil and gases. One evident example that will be discussed in this case study is Tajikistan's energy system, in which the state is exploiting its water resource to the point that other neighbour countries are not able to access to it (Ito, Khatib & Nakayama, 2016). Although the main reason behind Tajikistan's strategy is to ensure enough energy during the cold winters without importing it from abroad, the strategy supported by the country will have several effects on Uzbekistan, because of future resource deficit (Ito et al., 2016).

To comprehend thoroughly the difficulties and challenges of water management at an interstate level, it is relevant to understand the relation between energy and water. Siddiqi and Anadon (2011) assert that today the nexus between water and energy has become stronger than in the past: if before water was mainly used for nourishment purposes, it has not become a great source of power for machines and infrastructures, mainly for exploiting, extracting and creating energy. Indeed, fuel production and electricity generation are the main areas where water is most adopted, through its withdrawal (the quantity of water used is restored to another form, such as higher temperature) or consumption (the amount of water employed will not be reused, as evaporation or contamination) (Siddiqi & Anadon, 2011).

Generally, Siddiqi and Anadon's research (2011) asserts that fuel production needs water, in particular to steam and to cool the machines employed for the extraction of oil and gases, and the amount of water can vary according to the energy needed for the machines to work. However, electricity production needs water for steaming and cooling the turbines used in thermoelectric generation system, which requires a high amount of water to function. On the other way around, electricity is used to collect water (abstraction), to desalinate water from salt and other inorganic component (purification), and for heating and irrigation purposes (utilization) (Siddiqui & Anadon, 2011). Thus, it is possible to understand that the relation between the adoption of water and creation of energy is based on a circular need of each other's functionalities. This is notably the case for states where more one source than the other is lacking. For instances, the MENA states (Middle East and North Africa) are 'sensible' to the insufficient amount of water needed for the societies, except for Iran, Iraq and Turkey which are exceptionally abundant of water (Siddiqi & Anadon, 2011).

Because of the growing population in many countries, the demand of energy will significantly increase, and with it also the employment of higher quantity of water to produce energy (Cosgrove & Loucks, 2015). In the same way, if water is highly requested, the amount of energy needed to collect water will inflate in the future. The combined effect caused by the increasing demand of energy and water will cause irreversible effects on the environment and livelihoods, if action is not done before that. As a matter of fact, as Cosgrove and Loucks (2015) also assert, the current situation of food and energy production will not be enough to sustain the growing population, peaking to almost 10 billion people by 2050. Accompanied by the effects of climate change to the environment, the management of resources must be changed from a short-program management to a more sustainable and long-term plan, in particular from the water management perspective. For example, in

Cosgrove and Loucks's studies (2015), Africa is one of the most known and studied case regarding the issue of food and water scarcity: most of the lands in the continent have always been arid, but with the effects of climate changes, this condition has deteriorated over time, with experiences of huge precipitations' alternation over the months. In time, this repeated episode has caused uncertainty to the affected populations suffering from the lack of necessary resources to survive. In fact, half of the total population in sub-Saharan countries and half of Africa's population will not be able to access to drinkable water by 2030. However, not only climate change is affecting the landscapes of Earth, but also the management of the resources is underestimated or faulty, and the infrastructures inadequate. As illustrated by Dorothea Gibson (2018), in the conditions of growing urbanisation, the lack of efficient management of water can lead to heavy consequences, such as the strict regulations of water supplies to families in Cape Town. Indeed, Cape Town in South Africa has had to face one of the worst drought periods in 400 years, reducing the consumption of water to 25 litres per person in a day to avoid reaching the fatal 'Day Zero' (Gibson, 2018).

Another reason that makes water an important topic in today's international relations are the risks that might arise if the water sources have to be shared between states because of geographical and/or political reasons – and this it is not efficiently taken into consideration. Chellaney (2015) argues that water crisis is one result of the inefficiency management of the resource at an interstate level, which has led to multiple conflicts and wars among neighbouring countries sharing the same source. The Six-Day War is a classic example showing how the inefficacy of a certain type of water management can lead to war. The war was conducted by Israel in 1967 against the Arab neighbours, caused by the previous water wars between 1964 and 1967; the differing plans of water managing between Israel, Jordan, Lebanon and the State of Palestine and other political reasons led Israel to conquer the Arab Headwater Diversion Project, sparkling in the subsequent war won by Israel. This development in the war had tremendous consequences on the diversification of water sharing between the neighbour countries, where Israel obtained a huge control of groundwater resource and Jordan River's headwaters (Chellaney, 2015).

Inevitably, not only states such as Tajikistan and Uzbekistan, but also China and India that have shared the same river or lake for centuries are now in a high risk of exploding into a conflict due to the scarcity of the source or the disagreement over the management of the water or energy (Chellaney, 2015). Unfortunately, this fact has not been highly enlightened by global organisations and institutions, or it is underrated due to other issues that are

considered more important. Because of the absence of efficient support, the disputes might develop into armed conflict as happened in the past. Consequently, a better management of the 'water-energy nexus' (Siddiqi & Anadon, 2011) – and water diplomacy, as this research argues – is needed for prospective changes and demands.

1.2. The water diplomacy framework as a new tool of analysis

In the recent years, new studies have started to emerge in response to the challenges of water management. As a matter of fact, after many changes and transformations in the ecosystems – mainly due to human's actions –, water is starting to be an increasingly vulnerable resource and its quantity and quality is diminishing with time. Yet, although the acknowledgement of this risk from governments, global institutions, enterprises and people, the constant shortage of the resource is not treated as it should be, which highlights the importance of the water diplomacy framework.

In this regard, Cosgrove and Loucks (2015) assert that the problem of water has been dealt with the goal of decreasing the demand of water in a certain time frame. For instance, some states are trying to cut the losses from the transportation and from distribution systems of water. Or, some states are attempting to improve the use of water for domestic activities more efficiently than in the past, as well as the infrastructures that provides the resource. However, at the same time other states have been dealing the issue by increasing the demand of water supply. This has meant the construction of more infrastructures which would collect a higher amount of groundwater to householders or the instalment of new aquifers with the purpose of desalinating water or reuse it (Cosgrove & Loucks, 2015). In such cases, the shared resources of water are managed differently according to the interests of the states, or relatively to what the state considers right. Indeed, Tajikistan's desire of independence from other states has led to a greater employment of its water resource to produce higher levels (Ito, Khatib, Nakayama, 2016). Yet, this decision can also have effects on other states which are dependent on the water supply, such as Uzbekistan (Ito et al., 2016).

Certainly, it would be possible to regulate the flow of water by taking indirect decisions: for instance, reducing population growth or producing fewer consumption goods that require a high amount of water for their production, for instance meat. However, the most common problem that has emerged in the recent years is water management with the involvement of more actors. Indeed, it is not only the government that is responsible to provide the

infrastructures for water management, but also actors who have proper competencies (such as environment or economic knowledge) to deal with it, as well as companies providing the materials and skills to create water foundations (Cosgrove & Loucks, 2015).

In addition, due to climate change and rise of new needs, the skills and abilities to treat and to distribute water are changing, simultaneously as the environment is evolving rapidly. For example, in the past, water was collected directly from the rivers to towns and villages, whereas today water systems are often formed by many pipelines underneath the cities coming from different water foundations. In this context, governments should be more involved in the decision-making to create smooth and successful water management systems capable of supporting the living conditions. Yet, it may happen that governments are much affected by the situation that they do not consider the other aspects, such as the involvement of neighbouring countries in the distribution of the same resource, or the application of a long-term sustainable plan.

Because of the previous inefficacies in water management, Shafiqul Islam (2017) proposed the water diplomacy framework. Traditionally, the water management framework has achieved results through the employment of recognized and approved mechanisms used in the past: indeed, one specific method could be applied in many situations which have similar conditions. Thus, according to Islam (2017), water management depends on and presumes predictable, reliable, stable, controllable, transferrable approaches and contexts. However, when it comes to complex problems, with many actors and factors involved, one prescribed method is unlikely to be functional for all the situations (Islam, 2017).

Consequently, issues in water management arise from the "multi-level management of water resource problems" (Islam & Repella, 2015, p. 2). In such situations, multiple elements are influencing the attainment of an efficient, sustainable and acceptable water system for all the actors involved. Indeed, as Islam (2017) asserts, there are infinitive ways to see and evaluate a system which can be in contrasts with other views, as well as many 'interactions and interdependencies' that are impossible to study all at once. As a result, because of the countless perspectives and opinions on a given system, such as water management, objective evaluation is impossible.

Generally speaking, in the water management approach, problems have been dealt with the aim of finding scientific solutions that can be replicable with new situations in the future, in order to have a prepared formula for incoming events (Islam, 2017). Yet, it is often not

considered that the elements which led to the problem – such as the background, the reasoning of the actors involved or the circumstances that brought about the issue – can be different (Islam, 2017). However, the truth is that every situation is singular, from which derives the complexity of solving problems or approaching them adequately (Zarghami, Safari, Szidarovszky & Islam, 2015; Islam, 2017; Grech-Madin et al., 2018). This gives a bigger and more complex picture of water management than approaches that seek to reduce it to a simple scheme through which to manage the resource. Water management should be seen as complex structure where many actors, events and motivations are interdependent and simultaneously at work. The water diplomacy framework has been proposed as a new approach that might help to comprehend better the current weaknesses of water management at an interstate level, offering a new insight of water system development.

1.3. Background to the research problem and research questions

The reason behind the analysis of water diplomacy and its application derives from a wide research of the Rogun dam's construction on the tributary Vakhsh River in South Tajikistan and the diplomatic disputes caused by this plan.

Central Asia had always had difficulties in the distribution of water supplies within its regions. Specifically, due to is physical geography, the region is divided in two different categories: downstream and upstream countries. From a geographical perspective, the upstream countries have usually a high amount of water resource, whereas the downstream countries are rich of other resources, such as gas and oil, and they receive water supply from nearby upstream states (Ito et al., 2016). Consequently, the countries of this area are closely related for the management and distribution of their own resources among each other.

After the fall of the Soviet Union in 1991, for the first time Kazakhstan, Kyrgyzstan, Uzbekistan, Turkmenistan and Tajikistan had to rearrange the general supply system in Central Asia as independent, sovereign states, and to cooperate for a common purpose without an external power guiding them (Abdullaev, Giordano & Rasulov, 2005). In addition, since the independence, each state started to follow different development and improvement paths of their own economic systems: for instance, after 1991, not only Uzbekistan has been concentrating on the production of cotton, but also of wheat and vegetables (Abdullaev, De Fraiture, Giordano, Yakubov & Rasulov, 2009), whereas

Tajikistan has been developing further its irrigation system and its own crop production (FAO, 2012), which also shows in the ways in which water is managed.

Uzbekistan and Tajikistan had multiple conflicts of interests since the end of the Soviet Union, in particular in relation to the management of energy and water resources. As a matter of fact, they share two indispensable rivers: the Syr Darya and the Amu Darya rivers. If the access to the water resources of one of the rivers is limited from Tajikistan, it will aggravate the already poor water management of Uzbekistan for its cotton production. Whereas, if Uzbekistan stops furnishing gas and electricity to its neighbour, then Tajikistan will have difficulties to provide enough energy for the inhabitants during winter times. As a result, the desire of resource independence from the neighbour countries and of a higher supply of energy led Tajikistan to request the Italian company Salini Impregilo to build the 335-meter-high Rogun dam, with a capacity of 3600 MW in the Amu Darya river in 2016. However, this plan has always been contested by Uzbekistan (Ito et al., 2016).

From Uzbekistan's perspective, the Rogun dam will aggravate the situation of the cotton industry if the sufficient amount of water requested from Tajikistan is not provided. In addition, the dam might be used as a form of political leverage for future deals, and it is perceived as a danger due to the high risk of earthquakes in the zone of construction. As a result, the dam is seen as a threat. Lastly, it will give rise to a new supplier of energy in the international arena, damaging Uzbekistan's role as one of the main energy suppliers in Central Asia. Ito et al. (2016) also suggest that from Tajikistan's perspective, the dam is an occasion to improve the development of its economy and to provide energy without the support of gas resources from Uzbekistan. Moreover, it is a symbol of independence and pride for the state. Finally, Tajikistan believes that the dam will solve the consequences of climate change in their territory (Ito et al., 2016).

Consequently, the two states have come to possess two opposing views: Uzbekistan is strongly against the construction of the Rogun dam, whereas Tajikistan supports it. Both justify their positions by economic and social reasons, but also in reference to stronger dominance and independency in Central Asia. Given the existence of such opposing views, the water diplomacy framework is utilised in this research to further understand and analyse the current situation. Presumably, this approach is also policy relevant in the sense that it can be used to influence the related parties.

By employing the water diplomacy framework, this research will attempt to answer to the following questions:

(1) *What causes disagreement between the neighbouring states of Tajikistan and Uzbekistan over the Rogun Dam case?*
(2) *What can contribute to the political stability and peace between Tajikistan and Uzbekistan?*

The importance of the research is highlighted by the fact that, as Islam argues, (2017), studies regarding the disputes and conflicts over the management of water should be expanded more, especially focusing on the interstate level. The emerging water diplomacy framework can be a new approach that can be applied to future issues between states which are unable to find a suitable compromise or efficient solution for the organisation of the supply.

However, up to this time, the Rogun dam example has not been discussed yet from this point of view. Hence, the purpose of this research is (1) to enhance understanding of the value of water in the current society and in international relations: though water has known to become scarce, there were not enough (or yet) provisions to counter the problem. (2) To do so, the wickedness of water management at an interstate level will be highlighted, in particular by analysing Tajikistan and Uzbekistan positions over the construction of the Rogun dam. (3) Finally, to offer a new perspective to analysing water management and solving water related disputed through an application of water diplomacy framework.

1.4. Structure of the research

The following chapter (Chapter 2) describes the case of the Rogun dam, which has a strong significance importance in Tajikistan, but it has also caused many polemics regarding its construction, especially from Uzbekistan's side. Then, in the third chapter, the notion of water will be conceptualised within the international relations context. It is argued that today's water management is characterised by many and variegated factors that make the system complex and unsustainable to meet the demands of the contemporary world. Within this context, water management is conceptualised as a wicked problem that can be tamed only with new, updated and innovative solutions and approaches. Thus, an analysis of the past theories (water as a social opportunity, transboundary water resource management, water security and international water law) demonstrates that there is a gap in the current knowledge that reflects in the current problems of water management. In particular at a

transboundary level, the present water management approach does not always ensure a political stability between countries which are sharing the same resource. Thus, in the fourth chapter, the water diplomacy framework is introduced as a new approach to understand the role of water within the diplomatic context, especially between two states that are geopolitically constrained to share water. In fact, the disagreements between Tajikistan and Uzbekistan of sharing the natural resources equally has impacted their political relationship and stability. Consequently, the framework offers a new approach to understand the complexity of the current transboundary water management system at a political and diplomatic level. To operationalise the framework in actual research practice, the interests and the tools of the actors involved in the water management are analysed to comprehend what the problems are and what could be the possible solutions to tame this wicked problem. The methodology that I will use to produce the type of knowledge needed to answer the research question is discourse analysis, which will be explained in the fifth chapter. The sixth chapter will be dedicated to the analysis of the discourses of Tajikistan and Uzbekistan over the Rogun dam that I have found, and to the assessment of them within the water diplomacy framework. Finally, in the last chapter I discuss the findings and conclusions of this research.

2. AN UPSTREAM DILEMMA: THE ROGUN DAM DEVELOPMENT

Due to the geographical formation, Central Asia is characterised by a well-defined distribution of resources between the countries of the region, and the territory can be divided into upstream and downstream countries (Jalilov, De Sutter, & Leitch, 2011; Eshchanov, Stultjes, Salaev, & Eshchanov, 2011; Feaux De La Croix & Suyarkulova, 2015; Ito et al., 2016). The upstream countries are characterised by an abundance of water resources, which are vital for Central Asia's growth: the water flow descends into Syr-Darya and Amu-Darya rivers, sustaining the downstream countries, which are particularly rich of other natural resources, such as oil and gas (Jalilov et al, 2011; Eshchanov et al., 2011; Feaux De La Croix & Suyarkulova, 2015; Ito et al., 2016). Tajikistan and Kyrgyz Republic are part of the upstream countries and they are also defined as the "water towers of Central Asia" (Féaux De la Croix & Suyarkulova, 2015, p. 106), whereas Kazakhstan, Uzbekistan and Turkmenistan belong to the downstream countries (Ito et al., 2016). Most of the water flow ends up in the Aral Sea Basin, but a great amount of water is highly consumed by the downstream countries (Jalilov et al., 2011). Geopolitically, this formation has a great impact in the distribution of the resources among the countries: indeed, the upstream countries need gas and oil for energy production, whereas the downstream countries need water mainly for the harvest, such as cotton in Uzbekistan (Ito et al., 2016). Thus, the available resources present in each territory are "complementary" to each state's demands, fulfilling the gap of natural resources among the states. This validates the water-energy nexus explained by Siddiqi and Anadon (2011), meaning that the downstream countries provide natural resources in exchange of water from the upstream countries. However, over the past decade, the interests and objectives of the states have hindered the realisation of the nexus in the long run.

The main production of Central Asia is agriculture, which is the main source of sustainment and growth for most of the countries in the area. For example, Uzbekistan's agriculture represents 17% GDP of the country, with 25% of the population working in this sector, in particular in the cotton industry (FAO, Uzbekistan lay foundations of cooperation through 2022, 2019), whereas Kazakhstan's agriculture, which is the biggest country in whole Central Asian, stops only at 4.1% of the GDP in 2018 (World Bank Statistics). A lot of water is required to support the high demand of the big agricultural production of the region, but water can be only collected from the rivers that are originating from the upstream countries,

unless the products are imported from abroad. As a result, Syr-Darya and Amu-Darya rivers are the main inflows of water for the harvest, especially for downstream countries (Eshchanov et al., 2011).

As stated by Jalilov et al. (2011), the environment and the geography of the territories of Tajikistan and Kyrgyz Republic allow the two upstream countries to greatly benefit from the big amount of available water in the area, in order to produce their own energy. For instance, in Tajikistan 98% of energy is produced by water, establishing the country as a hydropower nation (Jalilov et al., 2011, p. 2). Consequently, the strategic position permits the upstream countries to have control and great influence over the distribution of water since the dissolution of the Soviet Union. Nevertheless, even though the availability of water, the mountainous lands does not leave space for an extensive agriculture growth, leading the two countries to be dependent on goods importation from neighboring countries. The picture below offers a better understanding of the advantages and disadvantages of the upstream and downstream countries.

Figure 1. Central Asia physical map (Wikimedia Commons, 2012)

As explained by Ito et al. (2015) and Eschanov et al. (2011), during the 20th century, for many decades most of the countries that are today in Central Asia were part of the Union of Soviet Socialist Republics (USSR), which had many "great projects" for this immense territory, as part of its modernization project. Indeed, USSR already knew that the natural resources were distributed unequally, and the government was always inclined to implement new infrastructures to overcome the issue. Hence, in 1954 the Virgin Lands Campaign started to foster a higher quantity of cotton production in the downstream countries, in particular in Uzbekistan. To make the campaign successful, in the territories which now belong to Tajikistan and the Republic of Kyrgyz, new power plants and reservoirs were built to produce hydro energy power, meaning that the energy was produced from water flows accumulated in dams and reservoirs.

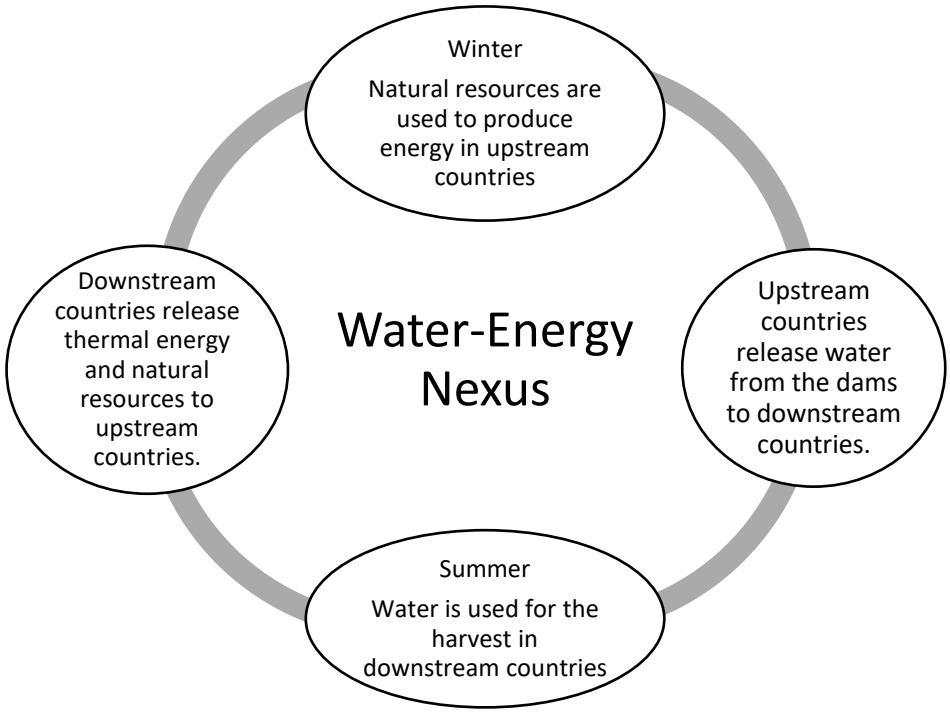

Figure 2. Water-Energy Nexus scheme based on Siddiqi & Anadon (2011) theory.

Figure 2 represents the water-energy nexus applied to the upstream and downstream countries in Central Asia, based on Siddiqi and Anadon theory (2011). The upstream countries would have delivered water to the downstream countries for the harvest throughout the summer, whereas the downstream countries would have exported their natural resources and electricity from thermal power plants to upstream countries throughout winter. Then, the cycle restarts again. This water-energy nexus was outlined during the Soviet Union, to meet the needs of the territory. As a result of this strategy, the Central Asia Power System (CAPS) was founded in the 1970s to monitor the distribution of the resources equally among

the regions in Central Asia (Ito et al., 2015; Eschanov et al., 2011). The Nurek Dam is an outstanding example of the results of the URSS's projects in the region. It is found in Tajikistan on Vakhsh River and it is 300-meter-high, making it one of the highest dams in the world (Encyclopædia Britannica, 2018). Its construction started in the 1960s and ended in 1982, with many stalls in between due to safety, environment and ecological issues (Eschanov et al., 2011). In conjunction with the Nurek Dam's development, the URSS started to establish the plan for the construction Rogun dam in the 1960s, with two functions: to irrigate the downstream countries and to produce electricity (Schmidt, 2007). In addition, it was designed to be higher than the previous dam, a 335-meter-high dam, and to possess a wider electricity capacity of 3600 MW (Schmidt, 2007). However, likewise the Nurek Dam, many obstacles have occurred, and the construction of the dam started much later than expected. Indeed, the construction of the Rogun dam was originally planned to start in 1976, but then it started in 1982 (Menga & Mirumachi, 2016; Ito et al., 2015; Lemon, 2016). Afterwards, the URSS collapsed in 1991 and the dam was at a standstill for many years before Tajikistan decided to restart the project (Menga & Mirumachi, 2016; Ito et al., 2015; Lemon, 2016). Not only the government dissolved, but also the Central Asian Power System (CAPS) commenced to be weaker and eventually be inoperable, leading the upstream countries to exploit the dams for their own electricity consumption instead of sharing evenly with others (Ito et al., 2015; Lemon, 2016). Eventually in 2009 Uzbekistan officially left the CAPS (Lemon, 2016).

