

Why the UN Watercourses Convention is more crucial than ever

By Mara Bún, CEO Green Cross Australia

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Introduction

Greetings delegates of the 2008 Riversymposium. On behalf of Green Cross International, WWF and the Australian Water Association, it gives me great pleasure to address such an eminent group of scientists, policy makers and advocates about the UN Watercourses Convention.

Why is this convention important?

The world's **263 international watercourses** contain key freshwater supplies and sustain rich ecosystems in **145 countries**. They cover almost **half the earth's surface**, are home to around **40% of the world's population**, and generate about **60% of global freshwater flow**. They are at risk from climate change, conflict, and damaging development practices.

After a brief introduction to my organisation, Green Cross, I will offer three reasons why the UN Watercourses Convention should be broadly ratified and implemented, namely:

- 1. Water is a source of conflict, and with conflict ecosystems are at risk:** The earth's climate and its impacts respect no borders in an era where water is becoming a source of serious conflict within and between countries. Cooperation – not conflict - across watercourse borders is essential to protect sustainable use of biodiversity and our wider ecosystem.
- 2. Healthy rivers promote peaceful human development:** Healthy aquatic ecosystems are essential to promote peace, security, economic progress and human development.
- 3. Current transboundary governance is hopelessly weak:** Existing agreements about watercourses lack cooperative management frameworks, are largely limited to two countries, and only exist at all in 40% of the world's international watercourses.

About Green Cross --- Mikhail Gorbachev founded our international NGO network in 1993 and it operates with a single mission: *To foster a global values shift towards a sustainable and secure future.* To advance this mission we work on the nexus between the environment, security and development. We are inspired by President Gorbachev, who says that: *"Green Cross promotes a policy of 'preventive engagement' of international and individual action to meet the challenges of poverty, disease, environmental degradation and conflict in a sustainable and non-violent way."*

Green Cross has supported this convention across the 31 countries in which we work because we are convinced that sustainable water resources are crucial to sustaining life in a warming world where all nations will feel the impacts of mass migrations, economic and political disruption, and rising food prices. Rivers that cross borders remind us that while we all share one planet and its finite resources, what some people and communities do have a major impact on how others survive downstream.

To find a humane solution to shared resources we need good rules about how to share them.

1. Water as a source of conflict leading to ecosystem risk

Negotiations for the UN Watercourses Convention started in the early 70s at the UN General Assembly precisely as member States were preoccupied by the growing risks of emerging water conflicts. Already there are major international disputes over water resources as upstream states dam rivers to hold more water within their borders.

