M.Sc. THESIS

Design Considerations for an International Facility to Promote Cooperation Between States Sharing a Common Water Resource

A feasibility Study on the International Water Cooperation Facility Initiative

May 26, 2004

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M.Sc. THESIS

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Abstract

With rising populations and the associated increase in water demand and poor water quality, allocation of shared water resources is becoming an increasingly difficult task as institutions must establish cooperation and consensus amongst the differing political and socio-economic minded riparian nations within the international river basin. At the 3rd World Water Forum in Kyoto, UNESCO and the World Water Council announced that they would partner with The Universities Partnership for Transboundary Waters and the Permanent Court of Arbitration to develop an "International Water Cooperation Facility" to promote cooperation in transboundary basins and provide third-party assistance in dispute resolution for water-related conflicts. The purpose of this study is to assess the need for such a facility, the capacities required to address these needs, and to propose design considerations to enhance the likelihood of success (if needed). The need, capacities, and criteria were based on the insights from a global survey targeted towards water experts in the field of transboundary waters management, multiple interviews and a limited literature review on aspects of global governance, international institutional design, international mediation and integrated transboundary water management. The "International Water Cooperation Facility" was to be assessed according to the originally proposed concept presented in Kyoto, however, as this study was being prepared it was understood that significant changes to the Facility design occurred, and therefore, some aspects of the assessment were omitted, as they would be redundant and out of date.

The survey findings indicated that there was a need to create an "International Water Cooperation Facility". The capacity to address these needs would require a wide scope and sufficient flexibility to cope with the spatial and temporal demands. The respondents were asked to identify the obstacles they faced to improve transboudary water cooperation in their regions, and which third-party assistance services they would seek from an international facility. In comparing those desired services with those 'obstacles to cooperation', the survey respondents generally requested the services needed to address the identified obstacles, where the biggest problems: insufficient cross-border exchange of information (most frequently identified), insufficient political will (#2), lack of stakeholder participation (#3), and insufficient capacity building across basin states (#4), were countered by requests for assistance in accessing financial resources (#1), increased capacity building (#2), basin-wide access to knowledge and tools (#3), and assistance convening parties (#4). The high demand for assistance assessing financial resources could be a result of respondents simply requesting more money when presented with the opportunity, but it was also determined likely that the respondent's priorities were reflected differently in this survey as assistance accessing additional financial resources could very much alleviate the difficulties in regular operating and maintenance costs of vital basin

monitoring and information systems (increasing cross-border exchange of information). This argument was reflected in an earlier study that proposed the creation of an "*International Shared Waters Facility*" for purposes of coordinating donor funding to provide a favourable mechanism to administer long-term funding strategies to implement shared visions in a risky investment environment which has generally been avoided by funding agencies. While many of the services to be provided by the International Water Cooperation Facility would not need large financial commitments, the findings from the survey suggest that financing transboundary water management remains a major obstacle towards improving cooperation. By coupling the concepts outlined in the "*International Shared Waters Facility*" proposal with this most recent "Water Cooperation Facility" initiative, it is likely that major strides towards fostering peace between countries within transboundary basins, reducing poverty through the development of water resources in a cooperative environment, and improving human and ecosystem health through sustainable transboundary practices could be achieved.

The findings also suggested that organisations to provide similar services within each of the regions studied existed, but respondents believed that the services provided by these organisations were inadequate to meet the demand. The survey also indicated that there was a strong desire for better coordination amongst those service providers and aid agencies active within the basins surveyed.

The insights gained through the survey, interviews and literature review were used to propose design considerations for the Facility. The design considerations presented herein should not be acted upon without significant consideration and debate amongst those experts familiar with international organisational design and transboundary water management. The purposes of presenting design considerations in this study is to increase the debate on how the governing structure should be designed to improve the likelihood of developing a sustainable, fair and robust facility that could provide services in an effective and efficient manner. The proposed design considerations focussed on Scope, Membership, Centralization, Control, and Flexibility of the Facility. As such, it was proposed that the Facility Partners consider a membership structure that is inclusive to other major international and regional organisations that could prove their added value in providing services to improve transboundary cooperation. The four proposed Facility Partners provide a strong platform in which to grow the membership which could include coordinating bodies like UN-Water, GEF, regional banks, GWP and others in the field of transboundary water cooperation. A second consideration was that none of these organisations 'lead' the Facility, rather the "Transboundary Water Alliance of Organisations" should have a functionally independent secretariat directed by an advisory board and elect members to a governing council. It was proposed that subsidiary principles be adopted and the proposed centralized structure of the Facility exist only for as long as it takes to disseminate the capacity required to provide these same services in the various regions through existing regional organisations perceived to be neutral (i.e. OAS, SADC, UN Regional Economic Commisions). These 'arms' to the regional bodies (if desired) could potentially be sustained through innovated funding mechanisms within the regions and associated regional development banks, thereby creating more 'ownership' over the development process. During the transfer of tasks under a targeted one-time "Program of Action", the International Water Cooperation Facility could provide the linkages and coordinate activities to develop standards and provide

a unified international platform to voice the transboundary concerns and funding needs of the regional nodes. When the activities of the focused "Program of Action" have been addressed, the role of the International Water Cooperation Facility and small core staff and role as central 'node' facilitators would be reduced until it is completely phased out and the linkages between the various regional networks are established. This self-destructing philosophy is generally not consistent with the way many organisations operate, so it may prove difficult for some agencies to adopt such a paradigm shift.

The recommended design considerations aside, the results of the survey indicated that an International Water Cooperation Facility as originally defined would be welcome to the majority of respondents surveyed in this study. The researcher will be requesting feedback from those same respondents on the design considerations developed in this study and the feedback comments will be compiled into a brief addendum. It is recommended that findings presented within this report be considered in the context of any suggestions made by the target audience following their review.

Assessing the originally proposed International Water Cooperation Facility was complicated by the fact that the assessment was performed during the Facility's development. Progress reports were presented to the Facility Partners on an ongoing basis during the preparation of this thesis in order to ensure that the findings and recommendations from this work would be available for consideration prior to the complete development of the Facility. It appears that some of the recommendations from the progress reports were acted upon or were in line with the Facility Partner's own thinking during the development process. Of particular note was the apparent shift from the Facility's formal network of four equal partner organisations operating under an MOU amongst them to the concept of adopting a more inclusive governing structure with a functionally independent secretariat with no 'lead' agency. As such, a detailed assessment of the originally proposed Partner organisations with respect to Membership and Control design dimensions was determined to be redundant, as they would not represent the whole. Through this study's limited assessment, the four Partners were determined to each have complimenting expertise that can provide a good foundation in which to expand the cooperative network of transboundary water organisations. The issue of decentralisation is new in this report and not available in previous progress reports. Any plans to revise the centralized concept outlined in the original Facility proposal into a "Program of Action" to decentralise the process was not known at the time this report was completed.

It is recommended that the current Facility Partners use their contacts and recognition for further consultations with high-ranking decision makers within the international development field and regional stakeholders in order to further assess the 'need' to create the Facility relative to other pressing water-related issues (sanitation, drinking water, etc.) as this study's scope was limited to gauging the response from those active within transboundary basins (although the recent rise of transboundary waters cooperation assistance on the global agenda and subsequent interviews performed by the researcher generally did support the need).

It was also recommended that renewed pressure be placed on development banks to adopt a coordinated and innovative approach to financing aid in sensitive investment

environments like transboundary basins and use the opportunity of this Facility's creation to further improve coordination.

Transparent selection criteria to include other organisations into the 'cooperative network' should be developed and clearly defined for *all* agencies (including existing ones) to perform internal assessments to identify value added and service gaps. New partners should be quickly invited to provide inputs into the design at this early stage of the development process of the Facility. If a decentralised process were adopted, the current Facility Partners should identify regionally neutral organisations and determine their interest, commitment and capabilities in expanding their agenda to coordinate and promote water cooperation within the transboundary basins in their regions.

It would be valuable for the Facility Partners to refine the scope of services through consultations (i.e. roundtables) with the regional neutral organisations, stakeholders and riparian governments at an early stage of development of the Facility. Target dates, milestones, and deadlines for the dissemination of activities to the regional bodies should be developed if a decentralised "Program of Action" were to be adopted.

Finally, the findings of this study suggest that water experts within the field of transboundary waters cooperation have an urgent desire to approach the Facility for assistance in many regions. Those developing the Facility should do so without haste.

I commend UNESCO, the World Water Council, the Permanent Court of Arbitration and the Universities Partnership of Transboundary Waters for initiating the development of this often-recommended proposal and for adopting a pragmatic and open approach to its design and development in the best interests of those riparian states in need of these services most. It is apparent through the study's survey that the creation of such a Facility is urgently desired, and therefore, I wish those involved in it's development a successful launch in the very near future.

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Acknowledgements

Thank you,

Your support and guidance is duly appreciated:

The Dutch Government, NUFFIC Financial Research Support Program

Dr. Joyeeta Gupta, Academic Supervisor,UNESCO-IHE Institute for Water Education
Dr. Aaron Wolf, Academic Supervisor, Oregon State University

Dr. Andras Szöllösi-Nagy, UNESCO
Dr. Bill Cosgrove, World Water Council
Ms. Lena Salame, UNESCO
Mr. Dane Ratliff, The Permanent Court of Arbitration

Mr. Herman Breusers, UNESCO-IHE Institute for Water Education
Mr. Frank Jaspers, UNESCO-IHE Institute for Water Education
Dr. Richard Meganck, Director, UNESCO-IHE Institute for Water Education

For your time and insights:
Ingvar Andersson, Peter Ashton, Gunilla Bjorklund, Joan C. Calcagno, Alexander Carius, Margaret Catley-Carlson, Fiona Curtin, Jerome Delli-Priscolli, Jean Francois Donzier, Tony Dorcey, Wim Douven, Alfred Duda, Kirk Emmerson, David Grey, Piet Heyns, Arjen Hoekstra, Anders Jägerskog, Torkil Jønch-Clausen, Aysegül Kibaroglu, Heinz Krummenacher, Monique LeGenissel, Milan Matuska, Eric Mostert, Alan Nicol, Richard Paisley, Simon Pazvakavambwa, Katarina Perrolf, Shammy Puri, Alistair Rieuclarke, Maher Salman, Huub Savenije, Jason Switzer, Attila Tanzi, Paul Taylor, Pieter van der Zaag, Veerle Van deWeerd, Frank van Steenbergen.

… And to all those kind enough to complete the survey!

For your faithful translating skills and web-survey development assistance:
Estelle Thibodeau, Ramiro Barrios, Boris Guinzbourg, Ewoud Kok, Roel Noorman.

To my colleagues and friends, new and old, throughout the world.

And most importantly, for your love and support:
Mom, Dad, and brother Grant.

Most Sincerely,

Kyle C. Robertson, P.Eng.
Peace on Earth.

M.Sc. THESIS
Design Considerations for an International Facility to Promote Cooperation Between States Sharing a Common Water Resource
A Feasibility Study on the International Water Cooperation Facility Initiative

1. INTRODUCTION

This study has been prepared for purposes of satisfying the requirements of a M.Sc. Thesis in Water and Environmental Resources Management at UNESCO-IHE Institute for Water Education, Delft, The Netherlands. It aims at providing design considerations for an international facility to promote cooperation and provide third-party assistance in dispute resolution on demand of riparian states sharing a common water resource. In addition, the study assesses the proposed International Water Cooperation Facility initiative announced at the 3rd World Water Forum in Kyoto, 2003.

1.1. Background

As humanity faces a serious water crisis, there is without doubt, a significantly increasing challenge to manage the world's freshwater resources in the coming decades. Today, when you can commission your very own custom-designed SilverTAG Shower at $120,000 in developed nations, roughly 2.5 to 3 billion people live on less than $2/day (World Bank 2002) and lack access to improved water supply (UNESCO 2003a). With continuing population growth, economic development, and climate change, it is predicted that at worse 7 billion people in sixty countries will be water scarce, and at *best* 2 billion people in forty-eight countries will be affected by the middle of this century (UNESCO 2003a). As ever, the poor will be the worst affected, as the certain two billion-person increase in global population growth in the next decades will be located in those areas where three hundred million people already experience annual water stress and shortage (Catley-Carlson 1999). The problems associated with the impending water crisis are not due to a lack of water, but poor governance, management and distribution of the available water resources. The complexities of managing water shared between two or more sovereign states with varying interests, historic agreements, weak legal frameworks and unpredictable political stability, require special consideration.

There are 263 shared basins in the world that cross over a multitude of natural, socio-economic, and political international boundaries covering an area of roughly 45% of the earth's surface, and affecting approximately 40% of the world's population (Wolf et al. 2002). Roughly one third of these basins are shared by more than two countries, and nineteen involve five or more sovereign states. One basin (the Danube) has eighteen riparian nations, and five basins (Congo, Niger, Nile, Rhine, and Zambezi) are shared by between nine and eleven countries (UNESCO 2003a).

In light of the serious water crisis we face, some people have come to identify the allocation of shared water resources as potentially being the world's next major area

of conflict. However, history has taught us that a commodity as valuable to human life as water presents a far greater opportunity for cooperation amongst riparian states than acute conflict. In the largest empirical study of historical water conflict and cooperation completed in 2001 at Oregon State University, cooperative events[1] were more than twice as common as conflictive events – there were 1,228 cooperative events (67.1 %) and 507 conflictive events (27.7%), with ninety six events (5.2%) delineated as neutral or non-significant (Wolf et al, 2002). While water can be a vector for cooperation, negotiating the terms of cooperation in a shared river basin can mean lengthy delays and courtroom costs to planned projects and stagnating development within a basin, thereby effecting regional prosperity and security issues. The institutions (when they exist) that are needed to manage the basin's water resources can themselves take decades to develop, even amongst wealthier countries with relatively good relations (i.e. International Joint Commission, Rhine River Commission). These institutions have an increasingly complex task as they must establish cooperation and consensus amongst the differing political and socio-economic minded riparian nations at an expedited rate in order to avoid dire global consequences of the water crisis. Mechanisms to resolve both international and inter-sectoral conflicts that impede cooperative efforts throughout an international basin are therefore needed to ensure effective and equitable development among riparian states sharing the resource.

In recent years there have been a number of recommendations indicating there is a need for an international facility to assist in promoting cooperation between riparian states sharing water resources in transboundary river basins. Most recently, the published findings of the United Nation's World Water Assessment Program reiterated this recommendation. As a response, the United Nations Educational, Scientific, and Cultural Organisation (UNESCO) and the World Water Council (WWC) in partnership with the Permanent Court of Arbitration (PCA) and the University Partnership for Transboundary Waters (UPTW) announced at the 3rd World Water Forum in Kyoto, Japan that they would address this concern by creating a 'Water Cooperation Facility' in 2004. Theoretically, the 'Water Cooperation Facility' would provide a single entry point (a "one-stop-shop") for stakeholders within transboundary river basins (i.e. government, NGOs, river basin commissions, community groups, inter-governmental agencies, etc.) access to the tools used to promote cooperation within the basin to anticipate, prevent, and/or resolve international water-related disputes through academic research, training, and/or direct assistance.

[1] The project attempted to compile a dataset of *every* reported interaction between two or more nations, whether conflictive or cooperative, which involved water as a scarce and/or consumable resource or as a quantity to be managed from 1950-2000 (excluding events where water was incidental to the dispute, i.e. fishing, transportation, or where water is not the driver, such as those when water is a target, tool or victim of armed conflict). In order to evaluate the intensity of interactions, either cooperative or conflictive, a scoring system was developed, which assigned "Basins at Risk" intensity values from -7 (indicating the highest level of conflict, i.e. war) to +7 (indicating the highest level of cooperation, i.e. voluntary merging of countries) to each event.

1.2. Purpose / Research Questions

The purpose of this study is to assess the need for such an international facility, the desired services and the capacities required, and to propose design criteria to enhance the likelihood of success. The researcher hopes that those developing the proposed International Water Cooperation Facility will consider the findings from this thesis work in the preparation of the final facility design document to identify potential barriers to success prior to the expected launch in 2004.

The main research question to be assessed is to determine:

> *"What criteria should be considered in the design and operation of an international water cooperation facility in order to improve transboundary waters governance in the world in an efficient and effective manner"*

1.3. Study Objectives

The objectives of this study are to:

1. Assess the stakeholder needs and the role an international water cooperation facility can play to address these needs;
2. Propose design considerations for an international water cooperation facility in order to provide services to effectively and efficiently address the determined needs;
3. Assess the proposed International Water Cooperation Facility Initiative.

1.4. Limitations

The scope, complexities, and regional inputs required in developing an International Water Cooperation Facility to promote cooperation between riparian states and provide third-party assistance in dispute resolution far exceeds that which can be analysed appropriately through a desk-top study. Valuable insights and opinions from high-level actors within the fields of water, diplomacy, law, politics, economy and mediation among others are necessary to determine the true need for such a Facility and likelihood of success. Soliciting these opinions can be difficult from the student's position over a limited time frame. The researcher has used his professionalism, experience, and persistence to solicit opinions from this target group and has had some success. However, without the full engagement and active contribution from these actors through roundtable discussions and high-level one-on-one interviews, the extent of defining what the 'actual' needs are in order to improve transboundary waters management through an International Facility will be limited. This report attempts to gauge the perception of the proposed facility and needs for assistance in transboundary basins through some of the actors involved in transboundary waters management. Theories on international institutional development and some design considerations derived for the development of the Facility are used to assess the *original* proposal of the Water Cooperation Facility presented in Kyoto, 2003. The

Facility is currently in its' development stage and would not reflect the proposal put forth last year. It is therefore recommended that this report be considered under the circumstances in which it was prepared and be used as a document to initiate further discussion and dialogue for the continued successful development of the Facility.

During the preparation of this report, Adelphi Consult prepared a Feasibility Study on the proposed International Water Cooperation Facility for the Swiss Agency for Development, COPRET. This report is intended to compliment the work performed by Adelphi Consult, while some findings have been incorporated into this report as they relate to the assessment strategy. For further details on the Adelphi Consult assessment please contact the Swiss Agency for Development.

1.5. Outline

The report has been outlined in the following manner:

1. Introduction
    - Historical Overview
    - Problem Definition: Obstacles to Cooperation
2. Theoretical Framework & Methodology
3. Data Analysis
4. Proposed Design Considerations for the Development of the International Facility
5. Assessment of the Proposed International Water Cooperation Facility Initiative
6. Recommendations for Further Actions
7. Closing Comments

1.6. Historical Overview

Freshwater resources have increasingly been on the global agenda since the UN Conference on the Human Environment first publicly presented the notion of sustainability (Table 1). In recent years emphasis on integrated transboundary water management and planning within regions has gained wider focus. However, despite the efforts over the past decade to expand global institutional capacity over freshwater resources, no intergovernmental agency exists for the primary purpose of facilitating the management of transboundary waters (UNESCO 2003a). A multiple number of regional transboundary water initiatives have developed, as have initiatives linking environment with conflict and security. In addition, there have been a number of proposals to create an International Facility to assist riparian states improve transboundary waters governance. Brief descriptions of the regional initiatives, conflict and security initiatives and international Facility proposals are presented in the following sections, as these initiatives should be considered during the development of an International Facility in a similar field.

