

# Introduction

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Water is intrinsically linked to peace and security. The United Nations Security Council (UNSC) recognised this through the first ever historic debate on Water, Peace and Security held on 22nd November 2016. This was followed by the UNSC discussion on the linkages between water, peace and security at a meeting on preventive diplomacy and transboundary waters held on 6th June 2017. In the context of hydropolitics, there is a growing consensus on the imperative of trans-boundary cooperation between countries that share rivers, lakes and other freshwater resources, as water is a strategic asset for countries to reach development but it is also a strategic asset for humanity to reach peace and security.

The question is how to define trans-boundary water cooperation and how to measure it for the benefit of those wanting to advance it to ensure regional peace and stability. Strategic Foresight Group (SFG) has therefore developed Water Cooperation Quotient (WCQ) the first measure in the world that quantifies the quality of cooperation within trans-boundary river basins on a global basis. SFG is now in the process of launching the second edition of Water Cooperation Quotient (WCQ) after a successful launch of the first edition in Dakar, Senegal in August 2015. Several rounds of consultations with experts around the world followed since the launch including at a workshop at the Nile Basin Initiative (NBI) in Entebbe, Uganda and the House of Lords, London.

The current edition is built upon a nuanced approach developed through these consultations and in-house research. Strictly speaking trans-boundary water cooperation can be defined in terms of technical activities required for the day-to-day management of water relations. In reality, if trans-boundary water cooperation has to have an impact in the realm of peace and security, it must be active, dynamic and politically driven. Water cooperation Quotient reveals that there is a strong correlation between the intensity of cooperation and strength of comprehensive peace between riparian countries. This can be seen from the fact that all the 21 countries that are involved in war or face a risk of war as of the summer of 2017 have a very low WCQ score. Thus confirming the hypothesis that:

**“any two countries engaged in active water cooperation do not go to war for any reason”**

In addition, Water Cooperation Quotient, 2017 has received support from InterAction Council, an organisation of former Heads of States and Governments:

**“This ground-breaking report is the only document that offers analysis on the risk of conflict and potential for cooperation among the 146 countries that have shared or transboundary rivers. The Water Cooperation Quotient is an effective decision-making tool for water cooperation and a badly needed barometer for assessing risks of war; one that the InterAction Council urges be employed around the world to promote peace, ensure security and improve human and planetary health through cooperation over shared waters, now and in the future.”**

**Olusegun Obasanjo**  
President of Nigeria, 1999-2007

**Bertie Ahern**  
Prime Minister of Ireland, 1997-2008

**Co-chairs of the InterAction Council**



## About the Water Cooperation Quotient (WCQ)

The Water Cooperation Quotient is an extensive research in which the intensity of cooperation between countries sharing water resources is measured, scoring and distinguishing between basic and active water cooperation, technical and political dynamics and routine and effective actions. It reveals that any two countries engaged in active, dynamic, politically driven water cooperation do not go to war for any reason at all. Thus, Water Cooperation Quotient is not only be a decision support tool for understanding and measuring levels of water relations, it is also a barometer to assess the risk of war between riparian countries.

WCQ is an instrument that the countries sharing freshwater resources with their neighbours can use for phased building of cooperative processes. It is also helpful for the international community in planning their investment decisions in basins which are shared by two or more countries. The key message of this report is that water cooperation has to be technically sound and politically meaningful. Therefore, engagement of political leaders in this endeavour is most valuable.

### Methodology

The Water Cooperation Quotient demonstrates that any two countries engaged in active water cooperation do not go to war for any reason. Thus, strong cooperation in collaborative and sustainable management of water resources can lead to comprehensive peace, reduce military expenditure and improve living conditions of poor people.