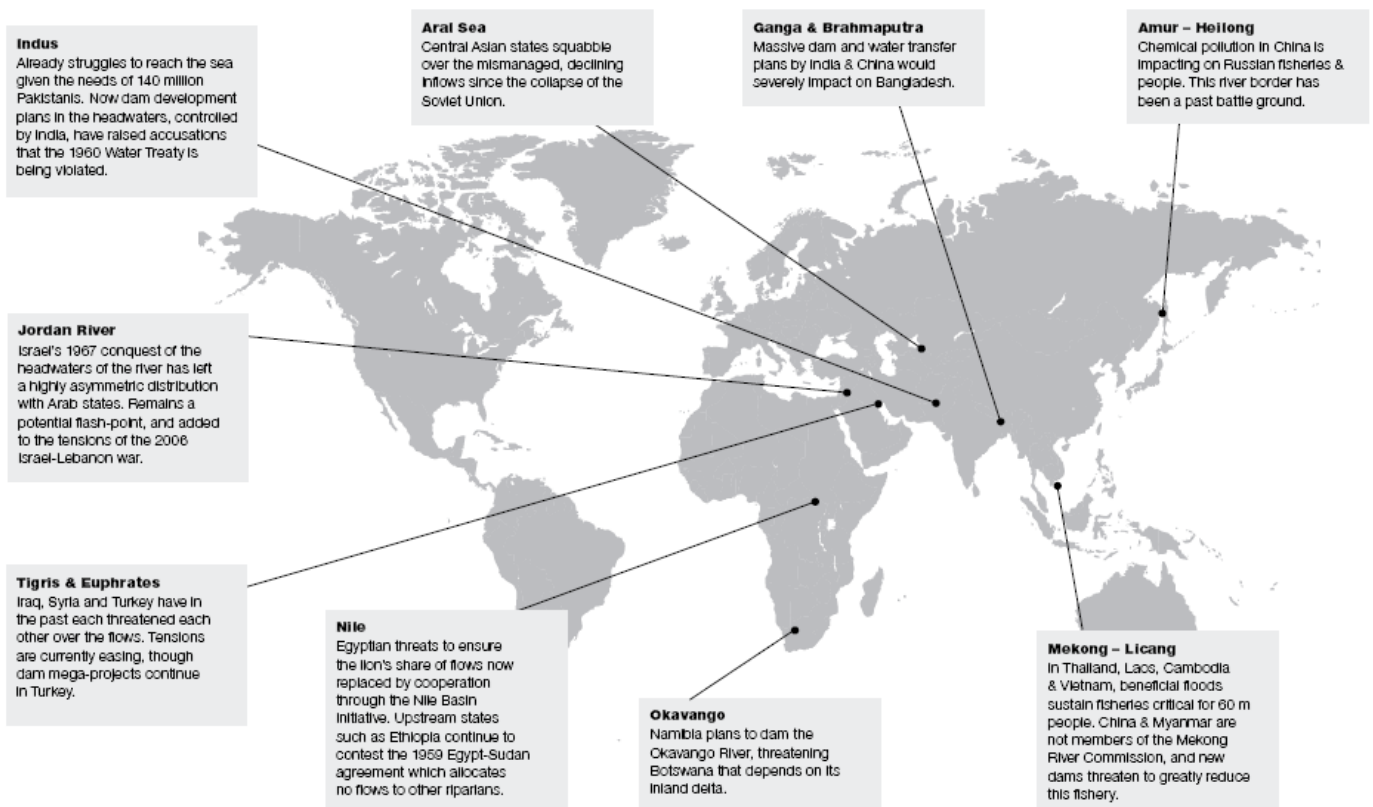
Water as a source of conflict

Conflict arises because water is a resource that is becoming increasingly scarce. The world's population has doubled since the 1960s and is set to increase further, by 50%, from 6 billion to 9 billion, between now and 2050. Meanwhile, lifestyle expectations are changing as more developing countries become urbanized and aspire to standards set by high-consuming western countries, per capita use of water will increase.

Climate change is anticipated to dramatically change water availability in some parts of the world, with those areas that are already facing water shortages becoming even drier, and with many countries storing more water to overcome greater variability in supplies, generating more hydropower, and growing more thirsty crops for biofuels. In many countries groundwater reserves are used to irrigate their crops, but as the rates of groundwater extractions often exceed replenishment, this source of water will also fail.

WWF UK highlights ongoing conflicts over transboundary waters in its 2008 report "Why the UK Government must support the UN Watercourses Convention."¹ The map below highlights just some of the hotspots around the planet.

Ongoing conflicts over transboundary waters



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¹ "Why the UK Government must support the UN WaterCourses Convention" published in 2008 by WWF in collaboration with End Water Poverty, LSE / KCL London Water Research Group, UNESCO Centre for Water Law, Policy & Science, World Development Movement, and Water Aid.

Conflicts are becoming less traditional, driven increasingly by internal or local pressures or, more subtly, by poverty and instability. These changes suggest that tomorrow's water disputes may look very different from today's. This is why Green Cross is involved in several international river basins in the Middle East, Africa and South America, where scarcity is increasingly problematic, human capacity often lacking, and pollution alarming.

Aquatic ecosystems at risk from climate change

According to the IPCC Technical Paper VI about "Climate Change and Water" published in June 2008, "Many rivers draining glaciated regions, particularly in the Asian high mountain ranges and the South American Andes, are sustained by glacier melt during warm and dry periods. Retreat of these glaciers due to global warming would lead to increased river flows in the short term, but the contribution of glacier melt would gradually fall over the next few decades."²