TABLE 1: The Rise of Transboundary Water Management on the Global Agenda

Date	Location	Event
1972	Stockholm, Sweden	United Nations Conference on the Human Environment
1977	Mar Del Plata, Argentina	UNESCO First International Conference on Water
1981-1990	*International Decade for Sanitation and Drinking Water*	
1990	Dublin, Ireland	International Conference on Water and the Environment
1992	Rio de Janerio, Brazil	United Nations Conference on Environment and Development
1997	Marrakech	1st World Water Forum
1997	Valencia	UNESCO ADC Millennium Conference
Mar. 1998	Petersberg, Germany	1st Petersberg Round Table International Dialogue
Mar. 1998	Paris, France	Paris Water Conference
Apr. 1998	New York, USA	6th Session of the United Nations Commission on Sustainable Development (CSD 6)
Sept. 1998	Berlin, Germany	International Round Table – Transboundary Water Management
2000	New York, USA	The Millennium Summit of the United Nations
2000	The Hague, The Netherlands	2nd World Water Forum
2001	Bonn, Germany	International Conference on Freshwater
2002	Johannesburg, South Africa	Johannesburg "Rio Plus 10" Earth Summit
2002	Delft, The Netherlands	From Conflict to Co-operation in International Water Resources Management: Challenges and Opportunities
2003	*International Year of Freshwater*	
2003	Kyoto, Japan	3rd World Water Forum
2005-2015	*International Decade for Action "Water is Life"*	

1.6.1. Regional Transboundary Waters Initiatives

In the past decade, there have been a number of initiatives designed to provide third-party assistance to promote cooperation between specific regions with transboundary river basins. Due to the limited scope of this study, descriptions herein will be restricted to those efforts that have evolved from the 1998 Petersburg initiative on global water politics, the EU Water Framework Initiative, and the dispute resolution work in the Indus, Mekong and Nile Basins with specific consideration of the role of the World Bank and the UNDP as third party mediators. An overview of bilateral and multilateral treaties and agreements within transboundary basins to promote cooperation is available at Oregon State's Transboundary Freshwater Dispute Database (http://www.transboundarywaters.orst.edu). These initiatives must be considered during the development of any International Facility in order to avoid overlap of services and gain from lessons learned.

1.6.1.1. Petersburg Initiative

The 1998 Petersburg Roundtable was organised by the German Federal Ministry for Economic Cooperation and Development (BMZ), the Federal Foreign Office (AA), the Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (BMU), the World Bank, and the Development Policy Forum/DSE. The Forum included the participation of a small, distinguished group, comprising Ministers from

various spheres; high ranking policy makers; experts from research institutions; and representatives of international organizations, the private sector and non-governmental organizations from all over the world. The recommendations of the Forum were outlined in the "Petersburg Declarations" presented at the International Conference on Water and Sustainable Development in Paris, France the same month, and at the 6th Meeting of the Commission on Sustainable Development in April 1998. The same organisers then prepared a second roundtable in Berlin in September 1998, which discussed the key challenges and problem areas associated with international river and lake commissions. The German government continued their initiative in June 1999 in Vilnius with another round table discussion on Transboundary Cooperation in the Baltic Sea Region, and held the International Conference on Freshwater in Bonn in 2001, where transboundary waters management was discussed at length. Most recently, their work has expanded their partners to the GWP (Particularly the Mediterranean region), the EU, and the GEF, and a conference, "Sustainable Development for Lasting Peace: Shared Waters, Shared Future, Shared Knowledge", was held in May 2003 in Athens. The work is expected to now progress towards a Southeastern Europe Transboundary River and Lake Basin Management Program, and a Mediterranean Shared Aquifers Management Program. Through their work and European experiences, the German government has taken a lead in facilitating international dialogue on preventing disputes over waters and identifying mutual benefits in managing transboundary waters. They are now working at implementing regional programmes in the Nile Basin and Southern Africa.

1.6.1.2. EU Water Initiative: Water For Life

The French Ministry of Foreign Affairs are also engaged in promoting cooperation in African river basins as they take the lead on the EU Water Initiative: Water for Life – African Component. The objective is to adopt the principles and practical guidelines of the European Water Framework Directive and link them with the Initiatives taken by the African Minsterial Conference on Water (AMCOW) and the African Water Task Force and build on existing programmes in Africa selected by African partners. However, despite declarations to disseminate internationally agreed principles, develop funds to implement IWRM programmes under river organizations, fund institutions in charge of transboundary waters, explore within mature river basin organizations new financing mechanisms, support consultation of civil society on a rights based approach, and create a clearing house of information before the 3rd World Water Conference in Kyoto last year, much of the time and efforts to date have been on project conceptualisation, and relatively little progress has been made on specific implementation in the five designated African transboundary basins. Additional EU Water Initiatives on non-EU transboundary basins are being performed in Latin America through the Portuguese and Spanish governments, although the researcher has not been able to determine the status of this work at this time.

1.6.1.3. Indus, Mekong, and Nile Basins: Particular Focus on the Role of the World Bank and UNDP as Third-Party Mediators[2]

Following the division of the Indus River basin into India and Pakistan in 1947 in accordance with independence of these countries from the United Kingdom, conflicts soon arose between the two riparian states over water resources and the two nations failed to settle the allocation dispute through bilateral talks. The World Bank offered assistance with a view to establishing an integrated water resources development and management scheme in the basin and in 1951 the two countries resumed negotiation under the good offices of the World Bank. The idea of integrated water resources management was discarded during the negotiation process, for basin countries were not willing to collaborate for this sake (Nakayama, M 1996). The Indus Water Treaty, which is based on division of the catchment into two basin countries and let them develop and manage water resources within their own territory, was signed in 1960 after nine years of long negotiation. The successful negotiation of this dispute illustrates the often long-term commitment that is required for successful resolution, the benefits of having a third-party negotiator with 'clout' which brings ample financial resources (or the means to raise funds), leverage, and influence to the table, and how, under the circumstances, the best means of resolving conflicts may not necessarily immediately contribute creating ideal solutions with respect to recently adopted principles of integrated water resources management.

The United Nations Development Program (UNDP) played a mediatory role throughout the negotiation process among riparian countries towards of the Mekong River Basin to establish the 1995 "Agreement on the Cooperation for the Sustainable Development of the Mekong River Basin". At that time, Thailand and Vietnam, the regional powers of the lower Mekong, wanted to build cordial relations in the aftermath of the Cold War, and needed the Agreement to help contain conflict and promote cooperation on water resources. Laos and Cambodia were motivated to reach an accord to help procure aid, and planned Chinese hydropower reservoirs would also effect downstream management of the resource. Negotiation assistance by UNDP was necessary to overcome a legacy of mistrust between riparian states. Similar to the Indus Treaty negotiations, the UNDP had a long presence in the region, was considered to have the 'clout', and brought generous financial and institutional support to the process to strengthen cooperation among the riparian countries.

It should also be noted that the US State Department backed an initiative by the African Development Bank to create a plan for water resources management and help countries to cooperate in light of the Bank's declaration that the lack of integrated management for most of the continent's 54 transboundary water bodies was a

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[2] For further information relating to these transboundary river basin initiatives, it is recommended that the reader peruse the following works:

Indus - Nakayama, M. (1996): *Role of the World Bank in Negotiation Process of the Indus Water Treaty*, Journal - Japan Society Hydrology & Water Resources, 9 (1), 77-87

Mekong – Ti Le-Huu and Lien Nguyen-Duc in cooperation with Apichart Anukularmphai, Do Hong Phan, Khammone Ponekeo, Pech Sokem and Zhang Hai-Lun, *Mekong Case Study*, UNESCO-IHP.

Nile – Alan Nicol, *The Nile: Moving beyond Cooperation*, UNESCO-IHP.

potential threat to regional stability. The US State Department has also contributed $2 Million towards a UNDP program to improve regional water management by bringing parties together to discuss and resolve transboundary water problems (TRIB Initiative).

The Nile Basin, the world's longest river with 10 riparian states, a downstream regional power and dire upstream development necessities, is arguably one of the most discussed river basins in expert circles of water conflict and cooperation. Many agencies have been involved with improving transboundary water management in the basin over its long history dating back to the pivotal bilateral Nile Waters Agreement between Sudan and Egypt in 1959 and the construction of large infrastructure works. But a significant renewal to the focus on regional cooperation and integrated waters management occurred in 1997, when the World Bank, in close partnership with UNDP, CIDA and now other donors aimed at facilitating dialogue among the riparians on cooperative water resources management, and to identify a strategic plan of action. The "Nile Basin Initiative" that developed out of this request represented a re-emergence of the earlier 1992 Nile River Basin Action Plan developed with the assistance from CIDA, and now forms the most important basin-level approach to cooperative development of the Nile waters ever undertaken, and its significance extends well beyond the basin itself. The Nile Basin Initiative describes itself as a "transitional arrangement until a permanent legal and institutional framework is in place" and comprises a Council of Ministers of Water Affairs of the Nile Basin (Nile-COM), a Technical Advisory Committee (Nile-TAC) and a Secretariat (Nile-SEC), the latter located in Entebbe. The aforementioned UNDP TRIB programme lends support to the Nile Basin Initiative (NBI) to facilitate rational water management and eventually dispute settlement. The process entails national consultations with the riparian governments and other stakeholders in each country, and regional consultations.

1.6.2. Conflict and Environmental Security Initiatives

An important field that has gained increasingly more focus since the end of the cold war is that of Conflict and Environmental Security. It is once again gaining renewed momentum as a result of the September 11, 2001 terrorist attacks in the United States. Many U.S. and international agencies—including the U.S. Departments of State and Defense, the North Atlantic Treaty Organization, and the Southern African Development Community—now analyze foreign policy in part through the lens of environmental resources (Chalecki et al 2002). As such, the actors, methods, and technologies that had commonly been associated with national security, acute conflict identification and peace-building are now considering collaboration with those promoting integrated transboundary water resources management. The approach of the Swiss Development Corporation (SDC) and Saferworld to assess the impact of development corporation projects on water-related conflicts in Central Asia and the Horn of Africa respectively offer good examples of previewing potential negative development project impacts by integrating a conflict impact assessment connected with a comprehensive assessment of the water resource and its uses (Carius, 2003). In 2002, the OSCE, UNDP, and UNEP launched the ENVSEC initiative with the aim in the pilot phase to map the links between environment and security in South Eastern Europe and Central Asia. Preliminary reports have been prepared for both of these

regions and future work in the South Caucuses and Russia is underway. In addition, discussions between the ENVSEC partners and SwissPeace's FAST program for early warning acute conflict assessment have been organized for purposes of determining how the two organizations can collaborate and identify synergies between their information gathering and existing field capacities. Adapting a well-established acute conflict identification network to recognize some of the more common simmering disputes associated with environmental security, may well contribute significantly to conflict prevention in transboundary basins while avoiding overlap of responsibilities and activities between agencies.

1.6.3. Proposals for an International Facility

The Kyoto announcement to create a "Water Cooperation Facility" to assist in transboundary waters management is not new. Similar proposals have been made over the years but have failed to be fully initiated to date.

In 1996, the Intergovernmental Council of the International Hydrological Programme (IC-IHP) of UNESCO approved the inclusion of "Water Conflicts – Prevention and Resolution" as a major theme in the six-year work plan of the Programme.

At the UNESCO/ADC Millennium conference in Valencia in the winter of 1997, the City of Valencia approached UNESCO with a proposal to create an International Centre for Transboundary Water Conflicts. The proposal was crafted by experts from the University Partnership for Transboundary Waters, UNESCO, and the U.S. Army Corps of Engineers. The proposal was followed in 1998 by UNESCO IC-IHP's adoption of a resolution endorsing the creation of a centre that "aims at promoting co-operation for sustainable water resources", however, this specific initiative was never realised.

At the 2nd World Water Forum in The Hague, Green Cross International distributed their report on National Sovereignty and International Watercourses, prepared through the contributions of an eminent Panel of former Heads of State and Government among the honorary members of the World Commission on Water for the 21st Century. Among other recommendations, it was proposed that the role of international organisations should be strengthened through coordination, there should be an increased use of subtle diplomatic dispute settlement mechanisms (i.e. information sharing, scientific assessments, etc.), the establishment of an International Fund for Water for use in cooperative basin development and in times of emergencies, and the establishment of a neutral International Forum for the resolution and mediation of international water conflicts, including the position of an "International Watercourses Ombudsman". At the conclusion of the 2nd World Water Forum, Dr. Mahmoud Abu Zeid, then President of the World Water Council, proposed the creation of the World Commission in Water, Peace, and Security to provide an opportunity for third party mediation of shared water disputes.

One month later, then Secretary of State Madeleine Albright proposed a "Global Alliance for Water Security" during her April 10, 2000 Earth Day speech in Washington, DC. To date, no further information/news has been available through the internet to suggest the initiative has been developed.

One initiative that is currently operating that is worth mentioning is the International Ombudsmen Centre for Environment and Development (OmCED). The Earth Council Foundation in partnership with the World Conservation Union (IUCN) launched the initiative on July 5, 2000. The centre is currently housed at the UN mandated University for Peace in Costa Rica and has the objective of encouraging sustainable practices through non-adversarial complaint investigation, facilitation/mediation, and preventative and early warning analysis and advise in situations of potential conflict relating to development. While OmCED's mandate does not specifically focused on transboundary waters issues as the other proposals mentioned earlier, the Centre has been engaged in "mapping" remaining contentious issues, some dating back three decades ago between indigenous communities and a government as a result of unfulfilled promises following the construction of a hydroelectric dam (OmCED 2001). No transboundary water conflicts have been reported.

In 2001, the findings of one study commissioned by the Swedish Ministry of Foreign Affairs as part of their *Development Financing 2000* project was presented at the Bonn International Conference on Freshwater. The study, entitled "Transboundary Water Management as an International Public Good" proposed that an '*International Shared Waters Facility'* be created with a specific mandate to assist regional management of transboundary waters (including smaller basins), to provide a clear focus and the opportunity to consolidate international concerns, streamline initiatives, and direct them towards mobilizing the idea of effective international water resources management as a regional public good. It is understood that the concept of an '*International Shared Waters Facility*' was well received when it was presented in Bonn in 2001, however, to date there have been no champions to lead the creation of such a Facility. The Swedish Government has implemented some of the recommendations made in the report, but there are no foreseeable plans to develop the international facility at this time.

When presented at the 3rd World Water Forum in Kyoto, the UNESCO / Green Cross International joint initiative (PC→CP): Water for Peace Programme recommendations included a call for the establishment of a '*Water Mediation Facility*' that would be a joint endeavour of the appropriate United Nations entities with interdisciplinary approaches to water issues, an international legal institution, and a water-related international NGO with a wide scope of interest. It would provide advice, guidance, and tools for parties involved in the management of shared water resources, on their demand and assist them in the anticipation and resolution of their water conflicts. The report also recommended the creation of an '*International Shared Water Facility*' (Similar to the Swedish Report recommendation) as a funding mechanism to support activities related to internationally shared water bodies and to compliment the proposed water mediation facility. Drawing from these recommendations, at the conclusion of the 3rd World Water Forum, UNESCO and the World Water Council (WWC) announced that they would develop the "International Water Cooperation Facility" together with the Permanent Court of Arbitration (PCA) and The Universities Partnership for Transboundary Waters (UPTW). To many interviewed as part of this study, the announcement came as an abrupt and unpleasant surprise, and was viewed as a political attempt to 'grab the spotlight' during the international event. Although it could be argued that the announcement came prior to any concrete

Facility design developments and reflected a growing trend of similar proposals, the discontent of some led to a widely distributed letter condemning UNESCO for the process they had taken to establish the Facility and the exclusive nature of the partnership. The development of this Facility is currently in progress and is to be launched later this year. It is this initiative that will be the focus of a feasibility study in this thesis. Some additional details relating to the fate of those initiatives that have not been fully implemented is discussed further in Section 1.7.4.2.

1.7. Problem Definition: Obstacles to Water Cooperation

In order to determine how an international facility can be designed and operated to best meet the needs of the riparian states, the obstacles to cooperation within transboundary river basins must first be considered, in addition to those obstacles associated with the provision of international assistance, international mediation, and international institutional development. These obstacles to improved global transboundary waters cooperation are described in the following sections.

1.7.1. Obstacles to Cooperation within Shared Rivers Basins

By considered the multitude of varying physical, socio-economic, and political / legal conditions within a transboundary river basin, obstacles to cooperation can easily be identified. Figure 1 provides an overview of the inter-linkages of the causes of freshwater conflicts, and the following sections briefly provide a few of the complicated issues that make sharing waters amongst two or more sovereign states particularly difficult.

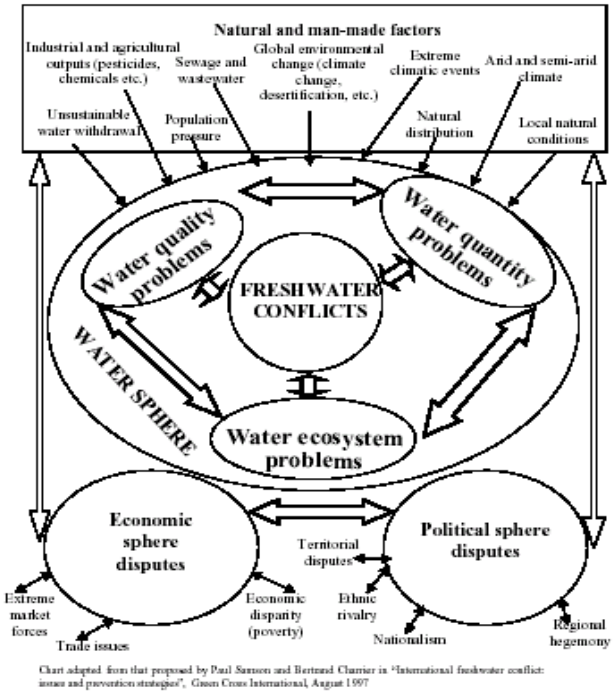


Chart adapted from that proposed by Paul Samson and Bertrand Charrier in "International freshwater conflict: issues and prevention strategies", Green Cross International, August 1997

FIGURE 1: Interlinkages of Transboundary Waters Governance
(Le-Huu, T. 2001)

1.7.1.1. Geophysical, Chemical and Biological System

Not surprisingly, transboundary water issues with respect to the geophysical, chemical and biological aspects of the hydrological system are no different from single jurisdiction water resources management. Similarly, the uneven spatial and temporal distribution of the natural resource causes conflicts within the basin. However, when the water resource must be shared between two or more sovereign states, these issues can become significantly more complex and intensified.

Within any river basin, as water quantities and qualities change with respect to available supply and user demands (environmental needs too), resource management decisions are required that can cause significant impacts that lead to conflicts. Water quantities can be externally impacted (i.e. climate change and drought) or human induced (i.e. unsustainable withdrawl), water quality can be affected by agricultural and industrial wastes and desertification. Reductions in water quality and quantity can lead to the collapse of ecosystems, and along with that, a plethora of other negative consequences. At the national level, preparedness for these fluctuations can be made through active monitoring and data analysis. In a transboundary basin, technical cooperation between riparian states is not always performed for any number of political, cultural, financial, or technical reasons. Needless to say, the inability to provide for any number of national security issues can lead to cross-border disputes.

In addition, a common problem between transboundary and national water resources management is that management is often concentrated on surface water with insufficient attention given to groundwater, green water (water used directly for biomass production), virtual water, and related aspects (Savenije and Zaag 2000). While this wider scope could increase the number of alternatives to form successful partnerships, it can also add complexity to transboundary governance.

One particularly important factor regarding the physical aspects of a shared river basin is the definition of the boundaries of that resource and the influence and impacts associated with it. The management of an internationally shared water resource is often performed along administrative boundaries and not hydrological ones. These administrative boundaries themselves are subject to change over time as new states evolve from other non-water-related conflicts or agreements. This complicates the management as countries develop their own specific ways of solving issues of planning, developing, allocating, distributing and protecting its water resources, so finding a common ground between countries to allow for integrated water resources management becomes particularly difficult with the varying interests, historic agreements, weak legal frameworks and unpredictable political stability. This in turn makes the role of an international third-party providing assistance on these sensitive issues particularly complicated.