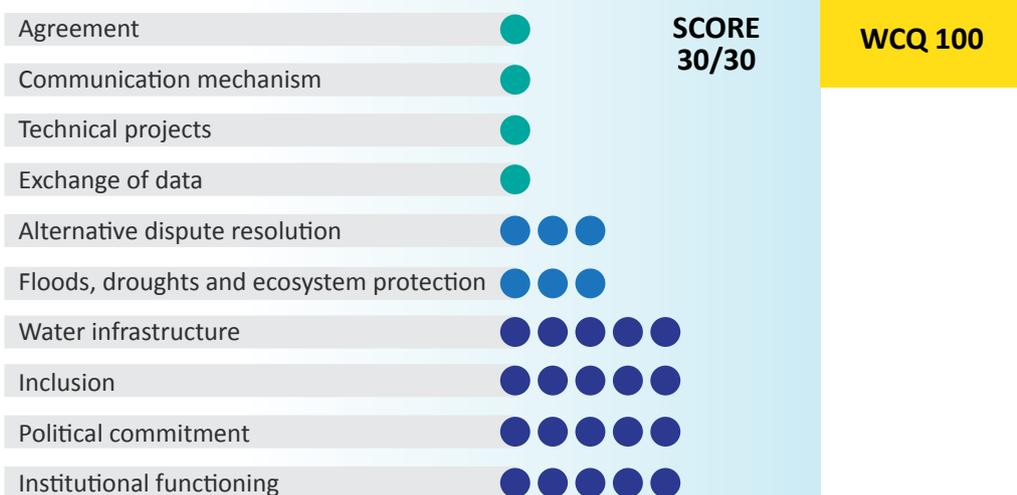
The present edition of the Water Cooperation Quotient (WCQ) tests this hypothesis applying 10 parameters to measure the performance of 286 shared rivers published by the Global Environment Facility (GEF). Out of these 286 shared watercourses, 231 are analysed in detail as it is not possible to expect cooperation in the remaining 55 shared watercourses due to high economic cost of cooperation, physical attributes of the water body (e.g. frozen for several months of the year or inaccessible for other reasons), or lack of reliable information.

In order to compute the WCQ of a riparian nation 10 parameters have been applied. These parameters are indicative of water cooperation in the technical and the political realm and have been weight differently. The weightage of each parameter is done on the basis of whether it represents technical cooperation, in which case it gets a point of 1 each or political cooperation in which case it gets a point of 5. When countries try to move from technical to political cooperation it often involves institution alternative conflict resolution methods or environmental, drought or flood control measures. These parameters hence get a point of 3 each.

### Senegal

**Countries:** Guinea, Mali, Mauritania, Senegal

**Authority:** The Organization for Development of the Senegal River (Organisation pour la Mise en Valeur du fleuve Sénégal) (OMVS)



## The Scoring of Countries

### Water Cooperation Quotient, Riparian Relation (WCQ RR)

The final WCQ score is evaluated in order to evaluate the relation between countries. It is then represented as WCQ (Riparian Relation). Therefore, the WCQ (RR) score for a country would be its corresponding WCQ score on the share watercourse with its immediate neighbour.

- When countries have a WCQ (RR) 50 and above, they are on the path of peace building and have no risk of war. This is when we see that countries have completed the transition into political cooperation. At this stage countries have technical, transitional and at least one or more of the political parameters i.e parameters 7, 8, 9, 10.
- When a country has a WCQ (RR) of 23.33 or higher and less than 50, it shows signs of peace building because it is transcending the realm of technical cooperation. This is when countries have technical cooperation and at least one component of transitional parameters i.e parameters 5 and 6.
- When a country has a WCQ (RR) score less than 23.33. It could be at a risk of war. This is when there is only technical cooperation between countries i.e when countries have one or more of the parameters between 1 and 4 but none from 5- 10.

#### Example:



**“This report offers detailed and unassailable analysis on the risk of conflict and same time outlines possibilities for potential cooperation among the 146 countries that share transboundary rivers. The Water Cooperation Quotient is an effective conflict prevention and peace-making tool for water cooperation and it should be present on the mind and action of every decision-making authority around the world.”**

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**J. Ramos-Horta**

President of Timor-Leste, 2007-2012

Prime Minister of Timor-Leste, 2006-2007

Nobel Peace Prize Laureate, 1996

## About Strategic Foresight Group

Strategic Foresight Group (SFG) is an international think-tank based in Mumbai which is known for creating new forms of intellectual capital. Its recommendations have been discussed in the United Nations, World Bank, World Economic Forum (Davos), European Parliament, Indian Parliament, UK House of Commons and House of Lords, UN Alliance of Civilizations, among other institutions from around the world.

SFG has launched a number of global and regional initiatives to use water as a force for peace, playing a critical role in recognition of the strategic importance of water by important countries including the convening of the first ever debate on water, peace and security in the United Nations Security Council.

It has cooperated with the Government of Switzerland to establish the Global High Level Panel on Water and Peace, co-convened by 15 countries, to recommend worldwide architecture for positive water and peace linkages. SFG has collaborated with the Brazzaville Foundation for Peace and Conservation to conceive the Congo Basin Blue Fund for water cooperation among 12 countries of the Congo Basin in Africa. It has formed the Blue Peace Community of champions of trans-boundary water cooperation in the Middle East at a time when violent conflicts have engulfed the region. It has sensitised several million people from all continents through articles on water cooperation in over 100 different newspapers in various languages. It has also been engaged in regional initiatives for water diplomacy in Africa, Asia and the Middle East.

In addition to water diplomacy, SFG is known for its pioneering work in conflict resolution, deconstructing terror, scenario planning, and mapping global paradigm shifts.



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