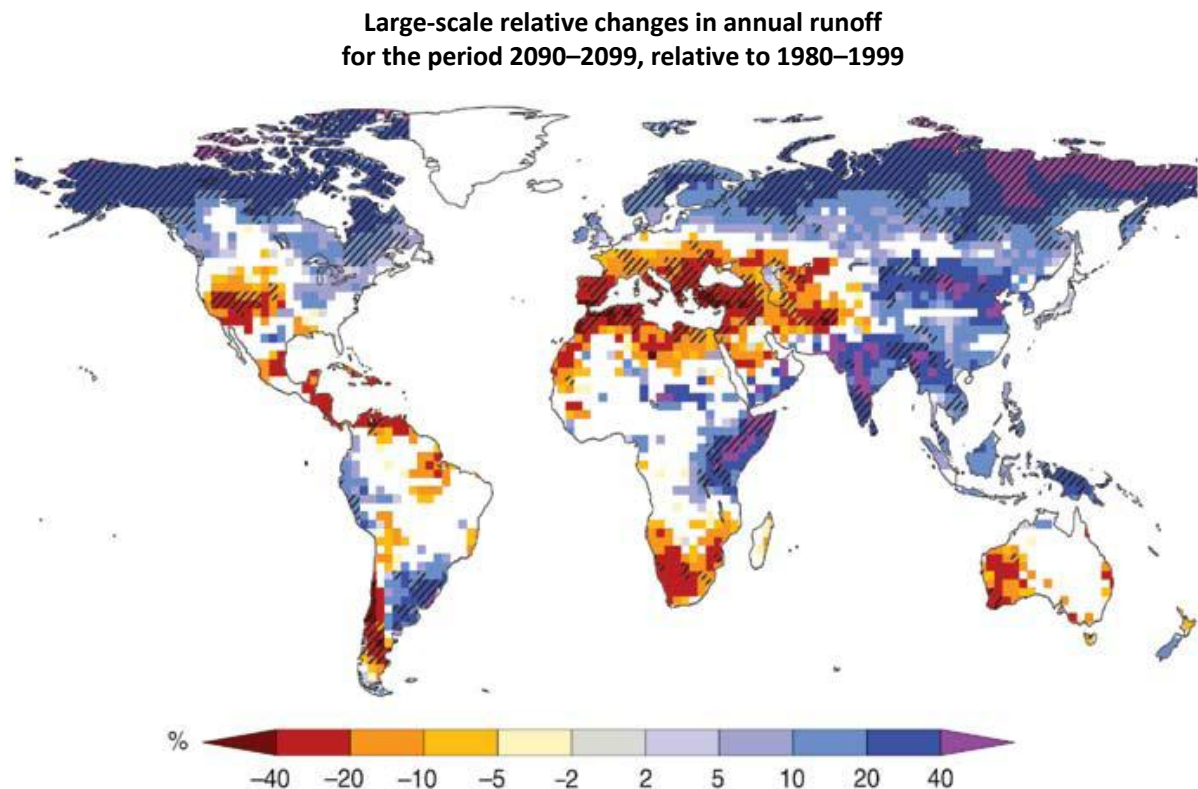


Figure above taken from IPCC Technical Paper VI "Climate Change and Water", June 2008: Large-scale relative changes in annual runoff for the period 2090–2099, relative to 1980–1999. White areas are where less than 66% of the ensemble of 12 models agree on the sign of change, and hatched areas are where more than 90% of models agree on the sign of change (Milly et al., 2005).

The 2008 IPCC Climate Change and Water report reveals alarming trends about aquatic ecosystems at risk. The report states that climate-related warming of lakes and rivers has been observed over recent decades, and as a result, the composition of species in freshwater ecosystems has changed. Other impacts include organism abundance, productivity and phenological shifts including earlier fish migration. Many lakes and rivers have increased concentrations of sulphates, base cations and silica,

² IPCC Technical Paper VI "Climate Change and Water", June 2008. Edited by Bates, Kundzewicz, Wu, Palutikof; page 30.

and greater alkalinity and conductivity related to increased weathering of silicates, calcium and magnesium sulphates, or carbonates, in their catchment.³

Climate impacts on our river systems are becoming evident to communities around the world.