Despite the poor economy and the winters when there was short energy supply, Tajikistan has never lost the interest to continue the construction of the Rogun dam (Sharipov, 2006; Jalilov et al., 2011; Eshchanov et al. 2011; Ito et al., 2015; Menga & Mirumachi, 2016). In fact, in 2005 the new Tajikistan government led by the president Emomali Rahmon tried to restart the project with the investment of two billion US dollars from the Russian aluminum company (RusAl). Menga and Mirumachi (2016) assert that the company had two main purposes: first, the company always needed more energy to sustain the aluminum production; hence, by contributing to the Rogun dam the company would have received higher quantity energy from Tajikistan. Secondly, the company had the intention to build a smelter next to the dam which would have contributed with the existing aluminum production at Tajikistan Aluminum company (TalCo), found in the borders between Tajikistan and Uzbekistan, which exploited at least 40% of the total energy production in the country. However, when the work started, RusAl discovered that there were many technical problems related to the dam and that it was more efficient to build up in stages

until the dam reached 280 meters height, instead of the original plan of 335 meters (Sharipov, 2006). Eventually, in 2006 the agreement was annulled from Tajikistan's government because they were many disagreements over the dam's construction (Tajikistan cancels RUSAL deal to build 3,600-MW Rogun, 2007).[1] Because of the controversies that were aroused from RusAl, Schmidt (2008) exposed that Lahmeyer International, a German engineering company, decided to conduct a research about Rogun dam's structure. In the research, three different stages that Tajikistan's government could have done to proceed with the project were identified: (1) stage 1 consisted of building a dam of 225 meters height, reservoir volume of 2.78 km^3, and 1200 MW production; (2) stage 2 consisted of a dam of 285 meters height, reservoir volume of 6.78 km^3, and 2400 MW production; (3) finally, stage 3 consisted of building a dam 335 meters height, reservoir volume of 13.3 km^3, and 3600 MW production (Schmidt, 2008). It was assessed that the first two stages would have been the most efficient solutions for both the upstream and downstream countries, whereas the third option was considered as the most perilous choice for the economy of downstream countries (Schmidt, 2008). In addition, the company recommended that the construction of the dam should be revisited and rescheduled based on a new project with updated information (Schmidt, 2008). However, president of Tajikistan Rahmon strongly asserted that the dam must be 335 meters-high, making it the tallest dam in the world, but the high cost of the construction and lack of funds (approximately 2.5 to 3 billion US dollars) hindered the continuation of the infrastructure (Sharipov, 2006; Eshchanov et al., 2011; Ito et al., 2015; Menga & Mirumachi, 2016).

To cover up the costs of the dam's construction, in 2008 the government established the Shareholders of Open Joint-Stock Company (OJSC) NBO Roghun, with an amount of 116 million somoni authorised capital (Asia-plus, 2015, May 25). According to Eshchanov et al. (2011) and Trilling (2014), in the following year, the Tajikistan government started a campaign for an Initial Public Offering (IPO), which requested to the citizens to offer part of their incomes to complete the dam. However, the country was, and still today is one of the poorest in Central Asia, with a high rate of unemployment; thus, many citizens refused to contribute to the IPO. Consequently, the citizens were forced to offer part of their own savings, stating that it was a duty of the citizen. The IPO became a coercive campaign to accumulate funds for the dam, spreading malcontent and dissatisfaction from the

[1] It was assumed that at the base of the disagreement there was the different interest of using the dam: Tajikistan's government wanted to have a dam 335 meters high, but RusAl would have accepted a smaller dam just to meet its aluminium's demand. Thus, it was assumed that RusAl was not following the deal.

impoverished population. Eventually, the forced IPO ended since it was stressing out the Tajikistanis to feed their families and to meet the bills: the campaign resulted in approximately 180 million US dollars (Eshchanov et al., 2011; Trilling, 2014).

In 2012, the Rogun dam was suspended. The World Bank (2014) started to conduct a research about the Rogun dam's construction, studying its benefits and its disadvantages, as well as the opportunities and challenges that the dam will create during its construction and once it is concluded. The results of the research were published in 2014 and they were different findings that Tajikistan should consider: indeed (1) it is suggested to change the measurements of the dam in order that the infrastructure will be built safely, (2) and it is recommended to choose one of the options suggested in the assessment, in order that the costs will be lower than the one assessed by the Tajikistan's government and to meet the energy demand of the country. (3) The dam project of 335 meters heights is expensive, and it would cause additional financial issues, such as further private investments or lower incomes for citizens. (4) In addition, building the dam means to resettle the communities living nearby the construction zone, and (5) it means to change the water-energy nexus between Tajikistan and the downstream countries. Nevertheless, with the proper adjustments and "modernisation" of the outdated project, the organisation will approve the construction of the dam (World Bank, 2014). Consequently, despite the obstacles and the challenges that Tajikistan had, in 2016 the "Rogun HPP" Open Joint-Stock Company (OJSC), which is the governmental firm in charge of the construction, signed a contract with the Italian company Salini Impregilo, which will be in charge of the project of the value of 3.9 billion US dollars (Salini Impregilo, 2016 & 2018). It will be divided into four smaller projects which will be accomplished in 13 years, and it is financed by the government and by international partners (Salini Impregilo, 2016 & 2018). At the end of 2018, the president Rahmon started the first turbine of the dam, celebrating the first achievement of the project (Salini Impregilo, 2016 & 2018).

3. CONCEPTUALIZATION OF WATER IN INTERNATIONAL RELATIONS

In this thesis, the concept of water will be analysed from a social, political and international relations perspective, in order to understand the role of water in society, its influence at an international level, and the problems derived from its management. However, there are various possible ways of conceptualizing water in international relations. This chapter will first focus on current water systems as "wicked problems" (Rittel & Webber, 1973). Next, water is characterized as an element of social opportunity, which can improve societies and states' conducts towards a more sustainable, efficient and cooperative management between different entities. The transboundary water resource management, which is discussed in the third section, is another kind of an attempt to understand the benefits and complexities of the system. Afterwards, I will describe the water security concept, which has risen as an approach to water management, in the need of establishing and ensuring a sustainable water system guaranteeing the safety, health and stability of a country. At an interstate level, the international water law would ensure a cooperative relation about sharing water among neighbouring countries. However, a necessity to reconsider and redefine the old water theories to adapt to the new and evolved reality has led to the studies of water diplomacy, which is also utilized in this research. The water diplomacy framework which will be described further in the fourth chapter paying special attention to the ways in which it improves upon other available conceptualizations presented in this chapter.

3.1. The wicked problem of water management

One possible conceptualization of the case of water is offered by the notion of "wicked problem". Defined by Rittel and Weber (1973), a wicked problem is a situation in which a defined solution is not found, since solutions are never right or wrong, but just good or bad. Arguably, water management at an interstate level is becoming a wicked problem due to the many complications that derive from political, social, economic and management areas, such as insufficient fund to invest for a water project, or the antagonism between the parties involved in the matter. Thus, the water related problems from different fields are starting to increase and accumulated in time, since they are no suitable solutions to contrast them, nor they were dealt earlier to prevent a bigger problem. For example, as reported by Ito et al. (2016), during the Soviet times, the management of water in Uzbekistan and Tajikistan has

been coordinated by the Soviet Union, but, after its dissolution in 1991, the contrasting interests of sharing resources between the two states led to a weaker economic and political cooperation, generating disagreements and contrasting debates over the following years. In fact, Tajikistan considers the construction of the Rogun dam as the best pattern to increase the economy and the energy production in the country, whereas Uzbekistan asserts that this action will have severe consequences on their own economy and agriculture production (Ito et al., 2016). Hence, whether a compromised solution is found (or not), both sides will have an opposite perspective towards the Rogun dam.

Secondly, whenever a solution is set, it does not guarantee that it can be replicable to others (Head & Alford, 2015): a dam can be beneficial for both parties if the interests of the actors are met, or if the dam is constructed within a country; yet, this system is not replicable to all other similar cases, since the structural factors change. Thirdly, a wicked problem has two origins: it can be generated from a previous problem, or it can conduct to a new and unsolved issue; plus, the infinitive interpretations of the concern from different individuals can lead to a 'multiplication' of the challenges to face (Head & Alford, 2015). As a matter of fact, when the Rogun dam was decided to be built up, the decision has sprung new perplexities in Uzbekistan, in particular for the risk of an inferior level of water accessibility and cotton production, thus hindering the growth of its own economy (Abdullaev et al., 2005). In addition to the previous definition, Yankelovich (2015) describes the common denominators of wicked problems: "(1) there are no quick fixes; (2) they are complex and multifaceted, (3) conventional methods (legislation, regulation, money, power, technology) don't and can't solve them, (4) solutions depend on how the problem is framed, (5) every wicked problem is essentially novel and unique" (Yankelovich, 2015, p. 9).

When it comes to the management of water within a certain area (in a country, between the borders or simply the flow of the watercourse), there are, indeed, no quick fixes or actions, as it is challenging to coordinate and to distribute equally the resource among the involved actors (families, towns, agricultural or energy companies). The complexity of the system relies on the multiple and variegate indicators that can change or evolve over time, influencing the decision-making or the technical process of the resource management. For instance, if we consider the distribution of water between two states, the following factors illustrate the wickedness of water and the possibility of its management:

- The stakeholders involved, and their backgrounds often overlap (e.g., historical relations, political interests or past management);

- The water is uncontrollable in the sense of flowing (between or across the states);
- The use of water is cross-cutting (it is not just at an individual level, but it concerns the agricultural and the energy sector of both the countries);
- There are various ways of agreeing or disagreeing on the management (agreements, laws or policies at a national, interstate or international level);
- The technical tools used for the distribution (infrastructures, investments, machines or dams);
- The consequences on society may be 'relentless', i.e. there are no rapid solutions if we take into consideration people living nearby the source or organisation relying on water for production.

In fact, as shown in the studies of Keskinen, Inkinen, Hakanen, Rautavaara, and Niinioja (as cited in Pangare, 2014), because water is a vital element for any community, it is highly prioritized in countries where there is a great need of water, leading the states to choose paths that can limit the access to other users for their own benefits. Moreover, global changes are affecting entire populations and countries in the contemporary era: among these are climate change and its impacts on the affected territories (augmentation of the temperature in the globe, rise of the sea levels, ice melting, drought, precipitation changes or higher chances of hurricane formation), the growth of the population, scarcity of resources and higher demand of energy and water (Pahl-Wostl, Conca, Kramer, Maestu, & Schmidt, 2013).

3.2. Water as a social opportunity

Besides being a wicked problem, water can be perceived from a positive light and it can provide a reason to do better and to improve old water management systems that are not anymore fit for the current needs of the states and populations affected. In the 21st century, more attention was given to the environmental changes, alerting most of the national and international institutions about the dangers of men's activities on nature: indeed, the constant exploitation of lands and natural resources brought in time to a higher demand of energy supply, which is not currently supported by the actual human activities. An increasing urge to change our own habits and way of 'doing business' is settling down not just among activists, but also among important figures, such as politicians and experts of the matter. Though the upcoming challenges of energy transitions, more attention is given to sustainable

management, or to the employment of renewable energy that can substitute the current energy supply deriving from fossil fuels (as coal and oil) (Garrett-Peltier, 2017).

Within this framework that the discourse around water has started to be emphasised, and different theories and understandings of the resource started to develop. As it is commonly known, water is one of the most important resource found on this planet, a key component of the existence of life. An interesting concept was produced by Davidson, Linton, and Mabee (2015): water should not be seen just as a mere commodity needed for the permanence of humans on Earth, but also as an opportunity to improve society. The UN's 2030 Development Agenda for the Sustainable Development Goals, established by United Nation in 2015, rotate directly or indirectly around the availability of water: the sixth goal directs to diminishing water scarcity in poor countries by implementing proper management of clean water and, as a result, it can have positive effects on the quality of health care. Indirectly, the third goal concerning good-health and well-being can be reached if the environment is safe and adequately habitable when clean water is provided. Thus, the first goal (no poverty) will be obtained, when poverty is gone (Sustainable Development Goals, n.d.) As a result, if one goal is reached, the others will be reached easily; yet the challenging part is how to do it.

According to Ralph Pentland (as cited in Davidson, Linton and Mabee, 2015, p. 20), the problem of managing water is directly connected to the possibility of realizing 'the societal goals of prosperity, equity and sustainability' by adopting 'water habits'. The interdependencies between various levels of water management, and the need of better cooperation and understanding of water can be perceived in different contexts. For example, the lack of a common understanding of multinationals, or the superficially judgment and conduct of approaching environmental issues globally led to the inefficiency of today's water practices; or the lack of transparency or inefficiency of communication hindered an amelioration of the water systems. As a result, a "Better integration of Top-Down and Bottom-Up perspectives" (as cited in Davidson, Linton and Mabee, 2015, p. 29) must be adopted: in other words, there must be a better collaboration between the knowledges deriving from the society and the high hierarchical institutions (Davidson, Linton and Mabee, 2015). Additionally, it has also been argued by Schmidt (as cited in Davidson, Linton and Mabee, 2015, p 33) about the implementation of a new and efficient national water strategy based on societal values and morality when water ethic is absent: in other words, because of the lack of 'water morality' or of a given significance to water (as purpose or

social values), eventually the national institutions will have to deal water management ethically, with sustainable regulations and normative, because there will be a need to consider the ethical perspective of water (i.e. avoiding wasting water). With the adjustment and implementation of an ethical water distribution plan, everyone will be able to access to water, no matter what their social status and conditions are.

Finally, the possibility to change the management of water can be perceived as a "new and innovative opportunity to change the way we think about, act on, and govern Canadians waters" (as cited in Davidson, Linton and Mabee, 2015, p. 75). In fact, the problems surrounding the water management system can generate constructive discussions and debates among institutions, researchers, politicians or any other relevant figure who is capable to lobby and to influence decision-makers' perspectives: it will become an occasion to induce cooperation between different agents involved in the water organisation. Yet, it is at a local management level that water can influence and improve society towards equality and sustainability. As declared by the UN Water (2013), water can be a valuable force of development of a country: investing in water means participating to the economic growth of a countries, thus the creation of more job opportunities for the individuals. To do so, more water projects can be initiated to favour this mechanism, which can bring benefits to all the actors involved directly or indirectly; the process can influence different sectors, such as the development of new technologies or improvement of water management strategies which can meet the evolving needs of individuals (UN Water, 2013).

Despite the positiveness and strong arguments of the previous research of water as a tool of social opportunity, it is not itself the natural element that can change contemporary societies' perception from a mere consumerist and constant economic growth approach into an equalitarian and sustainable community, but it is how water is being managed and distributed equally among the people. Indeed, relevant stakeholders, competent authorities and organisations are the main responsible of the decision-making regarding water distribution in the towns, cities, countries and the globe. However, local authorities are the direct establisher of the water distribution, and often they are unable to act independently without the involvement of their superiors, or of other sectors essential for the infrastructure of water, as the manufacturing sector. Also, the engagement of multiple actors on a singular topic can lead easily to disagreements, in particular if actions must be taken at an interstate level. All those aspects can slow down the process of the water system's improvement, or even worsen it in time.

One of the fundamental issues regarding the management of water at an international level is when water flow crosses between neighbouring countries. With this framework in mind, water is not often seen as a social opportunity as explained earlier, but rather an occasion of conflict of interests which can impact the security of the parties involved. The conflict of interests between Uzbekistan and Tajikistan over the management of water is a remarkable example of how a shared natural resource can deteriorate cooperation and trust in time. Owing to the many conditions and aspects that have to be analysed when implementing a better and developed water management strategy between two countries, according to Pahl-Wostl et al. (2013), it is laborious and complex to consider all the factors mentioned above, especially if they are multiple actors involved in the settlement of the water plan (governmental institutions, energy companies, international organisations, politicians and many more). Consequently, failures and missing gaps will affect the outcome of the management.

Summing up, the concept of water as a social opportunity is a result of a continuous development of the society towards the contemporary era. It can offer an encouraging perspective of seeing water as a meeting point to discuss and implement better strategies for its management and equally distribution among individuals. However, there is still much misunderstanding and misbelief of water as an urgent problem to take care in the future years. Furthermore, neglecting water as a social opportunity of discussion to seek an agreement, or a compromise, hinders the process of improving the water management system between conflicting parties. Hence, in the next section the transboundary water resource management will be discussed, which will offer a comprehensive and sufficiently clarified scheme of coordination, systems, perspectives and various approaches to transboundary water. This study proposes an in-depth analysis of crossing-shared water, which is fundamental to go through for a further understanding of previous approaches and newer attempts of interpretation and procedures of dealing water today.

3.3. Transboundary water resource management (TWRM)

In the study of transboundary water resource management (TWRM), water has been analysed from different scientific and research fields, offering various perspectives on the topic. According to Ganoulis, Aureli and Fried (2011), the study of TWRM can be divided into two big approaches. From a quantitative approach, hydrological sciences study water by applying the quantitative methods: thus, for example, it focuses on the availability or the

quantity of water in a basin, whereas hydraulic engineering examines the source from a technical point of view, meaning the logistic and mechanical side of water distribution. From a qualitative side, environmental sciences and public health studies investigate water considering its quality and its effects on human bodies (constitution, toxicity or impacts). Additionally, in mainstream economic sciences water is seen as a valuable commodity which can influence the 'strength' of a market system, suggesting efficient economic instrument (for example prices on water); whereas in social sciences water is being analysing in relation to society and the water users (Ganoulis et al., 2011). Finally, the legal framework, such as international law, implements regulations, treaties and water rights (Ganoulis et al., 2011).

Despite the deep knowledge and research behind the studies of TWRM, there is no common theory or thought that can define what TWRM consists of, due to the fact that many approaches can be selected to address the topic. For this reason, common features that all the scientific and research field possess will be outlined. From the studies of Ganoulis et al. 2011, knowledge and shared data are the most valuable source in the TWRM framework. Indeed, two countries, which are sharing the same basin or any water source, have the urge to acknowledge everything related to the water system management: distribution of the water; infrastructures (i.e. dams or energy companies employing water); technologies used; social, political and economic benefits and disadvantages. Consequently, there is a huge "hydrological, social and economic interdependencies between societies" which can enhance cooperation between, for instance, neighbouring countries, but also disagreements because of different interests and objectives (UN Water, 2008).

TWRM considers the environmental aspect from a mixture of technical and environmental point of views: in fact, water quality has to be considered when implementing new infrastructures in the area, together with the ecosystem surrounding the water course. To do so, the Environmental Risk Analysis (ERA) evaluates the risk of pursuing a specific plan by following several levels of analysis: "(1) identification of hazards and risks; (2) assessment of load and resistances, (3) uncertainty analysis, (4) risk qualification" (Ganoulis et al. 2011, p. 16). In addition, other elements are considered, such as global warming or the impacts in the society (Ganoulis et al. 2011).

Finally, TWRM identifies the roles of national and international laws, possible repercussions in the economy and in the social system, and the institutions involved in the management (Ganoulis et al. 2011). As it will be explained in the next chapter, international law has emitted several treaties and regulations that protects water as a valuable resource. However,

many issues have emerged in the past years, especially from a technical perspective. For example, the deterioration of groundwater's quality; the amount of water used from one country, consequently diminishing the availability of the resource for the next country; or distrust between the parties, making it difficult to reach to a common objective. Regarding the economical side, the involvement of water management is linked with the growth of the economy market (or a consistent lost for the economy, depending on the position observed), which is connected to the development of a country. Thus, the employment of TWRM not only considers the mechanical and scientific perspective of water management, but as well the social and economic impacts that it can have in societies, in the respect of the water regulations (Ganoulis et al. 2011).

The system behind TWRM includes important perspectives from which the individual can understand and make their own analysis about water management, using as a reference one of the past studies on TWRM. But because of the many changes happening constantly and simultaneously at a global, interstate and national level, which are increasing the value[2] of water, the tools and mechanics offered are not enough to deal with the management of water at the moment: "it is increasingly recognized that conventional supply side management is coming to an end in many cases" (Hoff, 2011).

Consequently, the complexity of water management resides on the multiple perspectives, tools and studies that we can employ when analysing the topic. However, not only different expertise can influence on the outcome of water management, but also the way it is approached a certain problem can impact on the results of the water strategy. Islam and Madani (2017) asserts that one of the main issues of science it is the constant research of defined solutions, which can be replicable and be general for common problems. However, because of the multiple linkages between arguments and fields, it is impossible to construct a defined scheme that can be applied to, for instance, water problems and its management. Indeed, the results of Islam & Madani' studies (2017) show that the core of complex problems can be summarised under three origins:

1. There are infinitive ways to comprehend the system of the world, and each direction is connected to many others and vice versa, building up interdependencies;

[2] The availability of water is slowly diminishing, and this can create repercussions on the current perception that we have on water, meaning that it will not be seen just as a public commodity, but as a valuable resource which demand will increase overtime.

2. Because of the infinitive linkages, it is impossible to estimate them and to understand each possible outcome;

3. As a result, the individual should explicitly accept all the multiple versions that interpret the world, but it is unable to do so because of (s)he possesses a certain background (life, morality, values, past events, environment) which leads to a personal understanding.

In short, we will never be certain of the complete picture of reality, as well as the full understanding of it: in fact, understanding a complex problem means comprehending each aspect of it and acknowledging the interdependencies and interactions between one element to another (Islam & Madani, 2017). With this view in mind, TWRM offers an overall picture of the 'fields' that needs to be considered when planning for a new and better water strategy at a transboundary level. Yet, it is humanly impossible to predict and understand every aspect of TWRM, though the generous amount of studies about it. Because of its large 'bag of knowledge', it is challenging to find suitable solutions and outcomes for a case involving more than one influenced entity. In addition, because the available knowledge on TWRM is wide but not specific, the institutions in charge of managing transboundary water systems need to reach to a common agreement to filter the knowledge in an efficient manner. Yet, it is impossible to find a single principle of managing water that would meet and satisfy the increasing demand of water. Thus, new and narrowed approaches of understanding phenomenon should be developed in the future, which can be fit to the constant changes happening in the world.

3.4. Water security: an approach to water management

According to the studies of Bakker (2012), in the past 20 years there was an increasing growth of interest to the management of water, which led to publish hundreds of studies related to water security. Water security is a theoretical tool which defines when the level of water reaches an adequate and qualitative amount to support living standards in a territory or community. The expansion of knowledge in this field derived from the interest of safeguarding water from different threats that would have contaminated the ecosystem and harm the health of humans (Bakker, 2012).

At first, Wouters, Vinogradov and Magsis (2009) described that the term 'security' was not associated to any environment specifics, but only to the safety of a country from military

attacks or threats from external actors. In time, the definition of security changed¸ and it started to consider also the safety of people seen as individuals. Thus, the concept of water security stopped to view from the perspective of the country as a unit, but as a whole entity formed by individuals. This change was declared by the UN Development Programme in 1997: people will feel secure when their personal environment is not menaced by external threats which can undermine their safety. For instance, this sense of safety can be achieved through the development of the country. Thus, as stated by Wouters et al. (2019), the definition of security shrunk from a national security level to an individual safety and development level. In this manner, institutions, NGOs and expertise gave more relevance to the contexts in which people were living, focusing on the endangering consequences caused by the scarcity of necessary elements for the development and security of society, such as water (Wouters et al., 2009).

The terminology of water security was described for the first time in the Hague Declaration in 2000. In the Hague Declaration the importance of water is underlined as a vital resource for human prosperity and for the existence of the planet's ecosystem. The population growth, climate change, continuous exploitation of lands, and water scarcity, can cause severe transformations in many aspects of society, from a political to an environmental degree. With the Hague Declaration, the World Water Council declares that water security must be provided in the 21st century:

> This means ensuring that freshwater, coastal and related ecosystems are protected and improved; that sustainable development and political stability are promoted, that every person has access to enough safe water at an affordable cost to lead a healthy and productive life and that the vulnerable are protected from the risks of water-related hazards. (p. 1)
>
> (World Water Council, March 22, 2000)

Different challenges were listed in the declaration, but two relevant scopes were suggestive: the management of shared water resources between different users, in particular at an interstate level, and the commitment to govern water wisely (World Water Council, 2000): in other words, to involve all the actors that are significant for an efficient and sustainable management of the water. Achieving water security by 21st century should be done through the implementation of the "integrated water resource management, that includes the planning and management of water resources, both conventional and non-conventional" (World Water Council, 2000, p. 2), as well as the promotion of cooperative relations between citizens, institutions, expertise and international organisations (World Water Council, 2000).