1.7.1.2. Socio-Economic Systems

Occurrences in one part of watershed have the potential to change the quantity, quality or use of water in another part of the watershed. For this reason, the potential socio-economic impacts of water resource allocation between two or more nations

with their independent value systems and end goals is the major crux of the conflict that arises over transboundary water resources management.

As globalization expands economic activities and the associated positive and negative consequences, it is important to recognise that water is deeply entwined and impacted by prosperity and poverty. Water resources supply the ecosystems which in turn supply our raw materials, drinking water quality affects the workers' ability to work, industrial processes and agriculture use water to create products, and rivers are both conduits for cargo and hydroelectric power storage. Economic development and social well-being are directly affected by the availability of freshwater just as poverty, refugee migration, and non water-related conflicts can have an impact on the quality and quantity of that same resource. For example, religious tension between Pakistan and India helps fuel the issue of the Indus river as a potential point of conflict and ethnic issues haunt Slovakian and Hungarian cooperation on the Danube. Disproportion in respective levels of cross-border development can also be an issue, as is the case between the USA and Mexico along the Rio Grande (Green Cross 2000). Another example is the case of Turkey and the sharing of the Tigres / Euphrates Water Resources with Syria and Iraq. To date, there has been very little cooperation between states despite large controversial development projects[3]. When socio-economic problems and prosperity are not contained within national borders sharing a common water resource, international third-party assistance to promote cooperation and reduce conflict must be truly capable of functioning effectively in the multi-interdisciplinary environment.

1.7.1.3. Political / Legal Systems

In order to accommodate different countries sharing the same water resource, there is a need to stress coordinated development, rather than unilateral action within a water basin. In general, countries have developed their own specific ways of solving the issues of planning, developing, allocating, distributing and protecting its water resources. In addition, countries also define their water rights in different ways, ranging from riparian rights where ownership is associated to the adjacent lands, public allocation which involves administered distribution of water, and prior rights, which are based on the appropriation doctrine, under which water right is acquired by actual use over time (Savenije and Zaag 2000). Finding a common ground between countries to allow for integrated water resources management becomes particularly difficult with the varying interests, historic agreements and legal frameworks. Further, the implementation of new policies in the various political landscapes (that aren't always stable) can increase the complexities of integrated management in the basin. The lack of political will and public participation needed to implement new policies and legislation aimed at integrated water resources management between riparian states can create obstacles to cooperation equally as great (and often greater) than those within the environmental, social and economic realms. The failure to establish a clear and strong legal framework for transboundary water management

[3] However, as a result of Turkey's interest in joining the EU, they would have to adopt the EU Water Framework, which states that cooperation over water resources is mandatory. As a result of this interconnectedness, changes to the principles of the World Trade Organisation could potentially contribute more to riparian cooperation and development in some regions than any number of trust-building measures currently applied by water resource managers. Simultaneously, the opposite is true –external influences beyond any International Water Cooperation Facility's control could provide a driver for riparian states to include water-related issues as a target, tool or victim of other socio-economic conflicts.

also poses an obstacle, which will be discussed further in the next section on global governance.

As these obstacles to cooperation within transboundary river basins rise up, negotiating the terms of cooperation is often a complex, lengthy process that can require significant financial, technical, and legal resources. These resources are often lacking – and the obstacles to providing third-party assistance to address these issues is discussed in the next section on global governance.

Summary – *Obstacles to Cooperation in Shared Basins*

As the previous sections illustrate, there are a number of complex obstacles to effective integrated water resources management in a transboundary river basin. For an international facility to provide third-party services to address this myriad of complex issues it is important to first understand the relative interest those water experts working within transboundary basins place on improving cooperation between riparian states. Further definition of what problems arise in these basins and the associated third-party services required to address them in the global context is also necessary. This study attempts to address the following questions in order to develop design criteria for an international facility to address the obstacles to cooperation within shared river basins.

Questions Raised:

1) *How much importance do those working in a water-related field in transboundary basins place on improving cooperation between riparian states?*
2) *What do those working to improve cooperation between riparian states find to be the greatest problems to achieving integrated transboundary waters management?*
3) *How do these problems differ regionally between transboundary river basins throughout the world?*
4) *What is the existing regional capacity to address these concerns?*
5) *What third-party assistance services are desired?*
6) *How do the desired services compare with the identified problems faced by riparian states?*
7) *What is the urgency in creating a third-party facility to assist in addressing these problems?*

1.7.2. Obstacles in Global Governance

As illustrated earlier in this report, the growing awareness of the interconnectedness of water and the environment is beyond dispute. Water *is* Life. Its' management has a direct impact on human poverty, health, and spirituality, and every aspect of our surrounding global environment in which we live. Rivers flow, clouds drift, and groundwater seeps across differing politically governed boundaries continuously. Such a meandering life force would dictate a need to coordinate international action and governance to ensure health and prosperity in our common future, but no such global governing structure yet exists. The current, looser system of global environmental governance, reflects the strengths and dysfunctions of global politics, and shows the difficulty of inspiring effective cooperation among the fractious community of nations – even on environmental matters that all agree require common action. The record of governance this loose global regime has compiled is decidedly mixed, while sustainable development issues have received wider attention on the world stage, the effectiveness and efficiency of the current international environmental governance regime is often debated (WRI 2003).

In developing an International Facility to promote cooperation in the field of transboundary waters management, the obstacles to global governance are considered in the following sections. These include assessing the problems associated with how the broad array of inter-governmental actors provide third-party assistance, the governing principles upon which they act, and the mechanisms in which they are funded.

1.7.2.1. Inter-Governmental Actors of Global Governance

The actors consist of the wide array of intergovernmental agencies responsible for coordinating policy on the international level (i.e. UN Organisations and the Bretton Woods Institutions). Over the years, the UN has promoted global sustainable governance through the establishment of a variety of institutional mechanisms to address specific issues relating to environmental, development, and socio-economic issues. Simultaneously, numerous non-governmental agencies (NGOs) have been formed to assist in implementation and to represent local-level stakeholders, and regional development banks and a number of other funding mechanisms have developed to address the financial needs of development and environmental protection.

The complexities of integrated transboundary water management outlined in the previous section illustrate how such a multi-disciplinary field of actors are required in problem assessment and assisting regions in implementing solutions. National ministries with vertical hierarchies designed by sector (i.e. agriculture, energy, environment, transport, etc.) have had difficulties coordinating internal management of water in an integrated way. Similarly, UN organisations are about as likely to cooperate and collaborate as government departments or ministries at the national level (Catley-Carlson 1999). The multitude of United Nation agencies involved with water have often been created without due consideration of how they might interact

with the overall system. Internal UN assessments[4] have concluded that the system is fragmented, with a host of policy-making organisations, treaties, financing mechanisms, and implementing projects whose efforts are often poorly coordinated and sometimes overlapping (WRI 2003).

The ACC Subcommittee on Water Resources has historically performed the coordination of a diverse array of twenty-three UN agencies and convention secretariats involved in water issues, but last year the UN-Water Coordinating Group replaced the ACC Subcommittee on Water Resources, and is now the focal point for coordinating United Nations system concerning freshwater. While all of these agencies recently collaborated for the first time to prepare the "World Water Development Report", it is too early to tell whether the new UN-Water Coordinating Group can routinely link all UN Agencies together to address water-related concerns more effectively and efficiently (particularly with respect to water conflict issues). The failure to do so will most definitely result in a further marginalization of those who need the assistance most.

It is not simply the UN who have faced these problems, add the multi-national, multi-agency initiatives in transboundary river basins, the plethora of other water-related NGOs and inter-governmental agencies and uncoordinated donor aid, and the effectiveness and efficiency of providing multi-disciplinary services to regions to assist in improving cooperation in these basins can easily be cast in doubt.

With respect to those Environment and Security Initiatives mentioned earlier in Section 1.6.2, there currently remains a clear fragmentation between peace and conflict research and environmental policy research, and comprehensive frameworks for conflict impact assessments of water-related projects have up to now rarely been developed (Carius, 2003). The lack of recognition by national governments towards the linkage between water management and conflict in international relations, the compartmentalization of NGOs, think tanks, donor agencies, and inter-governmental agencies have all contributed to limiting support to provide sufficient time and staff resources to identify issue linkages across units, departments or ministries.

The problems associated with improving governance in transboundary river basins are thus not restricted to simply providing assistance to develop solutions for effective integrated water management at the basin level, but must also consider how that assistance is delivered in an efficient and effective way to reduce as much as possible the waste in available capital and knowledge capacity to address this issue.

[4] The UNEP's April 4, 2001 Report of the Executive Director on International Environmental Governance recognised this and stated that:

> *"the growing number of environmental institutions, issues and agreements are placing stress on current systems and UN's ability to manage them. The continuous increase in the number of international bodies with environmental competence carries the risk of reduced participation by States due to limited capacity in the face of an increased workload, and makes it necessary to create or strengthen the synergies between all these bodies. Weak support and scattered direction have left institutions less effective than they could be, while demands on their resources continue to grow. The proliferation of international demands has placed a particularly heavy burden on developing countries, which are often not equipped to participate meaningfully in the development and implementation of international environmental policy"* (WRI 2003).

1.7.2.2. The Legal Framework of Global Governance

The second element of the international environmental governance system is the framework of international environmental law that has evolved through the form of environmental treaties and conventions.

To date, the failure to establish sufficient ratifications of the UN Watercourses Convention adds doubt amongst riparian states when determining how waters within transboundary river basins should be shared (see Box 1). That doubt is reflected in the 30-year process to establish the final draft of the convention and the significant dialogue on aspects relating to Article 5 and 7 ('equitable and reasonable utilisation' and 'obligation not to cause significant harm' respectively). The voting records in the UN General Assembly also illustrate the difficulties in gaining a consensus on the principles of the Watercourses Convention. While the text of the Convention was adopted by a wide margin, the vote conceals the complexity of the subject matter and the intricacies of the state interests at stake. With the exception of most of the island-nations and those with no riparian interests, the votes were clearly factors of diverse economic, geographic and other national interests. For example, many upper riparian states voted against passage of the Convention or abstained from the vote, while lower riparian states typically supported its adoption (Box 1). Others, both upper and lower riparian states, argued that there was a lack of balance in the Convention's provisions between the rights and obligations of upstream and downstream riparian states (Eckstein G 2002). The discordance of positions on the UN Watercourses Convention means that the IWCF would not have a universally accepted legal framework and guiding principles in which to operate under. As such, states that have not ratified the convention (and there are many) may avoid approaching the Facility for fear that principles they disagree with will be reflected in the services provided. However, water law history has illustrated that significant bi-lateral agreements and treaties can be signed without any formal unifying legal convention, so defining the Facility's guiding principles in light of these legal aspects would have to be considered.

Of particular relevance to this study, with respect to Article 33 of the Convention that deals with dispute settlement, States were divided on two issues, whether it was suitable for a framework agreement to contain such mechanisms, and if so, the extent to which these should be compulsory (Wouters 2001). While one group of States was in favour of compulsory and binding dispute settlement mechanisms, others considered such an approach too rigid and unsuitable for a framework convention and argued that such matters should be left to the discretion of the States concerned (Wouters 2001). India, for example, which abstained from the vote, asserted that "[a]ny procedure for peaceful settlement of disputes should leave the procedure to the parties" (Wouters 2001). Likewise, Israel, which also abstained, stated that: "As a matter of principle, States must settle their disputes peacefully. However, the means of settling a dispute must be left to their agreement. Parties to a dispute must be allowed to choose the mechanism which was most appropriate to their specific needs" (Wouters 2001). The Article remained, but states were closely divided on the issue (33 States for, 29 against or abstaining). There are inherent problems associated with mediation at the international level that the International Water Cooperation Facility would need to consider during its design phase, as discussed in Section 1.7.3.

BOX 1:
UN Convention on the Law of the Non-Navigational Uses of International Watercourses

In 1966, perhaps the most significant codification of the principles of international water law regarding transboundary water resources was completed through the International Law Association's (ILA) Helsinki Rules on the Uses of the Waters of International Rivers. In 1970, the International Law Commission (ILC) was asked by the UN General Assembly to "Take up the study of the law of international watercourses with a view to its progressive development and codification". After much discourse on the complex issues, the UN Convention on the Law of the Non-Navigational Uses of International Watercourses was adopted by resolution of the UN General Assembly on May 23, 1997, one-hundred and three States voted in favour, 27 states abstained and three upstream states voted against. The convention has yet to come into force, as of August 2002, it had been officially ratified by just 5 states of the 35 endorsements required, although many more states have unofficially accepted the convention.

Voting Record / UN General Assembly / 1997 Convention

FOR (103)	**AGAINST** (3)	**ABSTAINED** (27)
Albania, Algeria, Angola, Antigua & Barbuda, Armenia, Australia, Austria, Bahrain, Bangladesh, Belarus, Botswana, Brazil, Brunei Darussalam, Burkina Faso, Cambodia, Cameroon, Canada, Chile, Costa Rica, Côte d'Ivoire, Croatia, Cyprus, Czech Republic, Denmark, Djibouti, Estonia, Federated States of Micronesia, Finland, Gabon, Georgia, Germany, Greece, Guyana, Haiti, Honduras, Hungary, Iceland, Indonesia, Iran, Ireland, Italy, Jamaica, Japan, Jordan, Kazakstan, Kenya, Kuwait, Laos, Latvia, Lesotho, Liberia, Libya, Liechtenstein, Lithuania, Luxembourg, Madagascar, Malawi, Malaysia, Maldives, Malta, Marshall Islands, Mauritius, Mexico, Micronesia, Morocco, Mozambique, Namibia, Nepal, Netherlands, New Zealand, Norway, Oman, Papua New Guinea, Philippines, Poland, Portugal, Qatar, Republic of Korea, Romania, Russian Federation, Samoa, San Marino, Saudi Arabia, Sierra Leone, Singapore, Slovakia, Slovenia, South Africa, Sudan, Suriname, Sweden, Syria, Thailand, Trinidad & Tobago, Tunisia, Ukraine, United Arab Emirates, UK, USA, Uruguay, Venezuela, Vietnam, Yemen, Zambia.	Burundi China Turkey	Andorra, Argentina, Azerbaijan, Belgium, Bolivia, Bulgaria, Colombia, Cuba, Ecuador, Egypt, Ethiopia, France, Ghana, Guatemala, India, Israel, Mali, Monaco, Mongolia, Pakistan, Panama, Paraguay, Peru, Rwanda, Spain, Tanzania, Uzbekistan

ABSENT (33)

Afghanistan, Bahamas, Barbados, Belize, Benin, Bhutan, Cape Verde, Comoros, Democratic People's Republic of Korea, Dominican Republic, El Salvador, Eritrea, Fiji, Guinea, Lebanon, Mauritania, Myanmar, Niger, Nigeria, Palau, Saint Kitts & Nevis, Saint Lucia, Saint Vincent and the Grenadines, Senegal, Solomon Islands, Sri Lanka, Swaziland, Tajikistan, The former Yugoslav Republic of Macedonia, Turkmenistan, Uganda, Zaire, Zimbabwe.

UN Convention as it relates to individual Watercourses *(Eckstein 2002)*

• **Tigris and Euphrates Rivers**: While Syria and Iran backed the Convention, Turkey voted against the text (upstream of both Syria and Iran). Iraq was not recorded as participating in the vote.
• **Nile River**: In a watercourse that traverses the Middle East and North Africa and the sub-Saharan Africa geographic regions, only Kenya and the Sudan voted in favour of the Convention. Seven other riparian states abstained, while Burundi opposed the text outright.
• **Niger and Volta Rivers**: Three states voted in favour, two abstained, and three were absent, including Niger and Nigeria. Chad and the Central African Republic did not participate in the vote.
• **Limpopo River**: Three of the four riparian states – Botswana, Mozambique and South Africa – voted for the text, while the fourth, Zimbabwe, was absent from the vote.
• **Orange River**: All 4 states – Botswana, Lesotho, Namibia and South Africa – voted for the Convention.
• **Zambezi River**: Angola, Botswana, Malawi, Mozambique and Zambia backed the Convention, while Tanzania abstained, and Zimbabwe was absent.
• **Indus, Ganges, Brahmaputra and Mahakali Rivers**: Nepal and Bangladesh voted in favour of the text, while Pakistan and India both abstained. Bhutan was absent from the vote.
• **Mekong River**: Cambodia, Laos, Thailand and Vietnam voted in favour of the text, while China submitted one of only three votes against the Convention. Myanmar was absent from the vote.
• **Syr Darya, Amu Darya and Aral Sea**: Kazakstan voted for the Convention and Uzbekistan abstained, while Afghanistan, Tajikistan and Turkmenistan were formal absentees. Kyrgyzstan did not participate.
• **Danube River**: Of ten riparian states, seven voted in favour of the text. Bulgaria abstained, while Yugoslavia (Serbia-Montenegro) and Moldova did not participate in the vote.
• **Rhine River**: While France abstained, and Switzerland is not a member of the UN, the remaining six riparian states voted in favour of the Convention text.
• **Colorado River and Rio Grande**: Both Mexico and the US voted in favour of the Convention.
• **Columbia River**: Both Canada and the US voted in favour of the Convention.
• **Amazon River**: Brazil, Guyana, Suriname and Venezuela backed the Convention, while Bolivia, Peru, Colombia and Ecuador abstained.
• **La Plata and Paraguay Rivers**: Brazil and Uruguay supported the Convention while Argentina, Bolivia and Paraguay abstained.

1.7.2.3. Financing Global Governance

Lastly, the problems associated with financing mechanisms in International Global Sustainable Development Governance. In order to carry out the treaty commitments and supplement efforts in developing countries to adopt sustainable development practices, there is a system of dues to support UN agencies, and other financing mechanisms through the World Bank and other multi-lateral development banks and more recently, an increase in private sector financing.

Of the total annual development aid of $75bn on all water activities (Winpenny 2003) there has been very little spent specifically on transboundary water resources, probably less than $350m annually; despite frequent donor and government acknowledgement of its importance (SMFA 2001). However, it has been suggested that there has been a shift away from revenue earning sectors, including water supply and sanitation, towards 'softer' activities, such as capacity building, and building an enabling environment for other direct investors (SMFA 2001). Even still, development support for cooperation in transboundary river, lake, and aquifier basins are currently insufficient to meet the challenges of improving cooperation and sharing benefits of transboundary water resources. The vast majority of States did not take the opportunity to reconfirm their commitment to cooperate over transboundary basins by either including this goal in the outcomes of the World Summit on Sustainable Development (August 2002), or in the Ministerial Declaration of the 3rd World Water Forum (March 2003), which lead to a joint request from a number of development agencies (GWP, GCI, IUCN, INBO, International Secretariat for Water, Programme Solidarite Eau, WWC, and WWF) to the World Leaders meeting in Evian for the G8 Summit to recognise the management of transboundary rivers, lakes and aquifer basins as a priority and to allocate $1 billion during the next 10 years to finance interstate cooperation (representing less than 1/1000 of the hundreds of billions that are required to be invested in the next 10 years to meet the Millennium Development and Johannesburg Water Goals (Winpenny 2003)). It is uncertain at this time whether any further action is planned.

At the seemingly low cost to contribute to causes that improve security, alleviate poverty, improve regional cooperation and protect valuable ecosystems, funding transboundary initiatives would seem like a no-brainer. However a number of obstacles to financing transboundary water management remain. Many of these obstacles are discussed in a 2001 report commissioned by the Swedish Ministry of Foreign Affairs on Financing Transboundary Water Management. The comprehensive report was prepared by the Overseas Development Institute (ODI) and Arcadis-EuroConsult as part of the Swedish *Development Financing 2000* Initiative. Some of the obstacles discussed in the report include the hesitancy of donors to make regional investments in transboundary waters due to the risks associated with the sensitivity of uncertain political climates across borders, the lack of financial mechanisms to administer the funds, the long-term commitments necessary to establish lasting trust and cooperation amongst riparian states, and the often inadequate legal frameworks that create unfavourable investment environments for the private and public investors. As previously mentioned, a particularly note-worthy recommendation from this study was to create an *International Shared Waters Facility* to assist in developing a favourable environment to direct funds specifically for transboundary water related causes, however, to date no organisations or

governments have committed to creating the Facility as discussed further in Section 1.7.4.2.