I have **drawn extensively on information contained in the all-inclusive 2008 IPCC Climate Change and Water report** to highlight some of the key impacts scientists are finding below:

Australasia

- In Bangladesh, Nepal, the Philippines, Indonesia and Vietnam, many watersheds suffer badly from deforestation, indiscriminate land conversion, excessive soil erosion and declining land productivity.⁴
- In parts of China, temperature increases and decreases in precipitation, along with increasing water use, have caused water shortages that have led to drying up of lakes and rivers.⁵
- In India, Pakistan, Nepal and Bangladesh, water shortages have been attributed to issues such as rapid urbanisation and industrialisation, population growth and inefficient water use, which are all aggravated by changing climate and its adverse impacts on demand, supply and water quality.⁶
- In the countries situated in the Brahmaputra–Ganges–Meghna and Indus Basins, water shortages are also the result of the actions of upstream riverside-dwellers in storing water.⁷
- River water-quality data from 27 rivers in Japan suggest deterioration in both chemical and biological features due to increases in air temperature.⁸
- Salinity levels in the headwaters of the Murray-Darling Basin in Australia are expected to increase by 13–19% by 2050.⁹

Europe

- Glacier retreat is projected to enhance the summer flow in the rivers of the Alps initially, however, when glaciers shrink, summer flow is projected to be reduced by up to 50%. Summer low flow is projected to decrease by up to 50% in central Europe and by up to 80% in some rivers in southern Europe.¹⁰
- During the 2003 heatwave in Europe, annual precipitation was down by 300 mm. The Po, Rhine, Loire and Danube rivers were at record low levels, resulting in disruption of inland navigation, irrigation and power plant cooling. The extreme glacier melt in the Alps prevented even lower flows of the Danube and Rhine Rivers.¹¹

Middle East

- The Middle East has water-stressed basins. In Lebanon, the annual net usable water resource would decrease by 15% in response to a GCM-estimated average rise in temperature of 1.2°C under a doubled-CO2 climate, while the flows in rivers would increase in winter and decrease in spring.¹²

³ Ibid, page 36.

⁴ Ibid, pages 66-67.

⁵ Ibid.

⁶ Ibid.

⁷ Ibid.

⁸ Ibid.

⁹ Ibid, page 43.

¹⁰ Ibid, page 94.

¹¹ Ibid page 38.

¹² Ibid, page 87.

- During the hot summer of 1998 in Amman, Jordan, refugee-camp residents who were not connected to the municipal water system paid much higher rates for water than other households.¹³

Africa

- Water resources are a key vulnerability in Africa for household, agricultural and industrial uses. In shared river basins, regional co-operation protocols are needed to minimise both adverse impacts and the potential for conflicts.
- For instance, the surface area of Lake Chad varies from 20,000 km² during the dry season to 50,000 km² during the wet season. While precise boundaries have been established between Chad, Nigeria, Cameroon and Niger, sectors of these boundaries that are located in the rivers that drain into Lake Chad have never been determined, and additional complications arise as a result of both flooding and water recession.¹⁴
- Similar problems on the Kovango River between Botswana and Namibia led to military confrontation.¹⁵
- Sea-level rise could impact on the Nile Delta and on people living in the delta and other coastal areas. Temperature rises will be *likely* to reduce the productivity of major crops and increase their water requirements, thereby directly decreasing crop water-use efficiency. There will probably be a general increase in irrigation demand. There will also be a high degree of uncertainty about the flow of the Nile.¹⁶
- Based on SRES scenarios, Egypt will be *likely* to experience an increase in water stress, with a projected decline in precipitation and a projected population of between 115 and 179 million by 2050. This will increase water stress in all sectors. Ongoing expansion of irrigated areas will reduce the capacity of Egypt to cope with future fluctuations in flow.

South America

- Increases in precipitation were observed in southern Brazil, Paraguay, Uruguay, north-east Argentina (Pampas), and parts of Bolivia, north-west Peru, Ecuador and north-west Mexico.¹⁷
- The higher precipitation provoked a 10% increase in flood frequency in the Amazon River at Obidos; a 50% increase in streamflow in the rivers of Uruguay, Parana and Paraguay; and more floods in the Mamore Basin in Bolivian Amazonia.¹⁸

North America

- A significant proportion of the Arctic's water resources originate in the headwater basins of the large rivers that carry flow through the northern regions to the Arctic Ocean. The flows of these rivers have been the focus of significant hydro-electric development and remain some of the world's largest untapped hydropower.¹⁹
- Because these rivers transport heat, sediment, nutrients, contaminants and biota into the north, climate-induced changes at lower latitudes exert a strong effect on the Arctic. Crucially, changes in the combined flow of all Arctic catchments have been identified as being vital in relation to the freshwater budget of the Arctic Ocean, sea-ice production and, ultimately, potential effects on thermohaline circulation and global climate.²⁰

¹³ Ibid, page 73.