Therefore, the declaration offers a clear definition of what water security means, what the obstacles are and the possible strategies to be undertaken to achieve the declared purposes. Nevertheless, Bakker (2012) emphasises several challenges that threat the success of water security research: (1) different definitions are used by expertise from different specialisations, preventing the formulation of a common interpretation which would allow a competent water strategy and policy-making decisions; (2) because water management includes multiple and distinctive fields of interests (energy, food production, international organisation or governments), it is important to construct an "interdisciplinary and collaborative research" (Bakker, 2012, p. 915); and, (3) because researchers belong to different study assets, they tend to employ divergent scale of analysis, which prevent a common agreement on water management (Bakker, 2012). In addition, what makes the Hague Declaration purposes utopic[3] is the realisation of its goals by relying on international organisations' actions and strategies. Despite the commitment of those institutions to enhance water culture, or to diminish water scarcity in high-risk territories with an approved water management plans, the real change can happen only with the engagement of all the parties involved in the establishment of water security. In other words, all the actors (citizens, government, stakeholders, water managers or engineers) need to have the same interests for water security promotions, or at least 'to be on the same page': accessibility of clean water to everyone, sustainable and efficient management of water, and protection of the environment. However, each group can possess different opinions and interests, especially if water is being shared by two neighbouring states. For instance, Uzbekistan and Tajikistan have different reasons to use water in a certain manner or in another, causing several disputes about the quantity of water that must be shared between the two countries.

The following years after the publication of the Hague Declaration, several international organisations were born with the purpose to promote water security: for example, UN Water, World Economic Forum or Global Water Partnership. Notably, global water security plans are usually associated with United Nations activities and initiatives (Wouters et al., 2009). Today, research organisations, such as Global Water Partnership, the United Nations University, and the International Water Management Institute, are employing the terminology water security for their own research and as a main framework of studies (Wegerich, Rooijen, Soliev, & Mukhamedova, 2015). Other organisations are also involved in the planning of water facilities in rural areas, where water is not easily accessible or

[3] Using this term, I would like to underline that the sole influence of international organisations will not help to change the current water scarcity issues.

sufficiently clean to be drunk, but they concentrate more at a local level, focusing on small areas and groups of people. Despite the willingness to improve the conditions of individuals living in underdeveloped countries, the actions and promotions of water aid and development of water implementations from international entities can be still inadequate for long lasting plans.

As a matter of fact, Islam (2017) reported in his studies a concrete example that proves the poor and lack of knowledge and instruments of international companies to implement an adequate and successful water plan in underdeveloped countries. In the 1970s, United Nations Children's Fund (Unicef) undertook a new project regarding the improvement of underground water pipes in Bangladesh, where a high rate of diarrheal disease was present at that time. Because the water on the surface was dirty and contaminated by several bacteria, it was necessary to implement a new water distribution system capable of offering clean water to the inhabitants. After 10 years of construction, million tube wells were installed in the underground pipes all over Bangladesh, and they become the main source of clean water for the population, contributing to the success of the project. Unfortunately, the organisation did not predict the danger of arsenic contamination from the installation of metal tube wells, and, in five years, more than 20 per cent of tube wells were unusable for health safety. This not only had repercussions at a sanity side, but it also impacted at a social and cultural level: people affected by arsenic contamination began to be discriminated by other individuals, and they were perceived as outsiders of the society (Islam, 2017).

This example shows that the best strategies approved by international organisations might not always be the most efficient and sustainable approach to deal environmental issues, such as water scarcity or equal water distribution. Moreover, the incapacity of an efficient water system can cause a further threat to the development of a country. As a result, international organisations employ the discourse of water scarcity and of the importance of population's survival as motivations to implement new strategies to solve the lack or the maldistribution of water in affected territories. Yet, the plan that supposedly should improve people's life with water can have collateral effects and become a threat to the 'population health and survival' in the future, as shown in the Bangladesh disaster. Furthermore, the actions of international organisations do not always guarantee an improvement in the transboundary water management system and the political relationships among countries involved in the water system. In fact, as described in the previous chapter, the World Bank's report about the Rogun dam has certainly impacted on the decision-making process and water

management system between Tajikistan and Uzbekistan, influencing their fragile political relationship.

In the next sub-chapter, the legacy framework of international water law will be addressed to comprehend the main legal actions taken in the past years towards a sustainable and efficient water management.

3.5. International water law

International water law is a fundamental aspect of managing water systems around the globe. It provides a legal framework and a guide to organise and to support the decision-making processes regarding transboundary water streams. In fact, the past decades were characterised by meaningful episodes which brought to the development of international laws focusing on the equal distribution of water in countries afflicted by scarce resources. For example, the Treaty of Vienna of 1815 defined the first shared watercourse in Europe, with the creation of the Rhine and Danube commissions, which focused on navigation matters in those two water streams (Schmeier & Shubber, 2018). Despite the existence of water laws that support water management systems, those laws are still inadequate to meet the constant changes and demands of the states. In fact, global changes that are affecting the quantity and the quality of water in the planet, and the growing tensions between downstream and upstream countries, are few of the many reasons that affects the adequacy of water laws today (Zeitoun, 2015). For instance, Zeitoun (2015) described that, during the 20th century, Egypt, Turkey and Israel had developed irrigation systems and dams that would support the demand of energy with hydroelectric power for their own territories. Yet, because the water streams originate from Egypt, Turkey and Israel, today neighbouring countries like Syria or Sudan are greatly affected by the irrigation systems and dams since they are not receiving enough quantity of water to support living standard conditions. In addition, they do not maintain any sovereignty over the stream, nor decision-making, causing a lack of availability of water or restriction to the resource. This case can be defined as an “upstream dilemma” (Zeitoun, 2015, p. 950). Consequently, international water laws are necessary to guide the decision-making processes regarding states’ own shared resources (Zeitoun, 2015). Although international water laws do not oblige the state to act in a determined way, following the established norms makes state´s conduct and decisions admissible from an international point of view (Zeitoun, 2015).

According to UN Watercourse Convention of 1997, international water laws pursue the main principle of "equitable and reasonable utilisation" (Wouters & Rieu-Clarke, 2001, p. 2), meaning that laws define criteria and achievements to be accomplished through a specific procedure (Wouters & Rieu-Clarke, 2001). Generally, the international law focusing on the legal matters of water comprises of five elements: "(1) scope; (2) substantive rules; (3) procedural rules; (4) institutional mechanisms; and (5) dispute settlement" (Wouters, Vinogradov, Magsis, 2009, p. 110). The scope is the most important part when analysing legally the resource. Indeed, water must be first identified within a certain geographical or hydrological context, such as 'shared watercourse' or 'international watercourse' (Wouters et al., 2009). In this manner, it is possible also to understand who is involved and who is excluded, which duties and rights to execute and so on. Then, the water case is managed by following substantive rules, which identify the criteria of water usage, and procedural rules, which decide how water is systematically conducted (Wouters et al., 2009). All the actions taken must comply with the approved institutional mechanisms from international organisations, such as directives or specific water frameworks (i.e. UN Watercourse Convention, EC Water Framework Directive) (Wouters et al., 2009). Finally, it is always possible for a debate over the approved water management deal (Wouters et al., 2009).

With this perspective, the law conducts the involved actors towards a common settlement, enforcing the legal system on a complex water management issue between states. Indeed, when there are many interests taken into consideration, it is challenging and time-consuming to settle an agreement between parties because of the different values and interests over water usage, as well as the involvement of historical background and past relationships, which have conducted to a management dispute. Consequently, the law can enforce a decision and conclude with a compromise approved by the involved actors. Currently, there are several legal frameworks which should be borne in mind. As presented by Pangare (2014), the Helsinki Rules on the Uses of the Water of International Rivers in 1966 was the first step towards the international watercourse laws. Or, as described by Honkonen and Lipponen (2018), the Convention of the Protection and Use of Transboundary Watercourse and International Lakes in 1996 enhances a cooperative relation over transboundary water resources and enforces the creation of shared water joint bodies. The UN Watercourse Convention in 2014 recommends the establishment of watercourse agreements between states (Honkonen and Lipponen, 2018).

As Wouters, Vinogradov and Magsis (2009) asserted, the international water law has always been endorsing for a "basin-wide approach to managing transboundary waters" (p. 111). A basin approach considers that all the basins are geographically closed environments, in which eventually the water will flow in and be used effectively by the locals or the interested users. Yet, there are two kinds of water that can be defined within this approach. The first is "Dry water savings defined as reductions in non-consumptive water use" (Gleick, Christian-Smith & Cooley, 2011, p. 785): in other words, water that comes back to the basin because of return flow or runoff. The second type is "wet water savings are defined as reductions in consumptive water use" (Gleick et al., 2011, p. 785), meaning the water that leaves the basin or through evaporation and plant transpiration. Thus, the efficiency of a basin through the basin approach is calculated based on the amount of water that flows into the basin rather than the amount of use of the resource. However, the main issue of the basin approach regards the absence of analysis of water which is not just productively consumed, or the benefits that comes with the reduction of water in a basin, such as better water quality or the diminishing energy demand because of the lack of water (Gleick et al., 2011). Overall, it seems to be a quantitative analysis rather than a qualitative approach.

As a result, according to the basin approach, in order to manage the water at a transboundary level, the quantity of water in the basin should be examined and, when the level of water is diminishing, water strategies should be implemented. Within this perspective, in 1970, the basin approach was employed in the Soviet Union to regulate and re-allocate Syr Darya river, which distribution was unequal between the past soviet republics. Within this case, the following factors were considered: "(1) proximity of the lands to the source of irrigation; (2) higher productivity of the lands, lower demand for irrigation, less investments and time; (3) preference for the lands in more southern latitudes suitable for more valuable sorts of cotton; (4) proximity of the lands to the reserve contingents (labour, infrastructure); (5) needs of the republics in connection with the Union's interests" (Soliev, Wegerich, & Kazbekov, 2015, p. 2747). In this context, the Soviet Union did not just consider the level of water itself, but also other aggregates that would have been influenced by the basin approach, as well as considering the benefits and disadvantages of those elements. Indeed, the basin approach might be useful when applying on a single territory, or when one actor or group is involved. However, when the basin approach is applied at a transboundary level, its rigid attention to the water quantity and use purposes is not sufficient to take into consideration the other aspects that influence the water management, such as political, social and economic disagreement between states.

From the legal perspective, it is evident that the basin approach might be the most suitable strategy when two states are disagreeing about sharing and distributing water equally and efficiently. In fact, the laws and regulations governing a watercourse are based on technical and scientific evidences that oblige the involved actors to find a suitable agreement to meet the requirements of the regulations, as well as estimating which states are involved in that specific watercourse. Nevertheless, implementing a basin approach supported by the international law is not always the best way to deal with wicked problems such as transboundary water management. For instance, once former member states of the Soviet Socialist Republic, Uzbekistan and Tajikistan share the Syr Darya River for the growth of their economy and society. The distribution of water and production of energy were manoeuvred by Central Asia Power System (CAPS), but with the end of the Soviet Union the states got their own independencies and their own management issues to deal with (Ito et al., 2015). The basin approach used at that time could not meet the demand of the states, because it was not meant for a single and smaller state, but for a bigger nation like the Soviet Union. In addition, CAPS was meant for the management of multiple states' resources: without it, the Central Asian states had to rearrange the resource management accordingly. As a result, it seems that neither the strategy that was implemented by the Soviet Union, nor the basin approach supported by the international water law are enough to understand the whole complexity of the water management system in Central Asia. To gain a wider understanding of these consequences on society, the political and social aspects should be also involved within the legal framework.

However, a reason that makes international water law a suitable approach of managing water between two or more parties is that its ultimate aim is to guarantee the protection of the water streams through law enforcement and suitable agreements, that can protect the interests of the directed involved users, as well as safeguarding the quantity and quality of the resource. Indeed, the set of rules and compliances will enable and push the actors to get involved in the water management at a transboundary level, and to find suitable and efficient solutions which can sustain the demand of water through mutual cooperation. In this manner, discussions and debates between opposing actors will be enhanced, inducing to find strategies that are sustainable for everyone. However, it is not an external and international organisation or legislation which can directly coordinate and manage water shares between two neighbouring countries, but only the national government itself can decide for the economic, political or technical tools that can determine the access of the water resource to other external countries: this happens because the state has the right to access to the

transboundary water source stream first (Zeitoun, 2015). Of course, water is protected by international laws and each state has to be responsible for "equitable and reasonable use" (Wouters et al., 2009 p. 116); yet, in the end, it is the direct involved state that has the authority to decide how to manage the water course that flows in its area, regardless the perspectives of external countries (Wouters et al., 2009).

Consequently, because each state is independent from the others, and the governments are the direct systems which enable the implementation of new water strategies and frameworks, states are also responsible for the use of water according to the international water law standards: fair and rational use of water in their lands (Wouters et al., 2009). Thus, this can compromise the equal water distribution between neighbouring countries, hindering the achievement of the promised water security concept. Nevertheless, it is certainly a new perspective that the future development of international water law should take into consideration; in particular the effectiveness of their rules applied in the states (Wouters et al., 2009). Though those laws can be perceived as effective tools to guide the states in renewing and improving their own management mechanisms for water sharing, the most time-consuming and complex part stands with the achievement of an agreement between multiple shareholders which has different interests and perspectives on the matter.

Thus, international water law can be identified as an initial tool to analyse a past, current and future water dispute or conflict from the perspective of the legal framework, but it does not include other important features which should be also considered, such as "economy, ecology, technology, security, politics and policy" (as cited in Cahan, 2017, p. 39). Indeed, it is challenging to find a compromise in the water disputes, due to the many and different intentions and objectives that the actors have. Despite the purpose of the international water law to deal and to support the international interests of the countries, as well as maintaining stability, one of the main concerns that makes the laws expectedly 'weak' is the lack of a central government which enforces the rules emitted to the states, because of the common and accepted anarchism philosophy within the international relations (Allain, 2014).

3.6. Summary

The concepts and the methods described in the chapter were developed to explain the water management from different angles, and to provide a useful perspective over the water system

in the 21st century, with the aim to improve future water management policies and technical plans.

As the table below summarizing different approaches suggest, there is a broad spectrum of existing theories and approaches to water and its politics. The table shows what the main features and main weaknesses are for each approach considered in the chapter.

Approach to water management	Features	Weaknesses
Water management as a wicked problem	Water management is affected by many factors and interests involved in its management.	Water management is complex and difficult to assess because of the many perspectives involved, and the solutions found cannot be universal.
Water as a social opportunity	Water is perceived as a driving-force, a tool to ameliorate the society towards the values of prosperity, equity and sustainability; unfolds through discussion and debates.	Does not take into consideration a common perception of water and its management may be hard to reach, in case of a lack of consensus among the parties involved.
Transboundary water resource management (TWRM)	Provides depth knowledge source to manage water taking into consideration different fields and perspectives.	Finding a common definition of TWRM, impeding an agreed strategy on water management, is difficult to find due to the infinitive amount of knowledge and the

		multiple opinions produced.
Water security	Water is assumed to be secured when it is accessible and available for the sustainment of people's lives.	Lacks mention of any plans that can be used to reach the goal of water security.
International water law	Water is approached through the principles and laws that states should follow to guarantee the equal distribution through the water management system.	Continuous changes in the water structure may interfere in the application of the laws in a beneficial way for the parties involved.

Table 1. Summary of the approaches to water management (by the author).

Nowadays, water management can be perceived as a wicked problem, because there are many factors to be considered when it comes to implement a plan, such as the interests of the actors involved in the management. This can make the management complex and difficult due to the many perspectives involved, and the solutions found cannot always be applied to all problems with similar features. However, water can be considered as an opportunity, or a driving-force that is able to improve society towards 'universal' values, such as prosperity, equity and sustainability, through open debates between actors of different levels or adopting ethical plans. Yet, the lack of consensus and willingness to adopt this concept is still strongly present in many decision-makers actors, providing precedence to other interests that are unfit with the concept. Hence, the most common perspective adopted to manage the resource efficiently without taking part in "heated debates" is the TWRM, which offers a wide collection of information in different fields, from the scientific domain to the social science area. The extensive range of choices provides multiple detailed standpoints about sharing water between stakeholders; but one substantial problem is, indeed, the availability of a colossal amount of information, tools and opinions which hinder the agreement of a defined solution. In this manner, it is certainly impossible to find a common strategy that can be implemented for the future management. As a result, excessive knowledge becomes an obstacle to a common understanding of the water management.

Besides those concepts, water was also contextualised at a national level, from the perspective of social and economic stability and security. Then, this perception was narrowed down to a human level, meaning that the security of water is guaranteed when water is accessible to individuals, and available for the sustainment of life. In fact, with the Hague Declaration of 2000, it was officially proclaimed that water is secured when it can support lives and individuals, not anymore as a mean of enhancing economic stability of a nation (Hague Declaration, 2000). Nevertheless, the framework does not include other aspects that can guarantee the sustainment of life, such as proper water management system, or a further interdisciplinary study for the development of water systems. In addition, the strong emphasis on international organisations involvement in the water management systems prevents the improvement of national institutions strategy which can tackle the problem independently, favouring the inclusion of other international actors' projects.

The international water law provides principles and guidance when water is shared internationally, meaning that its stream, course or source is distributed with more than one single receiver. The detailed and schematic approach to tame disputes and debates often leads to a successful implementation of a water system and cooperation, which can guarantee peace and stability. The relevancy of the water-basin approach of the international water law drives states to fulfil their water obligations and to protect its use. Despite the capacity of the international law to implement rights and responsibilities, the schematic and solid methodology does not allow the integration of other perspectives, thus becoming inadequate to meet and to manage the on-going growth of water demand between states.

By analysing different approaches to water management, it is possible to understand what weaknesses are present in the theories, in order to develop a new framework that can fill the gaps of the previous theories. Understanding water as a reason of action was essential to introduce the difficulty and complexity of water management, due to the multiple views and interests involved at different levels and stages, as well as the many approaches taken to study water. From the point of view of this study, it was important to analyse the role of water from different perspectives, and to understand how different inputs can influence the next steps for water strategies, in particular from the side of international organisations, which seem to be the only strong decision-making authority in this context.

In the next chapter, an overview of the water diplomacy framework will be offered, which will be at the core of this thesis and will provide a framework of analysis of the case study. For the purpose of the thesis, the analysis will be focused on political and official discourses

from Tajikistan and Uzbekistan over the Rogun dam construction, which greatly influence the transboundary water management between the two states. Thus, it will be considered only the qualitative part of water management, whereas the scientific perspective of water management, meaning the technical and experimental view, will not be any longer considered, if not for describing the essential mechanisms of dams.

4. THE WATER DIPLOMACY FRAMEWORK

The management of water is complex and difficult for the innumerable aspects that have been explained earlier in the previous chapter. Briefly, often states act according to their own resource needs and demands, regardless of the consequences that others will have to face. It is exactly for this reason that this research utilizes and develops the water diplomacy framework. Within the international system, diplomacy is employed by institutions and governments to reach agreements and compromises, or to find alternatives to satisfy both parties. Diplomacy can be seen as one efficient and practical tool to mediate between opposing perspectives, interests and values of different entities, and to mitigate the discrepancies and the problems of water management systems. With the increase of water sharing issues, the focus of diplomacy has also started to concentrate on water argumentations and topics which are affecting at an interstate level. The next section will start with a short introduction to the evolution of the concept of diplomacy, followed by the water diplomacy framework and its weakness.

4.1. A brief outline of the evolution of diplomacy

Diplomacy is an institution of international relations which has developed in the context of international anarchy. Within the international relations frame, anarchy can be perceived in two ways: (1) it can refer to the lack of a common institution, which is authorised to govern over a state, or population; and (2), in a pessimistic sense, it is observed as a tool to create turmoil because of the lack of an institution that can control and establish rules and laws to tame disorder and confusion (Lechner 2017, p. 2). At a worldwide level, Lechner (2017) continues that international anarchy refers to the lack of a transnational institution effectively regulating a group of sovereign states. As a result, within the international anarchy, the relations between states is horizontal (p. 1–2). In the context of an initial anarchical system, according to Hsiung (1997), the need of stability and order at a global level drives the states to create international laws, which have the aim to regulate states' behaviours, rights and priorities. Besides the other functions (a tool to prevent new conflicts, or a communication tool to manage international relations), international law fills also the role of mitigating the plural interests of the states, permitting an international setting of debate and possible cooperation between disagreed states. This is possible thanks to an instrument of 'sophisticated communication': diplomacy.

Diplomacy covers many functions that are related to the world of communication and politics. Indeed, Hedley Bull (as cited in Jönsson & Langhorne, 2004) famously affirms that diplomacy is an instrument of communication used to ease the discussion between political figures, with the main aim to reach a mutual consent on a topic based on previous information collected earlier. Also, Bull continues that another function of diplomacy is to avoid or to reduce the possibilities of frictions between two parties: in other words, preventing, or at least attempting, any fallouts that may deteriorate the affairs and the stable relations between governments. Finally, individuals practicing diplomacy, named diplomats, are represented as society symbols of states, which have the duty to exhibit the existing rules and interests of one state which is respected internationally (Jönsson & Langhorne, 2004). Another aspect that should be considered and that is significant for this study is that, according to Rasmussen (2009), diplomacy means also creating and elaborating a constructed reality through the use of language: indeed, the perception of reality of an individual is influenced by the words that the political figures articulate about a determined concept or phenomenon. In this manner, a certain message or understanding of reality is transmitted to the audience, which is based on the interpretation of the person who is delivering the discourse.

Historically, Hedley Bull defines three definitions of diplomacy, which includes the role of professional diplomats and official agents with "tactful or subtle manners" (as cited in Jönsson & Langhorne, 2004, p. 162) to represent their own country´s interests. However, according to Jönsson and Langhorne (2004), the definition of diplomacy is distinguished between four settings: (1) diplomacy includes the collection of external information within the international community, relevant to the production of external policies which are executed, justified and achieved to reach an agreement, or to overcome the hostility of the implicated foreign actors; (2) diplomacy can be divided into bilateral (two states) and multilateral (three or more states) relations, (3) which are today institutionalised, meaning that diplomats need to follow certain rules and conventions approved by the states before taking any action or decision. Lastly, (4) the diplomatic role acts for the stability and interests of the governments involved, but not of the citizen's behalf.

Because of the many political changes that happened in the 20th century, the role of diplomacy within the international relations context has changed and developed, in order to adjust to the transformations that society is facing (Diplomacy, 2019). As a matter of fact, Strange (as cited in Jönsson & Langhorne, 2004) asserts that there has been a structural

change in the political, economic and societal world, which has influenced greatly the diplomatic conduct of the 21st century. Technological innovations and the advancement of this sector led the firms and the businesses to be more competitive and active in satisfying the demand of supplies of the market, not only at a local level, but also at a global level. As a result of the markets' opening globally and the 'economic frontiers' to others, the so-called third world countries had the possibility to grow and to reach the same well-off level of industrialised countries, by developing the demanded production sectors for international exportation purposes. Consequently, an increased competition between states to dominate the global market started to influence the conduct of the other states in matter of their international affairs. Within this context, diplomacy deals not only with official representatives of other countries, but also with firms, such as transnational business companies, "to compete with other states to get the value-added done in their territory and not elsewhere. That is the basis of bargain" (as cited in Jönsson & Langhorne, 2004, p. 357).

Moreover, the diplomacy framework had to be arranged and to be adapted to the new modern circumstances, which are hindering and threatening the old and traditional habits of humankind. The 'evolved' diplomacy started to include more domains of interests and practices than ever before. For example, after the two World Wars and the Cold War, Cooper, Heine and Thakur (2013) argue that the pattern of armed conflicts switched and focused to internal matters concerning power execution or resources management, which often is re-directed to regional and transnational interests of the parties involved. In addition to this context, climate changes repercussions are affecting all countries' interests and values, in particular those territories that are stroke by global warming effects, and that are lacking sufficient resources or knowledge to improve, or to adapt, to the unaccustomed situations. Thus, needs and demands are constantly changing, preventing an efficient development of the country (Cooper et al., 2013). Finally, Cooper et al. continues that international organisations are starting to consider health issue as a problem of foreign policy, which should be acknowledged and tamed to attain human security.