Without an established '*International Shared Waters Facility*', the most notable mechanism to fund transboundary water issues is the Global Environment Facility (GEF). The GEF operates on the basis of collaboration between the three implementing agencies (World Bank, UNDP, UNEP) in various focal areas – including International Waters. It currently invests in more than 100 water-related projects in 131 nations on problems relating to International Waters. To date the GEF have directed $329 million towards their international waters focal area and this year they expect to finance $100 million in projects. For every dollar the GEF has invested in international waters issues, GEF partners – local, national, and international institutions, NGOs, community groups, and the private sector – contributed slightly more than a dollar, more than doubling the GEF commitment (Sjöberg 1999). Despite this progress, the GEF's criteria for engaging in transboundary water projects has been criticized for creating substantial barriers for some basins to access funds (i.e. associated with the incremental funding mechanism), and others argue that the GEF is simply not doing enough in the field of promoting cooperation and providing third-party dispute resolution services within transboundary basins.

It is clear that most multilateral agencies invest a relatively small portion of their portfolios in regional infrastructure. Most water-related investments are made through grants directly to a specific riparian states or coordinated national country loans. This financing strategy precludes the possibility of investing in infrastructure located in one country that mainly brings benefits to neighbouring countries, and there have been no examples of such major regional investments being funded (SMFA 2001). Even without infrastructure development, the costs for ongoing monitoring for technical cooperation across borders can be significant by the time a valuable data set can be prepared. Without investments in regional infrastructure or long-term support for ongoing operations, shared visions that may be created through the assistance of the IWCF may never be implemented. In addition, when regional funds are established, it is usually those transboundary river basins that are relatively well established (i.e. the Mekong, Jordan, and Okavango) that generate the most donor interest, leaving out smaller lower-profile basins with equally pressing conflicts to be ignored.

Innovative funding mechanisms must be developed to address the problems within transboundary basins under what could generally be considered unfavourable investment conditions. The degree to which donors and riparian states are willing to support the activities of the IWCF will be paramount in determining the likelihood of its financial sustainability.

Summary – *Obstacles in Global Governance*

Addressing those questions outlined in the previous section on obstacles to cooperation within shared river basins will begin to identify the required scope the IWCF would need to undertake in order to improve global transboundary waters governance. Whether or not these third-party services should be provided by a centralized international facility and whether such a facility could provide the services

effectively and efficiently would be determined by considering some of the questions raised in this section on obstacles to global governance.

Questions Raised:

1) *Is there a desire for a centralized "International Cooperation Facility" to be created to provide a single entry point (a "one-stop-shop") of third-party assistance for services to improve transboundary water cooperation?*
2) *What is the perception of the proposed Facility Partner's ability to lead the International Facility?*
3) *Which organisations are perceived to be the best suited to provide the third-party assistance desired to improve water cooperation between riparian states?*
4) *Do those in the field of improving transboundary waters management believe that services to improve coordination amongst international aid agencies are required?*
5) *What are the implications for an International Water Cooperation Facility of not having an enforceable legal framework in the form of the UN Watercourses Convention?*
6) *Do potential users of the Facility have the financial capacity to reimburse the costs of providing the services offered?*
7) *Would organisations engaged in improving transboundary cooperation be interested in providing financial assistance to cover the operational and administrative costs of the Facility?*
8) *What innovative funding mechanisms exist to address the problems within transboundary basins?*

1.7.3. Obstacles to Effective International Mediation

The field of conflict resolution gained momentum in the last three decades of the twentieth century, which perhaps coincidently is roughly the same time frame environmental issues came into the global forum. While conflicts are part of everyday life and can potentially result in significantly destructive situations, there exists the possibility within each conflict to identify innovative cooperation strategies that can produce "*win-win*" solutions for both antagonizing parties. While one aim of mediation is to assist the disputing parties to identify the positive benefits of cooperation, there remain a number of obstacles within the process that can impede effective mediation at the international level. These obstacles to effective international mediation can relate to the characteristics of the parties in dispute, the nature of the dispute, and the nature of the mediator.

Of particular relevance to the creation of an International Water Cooperation Facility is the affect that the mediator themselves have on the likelihood of success in resolving a water conflict. It perhaps goes without saying that a mediator cannot mediate unless the disputants accept them as person(s) who have the appropriate skills and characteristics that the disputants themselves perceive to be adequate to represent their interests and mediate towards an agreement.

In developing an international facility to provide mediation services to a multitude of basins within the context of a number of varying political, religious, and economic systems, it may very well prove to be an obstacle to being able to sufficiently satisfy all disputants with a limited number of mediators capable of meeting the perceived ideals sought after for effective mediation. The provision of third-party dispute resolution from experts outside of the conflict region is argued to be ineffective. In Bercovitch's study (Bercovitch 1996) on mediation success, mediators were empirically classified according to a rank. Reflecting the diversity of possible mediators in the international environment, mediators were ranked along a dimension ranging from government leaders and representatives or regional and international organisations to private individuals.

In relating rank to mediation outcomes, mediators with the best success rate in acute conflicts[5] were leaders and representatives of regional organisations (62.4% and 50% respectively), followed by leaders or representatives of small governments (54.8% and 56.8% respectively). Interestingly, both leaders and representatives of large states were less successful (40% and 31.3% respectively), and international organisations such as the United Nations were less successful still (23.8%). (Bercovitch 1996)

It was argued that regional organisations (such as the Organisation of African Unity, the Organisation of African States, Contadora Group, and the Economic Community of West African States) with common ideals, perspectives, and interests appeared to offer the best chances of successful outcomes in international mediation, where as, in contrast, international organisations such as the United Nations have a very poor record in the area of mediation. While it is noted that organisations such as the

[5] Bercovitch's study focused primarily on violent conflicts and not the simmering disputes often associated with water-related conflicts.

United Nations usually deal with the more intractable disputes that resist mediation and other forms of conflict management, as compared to regional organisations that tend to deal with less serious disputes, the assertion that regional organisations always mediate within the same cultural and value system, and this is recognised by Bercovitch to be a means of promoting agreement more than any other factor. Whether or not riparian states desire third-party assistance in mediation / arbitration and other like services from an international facility is addressed later in this report.

These obstacles to international mediation are further compounded when the field of mediation, which is in the first phase of maturity, lacks a unified code of ethics (Hoffman 1997). There is variability in standards and ethical standards because of the major differences in the various approaches to mediation, the goals, and processes used by many mediators. This causes difficulty in creating a unified ethical code that will suit the mediators and be accepted by all (Folger, J & Bush, R 1994). However, in establishing an international facility to provide mediation in water-related disputes, the inability to provide potential users with a uniform code of ethics for all mediators may be a disincentive for the adversaries to approach the Facility.

Summary – *Obstacles to Effective International Mediation*

While it is recognised that third-party mediation is not the only service proposed to be offered by the IWCF, it is a service that is distinctly different from other services generally offered by the international development community. As such, particular attention to the obstacles of international mediation should be considered by addressing some of the questions raised in this section.

Questions Raised:

1) *Under what conditions would an organisation employ third-party assistance from an international facility to resolve disputes and improve water cooperation between riparian states?*
2) *How can effective third-party mediation services be provided through an International Facility?*
3) *Can the IWCF provide mediators who have the desired qualities for third-party assistance in dispute resolution?*

1.7.4. Obstacles Associated with International Institutional Development

1.7.4.1. General

It should not be assumed that effective institutions always operate according to the expectations of the designers or serve to solve the problems that necessitated the formation of the institute in the first place. Even the most carefully crafted institution can fall prey to the forces that are beyond the control of those responsible for administering them. Institutions can range from highly effective arrangements that have profound impacts on the course of human/environmental relations, to dead letters that have little or no impact in these terms. In addition, institutions that prove

highly effective under some conditions may be ineffective under other circumstances and that same institution may become more or less effective over the course of time (IHDP 1998).

In addressing transboundary water concerns, institutions are faced with the daunting challenge of balancing the physical, socio-economic, legal and political aspects that can often undermine its' own effectiveness. The often-unpredictable nature of these aspects creates potential obstacles to success for institutions designed to facilitate transboundary governance.

In addition, due to these aforementioned forces, institutions can frequently produce unintended consequences and become vehicles for a variety of actors to promote their own interests. Understandably, studies of effectiveness often direct particular attention to those impacts of institutions that are pertinent to efforts to solve or manage the problems that lead to their establishment in the first place. But comprehensive accounts of the effectiveness must consider the unintended consequences of institutions as well (IHDP 1998).

The success of an institution will be based on the inherent need for the institution and on the capacity to which the institution can fulfill that need in an effective and efficient manner.

Even when strong partners come together to develop an institution, the individual strengths of the partners do not necessarily add up to a strong institution. Without a clear strategy and guidelines for the direction and purpose of the institution, effectiveness and efficiency can be impacted. An example would be the early pilot phase of the Global Environmental Facility (GEF). Originally designed with informal arrangements to fund global environmental problems considered distinct from national concerns and collaboratively managed by UNDP, UNEP, and the World Bank, the GEF began a contentious restructuring process less than a year into the three-year pilot phase[6]. Within this short time, the pilot phase's intended operational focus was overshadowed by an intensely political process of institutional change (Sjöberg 1999). While everyone was pleased with the general idea of using the "comparative advantage" of each agency, the precise nature of the collaboration was not elaborated. It was assumed that the basic responsibilities assigned to the agencies would develop into a cooperative praxis as the agencies began their work. However, while there were expectations that there would be benefits not only from the expertise of the three agencies, but also the synergistic effects of cooperation, the roles of the implementing agencies would become controversial. Agency relations hit a low-point and an independent assessment of the GEF found the collaborative arrangement ineffective.

The International Water Cooperation Facility was originally proposed as a collaborative partnership between four agencies, and therefore could potentially meet the same obstacles the GEF confronted during the pilot phase. Proposing criteria for a governing structure to avoid these same obstacles is discussed later in this report.

[6] The reader is encouraged to look at Helen Sjöberg's Working Paper entitled "Restructuring the Global Environmental Facility" for an in-depth review of the process and outcomes (GEF) – See References.

1.7.4.2. Obstacles to Creating an International Facility to Promote Transboundary Cooperation

As previously mentioned, the idea of creating an international facility to promote cooperation and provide third-party dispute resolution to riparians in transboundary river basins is not new. In this section, the fate of earlier proposals, namely those made in Valencia, the US State Department's Global Alliance for Water Security, and the recommendations for an '*International Shared Waters Facility*' in the Swedish sponsored Development Financing 2000 study.

With the exception of the '*International Shared Waters Facility*' proposal, very little details are available on the organisational and governing structure, financing mechanisms, and services offered for any of these proposals is readily available. Perhaps the proposal that reflects the closest similarities to the Water Cooperation Facility proposal is that made in Valencia, which should be no surprise as many of the actors behind that proposal are involved with the development of this most recent initiative. Through interviews with some of those actors, it is understood that the Valencia proposal was never initiated as a result of a change in administration in the City of Valencia and the newly associated priorities removed the funds from this initiative. In addition, it is understood that governmental delegates within UNESCO's governing body (the proposed implementing agency), disagreed whether third-party assistance was required for dispute resolution in transboundary basins, insinuating that conflicts did not exist in water resources management.

The Global Alliance for Water Security initiative presented by the US Government has not materialised potentially as a result of a change in administration, but other reasons presented by those interviewed include the reluctance to support an impartial mediation initiative by a major donor government that could be seen as too influential.

When ODI and Arcadis-Euroconsult originally presented their *Draft* report to the Swedish Government, they recommended creating a new institution to address the transboundary issues identified. As a result, the Swedish Government advised that they could not print the report as it was against the Swedish Government's policy to simply create new institutions to solve problems. The report was reworded in its final draft to include that the Facility would build upon the existing structures of the GWP, GEF, and others, to which the Swedish Government agreed. That said, the general reluctance heard from some of those interviewed reflects the scepticism of some governments and water experts that the creation of another Facility in what is considered an already crowded field would take away the limited financial resources available to some of the proven existing initiatives. As one respondent elaborated: "it is not that we need to open more doors (i.e. provide new services) to tackle problems, it is that many doors already exist but are only partially opened and need to be opened fully". These comments reflect the concern of the abundance of actors and lack of coordination between the service providers at addressing global environmental issues. While the recommendation from the Swedish Report were well-received when they were presented in Bonn in 2001, and the GWP was approached as a potential implementing agency, no further action has developed since this time. This is partly due to the busy schedules by potential implementing agencies, and perhaps also due to

that same reluctance from donor agencies to support the creation of a new facility type initiative.

If it is determined that an international facility to provide third-party assistance in transboundary basins is desired, than the design of the governing structure must reflect those lessons learned from previous initiatives that have failed to materialise.

Summary – *Obstacles to International Institutional Development*

Given that an International Facility to improve transboundary cooperation is desired, addressing the questions presented in this section will assist the developers in designing the Facility in such a way that the obstacles to transboundary cooperation, global governance, and international mediation are avoided and an effective and efficient facility is created.

Questions Raised:

1) *What institutional design criteria should be considered in order to improve the Facility's likelihood of success and avoid the pitfalls of previous failed initiatives?*
2) *How should the governing structure of the Facility be designed to improve effectiveness and efficiency based on service demands?*
3) *Should regional actors and those involved with other similar initiatives be directly involved in the decision making process of an International Facility? If so, how?*
4) *Initiatives aimed at offering similar services exist or are currently developing – How can overlapping of responsibilities be avoided?*

1.8. Summary of Questions Raised

Questions Raised on Obstacles to Water Cooperation

Within Shared River Basins

1) *How much importance do those working in a water-related field in transboundary basins place on improving cooperation between riparian states?*
2) *What do those working to improve cooperation between riparian states find to be the greatest problems to achieving integrated transboundary waters management?*
3) *How do these problems differ regionally between transboundary river basins throughout the world?*
4) *What is the existing regional capacity to address these concerns?*
5) *What third-party assistance services are desired?*
6) *How do the desired services compare with the identified problems faced by riparian states?*
7) *What is the urgency in creating a third-party facility to assist in addressing these problems?*

In Global Governance:

8) *Is there a desire for a centralized "International Cooperation Facility" to be created to provide a single entry point (a "one-stop-shop") of third-party assistance for services to improve transboundary water cooperation?*
9) *What is the perception of the proposed Facility Partner's ability to lead the International Facility?*
10) *Which organisations are perceived to be the best suited to provide the third-party assistance desired to improve water cooperation between riparian states?*
11) *Do those in the field of improving transboundary waters management believe that services to improve coordination amongst international aid agencies are required?*
12) *What are the implications for an International Water Cooperation Facility of not having an enforceable legal framework in the form of the UN Watercourses Convention?*
13) *Do potential users of the Facility have the financial capacity to reimburse the costs of providing the services offered?*
14) *Would organisations engaged in improving transboundary cooperation be interested in providing financial assistance to cover the operational and administrative costs of the Facility?*
15) *What innovative funding mechanisms exist to address the problems within transboundary basins?*

In International Mediation:

16) *Under what conditions would an organisation employ third-party assistance from an international facility to resolve disputes and improve water cooperation between riparian states?*
17) *How can effective third-party mediation services be provided through an International Facility?*
18) *Can the IWCF provide mediators who have the desired qualities for third-party assistance in dispute resolution?*

In International Institutional Development:

19) *What institutional design criteria should be considered in order to improve the Facility's likelihood of success and avoid the pitfalls of previous failed initiatives?*
20) *How should the governing structure of the Facility be designed to improve effectiveness and efficiency based on service demands?*
21) *Should regional actors and those involved with other similar initiatives be directly involved in the decision making process of an International Facility? If so, how?*
22) *Initiatives aimed at offering similar services exist or are currently developing – How can overlapping of responsibilities be avoided?*

2. THEORETICAL FRAMEWORK

The theoretical framework is presented first through a description of how the researcher considers effective transboundary water resources management is to be performed, followed by a description of mechanisms to improve cooperation within these basins. These sections are followed by a description of international mediation and negotiation theory and international institutional design. A description of the proposed "International Water Cooperation Facility (IWCF)" that is to be assessed is then presented.

2.1. Effective Transboundary Water Resources Management

In this section, some mechanisms to improving integrated transboundary water management in shared river basins are described as these concepts must be incorporated in the IWCF's services.

In their paper presented at the SADC-EU Conference on the Management of Shared River Basins, Savenije and Zaag (2000), outlined a conceptual framework for the management of shared river basins that aims at addressing problems such as those identified in the "Obstacles to Cooperation within Shared River Basins" (Section 1.7.1). In their conceptual framework, they use the metaphor of the classical temple (Figure 2), where upon a foundation of integrated water resources management, three pillars support the 'roof' of the temple: the sharing of international waters. It would therefore be expected that the Facility would have the capacity to enhance these components used to facilitate the sharing of international water resources.

FIGURE 2: The Classic Temple of Sharing Water Resources
Source: Savenije and Zaag 2000.

It is important to recognise that each of these pillars are interdependent on one another to support the 'roof' of shared water resources in an international river basin. For example, potential conflict may arise within a basin as a result of poor flood forecasting and exchange of emergency information to the downstream states. This could have been a result of a poor institutional arrangement to provide such information, but that problem could be a result of insufficient data collection, which could be a result of a lack of political will to support such projects. Each of the pillars is interconnected in their consequences despite how the metaphor may suggest that the pillars are independent supports.

The importance of each of the pillars, and the associated aspects that will be considered in the facility design, are described below:

Political: Responsible for creating an enabling environment to allow inter-sectoral and international cooperation and planning in such a way that the waters are shared equitably and sustainably. Mutual economic interdependencies must be created between riparian states as an incentive to enhance the interest in share water resources management and there must be the political will to do so. Such international collaboration could be achieved through principles such as *good neighbourliness*, *recognition of riparian interests*, *development of joint activities*, and *turning crisis into opportunities*. Of the three pillars for transboundary water management success, the Political pillar is most susceptible to failing as a result of the unpredictable nature of politics and regional stability.

Technical Cooperation: As the metaphor implies, the Technical Cooperation (or Operational) pillar is central to the success of the management of international river basins as it may support most of the load if one of the outer pillars is weak (political instability or lack of political will, or inadequate legal/institutional framework). Technical cooperation is required in order to establish trust, confidence, and a reliable information base after which legal, institutional and political progress can be made. Technical issues that lend themselves to cross-border cooperation include the *exchange of information* and other relevant data, the *establishment of crisis procedures*, *increased capacity building* within and among riparian states, *joint research and planning*, and *joint development ventures*.

Legal-Institutional: The importance of the legal-institutional framework within an international river basin cannot be overstated, as riparian states cannot begin to share a resource without first agreeing to some basic legal principles. As previously mentioned, the existing principles codified in the Law of Non-Navigational Uses of International Watercourses is recognised as a binding agreement by just 5 states. This low portion of agreement is a result of self-interest, differing customary practices, and disputes pertaining to the interpretation of the law. It is therefore imperative that riparian states adopt regional or global agreements and common law (while keeping the principles behind local practices) in order to harmonize the national laws and regulations between countries in an effective and integrated global manner.