¹⁴ Ibid, page 66.

¹⁵ Ibid.

¹⁶ Ibid, page 84.

¹⁷ Ibid, Page 96.

¹⁸ Ibid.

¹⁹ Ibid, page 107.

²⁰ Ibid.

- An increase in intense tropical cyclone activity is considered *likely* according to the 2008 IPCC Climate Change and Water report. Storm surge flooding is already a problem along the Gulf of Mexico and South Atlantic coasts of North America. The death toll from Hurricane Katrina in 2005 is estimated at 1,800 with some deaths and many cases of diarrhoeal illness associated with contamination of water supplies.²¹

Today as Hurricane Gustav approaches New Orleans, we pray that lessons learned from Katrina will ease the burden.

Because we can expect these climate impacts of river system health to grow, we can expect conflicts in use and management across borders to increase. This is why the UN Watercourses Convention now needs to be urgently ratified and implemented.

For Australia, which shares not borders with other nations, the Convention might seem irrelevant. However this is not the case in a regionally warming world.

The Convention codifies minimum standards of cooperation and management of international rivers. It would strengthen Australian security by reducing potential for armed conflict over water resources, thereby reducing the need for humanitarian disaster relief, peacekeeping, warfare and reducing numbers of refugees. It is notable that many of the countries where this Convention could enhance security, such as Sudan, Iraq, Afghanistan & Pakistan, include nations where Australia has military commitments, are major sources of refugees to Australia, and are important markets for Australian agricultural exports.

2. Healthy rivers promote peaceful human development

Human consumption appropriates 54% of the world's accessible freshwater runoff. However, increases in accessible water supplies are unlikely to keep up with population growth, and per capita water availability will shrink in the coming century. Worldwide, over 1.1 billion people lack access to safe drinking water and around 2.6 billion people have no access to adequate sanitation. As a result, more than five million people die each year from water-related diseases that are mostly preventable. Water shortages already affect two billion people in over 40 countries.²²

Of all biomes, freshwater ecosystems are the most threatened, and 1/5 of freshwater fish species are in rapid decline. Water security is reaching the top of the international agenda, as awareness grows of the links between the water crisis and energy and food security, and as water overuse and pollution affect more and more people every year.²³

The impact that water security will have on the world's poorest, cannot be underestimated and will only be exacerbated by the impact of climate change. Water is a critical requirement for livelihoods of the poorest people in developing countries, not only for drinking water and domestic use, but also critically for agriculture. Securing the integrity and sustainable management of rivers and their associated ecosystems will therefore help towards meeting several of the UN Millennium Development Goals.

²¹ Ibid, page 104.

²² "Everything you need to know about the UN Watercourses Convention" published by WWF with participation from Green Cross, the African Centre for Water Research, HSBC Climate Partnership, and UNESCO Water Law, Policy and Science; by Loures, Rieu-Clarke & Vercambre, page 5.

²³ Ibid.

According to the 2008 IPCC Climate Change and Water report, water-stressed basins are located in northern Africa, the Mediterranean region, the Middle East, the Near East, southern Asia, northern China, Australia, the USA, Mexico, north-eastern Brazil and the west coast of South America.

The estimates for the population living in such water-stressed basins range between 1.4 billion and 2.1 billion.²⁴ These are some of the impacts that communities around the planet suffer from:

Examples of current vulnerabilities of freshwater resources and their management

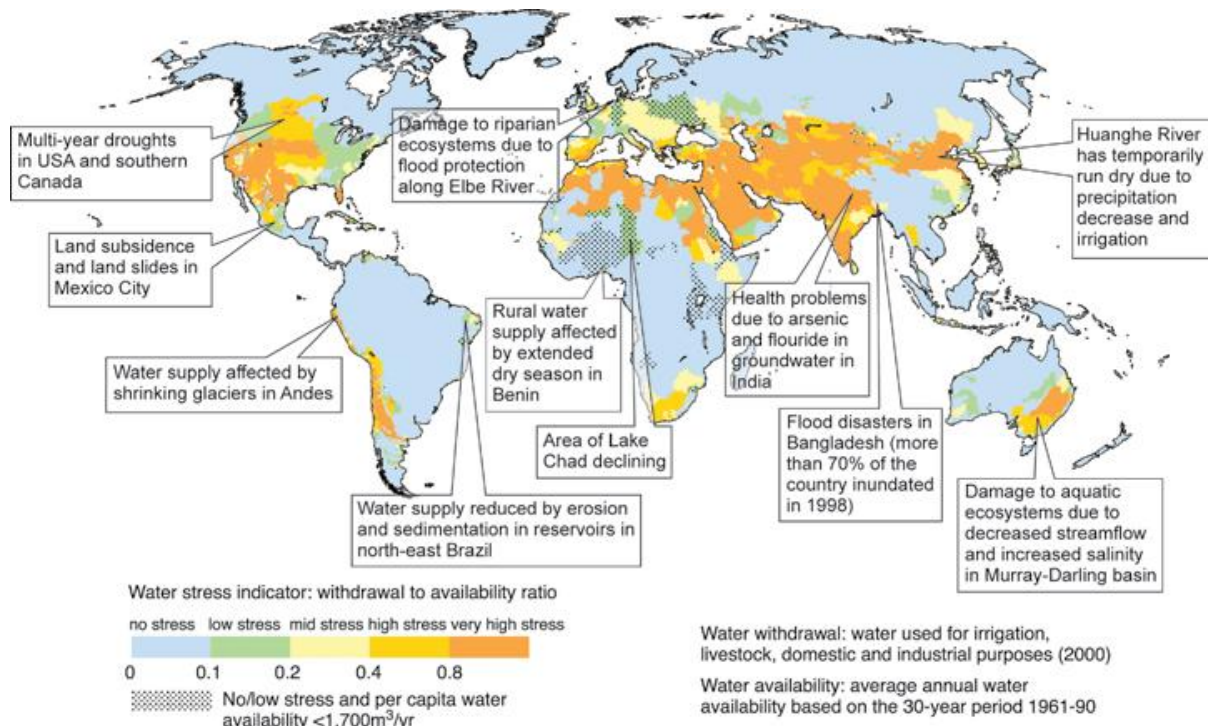


Figure above taken from IPCC Technical Paper VI “Climate Change and Water”, June 2008: Examples of current vulnerabilities of freshwater resources and their management; in the background, a water stress map based on WaterGAP (Alcamo et al., 2003a). See text for relation to climate change.²⁵

Peaceful, equitable and collaborative management of our international watercourses is a precondition to achieving Millenium Goal number 7, Target 10, on sustainable access to safe drinking water and basic sanitation. In the absence of these preconditions, health impacts will continue to emerge in a warming planet.

The 2008 IPCC Climate Change and Water Report states that:

- “Human health, incorporating physical, social and psychological well-being, depends on an adequate supply of potable water and a safe environment. Human beings are exposed to climate change directly through weather patterns (more intense and frequent extreme events), and indirectly through changes in water, air, food quality and quantity, ecosystems, agriculture, livelihoods and infrastructure. [WGII 8.1.1] Due to the very large number of people that may be affected, malnutrition and water scarcity may be the most important health consequences of climate change” and

²⁴ 2008 IPCC Climate Change and Water Report, page 8.

²⁵ Ibid, page 9.

- “Population health has improved remarkably over the last 50 years, but substantial inequalities in health persist within and between countries. The Millennium Development Goal (MDG) of reducing the mortality rate in children aged under 5 years old by two-thirds by 2015 is *unlikely* to be reached in some developing countries. Poor health increases vulnerability and reduces the capacity of individuals and groups to adapt to climate change. Populations with high rates of disease and disability cope less successfully with stresses of all kinds, including those related to climate change.”²⁶

According to CEO of World Vision in Australia, Rev. Tim Costello, climate change has the potential to reverse the last 50 years of gains in poverty alleviation.

3. Current transboundary governance is weak

I commend you to the excellent report in support of ratification of the UN Watercourses convention produced by WWF in collaboration with Green Cross, the African Centre for Water Research, HSBC Climate Partnership, and UNESCO Water Law, Policy and Science. The report is available at: http://www.panda.org/news_facts/newsroom/news/index.cfm?uNewsID=143644 and it contains the following points about weak existing governance of our international watercourses:²⁷