Against this background, the diplomatic studies have developed and enriched throughout the past decades, permitting the elaboration of new theories and practices which are more appropriate to employ rather than others. Besides the evolution of international relations and of new international establishments, diplomacy has grown also in relation to transboundary water interests and problems. Indeed, one of the biggest challenges is linked to the existence of treaties or river basin organisations which are inadequate to deal with conflict of interests

between parties, due to the lack of a strong mechanism to manage water clashes (Conca, 2012). In addition, the presence of foreign policy makers in the conduct of transboundary water discussion is problematic, since there is the possibility to worsen the existence rivalry, or to exclude other groups of interests which might stimulate other issues not considered before (Conca, 2012). Consequently, water diplomacy was developed to offer a new approach to the actual transboundary water system challenges.

4.2. The concept of water diplomacy

According to Read and Garcia's research (2015), the water diplomacy framework was developed to attempt to resolve the complex problems related to water management practices. Water strategies would have often contrasted each other, creating new and unpredicted issues about the management of water. But at the same time, slowly interdisciplinary approaches were growing and accepted among researchers and scholars (Read & Garcia, 2015). As a result, the framework can be considered a *new* approach also for the reason that it incorporates multidisciplinary knowledge, such as science, politics, policies or economics (Klimes et al., 2019). Keskinen, Inkinen, Hakanen, Rautavaara, and Niinioja (as cited in Pangare, 2014) assert that the framework assumes two starting points: first, when analysing transboundary water management, clashing and competing interests will be always involved; and secondly, it is best to deal with the conflicting bids rather than avoiding them, because of the risk of non-cooperative relation which would aggravate the existing relation (p. 36–37). Thus, the possibility to clarify and manage cooperatively water shared resources can become a social opportunity which countries can benefit from.

When applying water diplomacy, Islam and Repella (2015) define the concepts of "Know WHY" versus "Know HOW": it is important to investigate logically on the reasons and origins of one problem and to focus on the way to solve it, or vice versa. The figure below captures the fact that water diplomacy framework revolves around three fundamental aspects: (1) *values* that give structure to our reality and our understanding; (2) *interests* that guide the decisions and the objectives of the parties involved, and (3) *tools* that are instruments to realise goals and solving obstacles (practical, technical or logical) (p. 3). Taking these into account, water management problems are seen to be structured through the visions and the concerns of the involved parties, which determine the techniques and the processes that should be followed to reach the same goal. However, what causes the complexity of water problems are: (1) the lack of consensus among the involved actors, (2)

unrecognized universal problem of water; and (3) constant changes and shifts in the process of managing water (p. 4).

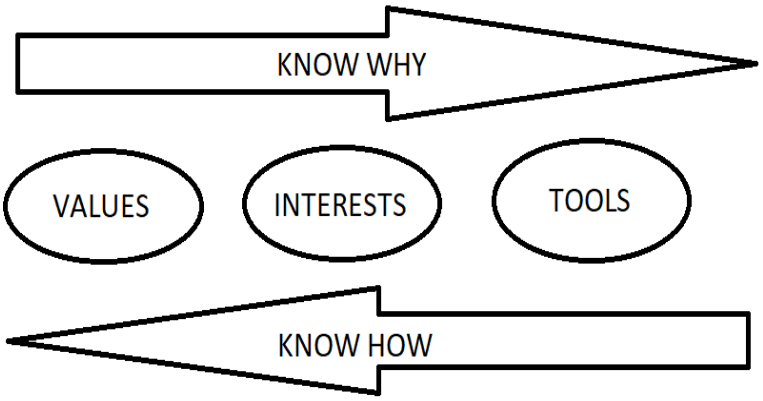

Figure 3. Know Why vs. Know How. (Islam & Repella, 2015, p. 3)

Consequently, the aim of the framework is not only to theorize and conceptualize, but also to find a compatible water sharing management approach by "developing reasonable, sustainable and peaceful solutions to water management while promoting or informing cooperation and collaboration among riparian stakeholders" (Klimes, Michel, Yaari, & Restiani, 2019, p. 3). In this manner, it seeks to provide a new insightful scheme which would enhance a common agreement of water management to different actors also in practice. Moreover, the establishment of a cooperative context at an interstate level is also another fundamental aim of the framework (Keskinen et al. 2014). Nevertheless, there is a shared acceptance among expertise that water diplomacy employs data from both the technical and diplomatic side, and that there should be a better interdependence between the two parts (Klimes et al., 2019).

Shafiqul Islam and Lawrence Susskind (as cited in Islam & Repella, 2015) have identified a certain pattern for the water diplomacy framework, which includes different elements to be considered. First, key assumptions are identified when approaching the theme of sharing water internationally, such as that water creates connections or that those links are always changing. Then, they have delineated a theoretical approach, including a selection of cases, depending on the complexity of the problem; the identification of focus area and scales that the research must concentrate on; the recognition that fields such politics, social sciences and sciences are interconnected; and identification of the context and its 'zone of complexity'. Finally, Islam and Susskind (as cited in Islam & Repella, 2015) have designated a practical framework to implement the water diplomacy framework: for example, each

approach to water management is unique and it is suitable for certain water networks than others; or it is important to highlight value creation and to find consent among different stakeholders (p. 5).

Acknowledge key assumptions	Theory: characterize water networks properly	Practice: manage water networks properly
Water is a flexible resource.	Distinguish among simple, complicate and complex water networks.	Recognize that simple, complicated and complex water networks require different management approaches.
Science, policy and politics combine to create water networks.	Identify appropriate domains, levels and scales.	Ensure appropriate stakeholder representation.
Water networks are complex.	Recognize that the natural, societal and political domains (NSPD) are interconnected.	Engage in scenario planning and joint fact-finding.
Assumption 1: Water networks are open and continuously changing.	Locate problems on the certainty-uncertainty and agreement-disagreement continua.	Emphasizee value creation.
Assumption 2: Water network managers must take account of uncertainty, non-linearity and feedback.	Understand what it means to operate in the Zone of Complexity.	Mediate informal problem-solving and seek consensus.
Assumption 3: Water networks need to be managed using a non-zero-sum approach to negotiation.		Commit to adaptive management (AM) and organizational learning.
		Implement an appropriate management strategy for each water network.

Table 2. The Water Diplomacy Framework. (Islam & Repella, 2015, p. 5)

According to the results of Water Diplomacy Integrative Graduate Education and Research Traineeship (as cited in Read & Garcia, 2015), four assumptions need to be evaluated and kept in mind when seeking to tame a complex water problem: (1) sciences and values should

be considered simultaneously when approaching the problem; (2) it must be accepted that in every solution there is "strength, limitations and boundaries" (Read & Garcia, 2015, p. 12); (3) the water system can be adjusted; and (4) expertise need to create "actionable knowledge"[4] that must be applied, though the unpredictability of the actions. The study also defines who the water diplomats are: experts of interdisciplinary fields who are capable to mediate in finding a solution for complex water problems among stakeholders, by adopting problem-solving skills, agreements, and analyse cross-boundaries perspectives (Read & Garcia, 2015). Therefore, water diplomacy studies are important to prevent or to contrast a conflict over the water management fallacy, often between multiple stakeholders or countries (Honkonen & Lipponen, 2018).

Another definition was given by Grech-Madin, Döring, Kim, and Swain (2018), who assert that water diplomacy is a negotiation between the actors to decide the management of the water shared stream(s). It has three main characteristics: (1) water diplomacy is analysed in the political perspective, setting aside any other relevant fields, such as the mechanical or engineering aspects; (2) it involves multi-level management; and (3) it is "normatively driven", with the aim to find sustainable and peaceful actions (p. 101). Even within this definition, the authors emphasise the importance of collaboration among the different disciplines which are related to water diplomacy, of focusing on reliable data from the multiple perspectives, and of addressing the research towards the establishment of cooperation and peace. In addition, Grech-Madin et al. (2018) continue that the tools of water diplomacy comprehend various levels: policies, financial and technical aid, political support and judiciary's state. The first three characteristics are efficient if they are adopted properly in the country, but often their implementations are weak because of the lack of knowledge or finance to invest in water projects. Only the jurisdiction of the state had positive outcomes, yet not without producing any tensions from the stakeholders.

Many actors are involved in water diplomacy and in the negotiations over the shared resource. In the studies of Keskine et al. (as cited in Pangare, 2014), national states and institutions are the first targets who are directly confronted with the problem, because of their legal, proximity and stability interests; experts of the discipline are beneficial as they share their knowledge and offer valuable and constructive. At an international level, a vast number of international organisations has grown in the past years, with the goal of supporting

[4] Defined by Argyris (2016), actionable knowledge means the knowledge that has external approval and legitimacy in the context of reference.

and developing efficient guidance and control over the availability of water in the globe: the aim is to offer an efficient water cooperation framework and to implement treaty provisions (Schmeier & Shubber, 2018). One example is the International River Basin Organisations (RBOs), which are essential actors to avoid any further disagreements and conflicts by suggesting alternatives that can be beneficial for both parties (Schmeier & Shubber, 2018). Organisations as the United Nations (UN-Water), banks helping with the development of countries (Asian Development Banks or African Development Bank) or international non-profit organisations (Global Water or International Water Association) are also considered in the water diplomacy framework (Pangare, 2014). Besides organisations, it is important to consider also the sectors in which water management is involved, such as food and energy sectors.

From the perspective of the Multi-Track Water Diplomacy Framework, the actors involved in the management of water can be identified as agents. This meaning that they have the power to act and to take decisions to pursue their own interests and goals (Huntjens et al., 2016). In this manner, they are able to influence the social structures based on their own preferences, and to form or re-form the existing structures into new shapes, which also influence other agents involved in the phenomenon. Once a certain pattern of actions has been identified, it is defined as an 'institution', "an organized way of doing things" (Huntjens et al., 2016, p. 41) characterising society approaching a certain issue. Thus, from the perspective of the Multi-Track Water Diplomacy Framework, although the forms of institutions are lasting, they are constantly affected by the actions and the decisions of the actors who are building them (Huntjens et al., 2016). The perspective offered by the framework is essential to understand that the actions of the agents are influential and have the ability to rebuild and reshape the institutions, which follow standardised patterns of management.

Although general definitions were identified, the concept of water diplomacy has several nuances which were acquired by past definitions: indeed, water cooperation is strongly linked to the new framework that often they are recognised as synonymous, yet they are well-distinguished for several aspects. The studies by Keskinen et al. (as cited in Pangare, 2014) reveal that one of the main differences is the distinctive process of analysis and their focuses. The core of water diplomacy is the political and cooperative sides of TWRM, whereas water cooperation does not necessarily involve the political aspect, since often the main focus is the technical part of water management. The research continues that, within a

transboundary context, the water diplomacy framework can offer a better understanding of the complexity of the water system, especially when conflicting political interests and plans are involved; thus, it assumes from the start the lack of cooperation between the parties. By contrast, the water cooperation approach is based on the idea of an already existing or possible formation of a cooperative relation. Hence, it can be understood as a tool of the water diplomacy framework, when cooperation has been already established. Although there are differences between the two approaches, the frameworks are strongly connected to each other, being part of a bigger process of establishing cooperation: in fact, they both aim to enhance and to create cooperation and stability among the parties. Nevertheless, water diplomacy includes more aspects than water cooperation, such as security, peace and stability at a political and social level, thus extending the fields of interests outside the water system (as cited in Pangare, 2014).

4.3. The challenges of the water diplomacy framework

The framework seems to be promising and innovative in many aspects; however, it does not mean that it lacks difficulties and challenges that contrast the efficiency of the approach. While scholars produce knowledge useful to solve the problems surrounding transboundary water management, one of the biggest issues remains that water systems are unpredictable, and they always involve other dimensions that are directly or indirectly linked to the system. Even though there is a common collection of data from different disciplines, which enlightens the variegate aspects of the water system, an agreed and joint production of actionable knowledge, based on technical and qualitative aspects, is indispensable for the generation of data and useful information (Read & Garcia, 2015). Put differently, researchers and scholars consider that technical practicalities are essential to be part of the solution. However, often they do not uplift the complexity of water problems. Thus, qualitative analysis and consideration of social aspects are essential to provide the lacking information that mechanical studies are unable to comprehend (Read & Garcia, 2015). But, because of the uncertainties derived from the system, the generation of assumptions indispensable to create realistic outcomes are limited.

Furthermore, another issue that hinders the achievement of stability, security and peace through water diplomacy is a defective communication system among the parties (Klimes et al, 2019). To put it in another way, consultations of technical experts by policy makers are often weak or absent to give a complete picture of the problem, in addition to which the

priorities set by the state often favour the security of the nation over other objectives. Thus, it prevents the emergence of a full cooperative relation which can ensure all the interests or a fair compromise of the parties. In addition, because of the feeble connection between experts and decision-makers, it would be important to guarantee a good transmission of the scientific information about shared water resource to the institutions (Klimes et al, 2019). Finally, the transmitted evidence should lead to a sustainable and efficient strategy that can lead to a strong cooperative relation over the resource. However, achieving this goal is challenging because of the weak relation between all the actors (Klimes et al, 2019).

The presence of international organisations that can support and offer guidance to the management of transboundary water between countries are certainly advantageous, yet their powers are greatly limited by the national legal system, which obstruct a full presence of the organisation in the decision-making and planning process (Schmeier & Shubber, 2018). Indeed, the purpose of international law is to adjust the conduct of the states and to prevent new disagreements that would lead to chaos and conflicts, allowing more the establishment of a global cooperation. This system has certainly permitted a degree of desired peace and stability after the two World Wars, but the influence and enforcement of international law does not step in the singular country's affairs.

Finally, when analysing a case through the water diplomacy framework, the role of diplomacy seems to be weak within the approach. Although the study provided by Islam and Susskind (as cited in Islam & Repella, 2015) offered an elaborate approach to water management, the diplomatic tool is not elaborated in the political and international relations perspective, but rather as a tool of communication that can break the barriers between the different sectors, and that can mediate between the different and multiple interests, values and tools of the parties involved in the transboundary water management. However, according to Huntjens et al.(2016), the role of diplomacy within the water diplomacy framework is to prevent any water conflict from escalating and to find solutions over a water management system through "processes of research and fact finding, negotiation, mediation and conciliation that are rooted in an in-depth understanding of the social/ cultural/ economic/ environmental conditions and the political context" (p. 3). In other words, diplomacy places an important position in the management of transboundary water system since this tool of communication can achieve deals, compromises and agreements between opposing parties. Thus, this research foregrounds the role of diplomacy in the water diplomacy framework.

One of the tasks set for this thesis has been to use and develop the water diplomacy framework through a discourse analysis of the case of the Rogun dam, arguably offering a new approach of studying such a contemporary wicked problem. The water diplomacy framework can offer a new understanding of such peculiar, wicked cases, with the inclusion of not only the social and the technical, but also diplomatic aspects. It is suggested here that beyond mechanical studies, qualitative analyses of such social, communicative and diplomatic aspects are needed to further support the employment of the water diplomacy framework. As discourses are in a key role in such communicative and diplomatic interactions, the following chapter explicates the method of this research, discourse analysis.

5. DISCOURSE ANALYSIS AS A METHOD FOR ANALYSING WATER DIPLOMACY

The research method used to analyse research data – such as official documents or statements from the governments – is discourse analysis. Water diplomacy is strongly connected with discourse analysis as the language is the main tool through which a discourse is developed, and thus I found it suitable for this research. This analysis of discourses is used to study the representations that Tajikistan and Uzbekistan governments portray when involving the Rogun dam in their own discourses. In fact, the main scope is to understand if there is a pattern behind their speeches or in official documents. After possible patterns are discerned it is possible to ask whether there are any changes of their positions over the construction of the dam, which could contribute to a peaceful and durable relationship.

While using discourse analysis, the water diplomacy framework (WDF) will be taken into consideration throughout the analysis of the data. The WDF observes and analyses different types of relations between parties over transboundary water management. These relations can be cooperative and stable, or conflicting and unsteady relationship. Especially, the framework focuses on specific elements – values, interests and tools. By paying attention to these elements, it is suggested here, the political discourses of the actors involved, in this case the representatives of Tajikistan and Uzbekistan, can be identified. After describing how the data collection was conducted, discourse analysis will be explained, followed up by its limitations and challenges in the task of explaining the political, social and economic divergences of the states of Tajikistan and Uzbekistan over the Rogun dam construction.

5.1. Data collection

There are a lot of sources about the tensions between Tajikistan and Uzbekistan, but less when it comes to the Rogun dam construction. The dam has always been a point of interest for many political figures since the dissolution of the Soviet Union, but it causes political and economic contrast which affects the political stability in the area. Indeed, the lack of a confirmed and official bilateral cooperation between Tajikistan and Uzbekistan is hindering the promotion of water security in the region, preventing a formal and official peace between the two states (Persing, 2018). In my analysis, I will focus on the period starting from 2012 until December 2018, and I will not consider new developments that happened in 2019. At the time I was collecting the data, the information was scattered between these years, and it

is challenging to select a single specific year to study the discourses of the Rogun dam from the perspective of Uzbekistan and Tajikistan, since the discourses have been developed through many years. Another reason why this period was chosen is because the official speeches and declarations from the two government specifically addressing the Rogun dam construction and translated into English were few, thus the length of the term selected. In addition, for the first time in 2012, the former president of Uzbekistan Islom Karimov officially declared his hostility towards the construction of the dam, and this vision has never changed until the new president was elected in 2016. Hence, it is also interesting to analyse if the discourses of Uzbekistan, with the president Shavkat Mirziyoyev, have changed after 2016. However, if it is relevant for the discussion part of the thesis, it might be outlined what has happened in the following year after 2018. Finally, it is preferable not to use data that are dated before 2012, if not for historical and chronological explanations purposes. Consequently, I will limit the scope of my data from 2012 until December 2018.

Having delimited the period of analysis, I started to collect data from different channels and platforms, mainly to explore the context which I am going to analyse, and to understand the most suitable data that can help me tackling the research question. In fact, I was trying to find the elements and the factors which can contribute to the political stability of the states, through the framework of water diplomacy. Thus, (1) I have investigated and gathered data from Tajikistan and Uzbekistan's governmental websites to find documents, statements or agreements related to the case of the Rogun dam; (2) then, I have sought for additional information from news websites, in order to have a clearer idea of the struggles and obstacles of the Rogun dam construction. (3) The articles were often linked to official international organisations' declarations, such as the World Bank or United Nations statements, (4) as well as the enterprise which is supporting and sponsoring the development of the dam, Salini Impregilo. (5) Finally, I have looked for legislations considering the water management systems in Central Asia, which can affect Tajikistan and Uzbekistan. (6) My curiosity towards the Rogun dam case was developed thanks to previous works that I have encountered when studying water security. Thus, previous academic journals, articles, and literature will be also useful for the development of this thesis. As a result, the data was collected from all the sources mentioned above. In the discourse analysis that follows, I will mainly focus on official speeches from the parties, in particular from relevant figures, such as the presidents or foreign ministries of the respective nations. However, to assess the reliability of my discourse analysis, I also take into consideration other data that I have gathered.

I decided not to conduct any interviews, because I am not able to meet people who are related to the case in person, such as experts or scholars. The linguistic barrier also turned out to be challenging to overcome, since I cannot speak Russian, Tajik nor Uzbek. Indeed, most of the data I have collected are in English, French or Italian, which are languages that I can understand fluently. Moreover, I did not consider any quantitative data as I perceive that it will not contribute significantly to this type of analysis. However, a solid and comprehensive picture of the most emblematic discourses used in significant events will show the intents of the two states about the Rogun dam development.

5.2. Discourse analysis

Discourse analysis is an approach used in social sciences to understand and to examine the speeches of social actors, focusing on the meaning and value of speech within a context (Briguglio, 2019). Similarly, as qualitative content analysis, it aims to identify new data with the purpose to expand the current knowledge of that research area (Briguglio, 2019). In my research, discourse analysis is mainly used to study primary materials (i.e. official speeches), considering that it can offer a rigorous interpretation of the official discourses and statements of actors involved in the Rogun dam case, discovering their true intentions over time.

Discourse analysis is a suitable and fruitful methodology when considering the water diplomacy framework in a study. Indeed, diplomacy unfolds through the use of language, whereby a discourse is developed to communicate and to interact with the interlocutor(s) (Dunn & Neumann, 2016). In this manner, the actor engaging in the communication is creating a set of values and meanings in speeches which are affecting the present environment, including the listeners (Dunn & Neumann, 2016). Yet, this 'reality' is perceived only from the person who is speaking; thus, the representation of a singular event can be interpreted in different ways by the interlocutor (Briguglio, 2019).

Discourse analysis seems, in fact, to be a suitable method for a piece of research in water diplomacy. Its point of departure is the idea that a representation of reality is a combination of several "statements and practices through which certain language becomes institutionalised" (Dunn & Neumann, 2016, p. 6): in other words, by speaking and communicating to other individuals, the perception of the environment is being created slowly until it is accepted as a structured system by the community, or society, involved. As a result, discourse analysis attempts to analyse the way representations were formed through time, and the actions that were derived from those (Dunn & Neumann, 2016). For example,

in relation to the case study, the Rogun dam has been seen as a positive solution to the energy problems of Tajikistan, which would enhance a better stabilisation of the energy revenue throughout the year without importing it from neighbour countries, such as Uzbekistan (Demytrie, 2010; Ito et al., 2016). In this manner, the government asserted that the dam would provide more energy supply; hence, there is a strong perception that delivering the dam project is one of the most suitable plans for the state's economic growth. With discourse analysis, it will be possible to understand the representations created around the topic of the construction of the Rogun dam, from the perspective of Uzbekistan and Tajikistan.

According to Dunn and Neumann (2016), there are several steps to be followed to examine representations. (1) It is important to understand how, when and where the discourse was developed in a certain environment, meaning that it must be identified the subject, the material or the topic of the speech which has produced that certain representation. (2) Then, after identifying the discourses, they need to be classified according to the theme or subject chosen and be interpreted, in order to be able to answer to the research questions. By interpreting the discourses, the representations of reality will also be comprehended and analysed. (3) After, the representations are linked to each other to find any connection and possible identification of a certain pattern within the discourses. (4) Mapping the discourses helps to understand whether there is any change, continuity or break of the representation that the interlocutor wants to convey. (5) Finally, the last step is to analyse the findings and the representations within the discourses (p. 6–7).

Because communication is a source of interaction between individuals, it is also a way to influence others: indeed, power is strongly related to discourse, since through discourse it is possible to produce and share knowledge with others, which can affect the representation of individuals' realities. Hence, power can be also seen and studied through discourses. Steven Luke (as cited in Dunn & Neumann, 2016) explores this argument, and he asserts that there are three dimensions which can be assumed between all the concepts of power: (1) side B is being subjecting to do something against his interests from side A; (2) the context enables side A to act to meet its interests; and (3) the contrasts that side B has against side A can be a consequence of the environment in which side A is able to act (p. 55). The three-dimensional power scheme of Luke can be useful to have a deeper understanding of the countries' divergences.

According to Lene Hansen (as cited in Dunn & Neumann, 2006), to conduct the analysis, discourses must be divided and distinguished, since they are built up from other previous

discourses and they have various levels of understanding. Thus, the 'basic discourses' should be found, investigated and connected with other discourses, in order to seek which discourse is dominating and which discourses are consequences of the dominant discourse, such as criticism. When studying discourses, the analyst will interpret the text that (s)he is reading and comprehending, with the intention to describe "the representations and the practices" of that particular phenomenon (Dunn & Neumann, 2016, p. 106). For example, within the Rogun dam case, the main dominant discourses were empowerment, and energy security from Tajikistan's side; and economical and environment threat for Uzbekistan. It is suggested to double read, to assume or to forecast when assessing the forms of discourses. Then, Lene Hansen (as cited in Dunn & Neumann, 2006) continues by explaining that the aim is to seek which representations are dominant and which are the effects of the firsts, especially when analysing power or its related field (hegemony, politics and others), creating slowly a guiding map with all the discourses analysed. Finally, within this map, it is possible to study the representations, their connections, levelling positions, differences, similarities and continuity (Dunn & Neumann, 2016). In this manner, the degree of representations and discourses about the Rogun dam can offer a better picture of the political situation between Tajikistan and Uzbekistan, and this knowledge can be further reconnected to the water diplomacy framework.