With respect to institutional aspects, the effective integrated planning and development of transboundary river or lake basins would ideally have similar institutional requirements to a basin entirely within one country and should be based

on the same principles (ICWE 1992). As such, management should be performed on hydrological boundaries and a joint water commission between the riparian states should be established. Once agreements are in place, it is the institution's function to consider water as an economic good, and should therefore make decisions on the utilisation of the water in the broadest socio-economic sense. Privatization and Public-private partnerships should be considered for financial sustainability, and other concepts such as cost-recovery, user pays, polluter pays, and demand management should be considered. Table 2 outlines those functions typically reserved for international river basin organisations, and those services or needs that the IWCF would need to be equipped to provide assistance to address.

TABLE 2: Important Functions of International River Basin Organisations
(Savenije and Zaag, 2000)

The essential functions of international basin organizations include:
- Reconciling and harmonizing the interests of riparian countries
- Technical cooperation
- Standardisation of data collection
- Exchange of hydrologic and other information
- Monitoring water quantity and quality
- Submission for examination and approval of proposed activities, schemes or plans which could modify the quantity and quality of the waters
- Development of concerted action programmes
- Enforcing agreements
- Dispute resolution

Coordinating an integrated approach to water resources management across international borders can be particularly difficult to develop when no existing institutions are in place. It is best if riparian states start at the earliest possible time to enter into agreements to investigate the potential for sustainable future development of international water resources (Heyns 1996). Heyns (1995) further argued that the management of international river basins involves a long learning process that the participating countries have to go through, and for which there are no short cuts and where outside assistance can only play a very modest role. The role in which the IWCF can play will be assessed later in this study.

When effective transboundary water resources management does not exist, mechanisms to improve cooperation and resolve conflicts between riparian states are required. These are described in the following section.

2.2. Mechanisms to Improve Cooperation and Resolve Conflict

There are a number of ways conflicts can arise between riparian states in a transboundary river basin sharing a common water resource. In previous sections, obstacles to promoting cooperation at the basin level and international level were described. In this section we discuss the theoretical framework for how benefits can be identified and stages to cooperation can be fostered to increase the likelihood of cooperative arrangements between riparian states with the end goal of developing institutions or multi-lateral agreements for effective transboundary governance. Needless to say, there are no clear-cut, one-size-fits-all mechanisms to improve cooperation between riparian states or eliminate those obstacles mentioned earlier.

However, Sadoff and Grey (2002) presented an analytical framework that identifies four types of cooperative benefits aimed at broadening the range of perceived benefits to promote the incentive to cooperate in sharing water resources. These four types of benefits are briefly described in the Table 3.

TABLE 3: Identifying Cooperative Benefits

Cooperative Management	Benefits
Benefits to the River	Reducing the potential detrimental effects on the socio-economic well being of a riparian state by fostering a healthy ecosystem. (*Cooperative Environmental Management*)
Benefits from the River	Good water management practices can effectively increase the available water resources in a system, allowing for increased benefits. (*Cooperative Development*)
Reduction of costs because of the River	Tensions and disputes that arise because of the shared resource may reach the point where they color the geo-political relationships between states within a basin and become obstacles to growth by constraining the regional political economy and diverting resources from economic development and social well being. (*Diminishing the Costs of Non-Cooperation*)
Benefits Beyond the River	Cooperation in the management and development in transboundary basins may contribute to, or even result in, political processes and institutional capacities that themselves open the door to other collective actions. (*Broader Opportunities Catalyzed by Cooperative Management of the River*)

Source: (Sadoff & Grey 2002)

Given that there is a framework for identifying potential benefits and creating incentives for cooperation, it would be the role of the IWCF to assist riparian states in identifying these benefits and transforming potential conflicts into cooperation. As such, four stages are proposed to illustrate how a non-cooperative or conflicting situation can move towards cooperative agreements and eventually into effective transboundary waters management as described in the previous section. These four general stages, adopted from the work by Swedish Ministry of Foreign Affairs (2001) but modified for the context of this study, are presented in Table 4.

TABLE 4: Stages Towards Cooperation

Developing a Shared Vision	
Initiating Process	'Bringing the Parties to the Table' – The stage when stakeholders are identified, parties convene, shared visions are considered, conflicts are diagnosed and the benefits of cooperation are assessed.
Institutional Management	The 'Agreement' - Solidifying a legal framework based on an established shared vision, building capacity for institutional management, ensuring accountability, participation at all levels, good governance, and stakeholder consultations, etc. are part of the institutional management.
Implementing the Shared Vision	
Programme Implementation	'Seeing the Benefits' - Where parties implement the shared vision, perform ongoing monitoring to develop uncontested databases, perform joint research projects.
Investment in Water Management Works	'Realising the Vision' - Joint-development of water-related infrastructure.

It should be noted that the stages towards cooperation do not necessarily flow directly from the Initiating Process through to the Investment in Water Management Works.

For example, following an 'agreement' in 'Stage 2', implementation of that agreement may change the context, which could create a new potential for conflict or cooperation, and hence, start a new cycle. Alternatively, the process to cooperation may be stalled out at any time – as was the case described in many interviews where shared visions were developed, but the resources and capacity to implement the programme or perform costly ongoing monitoring were not available. Needless to say, at any point during the process, cooperation potential could change to potential conflict, just as the opposite is true.

For purposes of this study, a number of potential services that an international third party could potentially provide to assist riparian states through these four general stages to cooperation are proposed in Table 5. It is intended that any proposed international third-party would work with the riparian states to assist in providing these services, and would not act unilaterally or without the consent of all stakeholders in assisting in these functions. The list is neither comprehensive nor necessarily required (or desired) by those within transboundary basins, it reflects those services that were presented to an international target group of transboundary water experts as part of a survey performed in this study to determine the scope in which the IWCF must operate. The findings, outlining the perceived desire or need for the specific services as determined through the international survey is presented later in this report.

TABLE 5: Potential Services to Improve Water Cooperation

Direct Assistance
- Assisting in convening parties; - Design of dispute management systems; - Facilitating joint fact-finding arbitration; - Basin-wide access to knowledge and tools; - Assess dispute situations and needs; - Mediation / Facilitating; - Arbitration; - Impartial third party advice; - Enforcing agreements; - Diagnosing conflict; - Assistance in accessing financial resources; - Implementation of agreements; - Participation and stakeholder identification - Establishing joint technical committees; - Creating joint development ventures; - Best practices analysis and cooperation identification; - Performing joint research projects (modeling, data collection); - Designing, implementing and adapting institutional and legal frameworks;
PUBLIC INFORMATION & OUTREACH
- Organize and assist stakeholder advisory committees; - Organize and assist community advisory committees; - Encouraging political engagement;
TRAINING
- Education and training; - Capacity building;
RESEARCH
- Research related to the anticipation /prevention /resolution of water related conflicts (visioning)

2.2.1. International Mediation and Negotiation Theory

As previously mentioned in the obstacles to international mediation, there is no clear definition of the role of the mediator, nor any specific code of ethics that all mediators abide by. Within the historical context of the development of water conflict mediation, much of the literature and theoretical analysis relating to third-party mediation derives from studies relating to conflicts that would be considered severe, or acutely violent, and not the simmering water-related disputes that progressively detrimentally impact development, health, and the environment over a period of time in a less direct (or obvious) way. As such, the theoretical framework for the role of the mediator has been principally derived from two main sources: 1) UNESCO's work from the water-dispute related PC→CP programme, and 2) the Theory and Practice of International Mediation by J. Bercovitch who has developed mediation context variables and likelihood of success based on a comprehensive review of the world's acute conflicts (defined as an organised and continuous militarized conflict involving at least one state and resulting in at least 100 fatalities). As such, the role of the mediator, their qualities and characteristics and the tools it is proposed they use should be considered in the context of how those more violent conflicts translate to the water-dispute field, which has seen very little acute conflict in its entire history. Nonetheless, the roles, skills, and tools of a good mediator are provided below.

As presented in the PC→CP work by Shamir (2003), the Mediator should consider the following to be part of their task:

- Help to coordinate meetings.
- Introduce the parties.
- Explain the process to the parties.
- Set the agenda and rules.
- Create a cease-fire between the parties.
- Open communication channels.
- Gain the confidence and trust of the parties.
- Gather information and identify obstacles.
- Allow the parties to express feelings and vent emotions.
- Help the parties to identify and understand their interests and priorities.
- Help the parties with brainstorming creative options and solutions.
- Help in defining acceptable objective criteria.
- Help the parties understand the limitations of their demands through what is know as a "reality test".
- Help in evaluating alternatives.
- Allow the process to move forward according to the needs and pace of the parties.
- Help in crafting the agreement.
- Help in validating the agreement by the courts (if there is a court that has jurisdiction).

Further, Shamir (2003) presented the skills and tools of a good mediator as follows:

- Listening skills, active listening.
- Strong negotiating skills (because mediation is facilitated negotiation).
- The ability to create trust among parties.
- The ability to identify the issues of the dispute.
- Patience, endurance, and perseverance.
- Thoughtfulness, empathy, and flexibility.
- Common sense, rational thinking.
- A likeable personality.
- Experience, education, training.
- Neutral, impartial.
- Problem-solving skills, creativity.
- Ability to reframe the parties' views in softer terms and summarize what was said.
- Good people skills.
- Asking open-minded questions.

It perhaps goes without saying that a mediator cannot mediate unless they are perceived as reasonable, acceptable, knowledgeable, and able to secure the trust and cooperation of the disputants. However, with respect to the importance of "Impartiality", Touval and Zartman (1989) argue that the motives of the mediator are best described in the context of power politics, and that mediators almost always have their own interests, so that they are very seldom truly indifferent to the issues and terms being negotiated. As such, at the international level, impartiality of the mediator may be less important than the achievement of a favourable outcome and the importance of a continuing relationship with a powerful mediator. The most distant party may accept a biased mediator precisely because they believe the third-party will have greater influence over the preferred party in terms of moving them towards settlement. Others have also supported this argument. Therefore, the effective mediation of international relations is more a matter of mediators' utilisation of resources, leverage, and influence commensurate with their position to enhance fairness than it is of impartiality (Brookmire and Sistrunk, 1980).

In addition, one of the most effective resources any international mediator can possess is legitimacy. Leaders of states and high-level officials such as foreign or prime ministers that have legitimacy can bring it to bear together with their status and respect (Touval and Zartman, 1985).

Another important aspect relates to the mediator's previous relationship with the parties in dispute. Trust is not established over night. Long-term relations and a recognised understanding of each adversary's beliefs, economic values, and interests can positively affect both mediator behaviour and mediation outcomes.

2.3. International Institutional Design

It is proposed that the design principles for an international cooperation facility should be based on its potential to provide ***effective*** assistance ***efficiently*** and ***fairly***, is ***robust***

in the face of change and provides ***sustainable*** solutions. In this study, design criteria will be proposed for the Facility Partner's consideration with the aim of avoiding the obstacles in the development an international institution to improve global transboundary water management. The aforementioned design principles will be used as a guideline for the recommended application of the criteria. These institutional design principles are briefly described below.

2.3.1. Principles for Institutional Design

Effectiveness: The effectiveness of a Facility is generally defined as the extent to which the outcomes of international transboundary water resource governance would differ from those had the Facility never been established. As there is no operational facility and there is no possible means of measuring performance, it is proposed that the effectiveness of the Facility be theoretically assessed based on its capacity to assist, and provide a platform for, riparian nations to meet the needs of transboundary water management identified in this study to establish the three 'pillars' for shared international waters.

Efficiency: The efficiency component of the assessment will concentrate on the intended operational performance and the governing structure of the Facility itself. Efficient means for command and communication lines will be determined, and the best means of coordinating research efforts amongst the Facility and outside organisations will be reviewed. An efficient Facility will be determined to be one who's services do not overlap services currently available and who's governing structure is designed such that subsidiarity is considered, allowing decision making at the lowest appropriate level without an overburden of financial commitments and bureaucracy. It is also important to review the funding mechanism for this Facility in order to determine the potential for financial sustainability under an on-demand need in arbitrary parts of the world that may have very different political and financial agendas to support such mediations. In addition, potential cost-recovery mechanisms that the facility could use would be considered.

Fairness: As conflicts generally arise when there is insufficient institutional capacity to adjust to change, a riparian nation may feel insecure about its ability to negotiate a fair agreement with a strong neighbour with a focused vision for resource development. It is therefore important to determine what the necessary promotional tools are to illustrate to the relevant stakeholders that the Facility can indeed provide an arena in which fair negotiations can be performed while at the same time, provide sufficient incentives for the more powerful riparian state to cooperate and join in on the negotiation process. Fairness will therefore be determined based on the Facility's ability to provide a level-playing field environment perceived by actors to be fair, has a legal framework and guiding principles to ensure fairness, has transparency incorporated into the governing structure, and does not discriminate between those seeking assistance.

Robustness: The extent to which the Facility itself is durable and stable over time will be evaluated. A robust Facility will be determined to be one that is flexible to uncertainties associated with varying demand, funding, and political uncertainties.

Sustainability: The mechanisms the facility would use to ensure that their assistance would result in long-term solutions in the shared river basins. Such mechanisms could include capacity building (at all levels) to ensure the cooperative environment fostered remains after the assistance is provided and that regions assisted are capable of addressing future issues as they develop. In addition, the Facility should measure the effectiveness of the assistance provided through follow-up assessments in order to recognise short-comings and improve future services. Lastly, financial sustainability for services offered would be required through adequate funding mechanisms and/or methods for cost recovery on services provided.

2.3.2. Design Parameters for Institutional Design

The design parameters to be used for establishing an international institution to improve cooperation in transboundary river basins is based on the work outlined in Barbara Koremenos' "*Rational Design of International Institutions*" (Koremenos et al 2001). The goal of the Rational Design of International Institutions project was to "offer a systematic account of the wide range of design features that characterize international institutions" (Koremenos et al 2001). The following four assumptions were used to derive conjectures that were subsequently evaluated during the project.

1) Rational Design: States and other international actors, acting for self-interested reasons, design institutions purposefully to advance their own joint interests.

2) Shadow of the Future: The value of future gains is strong enough to support a cooperative arrangement.

3) Transaction Costs: Establishing and participating in international institutions is costly.

4) Risk aversion: States are risk-adverse and worry about possible adverse effects when creating or modifying international institutions.

The researcher then proposed using five key design parameters within which institutions can vary:

- **Scope**: What issues are covered? To what extent must national sovereignty be considered in order to resolve international water conflicts? Should the Facility focus on transboundary water conflicts that cross international borders only, or consider national conflicts between regions and sectors?

- **Membership**: Exclusive or inclusive structure? Who should be included? In the context of the proposed International Water Cooperation Facility, are the proposed Partners sufficient to meet the needs?

- **Centralization**: Should important institutional tasks of the Facility be performed by a single focal entity or not? How is information best disseminated and requests most expediently responded to?

- **Control**: How will collective decisions be made? How is the governing body elected?

- **Flexibility**: How will institutional rules and procedures accommodate new circumstances? What happens when demand is too low or too high? How are the arrangements made such that differences of opinion can be addressed?

While these design parameters alone are not the sole important dimensions of institutions, the purpose for the selection of these five was to "reduce the myriad of elements of institutional variation to a few measurable dimensions that show up repeatably when institutions are designed or modified" (Koremenos et al 2001).

In order to explain variation in institutional design, a number of independent variables that could affect the key parameters were presented, which are briefly explained as follows:

- ***Distribution***: How each of the partners will benefit or how much further their agendas will be met through this institution and how the benefits are shared.

- ***Enforcement***: Refers to the strength of individual actors incentives are to cheat on a given agreement or set of rules.

- ***Number of Actors***: Who decides the direction of the facility and who best to represent them?

- ***Uncertainty***: Refers to the extent to which actors are not fully informed about others' behaviour, the state of the world, and/or others' preferences.

Based on the four assumptions, conjectures on the effects of changes to an independent variable on one of the proposed design parameters of international institutional design were proposed. The conjectures are provided in Table 6.

TABLE 6: Conjectures about Rational Design

Conjectures about Scope	
Conjecture S1:	Issue Scope Increases with Greater Heterogeneity among large numbers of actors.
Conjecture S2:	Issue Scope Increases with the Severity of the Distribution Problem
Conjecture S3:	Issue Scope Increases with the Severity of the Enforcement Problem
Conjectures about Membership	
Conjecture M1:	Restrictive Membership increases with the Severity of the Enforcement Problem
Conjecture M2:	Restrictive Membership Increases with Uncertainty about Preferences
Conjecture M3:	Inclusive Membership Increases with the Severity of the Distribution Problem.
Conjectures about Centralization	
Conjecture C1:	Centralization increases with Uncertainty about behaviour
Conjecture C2:	Centralization increases with Uncertainty about the State of the World
Conjecture C3:	Centralization increases with Number
Conjecture C4:	Centralization increases with the Severity of the Enforcement Problem.
Conjectures about Control	
Conjecture V1:	Individual Control Decreases as Number Increases
Conjecture V2:	Asymmetry of Control increases with Asymmetry among contributors (number)
Conjecture V3:	Individual Control (to block undesirable outcomes) increases with uncertainty about the state of the world.
Conjectures about Flexibility	
Conjecture F1:	Flexibility increases with uncertainty about the state of the world
Conjecture F2:	Flexibility increases with the severity of the distribution problem
Conjecture F3:	Flexibility decreases with Number

Source: Koremenos et al 2001

2.4. Definition of an International Water Cooperation Facility

Due to the limited time frame for this study, it is proposed that the framework and services to be provided by an International Water Cooperation Facility be defined by the recommendations of the UNESCO / Green Cross International *PC→CP: Water for Peace* Programme. It is intended to use this definition as a starting point, from which the actual need for the facility and the recommended partnerships and services to be provided will be evaluated to confirm whether the proposed theoretical type of facility would best fit the needs for global transboundary governance.

The recommendations by the UNESCO / Green Cross International *PC→CP: Water for Peace* Programme stated that:

> "*There is a need to establish a facility to provide advice, guidance, and tools for parties involved in the management of shared water resources, on their demand and assist them in the anticipation and resolution of their water conflicts.*" (UNESCO 2003b)

In addition, it was recommended that the water cooperation facility framework be a joint endeavour of the appropriate United Nations entities with interdisciplinary approaches to water issues, an international legal institution, and a water-related international NGO with a wide scope of interest. Following these recommendations it was further suggested by the Director General of UNESCO Koïchiro Matsuura, that a consortium of academic institutions involved with transboundary waters be included into the partnership.

The recommended objective of the facility would be to foster peace and cooperation among stakeholders using common shared water resources by providing a single entry point to international water clientele, donors and implementers, access to the necessary resources, the favourable environment, political backing, professional and technical support, and judiciary mechanisms when requested.

The desired facility would jointly diagnose, define, create and implement options for anticipating, solving or managing difficult shared water conflicts. The focus of the cooperative efforts would be to assist disputing parties to reach their own agreements, and not to proscribe specific solutions to the disputing parties. In this regard, it would operate on a voluntary basis and employ support in the form of independent third party fact-finding missions, facilitation, joint training and mediation.

The core activities of the facility would primarily concentrate on direct assistance, applied research, training, and providing public information and outreach services.

At the 3rd World Water Forum in Kyoto, UNESCO, the World Water Council, the Permanent Court of Arbitration and the Universities Partnership for Transboundary Waters announced that they would initiate the process of the development of this Facility.

2.5. Methodology and Approach

A literature study was performed on issues of conflict and transboundary water resource management, global sustainable development governance, environmental security and international mediation, and international institutional design. This study was performed in order to develop the contextual environment in which an International Water Cooperation Facility would be developed.

2.5.1. Assessing Stakeholder Needs and Facility's Role (First Objective)

In order to address the study's first objective of assessing the stakeholder needs and the role an international water cooperation facility can play to address these needs, a n internet-based questionnaire was used and the findings were further complimented or refuted through specific telephone interviews with a number of key actors in the field of international development and transboundary waters management.