- States have made some progress in adopting watercourse agreements at basin and sub-basin levels. But cooperative management frameworks exist for only about 40% of the world’s international watercourses.
- Where agreements exist, 80% involve only two countries, even though other states may also be part of the watercourse in question. The states that are parties to these “partial” agreements, as they seek to promote the integrated management of the watercourse, have to rely on the good will of non-parties to engage informally in the cooperation process.
- In other cases, parties to partial agreements make decisions among themselves without due regard for the interests and needs of other co-watercourse states that are not parties to those agreements.
- Many states are parties to several watercourse agreements, with their own different policies and obligations, which makes effective implementation more difficult.
- Many agreements have significant gaps or failings. Among other problems, some treaties fail to consider long-term changes in water availability and to provide for the revision of water allocations, in order to sustain the resource, protect ecosystems, and meet human needs, while maintaining a fair balance between all the states concerned.
- Such treaties are less likely to aid parties in responding to the effects of climate change on water resources in a cooperative and sustainable manner.

As the relentless documentation by the IPCC of increasing climate impacts shows, our aquatic ecosystems are severely strained, and this is expected to increase as populations grow and the planet continues to warm.

²⁶ Ibid, page 67.

²⁷ “Everything you need to know about the UN Watercourses Convention”, page 5.

The “sleeping elephant” in climate change debates is this: we are confronting a global challenge, but we cannot rely on a robust global governance system.

Where to from here?

Green Cross together with WWF and our growing list of partners around the world are mobilising urgently to progress ratification and implementation of the Un Watercourses convention.

Australia was among the 103 states that voted for the convention. Only 3 states voted against the convention, making it one of the most strongly supported conventions in UN history. To date, 16 countries have ratified the convention. However, accession by 35 countries is required before the treaty can enter into force.

In particular, we ask:²⁸

- **All countries who have not yet done so** to become contracting states to the Convention;
- **Current contracting states** to call on their neighbours and partner countries to join the Convention as well;
- **All states** to employ their best efforts to accelerate the process for entry into force of the Convention and to promote its broad ratification and effective implementation, including by:
 - Involving **joint river basin organisations** in the process and seeking guidance from their experts;
 - Authorising the **regional economic integration organisations** of which they may be part to accede to the Convention and engage in its implementation; and
 - Asking the **United Nations General Assembly** to give a mandate to an appropriate UN agency or programme to lead the efforts to raise awareness and promote the entry into force and implementation of the Convention within the United Nations system;
- All regional economic integration organisations duly authorised to do so by their member states to **accede to the Convention**;
- UN Water, the relevant UN agencies, programmes, and initiatives, the World Bank, and other development institutions to **provide financial and technical assistance to countries through the ratification and implementation processes**;
- The international water community at large, including non-governmental organisations in the fields of water, conservation, human rights, and gender, to **raise awareness of the value and importance of the Convention**, especially among ministers and parliamentarians, for getting the 19 additional ratifications necessary for its entry into force.

²⁸ Ibid, page 2.

Australian ratification

The *National Platform and Constitution 2007* of the governing Labor Party makes a number of relevant policy commitments, including:

- “Labour supports Australia ratifying the United Nations Convention on the Law of Non-Navigational Uses of International Water Courses to ensure the equitable, cooperative and sustainable management of the world’s 263 rivers which are shared by two or more countries” (pg 140, #63);
- “Labor considers the protection of the global environment a vital foreign policy objective. ... Protecting the environment will support Australia’s national interests and security. ... Labour is determined to rebuild Australia’s reputation as a world leader on international environmental issues.” (pg 240, #99-103).

The AusAID policy, “*Making every drop count: water and Australian aid*” is the current framework for Australian freshwater aid. In the forward to the policy, former Minister Downer states: “The rising competition for water has the potential to increase tensions between users, both within and between countries. In our region, water looms as a major transboundary issue that could threaten security and stability. For these reasons, I identified water and sanitation as a priority focus for our aid program.”

This approach is exemplified by the support given by the Australian aid program to the Mekong River Commission to help better plan and manage the Mekong River and its related resources. This program of assistance promotes integrated water resource management and helps Basin planners to understand the importance of focusing on the shared resources of the basin.

Ratification of the Convention would be a cost effective way of supporting the Australian Government’s aid policy objectives, leading to more sustainable and equitable use of transboundary water resources and greater regional security.

The Australian government is currently examining its intention in relation to ratification of the UN Watercourses Convention. We would warmly welcome a favourable decision.

Thanks very much for the opportunity to address this important occasion, the 2008 Riversymposium.