5.3. Research process and data generation

The research process started by investigating on the data and analysing the texts and statements related to the project of the Rogun dam. Then, the data was coded to form discourses: when coding the material, the key elements of water diplomacy framework was used as a guideline. The framework focuses on the values, interests and tools of the parties involved in the water management system from a cross-country perspective. Before coding the materials, I have identified the speeches and documents by searching the words "Rogun or Roghun dam". If those words were absent, I have expanded my research to water related topics. The main platforms I have used were governmental websites and online news articles. Afterwards, while reading the documents and articles, I took into consideration the tools of water diplomacy, and I categorised the most common elements found during the "scanning process". To help with my research, I have also written several notes and comments next to the relevant parts of the text that I was mostly interested, and then put them together in a logical pattern.

In order to create a link between the theoretical approach and method (discourse analysis) the water diplomacy framework was used to code research materials in the following way: (1) **values** were identified as what shapes the understanding of an individual/institution towards a certain situation, meaning the factors that have conducted the individual to construct a specific set of understanding of reality; (2) **interests** were considered as the guiding force towards a decision, hence what conducts a decision-maker to choose a certain choice rather than another; (3) **tools** were analysed as the technical or political instruments, which allow the realisation of a strategy agreed by one party. These elements were identified mainly in the statements of the governments of Tajikistan and Uzbekistan. International organisations. such as the World Bank, the Salini Impregilo and other relevant agents affecting the construction of the Rogun dam, will not be profoundly identified through this research due to the length and time of the research.

In this research, the discourses of Tajikistan and Uzbekistan will be analysed separately. The assumption here is that these states have a different set of values, interests and tools towards the Rogun dam construction; and that their discourses also differ respectively. Once the discourses are identified, the results will be linked back to the water diplomacy framework, in order to understand what possible outcomes might be the most suitable for a sustainable cooperation between the two states. As a result, the arguments found in the table down below were the most recurrent discourses in the material analysed.

CODES	**ROGUN DAM DISCOURSES**		
		Tajikistan	*Uzbekistan*
	Values	Patriotism, empowerment and environmental benefit	Social, security and economic threat
	Interest	Power independency, energy security and energy supplier	Accessibility to water and preservation of nature
	Tools	Investments and funds, consensus from the population and the international organisations.	Distrust and cooperation

Table 3. Codes and discourses of the Rogun dam from Tajikistan and Uzbekistan perspectives

Thanks to this process, it was possible to narrow down the analysis only to the elements linked to the theoretical framework of the thesis. Because various materials are employed, discourse analysis is useful to study mainly primary data, seeking if there is any other meaning or references behind the declarations or statements made in relation to the context assessed.

5.4. Limitations and challenges

One of the biggest challenges in any research is the trustworthiness of research. It is important to prove to the reader how the results were achieved by presenting clearly the course of the analysis. Indeed, this study was divided into three main parts: (1) preparation, which included data collection, selection and understanding their appropriateness within the analysis; (2) organization, which comprised of categorising data with the aim of studying and analysing; (3) and finally reporting, which is considered the most important aspect of the whole process (Elo & Kyngäs, 2014). Elo and Kyngäs (2014) suggest that by providing an accurate record of the analysis, in which the results are presented and discussed, it is demonstrated that the research is trustworthy with the following criteria: "credibility, dependability, conformability, transferability and authenticity" (Elo & Kyngäs, 2014, p. 2). As a result, it is advised that, when the analysis is conducted, the researcher should always consider the above-mentioned characteristics with constant self-awareness of the actions taken (Elo & Kyngäs, 2014).

Nevertheless, one difficulty of the discourse analysis is to find official and reliable documents. One of the limitations of the study is that I do not have any knowledge of the Tajik and Uzbek languages. Thus, I had to rely on sources written in the languages that I can comprehend, in particular English but also Italian and French, to an extent. Additionally, choosing the data might be complicated and not inherent with the research question of this thesis, because there is the possibility that the analysis will go off topic at a certain point. To avoid this, it was important to select appropriate materials that can help to find answers to the research question posed at the beginning of the study; in this case, official speeches, statements and documents were the most adequate. Finally, it might be possible that there is confidential data which are useful for the research; yet, the lack of accessibility to those might impact the quality of the research.

Overall, with discourse analysis, it was possible to study and interpret the primary data, which was then fitted into a structured matrix of analysis. In this manner, connecting the discourse analysis back to the water diplomacy framework, a path to possible water diplomacy outcome that can benefit Tajikistan and Uzbekistan will hopefully emerge.

6. ANALYSING ROGUN DAM DISCOURSES

In this chapter, the case of the Rogun dam will be analysed with the help of discourse analysis. First, Tajikistan's perspective will be introduced, seeing the dam as a tool to ensure energy security and growth of the country. In order to retain the connection between the theoretical approach of the thesis and the methodological application, the analysis is divided into three sub-chapters, categorised on the basis of the three key elements of the water diplomacy framework: values, interests and tools. Then, Uzbekistan's perspective will be presented, starting from its original pessimistic discourses regarding the construction of the Rogun dam towards the establishment of a cooperative relation with Tajikistan. Same as the section dedicated to Tajikistan, the section will also be divided in three parts which gather the main discourses of Uzbekistan in regards of the Rogun dam. Finally, in the last section I summarise the discourses and assess the findings.

6.1. Tajikistan: the Rogun dam as a means to achieve energy security

This section examines the discourses of Tajikistan about the construction of the Rogun dam, which has always been in the political and economic interest of the Tajik's government. This has been often confirmed since the Soviet Union fell in 1991. With the water diplomacy framework, I have identified the values, interests and tools that push Tajikistan to support its decision to continue the Rogun dam development on Vakhsh River. Determining these elements helps identifying the discourses of the parties involved ("know why" vs "know how"). Arguably, this will eventually lead to the recognition of part of the water management problems between the two states. However, it is important to keep in mind that due to its complexity, the issue will not be untangled easily, and that there might be the risk to discover new problems that were not identified earlier throughout the analysis.

In the course of the analysis, with the help of coding the research materials, a set of discourses were identified. The following discourses are grouped according to the codes that I have used, meaning the values, interests and tools of the water diplomacy framework. These are the discourses of patriotism and empowerment (value); power independence, energy security and energy supplier (interest); investments and international consensus (tools). These were identified on the basis of coding the material vis-à-vis Tajikistan's values, interests and tools.

6.1.1. The discourses of patriotism, empowerment and environmental benefit

In 2014, the World Bank published its research results about the Rogun dam's construction, in which it was stated that: "subject to design changes and mitigation measures, it is possible to safely build and operate a dam at the Rogun site" (World Bank, 2014, p. 24), meaning that the location of the dam is sufficiently safe to build a gigantic construction. Subsequently, the construction of the dam restarted two years later, in 2016, with the support of the Salini Impregilo company. Within these years, the president Rahmon has given several national speeches to the Tajik population, where he has firmly asserted the importance of the dam. Often, the speeches were addressed directly to the people by ensuring that the construction is essential to the lives of the inhabitants, or that it will offer better conditions for living in the country, by creating new jobs and promising energy security. For instance, in the opening ceremony of October 2016, which was held in occasion of the restart of the construction of the Rogun dam, the president asserted that:

> Every resident of Tajikistan has been looking forward to this *glorious day* and the *patriots* of our country (…). Thus, today is the day of light and establishment of the main foundation to achieve *national dreams* and ensure bright future of our beloved Tajikistan. (…) As you are aware, our country's 25 years history was full of contradictions and challenges, win and loss, success and failure. Despite all challenges, we have been able to ensure the dynamic and sustainable socio-economic development of our country thanks to the *sincere support and hard efforts of our patriotic and strong-minded people*.
>
> (President of the Republic of Tajikistan, 29 October 2016; italics added)

In the speech, in its dimension of values, Tajiks are referred as being patriotic, loyal and determined people to the nation, and that the dam is represented as being a part of Tajikistan's dream. The Rogun dam is characterized as an accomplishment that has been wished for since the times of the Soviet Union. Thus, by emphasising the support of the people, by describing them with fine words, and by including the dam as part of a collective dream, the president portrays the construction as a unifying symbol that joins the efforts of both the government and the citizens.

> Implementation of several important projects on energy development shows *the hard work and efforts of the Government*, as a result of which the electricity shortage has significantly reduced and people's living standards improved by several times. (…) Indeed, this [Rogun dam] will be another serious step towards our energy security. However, as I outlined several times, it is impossible to *ensure energy security without construction of the Roghun HPP*. (…) [The Rogun dam] is *life-changing project* for Tajikistan. (…) In conclusion, I would like to outline that all of our

> achievements in energy development and overall in all aspects of life are the *fruits of independence and the Tajik nation* everyday makes firm steps towards full energy security in a peaceful atmosphere of unity and stability.
>
> (President of the Republic of Tajikistan, 29 October 2016; italics added)

This section of the speech resolves again around the dimension of values, as portrayed in the water diplomacy framework. The president represents the dam as a great achievement that only Tajikistan as a sole and independent state could reach. The dam is also described as a national emblem that will drastically change the "life" of the nation, guaranteeing enough energy supply to everyone: no other alternatives are identified as equivalent to the energy that will be produced thanks to the construction of the dam. As confirmed earlier by Filippo Menga (2015) and by the above presidential speech (October 29, 2016), the Rogun dam is seen as part of the development and growth of the state, which will improve the inhabitants living conditions with hydropower. Consequently, the Rogun dam is represented as a symbol of empowerment, security and unification of Tajikistan.

The patriotic values are again reconfirmed in November 2018 at the inauguration for the launch of the first turbine of the dam: the president introduced in a speech the success of the construction with a strong patriotic sentiment and pride towards the dam. In addition, the day of the celebration has a great importance since it coincided with the national day of the president's election in Tajikistan.

> This milestone moment shall be recorded with *golden letters* in the new history of independent and sovereign Tajikistan our current and future generations shall be *proud of and honored with it*. (…) The time will come, *when our children and we will proudly say that we constructed the 'Roghun' HPP* – the grand light facility of our nation by *our own labor*, i.e. efforts of our glorious nation and in cooperation with the best adepts of this area from various countries of the world.
>
> (President of the Republic of Tajikistan, 16 November 2018; italics added)

It is evident that the dam was strongly in the interests of the government, to the point that it had become an emblem that has definitely marked Tajikistan's history as a result of the hard work of the nation: the terms "proud", "honour", "own labour", and "glorious" indicate the dam as an element of national pride. The presidential speech at the Rogun dam site certainly created even more value to the project and to the meaningful message of the president, proving to the audience that with their own sole force Tajikistan was able to start the construction of the highest dam in the world.

Besides the president portraying Tajikistan as a great nation because of the dam, his speech also represents the Rogun dam as a tool to improve the already affected environmental conditions of Central Asia, with the aim to contrast the effects of climate change with clean energy. By building the dam, Tajikistan will be able to sell renewable energy at a convenient price to neighbouring states, contributing to a better efficient distribution of water within the region, without fearing to lose any energy power during the winter. In this manner, it is perceived that the construction of the Rogun dam will be beneficial for the region, representing the dam from an ecological and environmental value through the discourse of protecting the territory from natural disasters. Indeed, in the opening ceremony of October 2016, the president claimed that:

> (…) Now, in the context of growing harm of devastating consequences of the *climate change to environment*, as well as the shortage of water, construction of hydropower plants would be a wise and effective, as well as beneficial and harmless solution for water and energy resources use. We need to remember that particularly the *construction of new small and large hydropower plants* will make it possible to not only eliminate the shortage of power, but also ensure water supply to all downstream countries of the region during drought periods. (…)
>
> (President of the Republic of Tajikistan, 29 October 2016; italics added)

This message has been also repeated at the International High-Level Conference in June 2018 by the president Rahmon, even though it was not explicitly referred to the Rogun dam:

> The use of *Tajikistan's huge hydropower potential* in order to provide the countries of the region with clean energy, one of the bases for the development of the "green economy", could seriously contribute to reducing greenhouse gas emissions into the atmosphere.
>
> (Center for strategic research under the President of the Republic of Tajikistan, 20 June 2018; italics added)

The environmental changes caused by the global warming, such as scarcity of water in Central Asia, led Tajikistan to support more the idea that the construction of more and new dams will contrast the problem of water deficiency, ensuring the constant accessibility of water for both upstream and downstream countries. Consequently, from this perspective, the dam becomes also a solution and a tool of protection from the effects of climate change, building up the image that it will guarantee energy and water security in the long-run.

Finally, it is worth mentioning that Tajikistan is aware of its own resources and knows the potentiality of being an upstream country, which raise the value of the Rogun dam in Central Asia.

> Currently, international organizations rank Tajikistan 6th in the world in terms of generation of environmentally clean electricity. *Our country has the necessary potential to be ranked as the 2nd or 3rd country in the world for generation of electricity from renewable sources after launching new assets, including Roghun HPP.* This would serve as an input of Tajikistan in addressing one of the global issues – reduction of carbon emissions and decrease of negative implications of global warming.
>
> (President of the Republic of Tajikistan to the Parliament of the Republic of Tajikistan, 22 December 2018; italics added)

6.1.2. The discourses of energy security, energy supplier and power independency

The interests of energy security and energy supplier of Tajikistan were the main forces that led the government to begin the dam on the Vakhsh River, which have been confirmed not only at a national level, but also in presence of other representatives from other states in international occasions, such as the International High-Level Conference on the International Decade for Action "Water for Sustainable Development, 2018-2028" in December 2016. The theme of energy security has always been a concern of the government since its independence, being one of the most important priorities in the political agenda.

Thus, in order to ensure national interest – the goal of energy and water provisions – the establishment of the hydropower plants, like the Rogun dam, becomes vital. It also emerges as the only way recognised by the government to manage the water system in the territory:

> The Government has identified the energy security as one of the *national priorities* and has been mobilizing all possible resources and possibilities to achieve this objective. (…) Construction of energy facilities on rivers of Tajikistan (…) in the nearest future will become the *only way* to reduce harm and manage low-water and abundant water seasons in the midstream and downstream of Amudarya river.
>
> (President of the Republic of Tajikistan, 29 October 2016; italics added)

This discourse can also be identified in a speech dated on December 2016, when the president is reporting the past year work of the government to the parliament of Tajikistan. He explains the successful construction of infrastructures and the development of new technologies, followed up by the incoming plans for the country. The high demand of energy for the industries and the inhabitants leads the country to push further the establishments of new hydropower structures. Indeed, it is asserted here that the development of the energy sector is one of the fundamental state's strategies for the growth of the country. It is in its interests:

> As no country can ensure its development without the development of energy, we identified the *energy security and energy efficiency as one of the State's strategic objectives*.
>
> (President of the Republic of Tajikistan to the Parliament of the Republic of Tajikistan, 22 December 2016; italics added)

On one hand, Tajikistan's main interest is the construction of hydropower facilities, which will ensure energy security for its own benefit. On the other hand, the government has also confirmed that it aims to be one of the main energy suppliers in Central Asia, guaranteeing an additional exponential growth of Tajikistan's economy and, consequently, its own empowerment:

> Ecologically clean electricity of Roghun hydroelectric power plant *will fully meet the needs of Tajikistan* in electricity and *will give an impetus to economic development of the country*. (…) After the construction of this important hydropower facility, Tajikistan will be able in the future, as the country-exporter of cheap and environmentally friendly electric power, to provide electricity to the neighboring and regional countries.
>
> (President of the Republic of Tajikistan, 29 October 2016; italics added)

In fact, the interest of the country to become an energy provider is driven by the fact that it is still dependent on neighbouring natural gas suppliers to run electricity in inhabitants' households. However, the two winters in which Tajikistan had assisted to energy shortcuts reinforced the desire to produce its own energy and, eventually, becoming also a source for others:

> As everybody is aware, we [Tajikistan] do not have sufficient reserves of gas and oil and sources of fuel extraction and processing, but we have *huge hydropower resources*, which are our *national wealth* and their effective use *can increase our opportunities* to ensure our country's sustainable economic growth and strengthening of its export capacity by several times."
>
> (President of the Republic of Tajikistan, 29 October 2016; italics added)

During a meeting with the executive responsible for the construction of Rogun dam, the president declared that the dam is a tool which will lead Tajikistan to be independent in terms of energy production, meaning that it will no longer need to rely on neighbouring countries to secure its own energy, thanks to the immense water resource that it is found in the territory.

> The achievement of full energy independence and importance of Roghun hydropower plant, President Emomali Rahmon stressed that the use of the rich

> hydropower resources, especially the construction of the Roghun HPP, is *the main way to achieve full energy independence of Tajikistan.*
>
> (President of the Republic of Tajikistan, 29 October 2016; italics added)

As a result, another important interest of the state is the desire for power independency. In fact, the strong relation that the upstream countries have with the downstream countries is greatly based on the exchange of resources needed to sustain their own territories and populations. But, in the very same speech given at the launch of the construction of the dam (President of the Republic of Tajikistan, 29 October 2016), the president mentioned often the terms "independent state" or "independency", sensing that he wanted to declare that Tajikistan is an autonomous state that can provide alone the energy needed, without the natural gas supply from downstream countries. In this discourse, the construction of the dam is not only a symbol representing the work of the country, but also the beginning of its own energy independency.

Lastly, the president has already declared in two occasions its intentions to cooperate with the border states in matters of the Rogun dam, in particular with the "friendly and fraternal Uzbekistan" (President of the Republic of Tajikistan, 29 October 2016), in order to improve the management of water and energy in Central Asia:

> This project [Rogun dam] is also of a particular significance for *expanding regional cooperation* since it will serve all countries of the region by using renewable energy sources and generating environmentally clean power and its reservoir will play an important role for regulation of water resources, particularly during low-water seasons and droughts.
>
> (President of the Republic of Tajikistan, 16 November 2018; italics added)

This is significant since it shows that the government has true intentions to collaborate with others, rather than contrasting them.

6.1.3. The discourses of investments and international consensus

When analysing the research materials and identifying discourses, with the help of the water diplomacy framework, it is important to remember not only the practical tools, such as investment or mechanical knowledge to build the dam, but also other aspects that have slowly built up a general approval and understanding of the construction of the dam among different actors. This section analyses the tools that are used by Tajikistan to approve and to continue the construction of the Rogun dam: investments in the projects and international consensus. The analysed discourses revolve on these two elements.

In order to start the construction of the Rogun dam, it is indispensable to have a big amount of money, which would cover the costs of the materials, structure, labour and maintenance. The project started during the Soviet Union times, but after the dissolution of the state, which was followed up by a civil war in Tajikistan, the dam has never been completed. According to Eshchanov et al. (2011) and Ito et al. (2015), after the settlement of the country, the economy of Tajikistan has always struggled to meet the minimum sum to restart the project, which required at least 3.5 billion US dollars. Even though there were interests from other countries to support the project, Tajikistan has never reached that amount. In addition, when the World Bank started its assessment of the dam in 2012, the beginning of the construction was delayed even further. One of the main reasons why the investments were never found was the constant conviction that the dam's structure was expensive, and that the plan was following the old standards set during the Soviet Union (Eshchanov et al., 2011, Ito et al., 2015).

Nevertheless, after the results from the World Bank's investigation, the government has decided to follow up the suggestions and recommendations made by the organisation, in order to receive an international consensus, which would enhance its chances to have further investments from other parties. Undoubtedly, the main tool to support the Rogun dam construction is investment, which was mainly originated from national and international funds:

> I [president Rahmon] would like to reiterate once again that *through mobilization of local and foreign investments*, we stand ready to implement a project on supply of the peoples of the Central Asian countries with excellent quality water of Sarez Lake, which will be sufficient for the peoples of the region forever.
>
> (President of the Republic of Tajikistan, 29 October 2016; italics added)

Tajikistan has invested for the project about 2.8 billion somoni, which is approximately the equivalent of 322 million US dollars, until 2016 (President of the Republic of Tajikistan, 2016). Yet, at the ceremony of the first turbine's launch of the dam in 2018, the president declared that the government has spent approximately 3.5 billion somoni in total, which is around 403 million US dollars (President of the Republic of Tajikistan, 2018). In this occasion, the president reminiscences with great gratitude the Initial Public Offering (IPO) of 2010: the people and the state of Tajikistan have made important contributions to the project by buying shares of the dam. This seems to be represented as a national investment which has greatly helped with the realisation of the dam.

> We spent 3.5bn Tajik Somoni from 2016 to present for the cofferdam construction alone [Rogun dam]. The noble people of Tajikistan remember very well that back on 5 January 2010 *I encouraged them to contribute to construction* of the 'Roghun' HPP – the source of light and heating for their households.
>
> (President of the Republic of Tajikistan, 16 November 2018; italics added)

Further specifics about the origins of the fund were not declared in both speeches in 2016 and 2018, but the president announced that the government spent in total 12 billion somoni (roughly 1.380 million US dollars) for the development of building and infrastructure in the country. According to the official news agency in Tajikistan, Asia-Plus, the IPO of 2010 produced about 6 billion somoni (690 million US dollars), and in 2017 it has been collected 500 million US dollars of Eurobond to cover the costs of the dam (Asia-plus, 2018, 25 July). The (OJSC) NBO Roghun is still open and currently it amounts of 14 billion somoni (1.610 million US dollars) (Asia-plus, 2018, 26 December). Thus, approximately 23,5 billion somoni was accumulated until now, which is about 2.5 billion US dollars. However, more investments will be necessary to complete the project, which is calculated about 3.9 billion US dollars in total, and the costs might rise in the future as well.

It is likely that the investments were partly generated thanks to discourses about the environmental benefits of the Rogun dam in Central Asia. As explained earlier, one of the main interests of the country is to reduce the effects of climate change in the region by offering sustainable solutions to be implemented in the future, especially renewable energy. The production of hydropower is one of the many kinds of renewable energy that has been identified by Tajikistan. According to president Rahmon, by adopting new resources of energy, it is possible to reverse and reduce the effects of carbon emissions, contributing to the sustainable development goals of the United Nations:

> It should be outlined that the Roghun HPP project is consistent with the world community's efforts to transfer to *green economy*, the core of which is the use of *renewable energy sources* and its implementation will make it possible to *reduce emission of hundreds of thousands of tons of carbon gas*.
>
> (President of the Republic of Tajikistan, 29 October 2016; italics added)

Besides the national investment and the environment discourses, it is important to consider the participation of international representatives at the inauguration of the Rogun dam in 2018. In this occasion, the Italian company for constructions Salini Impregilo and the French engineering company Tractable Engineering were invited to the event, and they were officially congratulated by President Rahmon for their support and interest towards the

project. By introducing the two companies on such significant event, he has showed that the dam is not only a national interest, but also that the dam has the full support from other international representatives, such as European enterprises. In this manner, the dam is represented as qualified and endorsed project by Tajikistan and foreign companies: this discourse of international consensus could lead to further investments and resource allocation from other outside companies or institutions.

> (…) we [Tajikistan] committed to construct this vitally important facility [Rogun dam] with the use of the best latest technologies *meeting international standards of quality and safety*. This is the very reason that after completion of the project's feasibility study and its social and environmental impact assessment, by announcing an *international tender* we have invited leading *international companies to participate in construction of this hydropower plant* and the tender winner – the Italian Company of Salini-Impregilo, which is one of the most experienced companies in construction of hydraulic facilities in the international arena, has already begun its activities for construction of the hydropower plant's dam. (…) Another reputable institution - the French Company of "Tractable Engineering", which has great experience in consulting and engineering, is in charge of supervision of the construction process and serving as the Customer representative.
>
> (President of the Republic of Tajikistan, 29 October 2016; italics added)

6.2. Uzbekistan: from hostility to stability

Even though the Rogun dam will not be physically built in the country, Uzbekistan has always been against its construction, or at least until 2017. The former president Islom Karimov held his position from 1991 until he died in 2016. With the new president, Shavkat Mirziyoyev, who was the former prime minister of the government during the years with Karimov, it seems that the tone of the disputes is getting less tense than in the past, with an apparent wish to collaborate with Tajikistan. However, the strong opposition towards the Rogun dam, that was built in the past years, may still persist in the national agenda. In brief, the main reasons why Uzbekistan is against the dam, according to Abdullaev et al. (2009), Jalilov et al. (2011), and Ito et al. (2015), are, first that the country is dependent of the water flow coming from the upstream countries, such as Tajikistan. With the construction of the dam, the government fears that it will not receive enough water for the main production of the state, cotton. Secondly, Tajikistan may use the infrastructure for political leverage in Central Asia. Thirdly, Uzbekistan has strong concerns about the dam's position on a seismic area. Finally, Tajikistan becomes an energy supplier competitor to Uzbekistan.