The questionnaire was prepared for the purpose of acquiring insights from experts within the field of transboundary waters governance. In particular, the questionnaire aimed at:

a) Identifying some of the obstacles to transboundary waters cooperation,
b) The existing regional capacity to address these problems,
c) The third-party assistance services desired to improve riparian waters cooperation,
d) The desire to create an International Facility to address these issues,
e) The likelihood of riparian states sharing the financial costs of the proposed Facility, and
f) The perception of the proposed Facility Partner's ability to lead and coordinate the activities of the proposed Facility.

The complete questionnaire is available in Appendix B.

The main target audience were those professionals working in the field of transboundary waters governance who would have the authority to request the services of an International Water Cooperation Facility, who provide third-party assistance in shared river basins, and experts in the field of promoting cooperation between riparian states sharing a common water resource. The target audience was established through contact information available through internet sites of organisations associated with transboundary waters, in particular, the GEF and the World Bank, UNDP, UNEP, GEF accredited NGOs and IWLearn contacts, UNESCO, UNECE, WWC, PCA, UPTW, GWP, IUCN, OSCE, IWA, and an extensive number of dispute resolution centres and Environment & Security contacts throughout the world. Where possible, experts working within those river basins considered by Wolf et al. (2002) to have "potential for dispute in the coming five to ten years" (the Ganges-Brahmaputra, Han, Incomati, Kunene, Kura-Araks, Lake Chad, La Plata, Lempa, Limpopo, Mekong, Ob (Ertis), Okavango, Orange, Salween, Senegal, Tumen and Zambezi) and those basins "currently in conflict or in the midst of active negotiations" (Aral, Jordan, Nile and Tigris-Euphrates) were solicited.

In total, over 1000 experts associated with transboundary waters or dispute resolution were solicited electronically with the survey (French and Spanish language versions were also available). Due to the complexity of the subject matter, the time requirements to complete the comprehensive survey, and the fact that the survey was designed to solicit responses from those who had sufficient authority to decide whether or not to use (or cooperate with) an International Water Cooperation Facility, the response rate was relatively low, with 56 respondents representing 42 transboundary river basins, 2 seas (Caspian and Black) and one transboundary aquifier during the 5 month period it was made available (December 1, 2003 through to the last response on April 15, 2004). In order to generate additional responses to questions associated with the desired services an International Facility should provide, an abbreviated "5-minute" survey was sent out to the same contact list and this survey generated an additional 19 responses representing 24 transboundary river basins (including 9 additional basins not included in the first round of responses). Section 3.1 summarises the findings from the survey and provides insights into the study's first objective.

2.5.2. Design Considerations for an IWCF (Second Objective)

If the findings of the survey, literature review, and interviews, identified an immediate demand for an International Water Cooperation Facility to be created to address the riparian needs, the study's second objective to propose design considerations to improve the effectiveness and efficiency in providing these services from an International Facility will then be addressed.

The study's second objective will be addressed by reconsidering the aforementioned design dimensions (scope, membership, centralization, control, flexibility) in the context of the findings of the survey, literature review and interviews. As such, the scope will be defined through the perceived needs outlined in the survey addressing the study's first objective. The Facility's required capacity to address these needs then provides insights into the required membership. While membership illustrates the Facility's capacity to assist, it also has implications on the governing structure of the Facility. These potential consequences on Centralization, Control, and Flexibility are identified using the proposed conjectures on Rational Design. Throughout, the design considerations will be proposed in the context of meeting the aforementioned institutional design principles of Effectiveness, Efficiency, Fairness, Robustness, and Sustainability. For example, the compatibility between membership and scope would illustrate potential Effectiveness, the governing structure would need to reflect the principles of Efficiency and Fairness, etc.

2.5.3. Assessment of Proposed IWCF (Third Objective)

The proposed design criteria will be used to assess the proposed *International Water Cooperation Facility* through a comparative study of the first draft for the facility's design. Recommendations to strengthen the facility to avoid potential barriers to success would then be offered to the Facility Partners prior to the launch expected in 2004.

3. DATA ANALYSIS

This section presents the findings from the global survey, literature review and targeted interviews aimed at addressing the three objectives of this study.

3.1. Assessing the Needs and Role of an IWCF

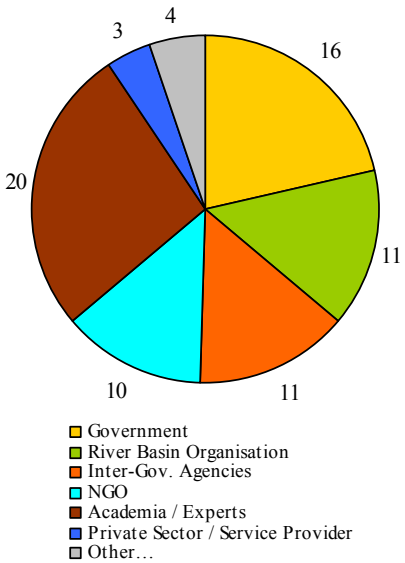
The global survey was the main driver in assessing the need for an International Facility to promote cooperation and provide third-party dispute resolution in transboundary basins. The full survey was divided into three sections: (1) Characterizing the respondent, (2) obstacles to cooperation and the capacity to address these problems, and (3) the desired services and design of an international facility providing third-party assistance. The abbreviated "5-minute" survey was based on the same survey, but restricted questions to those associated with the services desired and the interest in creating an international facility to address these issues. The findings are supported or refuted through the targeted interviews and literature study.

3.1.1. Survey Section 1: Characterization of Respondents

All partial and full survey respondents were requested to complete Section 1 of the questionnaire, which aimed at characterizing the respondents. Figure 3 below illustrates the distribution of the 75 responses when asked which classification best represents their organisation. Responses for the "Other" category included two from governmental research institutes, a legal advisor, and a regional multi-stakeholder platform. For simplicity, the sole "Water Service Provider" respondent and the two "Private Sector Business" respondents were grouped within the "Other" Category for the remaining analyses in this report.

FIGURE 3: Distribution and Grouping of Respondent's Organisations

8	Federal Government
5	National (State/Province) Gov.
3	National Water Authority
11	River Basin Commission
0	Sub-basin (Watershed) Org.
11	Inter-Governmental Agency
0	Municipality
7	NGO
3	Water User Association
0	Concerned citizen group
14	Universities (Academia)
6	Water Expert
1	Water Service Provider **
2	Private Sector Business **
4	Other….
75	TOTAL



On the respondent's experience, roughly 50% indicated that they had more then 15 years in a water related field (Table 7), but the vast majority had less than 10 years experience in promoting cooperation to anticipate, prevent, and/or resolve international water-related disputes through academic research, training, and/or direct assistance, which is not too surprising as the field of water-conflict related work has only recently expanded from the realm of specialists to receive wider attention (Table 8).

TABLE 7: Number of years worked in a water-related field

	TOTAL	GOV	RBO	INT-GOV	NGO	ACAD	PRIV & OTHER
< 5 Years	8	1	1	0	1	4	1
5-10 Years	16	4	3	4	3	2	0
10-15 Years	13	2	2	2	2	3	2
15-20 Years	9	1	2	2	2	2	0
> 20 Years	27	8	2	3	2	8	4

(73 Respondents)

TABLE 8: Number of years worked in promoting cooperation
(to anticipate, prevent, and/or resolve international water-related disputes through academic research, training, and/or direct assistance).

	TOTAL	GOV	RBO	INT-GOV	NGO	ACAD	PRIV & OTHER
< 5 Years	28	7	4	2	4	9	2
5-10 Years	28	6	5	6	5	3	3
10-15 Years	5	2	0	0	0	2	1
15-20 Years	8	1	0	2	0	4	1
> 20 Years	4	0	1	1	1	1	0

(73 Respondents)

The questionnaire allowed the respondent to provide their insights associated with up to three specific transboundary river basins that they had experience working within. Responses were summarised into four regions (Africa, Asia, Europe, Latin America). As only two basins were specified in North America (Columbia and Nelson-Saskatchewan), these were grouped with those general responses without specific region names. These Canada-US basins were not included with those from Central and South America (referred to as Latin America) due to the socio-economic conditions and considerable cooperative arrangements that exist between these two countries in relation to the other basins surveyed. Basins shared between the US and Mexico were included in the Latin American group as the socio-economic differences and physical climate in the region pose larger obstacles towards cooperative arrangements making the basin conditions more similar to others surveyed that the Water Cooperation Facility would aim to assist. The following Tables 9 and Figure 4 illustrate the regional distribution of the responses. A detailed summary of the respondents with respect to basins represented is provided in Appendix A.

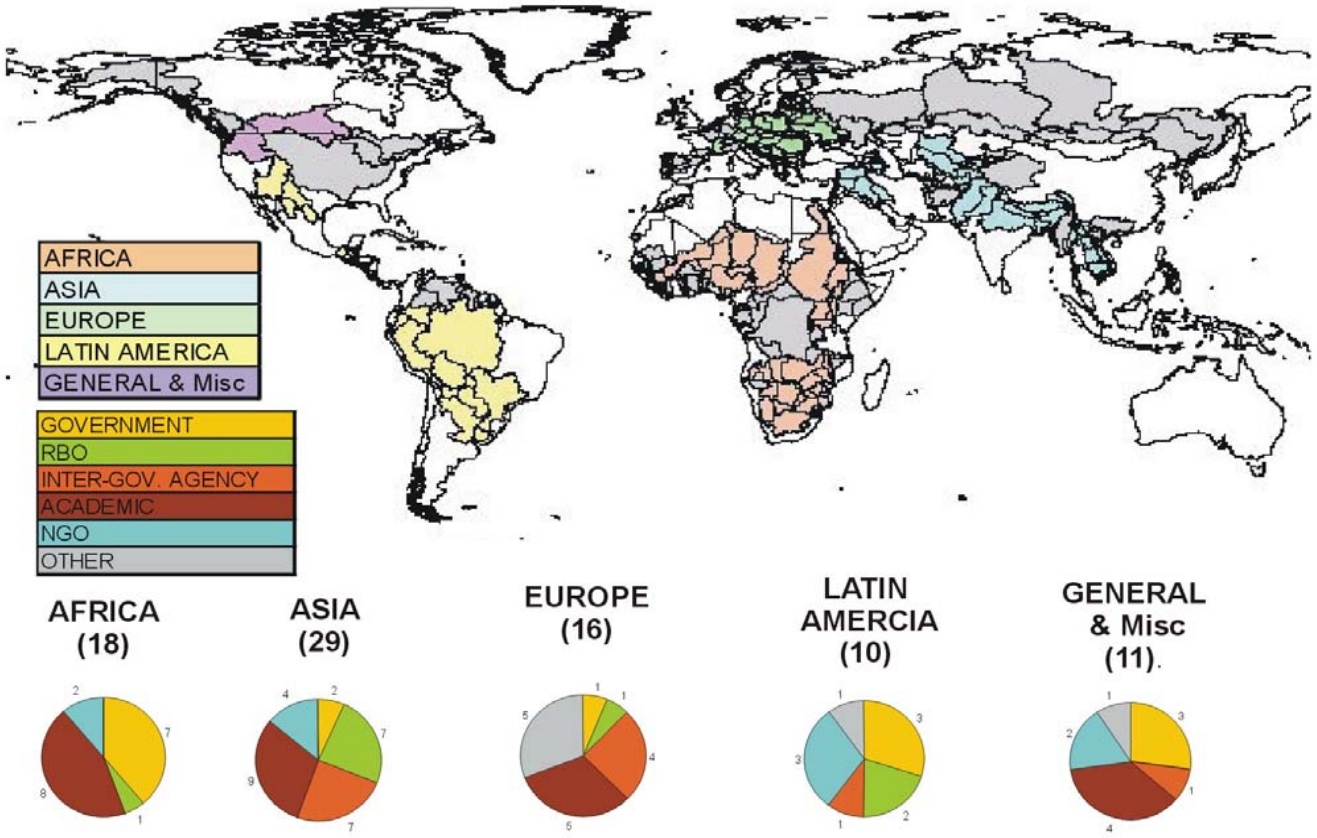
Insights into a broad array of shared river basins well distributed throughout the world have been accumulated through the survey (total of 42 transboundary basins). In addition, these basins included all but three (Han, Ob, and Senegal) that were identified by Wolf et al. as having a potential for dispute or were currently in conflict. However, despite the good regional distribution of the basins and the relatively good overall distribution of the organisations responding, the type of respondent

(organisation) from each region was not well balanced; with Africa being decidedly represented by the Academic community and Government, and no NGO responses in Europe or Academic responses in Latin America. Multiple attempts at soliciting these organisation's representatives were performed. The influence of uneven distribution of organisational responses will be considered during the analysis of the survey data discussed later in this report.

TABLE 9: Regional Distribution of Responses

Total	Partial	Full	**Africa (10, 12)**	Total	Partial	Full	**Asia (11, 13)**	Total	Partial	Full	**Europe (10, 15)**	Total	Partial	Full	**Latin America (11)**	Total	Partial	Full	**General**
9	1	8	Nile	12	2	10	Mekong	5	1	4	Danube	5	4	1	La Plata	8	2	6	GENERAL
2	1	1	Zambezi	7	0	7	Jordan	3	1	2	Dnieper	3	0	3	Lempa	3	1	2	Canada - US
1	0	1	Orange	6	5	1	Ganges	2	1	1	Western Dvina	2	0	2	Amazon				
5	1	4	Limpopo	5	2	3	Aral Sea	1	0	1	Pripyat	2	0	2	Colorado				
3	0	3	Okavango	4	1	3	Caspian Sea	2	0	2	Wisła	1	0	1	Rio Grande				
4	1	3	Incomati	2	1	1	Euphrates-Tigris	2	1	1	Odra	1	0	1	Grijalva				
3	0	3	Kunene	1	0	1	Indus	2	1	1	Elbe	1	0	1	Coatan				
4	0	4	Sabi	1	0	1	Ca / Song-Koi	1	0	1	Scheldt	1	0	1	San Juan				
2	0	2	Lake Chad	1	0	1	Kura and Aras/Araks	1	0	1	Nestos	1	0	1	Cuenca Río Paz				
1	0	1	Pungwe	1	0	1	Disi Aquifer	1	0	1	Black Sea	1	0	1	Sarstun				
				1	0	1	Middle East Region				(Partial Surveys Only)	1	0	1	Lake Titicaca				
			(Partial Surveys Only)				(Partial Surveys Only)	1	1	0	SouthEastern Europe								
1	1	0	Niger	1	1	0	Salween	1	1	0	Roia								
1	1	0	Lake Tanganyika	1	1	0	Tumen	1	1	0	Rhône								
								1	1	0	Narva								
								1	1	0	Nemanus								
36	6	30	TOTAL AFRICA	43	13	30	TOTAL ASIA	25	10	15	TOTAL EUROPE	19	4	15	LATIN AMERICA	11	3	8	GENERAL
15	1	14	Government	4	0	4	Government	1	0	1	Government	4	1	3	Government	3	2	1	Government
1	1	0	RBO	9	2	7	RBO	2	2	0	RBO	4	0	4	RBO	0	0	0	RBO
0	0	0	Intergovernmental Agency	11	7	4	Intergovernmental Agency	6	4	2	Intergovernmental Agency	1	0	1	Intergovernmental Agency	1	0	1	Intergovernmental Agency
15	4	11	Academic	12	1	11	Academic	7	1	6	Academic	0	0	0	Academic	4	1	3	Academic
5	0	5	NGO	7	3	4	NGO	0	0	0	NGO	8	3	5	NGO	2	0	2	NGO
0	0	0	Other	0	0	0	Other	9	3	6	Other	2	0	2	Other	1	0	1	Other

FIGURE 4: Regional Distribution of Survey Response



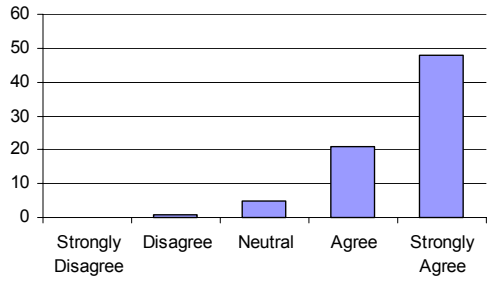
Four Lickert style questions (see adjacent) were asked to determine the respondent's involvement in promoting water cooperation between riparian states and their authority to make decisions that could improve cooperation efforts (and/or approach an international third-party facility for assistance).

The results suggest that the target audience very much believed that improving cooperation between riparian states was highly important on the global water agenda and they were very much involved in improving transboundary waters governance between riparian states.

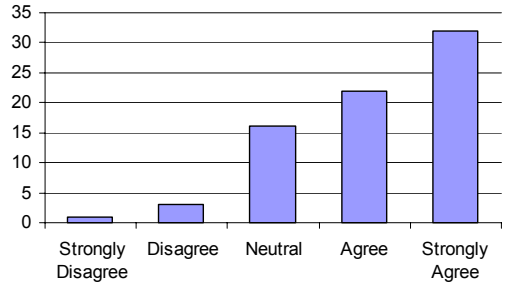
Further, the respondents generally believed they worked within organisations that had the ability to make/affect decisions that could significantly improve the way countries cooperate in sharing their water resources and their personal decision-making ability within their organisation was also high.

Figure 5 on the following page presents the organisational distribution of responses to these four questions with "Involvement" (Question 2) given more weight than the respondent's belief of the "Importance" (Question 1) in improving global transboundary cooperation on the y-axis and the respective "Organisation" (Question 4) and "Personal" (Question 3) decision-making ability aligned on the x-axis.

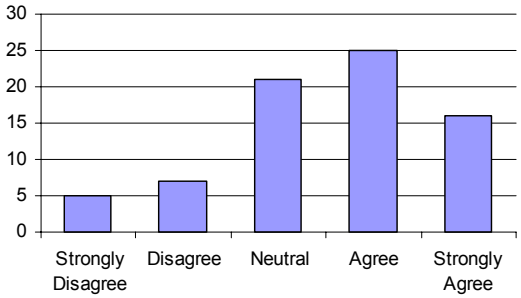
1) Improving cooperation among countries is one of the most important water resources management problems facing the world community.



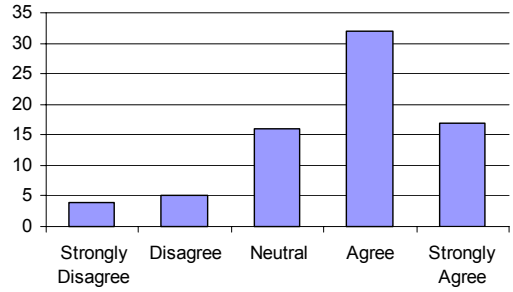
2) You are very much involved in improving cooperation between countries sharing a water resource in an international river basin.



3) Your organization's ability to make/affect decisions that can significantly improve the way countries cooperate in sharing their water resources is high.