The most challenging part when collecting data from Uzbekistan's perspective was the lack of official statements written in English from the president and parliament official websites. Thus, I have focused on the statements of state officials as reported by the media, such as online news article. In this chapter, same as I did for Tajikistan, it will be explored the values, interests and tools of Uzbekistan that led to the tensions and disagreements with its neighbour's decisions about the Rogun dam and the transboundary water management. These are the discourses of social, security and economic threat (value); reduced accessibility of water and preservation of nature (interests); distrusts and apparent acceptance (tools). These were identified on the basis of coding the material vis-à-vis Uzbekistan's values, interests and tools.

6.2.1. The discourses of the Rogun dam as a social, security and economic threat

The former president Karimov always had a negative view over the constructions of further dams in Central Asia, which was often reflected in his statements, stating that the projects will hinder water accessibility and that they are a symbol of the old Soviet Union "megalomania". Indeed, president Karimov represented the Rogun dam as a threat to water availability, which would cause several problems to the inhabitants living nearby the dams. This was often reflected in his discourses during his term of office.

> "[Tajikistan] They're going for the Guinness world record, it would seem, but we're talking here about the *lives of millions of people who cannot live without water*," Karimov said. "These projects [dams] were devised in the 70s and 80s, when we were all living in the Soviet Union and suffering from *megalomania*, but times change," said Karimov. "Hydropower structures today should be built on a different basis entirely."
>
> (Nurshayeva, 2012; italics added)

The tone that the president used reflect his hostility towards the construction of dams. Additionally, while visiting the other downstream country Kazakhstan in 2012, he also asserted that:

> "*Water resources could become a problem* in the future that could escalate tensions not only in our region, but on every continent," Karimov said. "I *won't name specific countries*, but all of this could deteriorate to the point where not just serious confrontation, but even *wars* could be the result."
>
> (Putz, 2017; italics added)

In both statements, President Karimov was aware of the problem of water scarcity in Central Asia that was, and it is today, affecting greatly the population living in the area. However, it

is possible to assert that the consequences that would come up after the construction of the dams would affect only downstream countries, since they are at risk of receiving less and less water in the future. In addition, he added that unknown countries will lead to a catastrophic resolution, such as war: I assume that here he was addressing to upstream countries like Tajikistan. Consequently, the discourse of threat represents the Rogun dam as a hazardous construction that could put in danger the people living in the area, due to a reduced accessibility of water.

Within the context of the availability of water and constant preoccupation from the Uzbekistan's government, the World Bank (2014) published its assessment regarding the construction of the Rogun dam. Here, the results revealed that the project is safe and endorsed the construction of the dam if the plan respects the recommendations made by the World Bank. This outcome made Uzbekistan even more concerned about the possible consequences after the completion of the Rogun dam's construction. As a result, on July 2014, the Head of the Delegation of the Republic of Uzbekistan, who is still the current Minister of Foreign Affairs, Abdulaziz Kamilov, made a public statement about his position towards the World Bank results and towards the future hydropower plant of Tajikistan. The statement was made during a meeting where all the Central Asian states participated to review the World Bank evaluation. Under such circumstances, Uzbekistan had the occasion to declare its opposition towards the results and, with a strong, severe and accusatory tone, the Head of the Delegation asked to revise again the plan.

> This fact is the essence of the project [Rogun dam] – to obtain a mechanism, or a tool in other words that will enable its owner *to dictate unilaterally* the harsh terms of water discharge to downstream countries, especially during vegetation of agricultural crops. (…) Furthermore, taking into account the extreme water scarcity in Central Asia, this mechanism can be converted *into explicit tool of political pressure on downstream countries*, provoking escalation of confrontation and growth of conflict potential in the region.
>
> (Ministry of Foreign Affairs of the Republic of Uzbekistan, 3 August 2015; italics added)

The discourse of the Rogun dam as a social and economic threat is further underlined in this part of the speech, in which the harsh comments about the Rogun dam emphasize the political instrument that the dam can become. The dam is further represented as a way to control over the downstream countries by manipulating and controlling the flow of water needed for the harvest of the countries. It is asserted that the dam will provoke additional disagreements and will aggravate the unstable political and economic relations between the

states, in particular between populations and individuals who will not hesitate to fight against each other to have access to water:

> The most explosive prospective outcome in this situation is a potential of conflict escalating not only between the governments, but primarily between populations of neighboring countries, *with millions of people prepared for any actions to access potable and irrigation water for their own and their children*. It is frightening even to picture the consequences.
>
> (Ministry of Foreign Affairs of the Republic of Uzbekistan, 3 August 2015; italics added)

The picture that has been portrayed by the Head of the Delegation seems to be quite dramatic and pessimistic, emphasizing the negative impacts of the dam that will hinder the establishment of cooperative relationships between the bordering states. In addition, the delegation critiqued the work of the World Bank heavily, stating that the results of the assessment were biased and that they were produced without considering the other parties that would be affected by the project. In fact, the delegation claimed that the research followed an illogical methodology and that it was just following the interests of Tajikistan:

> Absolutely *unprofessional or biased approach* of the studies proven by the fact that the World Bank's report and conclusions on the project's environmental and socio-economic impacts limited to assessment of impact on Tajikistan's area in proximate vicinity to the project site.
>
> (Ministry of Foreign Affairs of the Republic of Uzbekistan, 3 August 2015; italics added)

As a result, the arguments that delegation brought up have demonstrated the disagreement and hostility of Uzbekistan to the construction of the dam, which is sensed as a political tool that will eventually counterattack the richer downstream countries when upstream countries will not receive sufficient energy to generate electricity in their own households, as it has happened with Tajikistan twice. Through the discourse of threat, the government has portrayed the Rogun dam as a danger for the security of the country. At the same time, Uzbekistan has expressed its worries also from an economic point of view, yielding a discourse of the dam as an economic threat. In fact, it is feared that the economy of the country will be affected by the hydropower plant system because there will be higher chances to witness to floods during the winters and to water scarcity during the summers in the downstream countries, driving to possible unemployment and lost in the agriculture sector.

> The construction of Rogun HPP will trigger *immense losses* to Uzbekistan's economy. In summer time, the reduced water flow in the Amudarya [river] will result

> in water shortages and drought, which subsequently will lead to loss of income for millions of people employed in the agriculture sector in lower reaches of the river. In winter season, the Amudarya will rise, leading in the downstream to flooded orchards and fields, direct hazards to local population, massive destruction of buildings, roads, and other infrastructure.
>
> (Ministry of Foreign Affairs of the Republic of Uzbekistan, 3 August 2015; italics added)

From these declarations it is possible to identify a strong dissent towards the construction of the dam, which has slowly shaped the Uzbekistan's understanding of reality over the years. Clearly, the statements are reconfirming a discourse that has been brought along since the end of the Soviet Union, embedded in the president's belief and its government. As a result, the value that Uzbekistan gives to the construction of the Rogun dam is a sense of big threat to water accessibility, which will menace the growth of the economy and the security of the society of country.

6.2.2. The discourses of accessibility to water and preservation of nature

Because of the negative image that Uzbekistan has created around the construction of the Rogun dam, its main interest is to keep stability, especially from an economic point of view. Thus, the availability of water is one of the main interests for Uzbekistan, as well as preserving and safeguarding the environment of the country. As a matter of fact, from the statement that the delegation of Uzbekistan made at the Central Asian meeting in 2014, it is revealed and outlined that the main priority of the government is to keep its country safe from the activities of other neighbouring countries that can have a strong impact in the territory of Uzbekistan.

More importantly, the government is fearing that the dam will deviate the original course of the river. This water course (Amu Darya river) is the main water flow for Uzbekistan, and if it is deviate there is a chance that dry seasons during the summers will be more frequent in downstream countries. The delegation employs different arguments to sustain its interest and right to have access to water regularly. The discourse of (reduced) accessibility to water emerges through the following arguments: first, it is stated that the farmers will have higher chances to lose their jobs because of the increasing lack of water that will prevent to a rich harvest every year, and it proves it with facts, which offer a more alerting perspective of the situation and the possible consequences.

> Among immediate consequences is *the loss of income sources by 9.5 thousand farmers*. If the farmers' and hired laborers families are taken into account, the above number exceeds 1.5 million people who lose source of income."
>
> (Ministry of Foreign Affairs of the Republic of Uzbekistan, 3 August 2015; italics added)

In addition to this argument, the delegation introduced the example of the Nurek dam that had similar characteristics and effects as the future Rogun dam. This demonstrates that the construction might lead to the same issue as the first dam, namely the water shortcut to produce Tajikistan's own energy:

> It is the very period of last 20 years when Tajikistan hydropower authorities changed the regulation regime of the Vakhsh river as the owner of *Nurek hydropower system*, reducing the summer historic flow by 4.2 billion cubic meters of water, which are held up annually to build up the winter power potential.
>
> (Ministry of Foreign Affairs of the Republic of Uzbekistan, 3 August 2015; italics added)

Secondly, the delegation uses the argument that the report of the World Bank is "misleading and nonsense", and that there should be another in-depth research about the dam, without any biases or interests from the third party (Ministry of Foreign Affairs of the Republic of Uzbekistan, 2015). This will be described better when exposing the tools of Uzbekistan to support its perspective in the following section.

Another discourse that it is at the heart of the government's action is the preservation of nature, exemplified not only by a concern over the deviation of the river from its course, but also by the preservation of the Aral Sea. The sea has almost dried due to the effects of bad water system management in Central Asia during the Soviet time (Micklin, 2007). It is significant that this topic was brought up during the meeting of Central Asia in 2014, because Amu Darya and Syr Darya rivers are flowing into the Aral Sea, but throughout the years the level of water has decreased, together with an increase level of evaporation of the seas due to the effects of climate change (Micklin, 2007). In this manner, the delegation seeks to prove that the dam, when constructed, might further affect the Aral Sea's level, and that the next strategies of development should be concentrating on restoring the original sea level and its environment, rather than focusing of a new megalomaniac structure.

> Taking into account the *universal nature of the Aral catastrophe*, it is necessary to expand the concerted actions and form purposeful financial mechanisms in this direction. (…) Using the limited water resources of the region, firstly, the

> transboundary water arteries – Amudarya and Syrdarya in the interests of all countries of the region and in strict compliance with the norms of international law.
>
> (Ministry of Foreign Affairs of the Republic of Uzbekistan, 26 September 2015; italics added)

Therefore, even though the interests of Uzbekistan regarding the non-construction of the Rogun dam are not declared often, in the speech dating from 2014 it is possible to perceive the state's frustration and disapproval towards the plan. The speech also suggests that the main goal of the state is to protect its own agricultural sector and workers, in order to keep the economy growing. This can be done only if a reasonable amount of water is guaranteed everywhere for the harvest and inhabitants. However, also the discourse of natural protection and preservation emerges during this speech, addressing it as a "universal interest" that should be considered by everyone, in particular Tajikistan. Indeed, actualizing the discourse of natural protection by using the Aral Sea as a reference during the meeting increases awareness of the possible consequences that the dam can have in the region. This discourse also forms part of another speech of the minister of foreign affairs of Uzbekistan, held during the United Nations Summit on sustainable development goals in 2015.

> We cannot allow so that, as a result of realization of plans of construction of gigantic dams and large hydropower stations on the tributaries of Amudarya and Syrdarya on the basins of which the oases of life support of millions of people are concentrated, *the natural flow of these rivers is disturbed and the situation with water supply in the lower reaches is more worsened*, which would lead to radical breach of the water and ecological balance, *aggravation of the problem of Aral and undermining of ecological safety of the vast region*.
>
> (Ministry of foreign affairs of the Republic of Uzbekistan, 26 September 2015, September; italics added)

Again, the main discourse that emerges from the speech of minister Kamilov during the UN Summit is the discourse of preservation of nature, which was actualized in reference to the protection of the Aral Sea and of the rivers Amu Darya and Syr Daria flowing into the sea. Even though the name 'Rogun dam' is not explicitly mentioned, it is possible to assert that the "construction of gigantic dams and large hydropower stations" are referring also to the Rogun dam construction (Minister of foreign affairs of the Republic of Uzbekistan, 2015).

6.2.3. The discourses of distrust and future cooperation

The tools that the government of Uzbekistan has used to support its values and interests were certainly the most interesting part to study because the perspective of the state has changed rapidly over a couple of years. In fact, when the first president of Uzbekistan Islom Karimov

was in charge, he often declared his hostility against the construction of the dam, representing it as a danger for the nation and its development as a strong country. This was also reflected in the delegation's speech in 2014 which considerably criticizes the research conducted by the World Bank. Nevertheless, it is important to note that most of the important public communications, made on behalf of the government of Uzbekistan regarding the dam, were conducted by other important political figures, such as the Minister of Foreign Affairs Abdulaziz Kamilov. After the death of the first president, the following president Shavkat Mirziyoyev started to adopt a more cooperative and friendly tone towards its neighbour, but there were not any official declarations about the Rogun dam from its side.

The first official declaration of dissent concerning the construction of the Rogun dam was pronounced at the meeting of representatives of the Central Asia in 2014. The Prime Minister Abdulaziz Kamilov listed the reasons for why the dam should not be constructed. Although the World Bank had given its approval, Kamilov made strong accusations about the lack of in-depth studies. He argued that the report should be reviewed again because, firstly, the project is old and outdated; and, secondly, the dam is planned to be built on a seismic region, which would endanger the safety of the community living nearby. Thirdly, Kamilov argued that past examples of similar projects, like Sayano-Shushen Hydropower Plant in Russia[5], led many states not to construct anymore dams due to safety issues. He also pointed out that data had not been collected properly and that the report was ignoring Uzbekistan's perspective and interest towards the dam (Head of the Delegation of the Republic of Uzbekistan, 18 July 2014). For instance:

> Such recommendations cannot be considered as *competent conclusion or even more or less logical recommendation.* (…) We cannot accept that after 3 years of studies, consultants and experts *failed to develop specific answers* to the following vitally important questions concerning the project. (…) Neither the World Bank, nor its consultants possess the requisite and sufficient information, or adequate qualification for well-grounded competent conclusions regarding the technical safety of the project and feasibility of its implementation. In other words, *the decision on implementation of the project based on the findings of the so-called assessment studies cannot be accepted in principle*.
>
> (Ministry of Foreign Affairs of the Republic of Uzbekistan, 2015, 3 August 2015; italics added)

In addition, in many parts of the speech, the minister uses the following terms to show the incompetency of the organisation: "did not understand", "consciously ignored", "not

[5] In 2009, an accident occurred at the Russian plant and 75 people died.

intentionally did", "this is complete nonsense". This clearly shows a certain pattern in the discourse of distrust used by the head of the delegation. In fact, by using certain words and arguments, the disapproval and disbelieve that Uzbekistan has towards the evaluation and conclusions of the World Bank is firmly represented and communicated to the audience. Not only does the minister use specific terminologies to underline the inadequacy of the organisation, but it also employs facts and numbers to emphasise even more the risk of the Rogun dam's construction in such fragile territory.

> A vivid example supporting the view that construction solutions at the backbone of the Rogun Hydropower Project *can cause man-made hazards* is the accident on its site in 1993, and the disaster on *Sayano-Shushen Hydropower Plant in Russia* which have *cost the lives of 75 people in 2009*. The technical and design solutions developed for this HPP developed in the same period and by the same institutes that designed Rogun HPP. (…) (Oxford University) they conducted a *statistical analysis* of all 245 large dams built in the world in the last 70 years and found that large dam projects experienced 100% cost overrun on average, and even higher in case of dams built in low-income countries.
>
> (Ministry of Foreign Affairs of the Republic of Uzbekistan, 3 August 2015; italics added)

Naturally, at the end of his discourse, Kamilov declares that the project is not within the international standards, and that the project can produce severe consequences to the region, not only at an economic point of view, but also from a security and humanitarian perspective. The final part for the speech clearly identifies the position of the government.

> I would like to state that the findings of the consultants and the panel of experts on Rogun Hydropower Project are completely unacceptable to the Republic of Uzbekistan. (…) Uzbekistan never, and under no circumstances, will provide support to this project.
>
> (Ministry of Foreign Affairs of the Republic of Uzbekistan, 3 August 2015)

The minister reclaims once again his position during an assembly of the United Nations, calling for a re-evaluation of the Rogun dam. In the same assembly, the discourse of distrust toward the dam re-emerged again. The opportunity to declare the opposition of the construction during an international meeting indicates that the issues have a big impact and influence in the government of Uzbekistan, in particular at an environment level, eventually leading to a wider dispute. Yet, he offers also an alternative solution to the Rogun dam which would be more beneficial for all the interested parties:

> I would like to underscore that in the conditions of aggravating ecologic problems the growing number of countries in the world refuse the construction of gigantic dams and opt *for small and medium-size hydropower stations* which do not cause damage to the environment, safety or social-economic well-being of the population.
>
> (Ministry of Foreign Affairs of Uzbekistan, 27 September 2014; italics added)

The minister did not propose any concrete alternative solutions int the previous statements, if not only to revise the project again, whereas at the United Nations conference he spoke about smaller dams that would not damage the territory and that it could be a more efficient plan for everyone.

Nevertheless, from the perspective of discourse analyses, it is interesting to note that a turning point in the discourses of the state of Uzbekistan emerged when the former president Islom Karimov died in 2016 and was replaced by Shavkat Mirziyoyev. Mirziyoyev started to develop a different approach towards Tajikistan and its political and economic interests. Indeed, when he was still the prime minister of Uzbekistan, Mirziyoyev sent out a written letter to the Prime Minister of Tajikistan Kokhir Rasulzoda, stating that the state should consider the construction of smaller dams in order to prevent any further harmful consequences that would damage the relationships with neighbour countries or the water management system in the area.

> We have every reason to believe that the Tajik leadership can address the complex problems with the energy supply of the *country through the construction of small and medium-sized hydropower plants*, using numerous rivers and water resources in Tajikistan. As we know, such a promising program [Rogun dam] has already been implemented in Tajikistan.
>
> ("Uzbekistan once again warns Tajikistan on threat of Rogun HPP", 2016; italics added)

In this manner, Mirziyoyev was supporting the perspective of the president and the general pessimistic idea about the dam's construction, even though the nature of the letter seemed to be peaceful, with the intention to offer an alternative solution with a composed tone rather than accusing the action of Tajikistan's government. However, it is important to remember that the message was written in a letter, hence it could be interpreted differently according to the reader's perspective. When Mirziyoyev officially became president in 2016, he started to slowly change his opinion and, in July 2017, the minister of foreign affairs communicated in a television show that:

> The position of principle remains that during *the construction of such dams, the interests of both upstream and downstream countries should be considered*. We do not say that our Tajik friends should stop the construction of the Roghun Dam. Go ahead and build it, but we hold to certain guarantees in accordance with these conventions that have been signed by you.
>
> ("Uzbekistan Breaks Silence on Tajik Giant Dam Project", 2017; italics added)

The emergence of a new discourse of the Rogun dam, as voiced by Mirziyoyev, represents a turning out point in the position of Uzbekistan towards the construction of the dam. For many years the government's main tool to contest the construction of the Rogun dam was to publicly show his distrust to the project. The government has claimed the danger of the dam in the territory, stating that it will affect the neighbouring countries' economy and population. Especially, the government has contradicted the World Bank's report of the Rogun dam project, often underlining the incompetence of the organisation and their miscarried results, driving Uzbekistan to assert that: "Uzbekistan never, and under no circumstances, will provide support to this project" (Head of the Delegation of the Republic of Uzbekistan, 18 July 2014). However, with president Mirziyoyev, a new discourse is starting to emerge: an apparent approval to the Rogun dam project. Indeed, it seems that a more cooperative and stable approach with Tajikistan is adopted.

> "We must *eliminate the causes that fuel the potential for conflict* [between Uzbekistan and Tajikistan]. We are looking for reasonable compromises in resolving issues on border, water use, transport and trade." Mirziyoyev said at UN-sponsored conference in November on sustainable development.
>
> (Persing, 2018; italics added)

This is reflected not only in the discursive shift, but also proved by the first visit of Mirziyoyev in Tajikistan in 2018. The last time that the president of Uzbekistan had paid visit to Tajikistan was back in 2000, and this event is recognised as a historic visit that could change the relation between the two states (Sorbello, 2018). Within this occasion, the two states have declared that their intentions will be based on cooperation and mutual agreements, which could also include the Rogun dam project:

> In this context, the *Uzbek side* expressed its readiness to comprehensively consider the *possibility of participating in the construction of hydropower facilities in the Republic of Tajikistan, including Roghun HPS*, taking into account the universally recognized international norms and standards on the construction of such facilities.
>
> (Center for strategic research under the President of the Republic of Tajikistan, 12 March 2018; italics added)

Therefore, from the old opposition and contrasting declarations of the previous government, according to the latest statements and the visit to Tajikistan in 2018, the new government led by new president Mirziyoyev is seeking further cooperation and stability with Tajikistan, which might also include arrangements over the Rogun dam. However, an official declaration about the Rogun dam from the Uzbek's government is still missing. In fact, the joint statement of the two presidents of Uzbekistan and Tajikistan in March 2018 focuses on improving the water management system between the states, in order to provide sufficient energy and water resources for the harvest and energy production of the respective states; yet, when it comes to discuss about the Rogun dam, president Mirziyoyev has declared that he might take into consideration participating the project, but it is unsure whether he will keep the promise or not, due to the past strong opposition of the Rogun dam. Indeed, in the following meeting in August 2018 an official statement from the two parties was released to the public.

> Agreements have been reached on trade, economic, scientific, technical and cultural-humanitarian cooperation between the regions of the two countries, in particular Surkhandarya and Khatlon, Samarkand and Sughd regions.
>
> (Ministry of Foreign Affairs of the Republic of Uzbekistan, 18 August 2018)

From this statement, the agreement over water management and the Rogun dam is still missing. In addition, there is not any official statements about the benefits that Uzbekistan would receive by participating in the construction. Nevertheless, it is worth mentioning that the positive tone of the joint statement proves that Uzbekistan has intentions to change and to improve its political and economic relationship with Tajikistan.

> "*Uzbekistan and Tajikistan people are like two branches of one tree*, two tributaries of one river. *We* have one religion, common land and water. *We* are together in joy and sorrow, united by one destiny. Continuing good traditions of our ancestors, *we* must strengthen and preserve the friendship of our people" – said Shavkat Mirziyoyev.
>
> (Ministry of Foreign Affairs of the Republic of Uzbekistan, 18 August 2018)

The terms 'we', 'common' and 'united' pronounced by president Mirziyoyev emphasise that the two states are part of the same territory that shares resources and historical background. This is an important point to underline, since in this sentence president Mirziyoyev declares the vicinity of the states, 'unified by a common destiny'. Hence, the purpose of the visit was also to enhance and to revive the missing diplomatic relation that was absent for many years. The two presidents have also signed a new agreement named 'Treaty on Strategic

Partnership' during the visit, which will establish their future cooperation and partnership in terms of economy and trade. After the trip, the two presidents have exchanged several phone calls to each other, reinforcing even more their intentions of collaboration.

Finally, the diplomatic relation grew stronger in the following months, after August 2018. Many messages and phone calls were exchanged, as well as some visits to neighbouring countries. Yet, it is important to note that, with the new president of Uzbekistan, the foreign policy approach has also changed towards Tajikistan. For example, for the 27th anniversary of Tajikistan's independence, president Mirziyoyev sent a message to president Rahmon, stating kind words of friendship and addressing future cooperation.

> We in Uzbekistan sincerely rejoice at the tangible achievements of Tajikistan - our *closest neighbor*, in all spheres that have become possible due to your far-sighted policy, state wisdom, dedicated work and talent to unite people. […] I would particularly like to note *your personal contribution to strengthening the centuries-old bonds of friendship, good-neighborliness and close cooperation between our states and peoples.* […] I want to emphasize once again that we in Uzbekistan are firmly committed to further deepening an *open and trustful dialogue*; we are ready to use all opportunities for the widest possible cooperation.
>
> (President of the Republic of Tajikistan, September 2018; italics added)

From the visits and the exchange of messages, it becomes clear that Uzbekistan has changed its perspective about Tajikistan. Although it is not directly related to the Rogun dam case or to the transboundary water management, it is worth mentioning that the shift of the discourse was influenced also by the change of Tajikistan's representation. Indeed, the current foreign policy of Uzbekistan is concentrated on the re-establishment of better political and economic relations with neighbouring countries, like Tajikistan (Hashimova, 2018). Thus, if before Tajikistan was seen as a difficult neighbour to deal with because of its ambitious projects, such as the Rogun dam, now Uzbekistan sees it as a strategic partner for future economic and development plans in Central Asia. Consequently, the discourse of distrust towards Tajikistan has changed as the representation of the state has altered, contributed by the fact that it was implemented an opposite foreign policy from the one used by the last president Karimov. Uzbekistan's government does not use anymore discourses of distrust and threat when it is referring to Tajikistan in its speeches and statement. Rather, it actualizes the discourse of cooperation for the development of the relations of these two states. After the two states have re-approached, the supply of electricity through the Regar substation from Tajikistan to Uzbekistan has been rehabilitated again, after having been cut off for nine years

(Putz, 2018). Lastly, the two governments re-established the travel connections between the two states and re-opened ten boarder checkpoints, which had been closed since 2001 (Lemon, 2018).

To sum up, since the independence of Uzbekistan in 1991, one of main tools used by the government to prevent the Rogun dam's construction is reflected in the discourse of distrust. The position of the government in regards the construction of the Rogun dam was constantly in disagreement, not only against the government of Tajikistan itself, but also against the research of relevant international organisation as the World Bank, firmly enduring its opinion throughout the years. However, since the former president Islom Karimov died and new president Shavkat Mirziyoyev was elected, there has been a discursive shift from distrust towards a cooperative relation with. Changing the political and economic approach and foreign policy of Uzbekistan might affect the use of the dam from Tajikistan's side, turning the dam towards Uzbekistan's favour, which would lead to share natural resources more equally and frequently.

6.3. Analysis of the findings: map discourses of Tajikistan and Uzbekistan

The previous section presented how I have used the codes of value, interest and tool to analyse the speeches and official documents and, on the basis, to identify the key discourses of the states of Tajikistan and Uzbekistan. In this section, I have identified the main representations from the two countries perspectives, which were detected during the analysis of the discourses. Then I have mapped the discourses, in order to recognize any relation between them, and to identify if the representations have any continuity or changes in the existing discourses.

From Tajikistan's side, the following discourses and representations were identified.

Codes from water diplomacy framework	**Tajikistan's discourses**	**Representation of Rogun dam**
Values	Patriotism, empowerment and environmental benefit	Strength and symbol of the country
Interests	Power independency, energy security and energy supplier	Independency and emergent energy actor
Tools	Financial investments and international consensus	National investment: expensive but indispensable

Table 4. Codes, discourses and representation from Tajikistan's perspective.

The table 4 shows the findings of the discourses and representations of the Rogun dam after analysing the data, which was narrowed down to the values, interests and tools of the water diplomacy framework. The speeches and statements of Tajikistan are all focusing on the benefits that the dam will offer to the country and to Central Asia. The arguments and topics were identified in a certain pattern which formed slowly the discourses of Tajikistan. First, one of the representations I have identified is that the Rogun dam is represented as a national emblem for Tajikistan: it depicts all the efforts that Tajiks have put in the construction throughout many years, despite the wars, the disagreements and the lack of funds. Only this powerful and wilful country could achieve the great goal of building the highest dam in the world. This representation is often also found in the words that the president Rahmon has used during his speeches. Secondly, the Rogun dam is portrayed as a sign of independence from the other states in Central Asia. As mentioned earlier, for many years Tajikistan has been depending on the natural resources of the downstream countries, like gas and oil, in order to produce energy during winter. Thus, the construction of the dam can lease Tajikistan from being a dependent state, and to finally become an autonomous energy producer through hydropower. In addition, because the dam can provide a larger quantity of energy, this energy can be also exported to other countries, making Tajikistan slowly an energy supplier rather than an energy consumer. Thirdly, thanks to the effort of the state and of its citizen, the Rogun dam represents also the financial effort of the people who believed in the benefits of the construction. Additionally, even though it is an expensive project, it is perceived as an indispensable plan for the country's economic growth.

From Uzbekistan's side, the following discourses and representations were identified.

Codes from water diplomacy framework	**Uzbekistan's discourses**	**Representation of Rogun dam**
Values	Social, economic, security threat	Political instrument and High-risk construction
Interests	Accessibility to water and preservation of nature	A water security and environmental problem
Tools	Distrust and cooperation	A point of reconciliation or conflict?

Table 5. Codes, discourses and representation from Uzbekistan's perspective

When I have analysed the perspective of Uzbekistan, the main discourse that is often found in the speeches and statements is the hazardousness of building the Rogun dam. Besides the long historical hostility between Uzbekistan and Tajikistan, the transboundary water management has always been an issue, due to old logistical and technical system implemented before by Soviet Union and the dissolution of Central Asian Power System (CAPS). All the discourses of the government of Uzbekistan were used to justify their opposition towards the construction of the Rogun dam, representing it as a threat in different aspects. First, the Rogun dam is represented as a political tool that can be used by Tajikistan to enforce its own decisions in the transboundary water management in Central Asia, destabilizing the already fragile equilibrium between Uzbekistan and Tajikistan. The dam is also pictured as a high-risk construction, which emerged through the discourse of social, economic and security threat. The dam can impact greatly the downstream countries, because it can affect the economic growth of the state, or the living conditions of the inhabitants. This representation can be linked to a second representation: the Rogun dam is depicted as a problem in terms of water security and environmental protection. In fact, in the long-run the dam can cause water shortage, affecting the agriculture activities in the territory, as well as the living conditions of Uzbeks living nearby Amu Darya river. For example, the cotton market of Uzbekistan can be affected by the scarcity of water that would follow after the construction of the dam, resulting in a decreased level of cotton production. Moreover, the dam could affect the Aral Sea's level and the tributaries water level that are flowing in the sea, impacting the ecosystem in the area. Finally, when the president of Uzbekistan changed in 2016, the discourse shifted from a discourse of distrust to an apparent acceptance

of the Rogun dam. In fact, the government of Uzbekistan has slowly built distrust towards Tajikistan, which is shown in the past discourses when president Karimov was still in charge. Now with the new president Mirziyoyev, it seems that there is a will to build a cooperative relation with Tajikistan. The shift in the discourse means also a shift in the representation of the Rogun dam: if before the dam was seen as a threat and a problem to Uzbekistan, now it can be represented as a turning point that can lead to a peaceful and stable relationship between the two states. The lack of discourses of threat and danger in the latest speeches enforces the fact that there is a discontinuity between the past and the present discourses. However, so far there is not any explicit declaration of cooperation to build the Rogun dam together, even though the dam can become a common point of settlement in the future. Thus, the representation of the dam might have changed with the new president of Uzbekistan, but because of the lack of official statements, it is still uncertain whether the dam can be a point of reconciliation or still a point of conflict.

Consequently, after analysing the representations within the discourses, I have identified the relation between the discourses from the two different perspectives. From Tajikistan's side, the following relations have been found vis-à-vis Tajikistan's values, interests and tools.

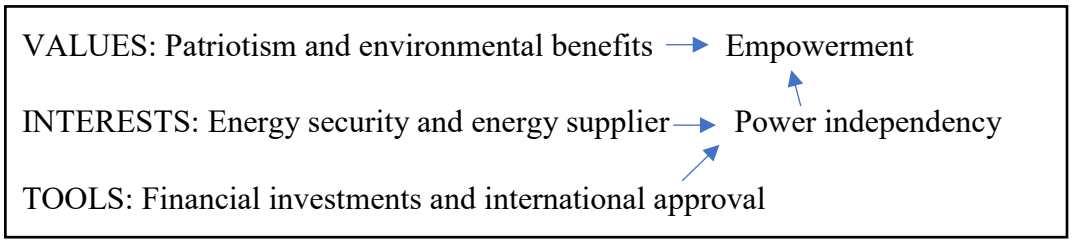

Figure 4. Map of Tajikistan's discourses

According to this map, the main discourse is the discourse of empowerment, which is supported by the other discourses of patriotism, environmental benefit and power independency. The discourses of financial investments and international approval can lead to an indispensable support for the construction of the Rogun dam, which will consequently enrich the discourse of power independency and the discourse of empowerment. This map also reflects in the "Know WHY" versus "Know HOW" concepts of the water diplomacy framework.

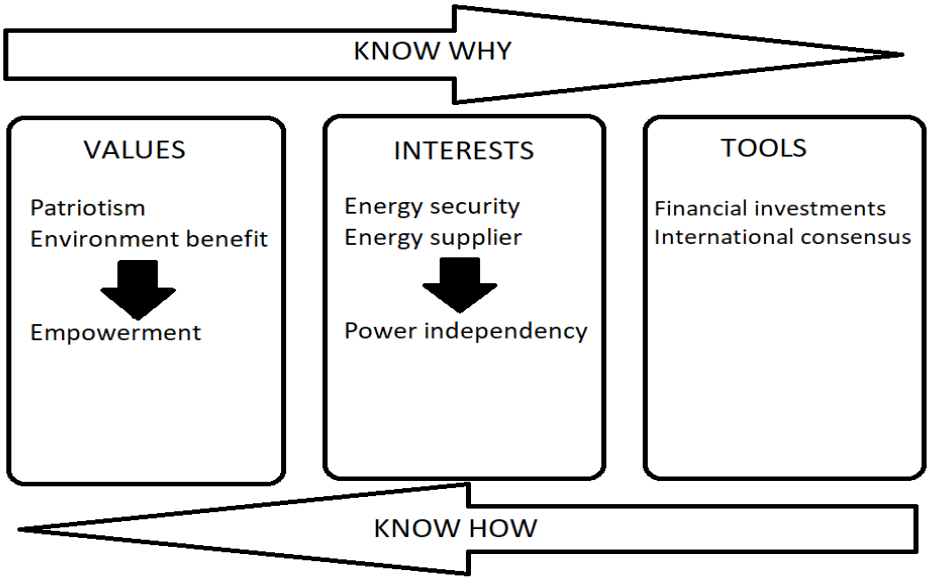

Figure 5. "Know Why" versus "Know How" concept from Tajikistan's perspective

Consequently, it is possible to assert that the representation of the Rogun dam as a national emblem of power still continues in Tajikistan's discourses.

From Uzbekistan's perspective, the following relations were identified vis-à-vis Tajikistan's values, interests and tools.

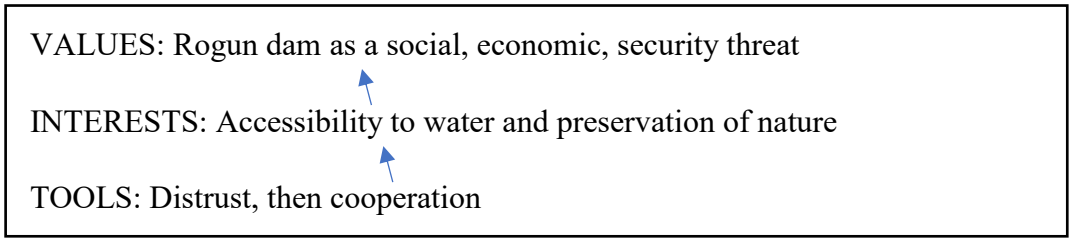

Figure 6. Map of Uzbekistan's discourses

According to the map, the main discourse that it is recurrent in most of the speeches and statements of Uzbekistan's government is that the Rogun dam is represented as a threat in from the social, economic and security point of views. Indeed, the discourse of accessibility to water and preservation of nature explain also the reasons why Uzbekistan is against the project. Thus, the discourse of distrust was also produced and supported through many years. However, the discourse shift arrives in 2016, when the new president of Uzbekistan decides to change the foreign policy into a more cooperative approach with Tajikistan, which is also

reflected in the discourse of cooperation in the joint statement of 2018. Uzbekistan's discourses can also be reflected in the "Know WHY" versus "Know HOW" concept.

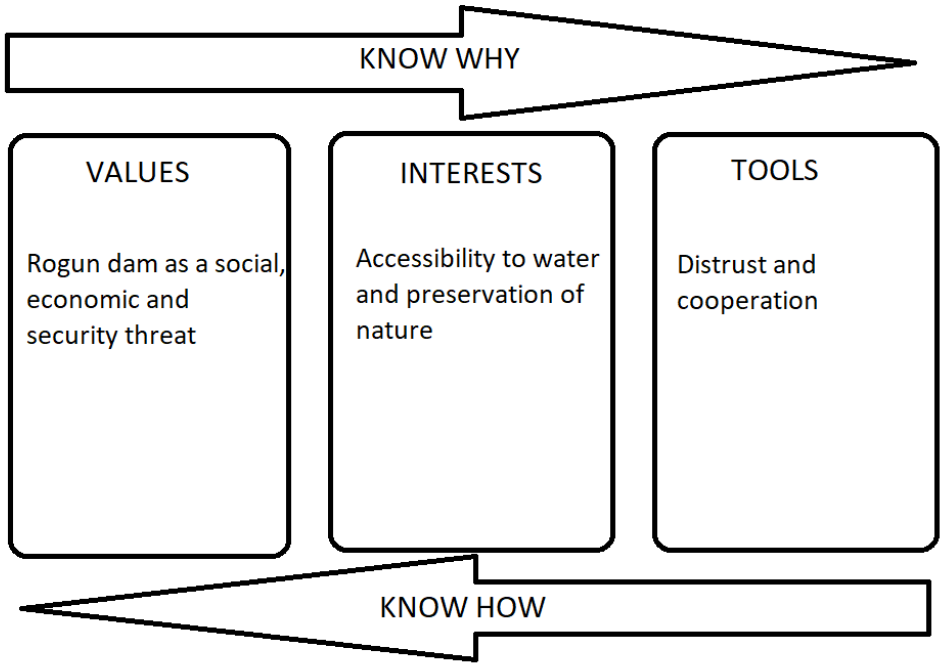

Figure 7. "Know Why" versus "Know How" concept from Uzbekistan's perspective

Changing the discourse means also changing the representation of the Rogun dam: from a threat, the dam can be represented as an occasion for reconciliation and cooperation between Uzbekistan and Tajikistan. The shift in the representation of the Rogun dam was certainly contributed by the way Uzbekistan represents now Tajikistan: if before Tajikistan was seen as dangerous neighbouring state, which was capable of cutting off water to others and to empower the state by producing hydropower, now it is represented as a partner with whom Uzbekistan can grow economically. Consequently, the shift of the discourse does not only happen because there is a new political perspective that has greatly influenced the current foreign policy approach, but also by the fact that Tajikistan is not represented anymore as a threat since the death of Islom Karimov. In addition, the lack of representing the Rogun dam as a threat, and the pessimistic perception of Tajikistan as strategic partner in the latest speeches, confirms again that there was a shift in the discourse of Uzbekistan. Finally, the change in the discourse is proved also by the possibility that the discourse revolting the Rogun dam construction can be used in the future to influence a better strategic partnership

with Tajikistan, as suggested in the statement from the Center for strategic research under the President of the Republic of Tajikistan (2018, March 12).

In this research, due to the lack of time and resource, I did not analyse the discourses of the international companies, such as Salini Impregilo, or the World Bank, which also have a great influence in the construction of the Rogun dam. However, it is worth to mention that Salini Impregilo claims to be the "leading global player in the construction of large, complex civil infrastructure" (Salini Impregilo, n.d.). Hence, the company could have been chosen by the government of Tajikistan due to its experience in building big infrastructures. The lack of public opinions or statements about the dam from Salini Impregilo prevents an analysis of its discourses. Regarding the World Bank's position, the vice president of the World Bank Cyril Muller has announced that the dam will solve part of the energy problems of Tajikistan and that energy can be also a source for economic growth of the country. Thus, he approves that the dam will be beneficial for Tajikistan.

> "Rogun can be a source of much needed, inexpensive, renewable and reliable energy for the people of Tajikistan. It can also be an important source of energy exports that can generate revenues for other critical investments in human capital to help transform Tajikistan's economy and create the foundation for a prosperous future." said Vice President Cyril Muller.
>
> (World Bank, 2018)

7. DISCUSSION AND CONCLUSIONS

Water scarcity is affecting more countries and populations than in the past, due to the population growth, environmental degradation, global warming or urbanisation. However, although the level of fresh water is slowly reducing, the demand of water keeps rising. In countries where water is not easily accessible, water can become a real valuable resource that could be fought for, increasing tensions globally. For this reason, the water diplomacy framework is important in today's international relations, to understand and to analysis the dynamics of sharing water at an interstate level.

The specific purpose of this research has been (1) to understand what disagreements caused the disputes of Tajikistan and Uzbekistan over the Rogun dam and (2) to identify the possible factors that can benefit a political stability between Tajikistan and Uzbekistan through an analysis of the Rogun dam case. In fact, the complex transboundary water management in Central Asia has caused many disagreements and dissatisfaction between the states involved, to the point that the states have decided to work independently to produce their own resources, as exemplified by the case of Tajikistan with the generation of hydro energy power. Thus, through the water diplomacy framework, the intention of the research has been to analyse and categorise the elements that can lead to an improved political and diplomatic partnership between Tajikistan and Uzbekistan, specifically in regards of the construction of the Rogun dam.

It has been argued here that discourse analysis provides one way in which the water diplomacy framework can be operationalized in research practice. Discourses, after all, play a central role in diplomatic practices. After analysing and assessing the discourses of Tajikistan and Uzbekistan, the study has demonstrated that the main reasons behind the dispute are related to the possible inefficient transboundary water management between the two states, which can cause big damages to Uzbekistan's agriculture or cause the lack of energy in Tajikistan during the winters. However, the identified factor that can lead to a political stability is the change of Rogun dam's representation from the perspective of the state of Uzbekistan. In fact, with the new government led by president Mirziyoyev, the previous discourse where the dam was mainly seen as a threat has evolved to a discourse of possible cooperation and stability. Not only the new Uzbek president brought a new foreign political approach, but it also offered a new representation of Tajikistan, as a potential political and economic partner in the future. As a result, the new and possible cooperative approach towards Tajikistan can contribute to the political stability and peace of the two

countries. In addition, the fact that the discourse of distrust is not anymore present in the speeches or statements of Uzbekistan's government proves that the discourse has changed, as well as the fact Rogun dam can be used as a point of reconciliation for future strategic partnerships. By openly declaring the possibility of a cooperation in the future and by visiting Tajikistan, the president of Uzbekistan has demonstrated that there is an intention to collaborate with president of Tajikistan to ameliorate the diplomatic, economic, trade and political relationship.

The analysis has indicated what the values, interests and tools of the two states are and examined these in the context of the water diplomacy framework. Considering Tajikistan's side, the analysis revealed that the discourses of the Rogun dam have followed a progressive structure throughout the years, contributing to enhance the greatness and powerful symbol of the dam for Tajikistan. This image is well embodied and preserved in the government and in the society, as proved by the speeches given at the inauguration of the Rogun dam in 2016. Hence, it seems that the representation of the Rogun dam as an empowerment symbol will not change in the future. By contrast, from Uzbekistan's perspective, the representation of the dam as an economic, social and security threat did not endure but has rather changed into a point of reconciliation with Tajikistan when president Mirziyoyev was elected. Because the representation of threat seems to have disappeared in the political discourses of Uzbekistan in the past two years, this change can imply that the new government is prepared to go forward and to establish a cooperative relation with Tajikistan, which can involve a better transboundary water management system between the two states. Indeed, by visiting Tajikistan and by publicly introducing the new cooperative relation with a join statement in 2018, president Mirziyoyev demonstrated that the new government is willing to find new ways to establish good relations with Tajikistan. However, even though the results might suggest that there will be a positive outcome, there is still a possibility that the dam still represents a dangerous construction that can have negative consequences on Uzbekistan's security. In addition, I assert that the government's main interest in regard to the dam is still to have accessibility to water and to preserve the environment from further gigantic infrastructures. Yet, if the dam will be finished, it is uncertain how these interests will influence the water management system and the political stability in the future.

The research findings – codes and key discourses – were identified by taking into consideration the water diplomacy framework. According to Islam and Repella (2015), through the analysis of the value, the interests and the tools of the individual or of an entity

(institution or government), it is possible to depict the reality in the way in which it is perceived by the involved actors, which also includes the water management issues. Thus, through the analysis, I have first identified that both Uzbekistan and Tajikistan are aware of the water management problem in Central Asia. This mainly concerns equal and efficient ways of sharing the natural resources between the downstream and upstream countries. But the lack of a common management system hinders the development of a better transboundary water system, leading Tajikistan to choose its own way to produce energy and Uzbekistan to act accordingly. Secondly, the main issue for Tajikistan as an upstream country is not having access to water but producing enough energy to pass through the cold winters, as well as becoming an energy supplier that could benefit its economy in the future. Whereas, for Uzbekistan the problem is the opposite: it is about having access to water for agricultural purposes and for its inhabitants living conditions. Building up the Rogun dam can solve part of Tajikistan's problem, but it will certainly induce other management problems, such as the distribution of water to other states. Thirdly, both states have the interest to solve the environmental problems caused by climate change, but in different ways: for example, Uzbekistan suggested to focus on ameliorating the situation in the Aral Sea rather than creating dams, like Tajikistan is doing. On the other hand, Tajikistan believes that the dam can be a sustainable solution since it would use water as a source to produce energy, and not gas or oil. Finally, it is true that now Uzbekistan is changing its approach towards Tajikistan in terms of future cooperation, but there are still many technical and management issues that have not been tackled yet to fully agree with the construction of the Rogun dam.

In relation to the water diplomacy framework, the results of this research have confirmed that the multiple perspectives and understanding of reality can greatly influence the already existing multi-level management water problems, as explained also by Islam and Repella (2015). Nevertheless, the identified discourses and representations found in the speeches and statements of the two states have also contributed an understanding of some of the factors that drive the actors to act in a certain pattern rather than in another. Indeed, Tajikistan is driven by the fact that the Rogun can represent a symbol of empowerment of the state. Whereas, in the past Uzbekistan saw the dam as a danger for the inhabitants living in the area and for the preservation of the environment; now the dam could be perceived as a point of junction for stability. Thus, changing the perception and the role of the dam in Central Asia can contribute to a more stabilised relation between Uzbekistan and Tajikistan. In fact, it is significant that the president Mirziyoyev first went to Tajikistan to meet president Rahmon, and not the other way around. This ameliorated the diplomatic relation between

the two states, since there was the aim to establish a better cooperative relation that would include a better management of the resources and better trade deals between the two states. Also, introducing the discourse of cooperation in the new political agenda of Uzbek's government can benefit the relation with Tajikistan in many ways, starting from the management of water and energy together. This can be also found in the joint statement of the president of the Republic of Tajikistan Emomali Rahmon and the president of the Republic of Uzbekistan Shavkat Mirziyoyev on strengthening friendship and neighbourliness (2018). The absence of the discourse of threat of the Rogun dam, which could be linked to Tajikistan's ambitiousness, reinforce the assumption that Uzbekistan's government wish to develop better diplomatic relations with Tajikistan. This statement represents the first step to a possible cooperative relation that could eventually lead and enhance peace and stability between Uzbekistan and Tajikistan in the long-run.