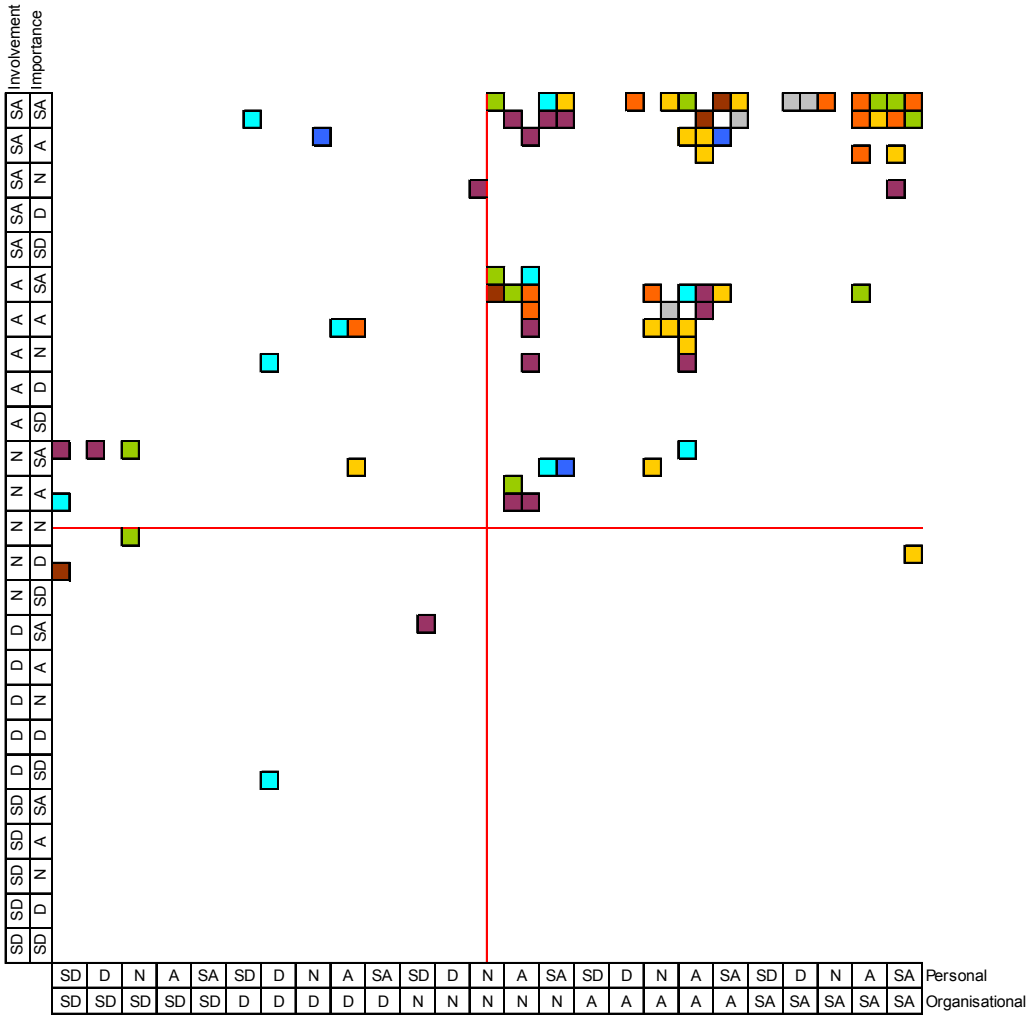


4) Your personal ability to make/affect decisions within your organization is high



The results illustrate that the respondents were within the desired target audience for the questionnaire, being both involved in promoting water cooperation in their respective regions and believing themselves and their organisation had a relatively high authority to make decisions to improve transboundary governance.

FIGURE 5: Organisational Distribution of Respondents
(With respect to Involvement and Decision-Making Ability)



However, as a result of the targeted audience, some biasness arises. By sampling a group of experts very much involved in improving cooperation between countries, it comes as no surprise that their view that improving transboundary governance should be high on the global environmental agenda. Soliciting other water experts (and non-water experts alike) and decision-makers on the importance of improving riparian waters cooperation in relation to other priority development issues such as access to sanitation and clean drinking water, would likely have reduced the perceived need to develop any facility to improve transboundary governance. However, expanding the target audience for the questionnaire was beyond the scope of this study. As a means of assessing the perceived importance of improving transboundary waters governance on the global agenda, interviews with high-ranking decision makers within the field of international development were performed and a comprehensive literature review was

conducted to support or refute the findings. As mentioned earlier, improving transboundary governance has gained considerable recognition on the global agenda over the past decade, including recognition at the G8 Summit in Evian, France in June 2003. While everyone interviewed recognised the importance of improving transboundary governance, some suggested that the complexities associated with addressing these issues motivates international donors to direct their limited funds towards more National objectives of the Millenium Development Goals, and thus lowering its priority on the global agenda. Needless to say, avoiding the problem won't make it go away, but it can be argued that a country cannot adequately participate in improving transboundary waters governance when their own national water policies do not reflect the principles of integrated water resources management.

During the same period that this survey was performed, the World Bank posted a survey of their own on the International Network of Basin Organisations (INBO/RIOB) website. The survey was part of a research project aimed at assessing how the creation of river basin organisations can lead to decentralisation of water resources management to other- lower – levels of decision making. The survey also tried to assess how the creation of River Basin Organisations can lead to improved water resources management results. As such, questions relating to the River Basin Organisation's main objectives and effectiveness of addressing these priorities were raised with respect to water conflicts. In speaking with the World Bank representatives, it was understood that the survey results are currently being analysed and the findings would be posted on their website later this year (http://lnweb18.worldbank.org/ESSD/ardext.nsf/18ByDocName/SectorsandThemesRiverBasinManagementIntegratedRiverBasinManagementProject).

3.1.2. Survey Section 2: Identifying Issues and Capacity

Fifty-six respondents representing 98 basins identified the four most important problems they confronted in improving cooperation between the countries sharing a common water resource. A list of 15 options was provided and additional space for explanation and "Other" problems was available. A total of 409 responses were selected (some respondents provided more than 4 choices), and a summary of the responses as a percentage of the total response was provided in Figure 6, 7 and 8.

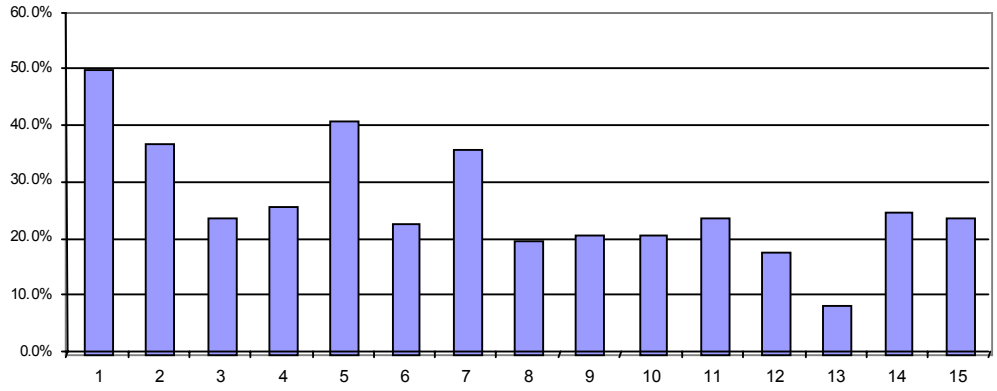
The responses were also analysed with respect to region and actor as illustrated in Table 10 and the associated figures on the following pages. Due to the limited responses representing each sub-category, only the top three most selected responses (instead of 4) for each Region and Actor were highlighted for comparison. Overall, the four largest obstacles to promoting water cooperation in shared basins were:

1 - Insufficient cross-border exchange of information
2 - Political will to create an enabling environment
3 - Lack of stakeholder participation across borders
4 - Insufficient capacity building across all basin states

In considering the overall results and the variability between regions and actors, the primary influences to the overall results were from the respondents from Africa and Asia, representing 61% of the respondents. Of the largest 'obstacles' identified by

these two regions, Latin American basins identified similar problems whereas European respondents weighed their responses more towards joint research and planning and accessing funding sources. In considering the four 'Stages to Cooperation' discussed earlier in the theoretical framework, basins from different regions in different levels of development will no doubt be in differing 'Stages to Cooperation'. Europe's differences with these other regions with respect to socio-economic and legal-institutional aspects (EU Framework) likely contributes to the differences in their greatest 'obstacles'; (1) funding opportunities, (2) Lack of joint research and planning, (3) political will, and (4) the need for dispute resolution mechanisms. It is perhaps more unexpected that the largest obstacles identified were so similar between the three other regions, although the magnitude of these problems would no doubt be significantly different from basin to basin, region to region, and influenced by the perspective of the respondent.

FIGURE 6: Greatest Obstacles to Cooperation



1 - Insufficient cross-border exchange of information (#1 Overall);
2 - Lack of stakeholder participation across borders (#3 Overall);
3 - Lack of crisis procedures / Emergency response plans;
4 - Joint research and planning;
5 - Political will to create an enabling environment (#2 Overall);
6 - Lack of joint development ventures;
7 - Insufficient capacity building across all basin states (#4 Overall);
8 - Lack of dispute resolution mechanisms;
9 - No agreed legal/institutional frameworks;
10 - Basin wide monitoring of water quality and quantity;
11 - Enforcing agreements;
12 - Insufficient education and training;
13 -Cultural / Ethical / Religious tensions
14 - Lack of confidence between disputing parties
15 - Lack of funding opportunities

In considering the differences of the largest obstacles to cooperation from the perspective of the various actors responding to the survey, Government representatives ranked "Political will" relatively low compared to River Basin Organisations, Academics, and NGO's, but indicated that a major problem was the lack of confidence between parties. The differences are likely a result of perspective,

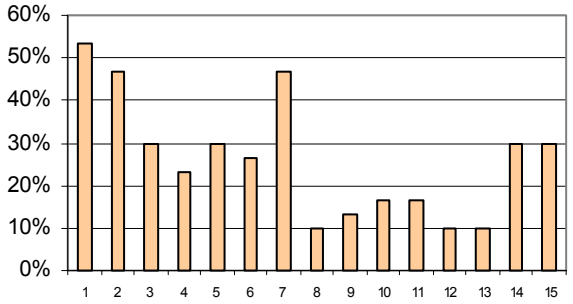
with the government not 'politically willing' to cooperate with another party they had little confidence in. Most respondents generally agreed on the largest obstacles, with the exception of River Basin Organisations that highlighted the lack of Education and Training being a large barrier in their regions (perhaps surprisingly, academics did not identify this as a major problem). That said, the findings should be considered in relation to the limited number of respondents, so it is important not to read too much into these findings. However, these findings are valuable as they can provide a comparison between the 'problems identified' by a respondent with respect to the 'desired third-party assistance services' these same respondents requested. Do the desired services address the identified problems? This will be discussed later in this report.

TABLE 10: Largest Obstacles to Water Cooperation		TOTAL		REGIONS										ACTORS													
				AFRICA		ASIA		EUROPE		LATIN AMERICA		GENERAL & Misc.		Government (12)		Water Commission (8)		NGO (8)		Academia / Experts (17)		Inter-Gov. Agency (6)		Other (5)	
Insufficient cross-border exchange of information;	1	49	50%	16	53%	17	57%	6	40%	6	40%	4	50%	15	65%	5	45%	7	44%	13	42%	5	63%	4	44%
Lack of stakeholder participation across borders;	2	36	37%	14	47%	7	23%	5	33%	7	47%	3	38%	12	52%	2	18%	7	44%	8	26%	5	63%	2	22%
Lack of crisis procedures / Emergency response plans;	3	23	23%	9	30%	4	13%	4	27%	5	33%	1	13%	10	43%	2	18%	0	0%	4	13%	2	25%	5	56%
Joint research and planning;	4	25	26%	7	23%	5	17%	7	47%	5	33%	1	13%	4	17%	4	36%	3	19%	11	35%	2	25%	1	11%
Political will to create an enabling environment;	5	40	41%	9	30%	21	70%	6	40%	2	13%	2	25%	8	35%	6	55%	8	50%	14	45%	2	25%	2	22%
Lack of joint development ventures;	6	22	22%	8	27%	9	30%	1	7%	2	13%	2	25%	8	35%	1	9%	5	31%	5	16%	2	25%	1	11%
Insufficient capacity building across all basin states;	7	35	36%	14	47%	11	37%	3	20%	6	40%	1	13%	10	43%	3	27%	6	38%	9	29%	3	38%	4	44%
Lack of dispute resolution mechanisms;	8	19	19%	3	10%	5	17%	4	27%	4	27%	3	38%	5	22%	2	18%	2	13%	6	19%	2	25%	2	22%
No agreed legal/institutional frameworks;	9	20	20%	4	13%	8	27%	1	7%	4	27%	3	38%	1	4%	3	27%	4	25%	6	19%	5	63%	1	11%
Basin wide monitoring of water quality and quantity;	10	20	20%	5	17%	6	20%	2	13%	6	40%	1	13%	6	26%	4	36%	2	13%	4	13%	2	25%	2	22%
Enforcing agreements;	11	23	23%	5	17%	11	37%	4	27%	0	0%	3	38%	4	17%	2	18%	2	13%	12	39%	2	25%	1	11%
Insufficient education and training;	12	17	17%	3	10%	3	10%	0	0%	10	67%	1	13%	2	9%	6	55%	5	31%	2	6%	0	0%	2	22%
Cultural / Ethical / Religious tensions	13	8	8%	3	10%	1	3%	2	13%	0	0%	2	25%	2	9%	0	0%	1	6%	3	10%	2	25%	0	0%
Lack of confidence between disputing parties	14	24	24%	9	30%	11	37%	1	7%	0	0%	3	38%	11	48%	0	0%	3	19%	6	19%	3	38%	1	11%
Lack of funding opportunities	15	23	23%	9	30%	4	13%	8	53%	1	7%	1	13%	6	26%	4	36%	1	6%	8	26%	2	25%	2	22%
TOTAL Number of Basins Represented:		98		30		30		15		15		8		23		11		16		31		8		9	

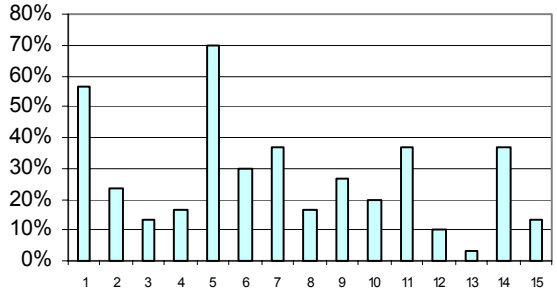
Note: 1 - Brackets () adjacent to Actor's Category indicates the number of respondents.
2 - Due to the limited responses representing each sub-category, only the top three most selected responses were highlighted. Those with 3 responses or less were ignored for simplicity.

FIGURE 7: Obstacles to Cooperation (Regional Perspective)

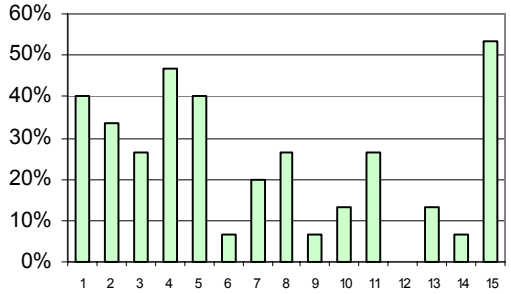
AFRICA (30)



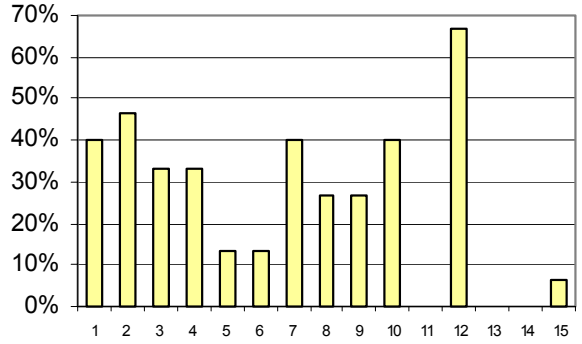
ASIA (30)



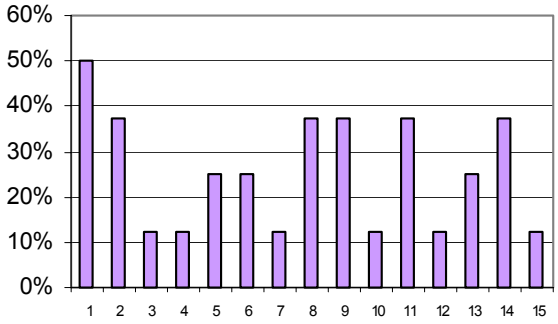
EUROPE (15)



LATIN AMERICA (15)



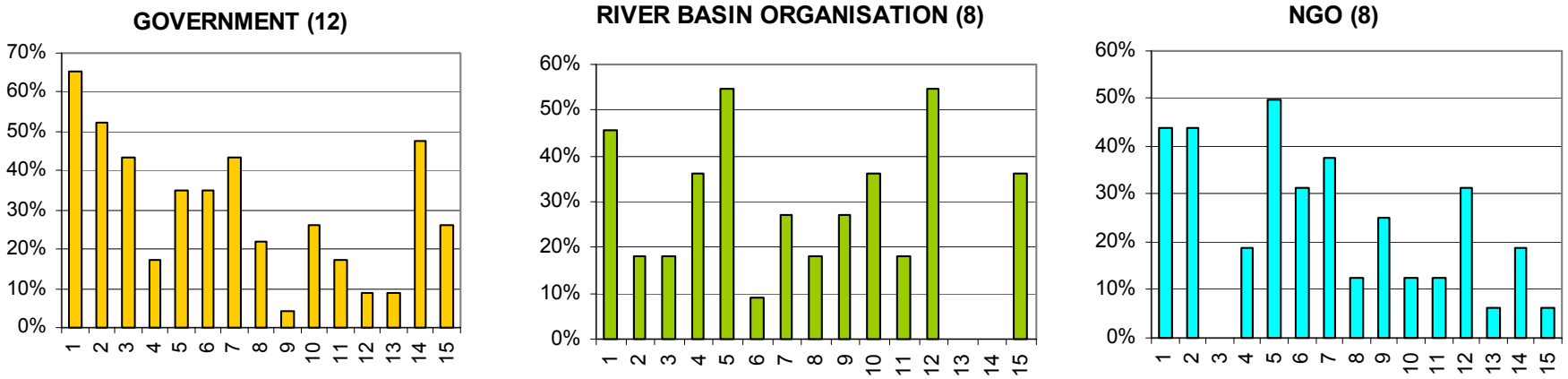
GENERAL & Misc (8)

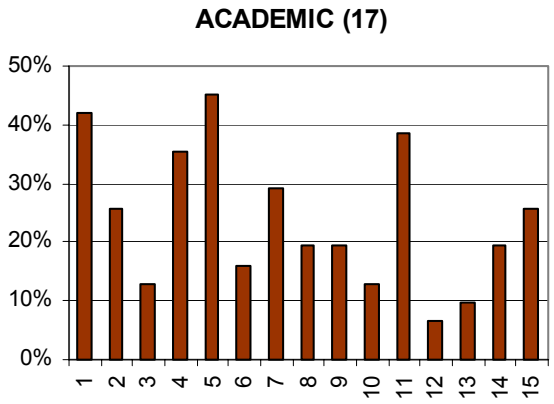


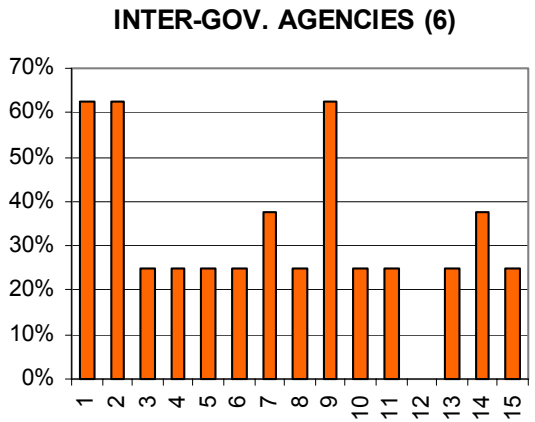
1 - Insufficient cross-border exchange of information;
2 - Lack of stakeholder participation across borders;
3 - Lack of crisis procedures / Emergency response plans;
4 - Joint research and planning;
5 - Political will to create an enabling environment;
6 - Lack of joint development ventures;
7 - Insufficient capacity building across all basin states;
8 - Lack of dispute resolution mechanisms;
9 - No agreed legal/institutional frameworks;
10 - Basin wide monitoring of water quality and quantity;
11 - Enforcing agreements;
12 - Insufficient education and training;
13 -Cultural / Ethical / Religious tensions
14 - Lack of confidence between disputing parties

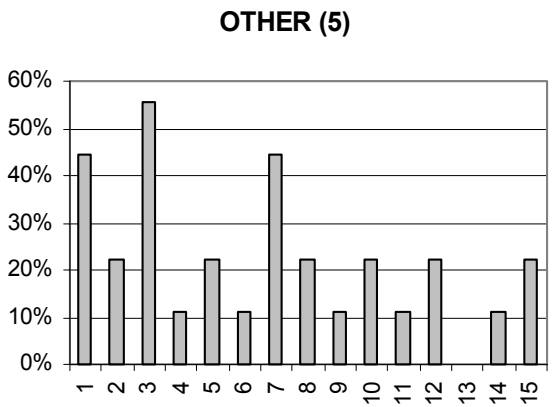
15 - Lack of funding opportunities

FIGURE 8: Obstacles to Cooperation (Organisational Perspective)




ACADEMIC (17)
50%
40%
30%
20%
10%
0%
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15


INTER-GOV. AGENCIES (6)
70%
60%
50%
40%
30%
20%
10%
0%
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15


OTHER (5)
60%
50%
40%
30%
20%
10%
0%
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15

Question 2 of this section asked the respondent to identify who was providing the services (or assisting the stakeholders) to improve cooperation with the basins they had identified. The purpose of this question was to assess the perceived capacity within regions to provide the services the International Water Cooperation Facility aimed to offer. The respondents had the options of selecting any number of the following categories for each service listed:

a) **YOUR ORGANISATION** provides the service.
b) The service is provided or assisted by another organisation that you know of within the region (**REGIONAL EXPERT**).
c) You know that the service (or associated assistance) is unavailable or is not performed in the Basin (**NONE / NOT PERFORMED**).
d) You're uncertain whether or not the service can be obtained (**DON'T KNOW**).