Reflecting back on the various conceptualizations of water in international relations and the Rogun dam case, we can see that the management of water at a transboundary level is a fundamental element that can influence relations between neighbouring states. In this case, water could also be seen as a social opportunity to establish a better cooperation, but the different interests of Uzbekistan and Tajikistan hinders reaching a common agreement about the dam in Central Asia. The transboundary water resource management approach also has some relevance in the context of the two governments sustaining their opinions about building or not building the dam. However, the strong opposition of the two parties, enhanced by their own representations of the dam, has hindered the creation of a common knowledge that could have been used to create a better and more efficient cooperative water system. Thus, the fact that Uzbekistan has decided to first cooperate with Tajikistan will open many paths for future strategies to employ the dam more effectively and wisely, leading to create 'actionable knowledge'. However, in the future, it is likely that the Rogun dam's activities will affect Uzbekistan's water security in one way or another, since the available water will not be fully reachable to the population in the long-run, if not agreed with the Tajik's government beforehand. Despite the many official statements, I have noticed that any mention to the international water law in relation to the Rogun dam was missing, if not only in the World Bank's report.

The analysis of the data is impacted by the lack of available translated data and the fact that I have chosen to analyse specific speeches and statements related to the dam, which have influenced the outcome of this research. Yet, even though the limited amount of analysed

primary data, the results still sustained my research purpose. In addition, through the water diplomacy framework, it was often challenging not to overlap the definitions of values and interests from the perspective of Tajikistan and Uzbekistan. In actual social life, discourses and codes overlap and data might have also been categorized in different ways. For example, the discourse of environment brought by Tajikistan is categorised under its values, but it can be also perceived as an interest to build the Rogun dam. Finally, the discourses of distrust and of cooperation can be also perceived as results of previous discourses that have generated the approach of rejection and then acceptance of the Rogun dam's construction, rather that distinguished discourses.

This research has offered a new application of the emerging water diplomacy framework through an analysis of the Rogun dam focusing on the development of the relation between Tajikistan and Uzbekistan. Analysing the official speeches and statements through discourse analysis has supported the research aim of comprehending possible outcomes that can contribute to the political stability in the region and between these two states. Moreover, using discourse analysis has also been a fresh methodological contribution in the development of the water diplomacy framework. Future studies should take into account this framework when analysing such wicked problems as to water management, as it can significantly contribute towards understanding the main points and positions that hinder taming the wickedness of the problem. As the research has identified an emerging discursive shift, studying the evolution of the cooperation between the two states in regards of the development of the Rogun dam would also provide an interesting topic for further research.

REFERENCES

Abdullaev, I., De Fraiture, C., Giordano, M., Yakubov, M. Rasulov, A. (2009). Agricultural water use and trade in Uzbekistan: Situation and potential impacts of market liberalization. *Water Resources Development*, *25*(1), 47–63.

Abdullaev, I., Giordano, M., Rasulov, A. (2005). Cotton in Uzbekistan: water and welfare. *Paper presented at Conference on Cotton Sector in Central Asia: economic policy and development challenges*. School of Oriental and African Studies, University of London, 3–4 November 2005.

Allain, J. (2014). Anarchy and international law: the approaches of Hedley Bull and Noam Chomsky. *Review of Contemporary Philosophy*, *13*, 17–47.

Argyris, C. (1996). Actionable knowledge: Design causality in the service of consequential theory. *The Journal of Applied Behavioral Science*, *32*(4), 390–406.

ASIA-Plus. (2015, May 25). OJSC NBO Roghun shareholders decide to increase the company's authorized capital to TJS 14 billion. Retrieved July 16, 2019, from https://asiaplustj.info/en/news/tajikistan/economic/20150525/ojsc-nbo-roghun-shareholders-decide-increase-company-s-authorized-capital-tjs-14-billion.

ASIA-Plus. (2018, December 26). Tajikistan earmarks 430 million USD next year for construction of Roghun hydropower plant. Retrieved July 16, 2019, from https://asiaplustj.info/en/news/tajikistan/economic/20181226/tajikistan-earmarks-430-million-usd-next-year-for-construction-of-roghun-hydropower-plant.

ASIA-Plus. (2018, July 25). Tajikistan's gold-and-currency reserves exceed 1.2 billion U.S. dollar. Retrieved July 16, 2019, from https://asiaplustj.info/en/news/tajikistan/economic/20180725/tajikistans-gold-and-currency-reserves-exceed-12-billion-us-dollar.

Bakker, K. (2012). Water security: Research challenges and opportunities. *Science*, *337*(6097), 914–915.

Briguglio, M. (2019). WASP (write a scientific paper): Discourse analysis. *Early Human Development*, *133*, 62–64.

Cahan, J. (2017). *Water security in the middle east: Essays in scientific and social cooperation* (pp. 39–66). London; New York, NY: Anthem Press.

Center for strategic research under the President of the Republic of Tajikistan. (2018, June 20). *President of Tajikistan Emomali Rahmon made speech at the opening ceremony of the International High-Level Conference on the International Decade for Action "Water for Sustainable Development, 2018-2028"*. Retrieved August 10, 2019, from http://www.mts.tj/en/index.php?option=com_content&view=article&id=756%3Apresident-of-tajikistan-emomali-rahmon-made-speech-at-the-opening-ceremony-of-the-international-high-level-conference-on-the-international-decade-for-action-water-for-sustainable-development-2018-2028&catid=178%3A2013-09-16-12-06-02&lang=en.

Center for strategic research under the President of the Republic of Tajikistan. (2018, March 12). *Joint statement of the president of the Republic of Tajikistan Emomali Rahmon and the president of the Republic of Uzbekistan Shavkat Mirziyoyev on strengthening friendship and neighbourliness*. Retrieved August 10, 2019, from http://www.mts.tj/en/index.php?option=com_content&view=article&id=754%3Ajoint-statement-of-the-president-of-the-republic-of-tajikistan-emomali-rahmon-and-the-president-of-the-republic-of-uzbekistan-shavkat-mirziyoyev-on-strengthening-friendship-and-neighborliness&catid=178%3A2013-09-16-12-06-02&lang=en.

Chellaney, B. (2015). *Water, peace, and war: Confronting the global water crisis*. Maryland, USA: Rowman & Littlefield.

Conca, K. (2012). Decoupling Water and Violent Conflict. *Issues in Science and Technology*, *29*(1), 39–49.

Cooper, A., Heine, J., Thakur, R. (2013). *The Oxford Handbook of Modern Diplomacy.* London, United Kingdom: Oxford University Press.

Cosgrove, W. J. & D. P. Loucks (2015). Water management: Current and future challenges and research directions. *Water Resources Research*, *51*(6), 4823–4839.

Davidson, S. L., Linton, J., Mabee, W. E. (2015). *Water as a social opportunity*. Montreal, Canada, McGill-Queen's University Press.

Diplomacy. (2019). Encyclopædia Britannica Inc. Retrieved June 6, 2019, from https://academic.eb.com/levels/collegiate/article/diplomacy/106182.

Dunn, K. C., & Neumann, I. B. (2016). *Undertaking discourse analysis for social research*. University of Michigan Press: Ann Arbor.

Elo, S., & Kyngäs, H. (2008). The qualitative content analysis process. *Journal of Advanced Nursing*, *62*(1), 107–115.

Eshchanov, B. R., Stultjes, M. G. P., Salaev, S. K., & Eshchanov, R. A. (2011). Rogun dam-path to energy independence or security threat? *Sustainability*, *3*(9), 1573–1592.

Féaux de la Croix, J. & Suyarkulova, M. (2015). The Rogun Complex: Public Roles and Historic Experiences of Dam-Building in Tajikistan and Kyrgyzstan. *Cahiers d'Asie centrale, 25*, 103–132

Food and Agriculture Organization of the United Nations (FAO). (2012). Uzbekistan. Retrieved from July 8, 2019, http://www.fao.org/nr/water/aquastat/countries_regions/UZB/.

Food and Agriculture Organization of the United Nations (FAO). (2012). Tajikistan. Retrieved from July 8, 2019, http://www.fao.org/nr/water/aquastat/countries_regions/TJK/index.stm.

Ganoulis, J., Aureli, A., Fried, J. J. (2011). *Transboundary water resources management: A multidisciplinary approach*. Weinheim, Germany: John Wiley & Sons, Incorporated.

Garrett-Peltier H. (2017). Green versus brown: Comparing the employment impacts of energy efficiency, renewable energy, and fossil fuels using an input-output model. *Economic Modelling*, *61*, 439–447.

Gibson, D. (2018, February 28). Water Crisis in Cape Town: Lessons to be Learnt. Konrad Adenauer Stiftung. Länderprojekt Südafrika. Retrieved November 20, 2018, from https://www.kas.de/single-title/-/content/water-crisis-in-cape-town-lessons-to-be-learnt-part-1-.

Gleick, P. H., Christian-Smith, J., Cooley, H. (2011). Water-use efficiency and productivity: rethinking the basin approach. *Water International*, *36*(7), 784–798.

Grech-Madin, C., Döring, S., Kim, K., Swain, A. (2018). Negotiating water across levels: A peace and conflict ‘‘Toolbox” for water diplomacy. *Journal of Hydrology, 559*, 100–109.

Hashimova, U. (2018, August 22). Security Matters Top Uzbekistan-Tajikistan Agenda. Retrieved October 17, 2019, from https://thediplomat.com/2018/08/security-matters-top-uzbekistan-tajikistan-agenda/.

Head, B. W., Alford, J. (2015). Wicked Problems: Implications for Public Policy and Management. *Administration & Society*, *47*(6), 711–39.

Hoff, H. (2011). *Understanding the Nexus; Background Paper for the Bonn 2011 Conference: The Water, Energy and Food Security Nexus*. Stockholm, Sweden: Stockholm Environment Institute.

Honkonen, T., & Lipponen, A. (2018). Finland's cooperation in managing transboundary waters and the UNECE principles for effective joint bodies: Value for water diplomacy? *Journal of Hydrology*, *567*, 320–331.

Hsiung, J. C. (1997). *Anarchy & order: The interplay of politics and law in international relations*. Boulder, Colorado: Lynne Rienner Publishers.

Huntjens, P., Yasuda, Y., Swain, A., De Man, R., Magsig, B., Islam, S. (2016). *The Multi-track Water Diplomacy Framework: A Legal and Political Economy Analysis for Advancing Cooperation over Shared Waters*. Aia, Netherlands: The Hague Institute for Global Justice.

Islam, S. & Madani, K. (2017). *Water Diplomacy in Action: Contingent Approaches to Managing Complex Water Problems*. London, United Kingdom: Anthem Press.

Islam, S. & Repella, A.C. (2015). Water Diplomacy: A Negotiated Approach to Manage. Complex Water Problems. *Journal of Contemporary Water Research & Education Issue*, *155*(1), 1–10.

Ito S., Khatib S.E., Nakayama M. (2016). Conflict over a hydropower plant project between Tajikistan and Uzbekistan. *International Journal of Water Resources Development*, *32*(5), 692–707.

Jalilov, S.M., De Sutter, T.M., Leitch, A. (2011). Impact of Rogun dam on downstream Uzbekistan agriculture. *International Journal of Water Resources and Environmental Engineering*, *3*(8), 161–166.

Jönsson, C. & Langhorne, R. (2004). *Diplomacy: Vol. 1, theory of diplomacy* (pp. 75–91). London, United Kingdom: Sage.

Klimes, M., Michel, D., Yaari, E., Restiani, P. (2019). Water Diplomacy. The Intersect of Science, Policy and Practice. *Journal of Hydrology*.

Lechner, S. (2017). Anarchy in International Relations. International Relations Theory. Retrieved March 5, 2019, from

https://oxfordre.com/internationalstudies/abstract/10.1093/acrefore/9780190846626.001.0001/acrefore-9780190846626-e-79.

Lemon, E. (2016, October 19). Signs of improving relations between Uzbekistan and Tajikistan but tensions remain. Retrieved July 19, 2019, from https://cacianalyst.org/publications/analytical-articles/item/13405-sings-of-improving-relations-between-uzbekistan-and-tajikistan-but-tensions-remain.html.

Lemon, E. (2018, March 12). The Transformation of the Uzbek-Tajik Relationship Publication. Retrieved October 16, 2019, from https://jamestown.org/program/transformation-uzbek-tajik-relationship/.

Menga, F. & Mirumachi, N. (2016). Fostering Tajik hydraulic development: Examining the role of soft power in the case of the Rogun dam. *Water Alternatives*, *9*(2), 373–388.

Menga, F. (2015). Building a nation through a dam: The case of Rogun in Tajikistan. *Nationalities Papers*, *43*(3), 479–494.

Micklin, P. (2007). The Aral Sea Disaster. *Annual Review of Earth and Planetary Sciences*, *35*(1), 47–72.

Ministry of Foreign Affairs of the Republic of Uzbekistan. (2014, September 27). *Address by the Minister of Foreign Affairs of The Republic of Uzbekistan A. Kamilov at the General debates of the 69th Session of the Un General Assembly.* Retrieved August 21, 2019, from https://mfa.uz/en/press/news/2014/09/2477/.

Ministry of Foreign Affairs of the Republic of Uzbekistan. (2015, September 26). *Address by the Minister of Foreign Affairs of the Republic of Uzbekistan Abdulaziz Kamilov at the United Nations summit on sustainable development goals.* Retrieved August 19, 2019, from https://mfa.uz/en/press/news/2015/09/5376/.

Ministry of Foreign Affairs of the Republic of Uzbekistan. (2015, August 3). *Press release of the Ministry of Foreign Affairs of the Republic of Uzbekistan.* Retrieved August 20, 2019, from https://mfa.uz/en/press/release/2015/08/4992/.

Ministry of Foreign Affairs of the Republic of Uzbekistan. (2018, August 18). *Uzbekistan and Tajikistan are strategic partners.* Retrieved August 19, 2019, from https://mfa.uz/en/press/news/2018/08/15810/.

Munro, J. H. (2012). *Industrial energy from water-mills in the European economy, 5th to 18th Centuries: the limitations of power*. Munich, Germany: Munich Personal RePEc Archive.

Nurek dam. (2018). Encyclopædia Britannica Inc. Retrieved from https://academic.eb.com/levels/collegiate/article/Nurek-Dam/56521.

Nurshayeva, R. (2012, September 7). Uzbek leader sounds warning over Central Asia water disputes. Retrieved August 16, 2019, from https://www.reuters.com/article/centralasia-water/uzbek-leader-sounds-warning-over-central-asia-water-disputes-idUSL6E8K793I20120907.

Pahl-Wostl, C., Conca, K., Kramer, A., Maestu, J., Schmidt, F. (2013). Missing links in global water governance: A processes-oriented analysis. *Ecology and Society*, *18*(2), 33.

Pangare, G. (2014). *Hydro diplomacy: sharing water across borders* (pp. 35–40). New Delhi, India: Academic Foundation from IUCN India Country Office.

Persing, W. (2018, January 23). Perspectives - Uzbekistan & Tajikistan: Catalysts for a Regional Water Solution?. *Eurasianet.* Retrieved April 23, 2019, from https://eurasianet.org/perspectives-uzbekistan-tajikistan-catalysts-for-a-regional-water-solution.

President of the Republic of Tajikistan. (2016, October 29). Meeting with the management and specialists of Roghun HPP and residents of Roghun town. Retrieved August 14, 2019, from http://www.president.tj/en/node/13421.

President of the Republic of Tajikistan. (2016, October 29). *Start of construction of Roghun HPP dam.* Retrieved August 14, 2019, from http://www.president.tj/en/node/13416.

President of the Republic of Tajikistan. (2016, December 22). *Address of the President of the Republic of Tajikistan, Leader of the Nation, His Excellency Emomali Rahmon to the Parliament of the Republic of Tajikistan.* Retrieved August 14, 2019, from http://www.president.tj/en/node/13748.

President of the Republic of Tajikistan. (2016, October 29). *Speech by the President of the Republic of Tajikistan, Leader of Nation, H.E. Mr. Emomali Rahmon Vakhsh River Diversion Ceremony.* Retrieved August 14, 2019, from http://www.president.tj/en/node/13409.

President of the Republic of Tajikistan. (2018, November 16). *Speech at Roghun HPP First Unit Launch Ceremony.* Retrieved August 14, 2019, from http://www.president.tj/en/node/18899.

President of the Republic of Tajikistan. (2018, September 7). *Congratulatory messages from heads of a number of foreign countries on the occasion of 27th anniversary of State Independence of the Republic of Tajikistan.* Retrieved October 16, 2019, from http://www.president.tj/en/node/18371.

Putz, C. (2017, July 10). Uzbekistan's Changing Rogun Tone. Retrieved August 16, 2019, from https://thediplomat.com/2017/07/uzbekistans-changing-rogun-tone/.

Putz, C. (2018, April 4). Tajikistan Resumes Supplying Uzbekistan with Electricity. Retrieved October 17, 2019, from https://thediplomat.com/2018/04/tajikistan-resumes-supplying-uzbekistan-with-electricity/.

Rasmussen, S. B. (2009). *Discourse Analysis of EU Public Diplomacy Messages and Practices.* Retrieved from Netherlands Institute of International Relations 'Clingendael' https://www.clingendael.org/sites/default/files/pdfs/20090700_cdsp_discussion_paper_115_Rasmussen.pdf.

Read, L. & Garcia, M. (2015). Water Diplomacy: Perspectives from a Group of Interdisciplinary Graduate Students. *Journal of Contemporary Water Research & Education*, *155*(1), 11–18.

Rittel, H. W. J., Webber, M. M. (1973). Dilemmas in a general theory of planning. *Policy Sciences*, *4*(2), 155–169.

Salini Impregilo. (2016, July 6). Rogun, la diga dei record. Retrieved July 18, 2019, from https://www.webuildvalue.com/it/opere-e-progetti/rogun-in-tajikistan-la-diga-piu-alta-del-mondo.html#.

Salini Impregilo. (2018, November 16). Il presidente del Tagikistan avvia la prima turbina dell'impianto idroelettrico di Rogun in costruzione con la partecipazione di Salini Impregilo. Retrieved July 18, 2019, from https://www.salini-impregilo.com/it/sala-stampa/news-eventi/il-presidente-del-tagikistanavvia-la-prima-turbina-dell-impianto-idroelettrico-di-rogun-in-costruzione-con-la-partecipazione-di-salini-impregilo.html.

Salini Impregilo. (n.d.). Retrieved September 27, 2019, from https://www.salini-impregilo.com/en/projects/expertise.html.

Schmeier, S., & Shubber, Z. (2018). Anchoring water diplomacy - the legal nature of international river basin organizations. *Journal of Hydrology*, *567*, 114–120.

Schmidt, R. (2007). Feasibility Study for Completion of the Rogun Scheme, Tajikistan. *Hydropower & Dams*, *14*(3), 102–107.

Schmidt, R. (2008, June 4). Onwards and upwards. Retrieved July 19, 2019, from https://www.waterpowermagazine.com/features/featureonwards-and-upwards/.

Sharipov, R. (2006, August 26). Unblocking Tajikistan's Giant Dam Project. *Institute for war & peace reporting.* Retrieved July 20, 2019, from https://iwpr.net/global-voices/unblocking-tajikistans-giant-dam-project.

Siddiqi, A. & Anadon, LD. (2011). The water–energy nexus in middle east and north Africa. *Energy Policy*, *39*(8), 4529–4540.

Soliev, I., Wegerich, K., & Kazbekov, J. (2015). The costs of benefit sharing: Historical and institutional analysis of shared water development in the Fergana valley, the Sir Darya basin. *Water (Switzerland), 7*(6), 2728–2752.

Sorbello, P. (2018, August 21) Tajikistan's President Makes Historic Visit to Uzbekistan. Retrieved from August 20, 2019, https://thediplomat.com/2018/08/tajikistans-president-makes-historic-visit-to-uzbekistan/.

Sustainable development goals. Retrieved January 22, 2019, from https://sustainabledevelopment.un.org/?menu=1300.

Tajikistan cancels RUSAL deal to build 3,600-MW Rogun. (2007, July 30). Retrieved July 20, 2019, from https://www.hydroworld.com/articles/2007/08/tajikistan-cancels-rusal-deal-to-build-3600-mw-rogun.html.

Trilling, D. (2014, February 13). Tajikistan Using DC Proxies to Build Support for Rogun dam. Retrieved July 20, 2019, from https://eurasianet.org/tajikistan-using-dc-proxies-to-build-support-for-rogun-dam.

United Nations Development Programme. (1997). Human Development Report 1997. Retrieved January 30, 2019, from http://hdr.undp.org/sites/default/files/reports/258/hdr_1997_en_complete_nostats.pdf.

United Nations. (2008). *Transboundary Waters: Sharing Benefits, Sharing Responsibilities.* Retrieved January 24, 2019, from https://www.unwater.org/publications/transboundary-waters-sharing-benefits-sharing-responsibilities/.

United Nations. (2013). *Water security & the global water agenda. A UN analytical brief.* Retrieved January 24, 2019, from https://www.unwater.org/publications/water-security-global-water-agenda/.

Uzbekistan Breaks Silence on Tajik Giant Dam Project. (2017, July 8). Retrieved August, 24, 2019, from https://eurasianet.org/uzbekistan-breaks-silence-on-tajik-giant-dam-project.

Uzbekistan lay foundations of cooperation through 2022 (FAO). (2019). Retrieved July 18, 2019, from: http://www.fao.org/europe/news/detail-news/en/c/1177059/.

Uzbekistan once again warns Tajikistan on threat of Rogun HPP. (2016, July 20). Retrieved July 18, 2019, from http://www.uzdaily.uz/en/post/36412.

Wegerich, K., Rooijen, D. V., Soliev, I., & Mukhamedova, N. (2015). Water security in the Syr Darya basin. *Water (Switzerland), 7*(9), 4657–4684.

Wikimedia Commons. (2012, May 8). FL: Wikimedia Foundation, Inc. Retrieved October 15, 2019, from https://commons.wikimedia.org/wiki/File:Central_Asia_Physical.jpg.

World Bank Statistics. Agriculture & Rural Development in Kazakhstan. Retrieved August 15, 2019, from https://data.worldbank.org/topic/agriculture-and-rural-development?locations=KZ.

World Bank. (2014, September 1). *Key Issues for Consideration on the Proposed Rogun Hydropower Project*. Retrieved August 15, 2019, from https://www.worldbank.org/en/country/tajikistan/brief/final-reports-related-to-the-proposed-rogun-hpp.

World Bank. (2018). *Embedded in Broader Reforms, the Rogun HPP Could Provide a Significant Development Impetus to Tajikistan.* Retrieved from September 27, 2019, from https://www.worldbank.org/en/news/press-release/2018/11/16/embedded-in-broader-reforms-the-rogun-hpp-could-provide-a-significant-development-impetus-to-tajikistan.

World Water Council. (2000, March 22). *Ministerial Declaration of The Hague on Water Security in the Twenty-First Century*. Retrieved from March 10, 2019,

http://www.worldwatercouncil.org/fi leadmin/ wwc/Library/Official_Declarations/The_Hague_Declaration.pdf.

Wouters, P. & Rieu-Clarke, A. (2001). *The role of international water law in promoting sustainable development.* Retrieved February 20, 2019, from https://www.researchgate.net/publication/43920099_The_role_of_international_water_law_in_promoting_sustainable_development.

Wouters, P., Vinogradov, S., & Bjørn-Oliver Magsig. (2009). Water security, hydrosolidarity, and international law: A river runs through it. *Yearbook of International Environmental Law*, *19*(1), 97–134.

Yankelovich, D. (2015). *Wicked problems, workable solutions*. Lanham, Maryland: Rowman & Littlefield.

Zarghami, M., Safari, N., Szidarovszky, F., & Islam, S. (2015). Nonlinear Interval Parameter Programming Combined with Cooperative Games: a Tool for Addressing Uncertainty in Water Allocation Using Water Diplomacy Framework. *Water Resource Manage*, *29*(12), 4285–4303.

Zeitoun, M. (2015). The relevance of international water law to later-developing upstream states. *Water International*, *40*(7), 949–968.