In order to evaluate the findings, the number of combined responses for "Your Organisation" and "Regional Expert" were compared with those of "None / Not Performed" and "Don't Know". By doing so, it illustrates the frequency of whether or not a respondent believed the service was available within the region or not. The results do *not* provide insights into the amount of capacity within the region, nor whether it is sufficient to meet the needs (this question is asked later in the survey). Overlap between respondents identifying services performed by "Regional Experts" with other organisations responding has likely occurred, and not knowing whether or not a service is available is indeed different from a service not being performed at all – or not available when desired for that matter. As such, the grouping of the categories is solely for the purposes of identifying the frequency in which a respondent would indicate that a service relating to improving cooperation between states was currently available within a region. Adding some difficulty to the interpretation of the results was the relatively low response rate for this question. Firstly, this question was not included on the partial survey so only 98 basins representatives were solicited, but of these, only 63 responses were sufficiently completed. Secondly, a few respondents indicated only those services that their organisation alone performed within the region and left the remaining service responses blank, others indicated that the service was provided by both them *and* a regional expert, which may be appropriate, but would unfairly skew the interpretation of the results. In these circumstances, the researcher selected "Don't Know" for those incomplete services in the questionnaire, and selected "Your Organisation" only for those who indicated that regional expertise also existed in the basin. Table 11 and Figure 9 provides the results without any manipulation ("Actual"), and Table 12 and Figure 10 provides the results when the responses were "Adjusted" to ensure one response per service was selected.

In general, the results indicate that the majority of respondents believed that services to improve cooperation between states over their water resources were available in the basins assessed. Every service was acknowledged by at least one respondent to be available within the basins assessed. In considering the "Actual" responses, over 58% of respondents believed the services were available within the basin, with the exception of 'Arbitration', which only 43% responded believing regional availability. When the responses are "Adjusted", other services such as 'Impartial Third-Party Advise', assistance 'Creating Joint Development Ventures', 'Enforcing Agreements'

TABLE 11: Regional Capacity to Provide Services		TOTAL			AFRICA			ASIA			EUROPE			LATIN AMERICA		
		No. Responses	In the Region	Not Performed / Don't Know	No. Responses	In the Region	Not Performed / Don't Know	No. Responses	In the Region	Not Performed / Don't Know	No. Responses	In the Region	Not Performed / Don't Know	No. Responses	In the Region	Not Performed / Don't Know
- Convening parties;	1	69	87%	13%	26	85%	15%	23	87%	13%	11	91%	9%	9	89%	11%
- Design of dispute management systems;	2	52	69%	31%	17	59%	41%	20	75%	25%	7	100%	0%	8	50%	50%
- Facilitating joint fact-finding arbitration;	3	58	67%	33%	20	50%	50%	22	82%	18%	9	89%	11%	7	43%	57%
- Basin-wide access to knowledge and tools;	4	68	82%	18%	25	76%	24%	21	81%	19%	14	100%	0%	8	75%	25%
- Assess dispute situations and needs;	5	60	62%	38%	19	53%	47%	23	65%	35%	11	82%	18%	7	43%	57%
- Mediation / Facilitating;	6	60	65%	35%	21	71%	29%	22	64%	36%	8	75%	25%	9	44%	56%
- Arbitration;	7	51	43%	57%	18	50%	50%	21	38%	62%	5	60%	40%	7	29%	71%
- Impartial third party advice;	8	48	63%	38%	15	60%	40%	20	75%	25%	6	50%	50%	7	43%	57%
- Enforcing agreements;	9	57	58%	42%	18	44%	56%	22	45%	55%	9	89%	11%	8	88%	13%
- Diagnosing conflict	10	61	77%	23%	22	77%	23%	22	68%	32%	10	100%	0%	7	71%	29%
- Designing, implementing and adapting institutional and legal frameworks;	11	58	88%	12%	21	86%	14%	20	85%	15%	9	100%	0%	8	88%	13%
- Assistance in accessing financial resources;	12	64	88%	13%	23	87%	13%	22	77%	23%	11	100%	0%	8	100%	0%
- Implementation of agreements	13	66	79%	21%	24	88%	13%	25	64%	36%	9	78%	22%	8	100%	0%
- Participation and stakeholder identification	14	71	80%	20%	26	81%	19%	23	70%	30%	14	86%	14%	8	100%	0%
- Establishing joint technical committees;	15	65	82%	18%	22	77%	23%	25	88%	12%	11	100%	0%	7	43%	57%
- Creating joint development ventures;	16	53	60%	40%	19	58%	42%	21	67%	33%	5	60%	40%	8	50%	50%
- Best practices analysis and cooperation identification	17	61	79%	21%	18	61%	39%	24	88%	13%	10	100%	0%	9	67%	33%
- Performing joint research projects (modeling, data collection);	18	64	86%	14%	23	78%	22%	24	88%	13%	10	100%	0%	7	86%	14%
- Stakeholder advisory committees;	19	64	66%	34%	26	69%	31%	21	48%	52%	8	75%	25%	9	89%	11%
- Community advisory committees;	20	51	61%	39%	17	82%	18%	20	35%	65%	5	40%	60%	9	89%	11%
- Political Engagement;	21	63	81%	19%	22	91%	9%	23	70%	30%	9	89%	11%	9	78%	22%
- Education and training;	22	72	88%	13%	25	80%	20%	24	96%	4%	13	85%	15%	10	90%	10%
- Capacity building;	23	75	88%	12%	27	81%	19%	26	96%	4%	13	85%	15%	9	89%	11%
- Research for the anticipation /prevention /resolution of water conflicts	24	61	70%	30%	23	57%	43%	23	83%	17%	6	83%	17%	9	67%	33%

Note: Response rates of 50% or higher of those Services that the respondent knew were not performed in the basin were highlighted.

TABLE 12: Regional Capacity to Provide Services (ADJUSTED)		TOTAL			AFRICA			ASIA			EUROPE			LATIN AMERICA		
		# Responses	In the Region	Not Performed / Didn't Know	# Responses	In the Region	Not Performed / Didn't Know	# Responses	In the Region	Not Performed / Didn't Know	# Responses	In the Region	Not Performed / Didn't Know	# Responses	In the Region	Not Performed / Didn't Know
- Convening parties;	1	63	81%	19%	25	76%	24%	20	80%	20%	10	90%	10%	8	88%	13%
- Design of dispute management systems;	2	63	56%	44%	25	40%	60%	20	75%	25%	10	70%	30%	8	38%	63%
- Facilitating joint fact-finding arbitration;	3	63	60%	40%	25	44%	56%	20	80%	20%	10	80%	20%	8	38%	63%
- Basin-wide access to knowledge and tools;	4	63	79%	21%	25	72%	28%	20	80%	20%	10	100%	0%	8	75%	25%
- Assess dispute situations and needs;	5	63	51%	49%	25	36%	64%	20	60%	40%	10	80%	20%	8	38%	63%
- Mediation / Facilitating;	6	63	56%	44%	25	60%	40%	20	60%	40%	10	50%	50%	8	38%	63%
- Arbitration;	7	63	33%	67%	25	36%	64%	20	35%	65%	10	30%	70%	8	25%	75%
- Impartial third party advice;	8	63	44%	56%	25	36%	64%	20	65%	35%	10	30%	70%	8	38%	63%
- Enforcing agreements;	9	63	49%	51%	25	36%	64%	20	40%	60%	10	80%	20%	8	75%	25%
- Diagnosing conflict	10	63	71%	29%	25	68%	32%	20	65%	35%	10	100%	0%	8	63%	38%
- Designing, implementing and adapting institutional and legal frameworks;	11	63	76%	24%	25	72%	28%	20	75%	25%	10	90%	10%	8	75%	25%
- Assistance in accessing financial resources;	12	63	84%	16%	25	80%	20%	20	75%	25%	10	100%	0%	8	100%	0%
- Implementation of agreements	13	63	75%	25%	25	84%	16%	20	60%	40%	10	70%	30%	8	88%	13%
- Participation and stakeholder identification	14	63	73%	27%	25	72%	28%	20	65%	35%	10	70%	30%	8	100%	0%
- Establishing joint technical committees;	15	63	73%	27%	25	68%	32%	20	85%	15%	10	90%	10%	8	38%	63%
- Creating joint development ventures;	16	63	49%	51%	25	44%	56%	20	65%	35%	10	30%	70%	8	50%	50%
- Best practices analysis and cooperation identification	17	63	63%	37%	25	44%	56%	20	85%	15%	10	70%	30%	8	63%	38%
- Performing joint research projects (modeling, data collection);	18	63	73%	27%	25	52%	48%	20	85%	15%	10	100%	0%	8	75%	25%
- Stakeholder advisory committees;	19	63	63%	37%	25	68%	32%	20	50%	50%	10	60%	40%	8	88%	13%
- Community advisory committees;	20	63	48%	52%	25	56%	44%	20	35%	65%	10	20%	80%	8	88%	13%
- Political Engagement;	21	63	71%	29%	25	76%	24%	20	65%	35%	10	70%	30%	8	75%	25%
- Education and training;	22	63	83%	17%	25	72%	28%	20	95%	5%	10	80%	20%	8	88%	13%
- Capacity building;	23	63	81%	19%	25	72%	28%	20	95%	5%	10	70%	30%	8	88%	13%
- Research for the anticipation /prevention /resolution of water conflicts	24	63	57%	43%	25	40%	60%	20	80%	20%	10	50%	50%	8	63%	38%

Note: Response rates of 50% or higher of those Services that the respondent knew / or did know were not performed in the basin were highlighted.

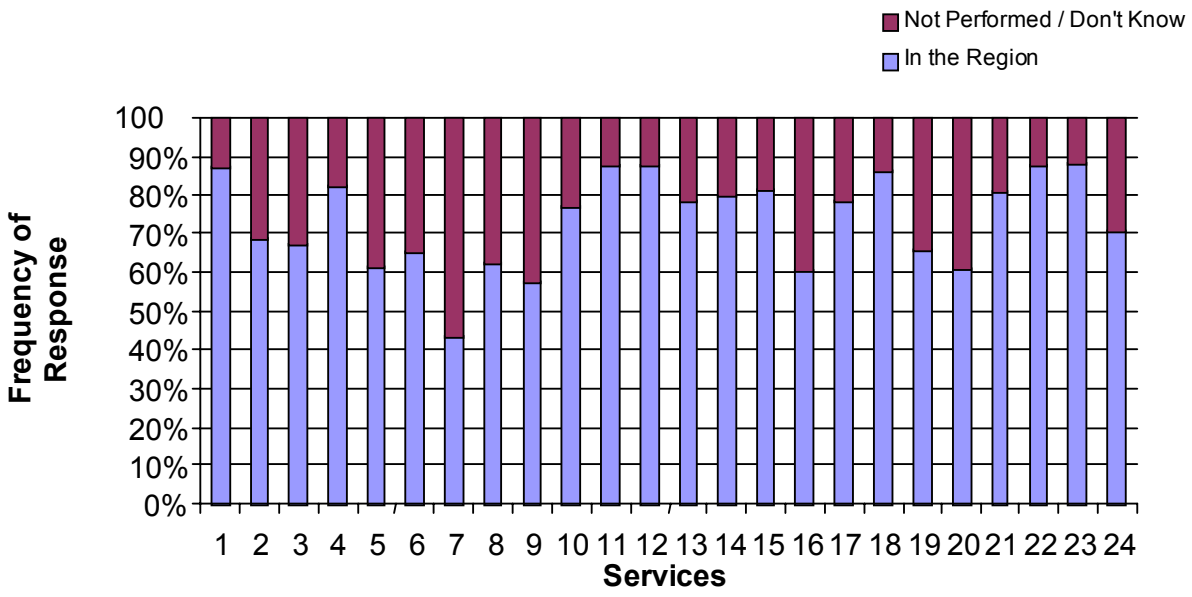


FIGURE 9: Regional Capacity to Provide Services

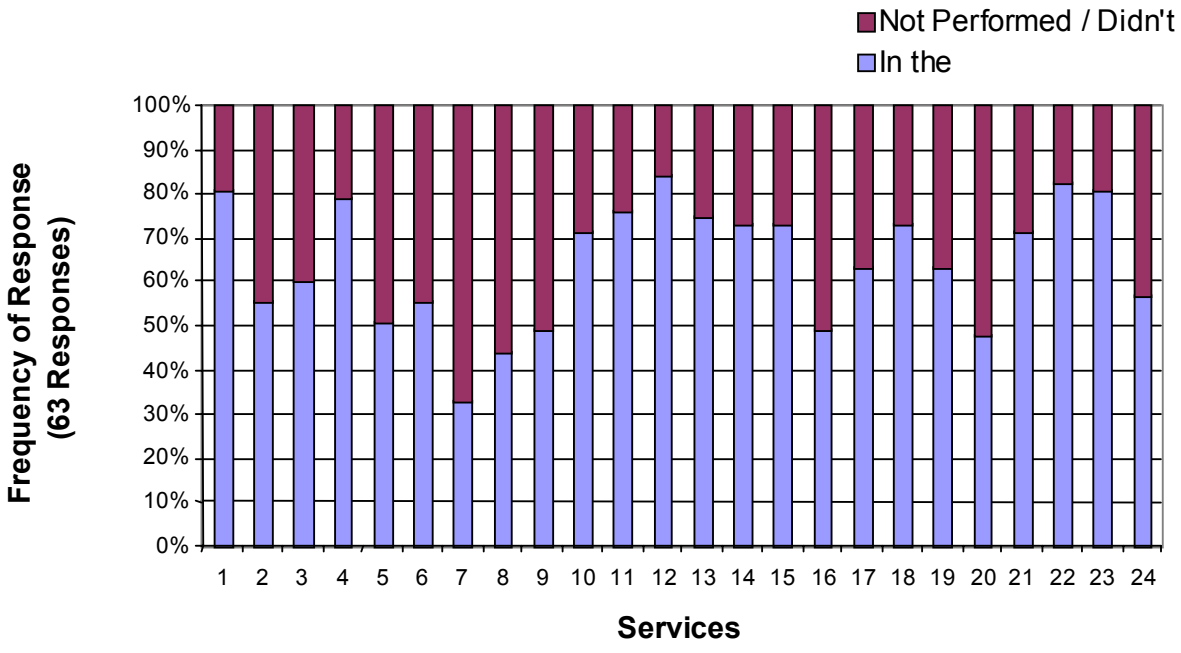
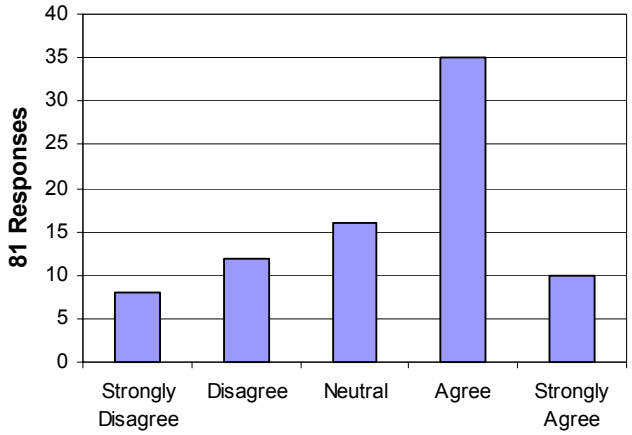


FIGURE 10: Regional Capacity to Provide Services (Adjusted)

and assistance in establishing 'Community advisory committees' had a potential respondent uncertainty of 50% or more. These results may suggest that there's a relatively high number of respondents unfamiliar with the availability of some services in the basin, which would be an argument for better awareness raising and coordination / cooperation between organisations within the basin, or the result could suggest that a relatively high percentage of respondents were not familiar with the availability of the service because the demand for the service in their occupation (or in general basin-wide) has historically been low and the service has never been sought. The assessment of the perceived availability of capacity within each region is difficult from an internet-based survey with limited time constraints, and additional insights for the sub-regions was difficult to determine as the number of responses were too low for meaningful comparison (particularly in Europe and Latin America despite multiple efforts to increase the response rate in these regions). Further, interpretations of the services varied based on the respondent – a review of two submissions for the same transboundary basin illustrated a difference in opinion between the Director of the Ministry of Water Resources and the Deputy Director of Planning for the same office on the regional capacity on 6 of the 24 services listed (and some differences between whether or not their office provided some of these services). Despite these deficiencies, the question does serve the purpose of providing some insight into the perception of the available capacities within the various basins, or a lack of basin-wide knowledge of available services that could potentially be offered by the International Water Cooperation Facility.

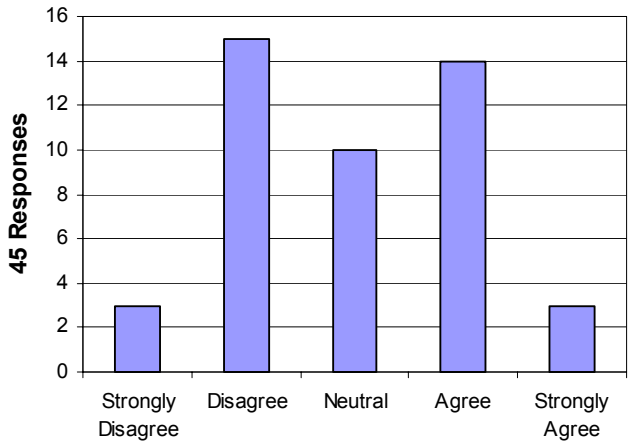
An effort to determine additional insights into the regional capacities was made through a Likert-Scale question posed in Section 3 of the full survey. Representing 81 basins, respondents were asked if an International Cooperation Facility should be created because other service providers within the regions of the international basins identified could not adequately provide the third party assistance services desired. The response is provided below to gain some additional insights.

An "International Cooperation Facility" should be created because other service providers operating within the regions of the international basins you identified cannot adequately provide third-party assistance services you desire to promote cooperation between riparian states.



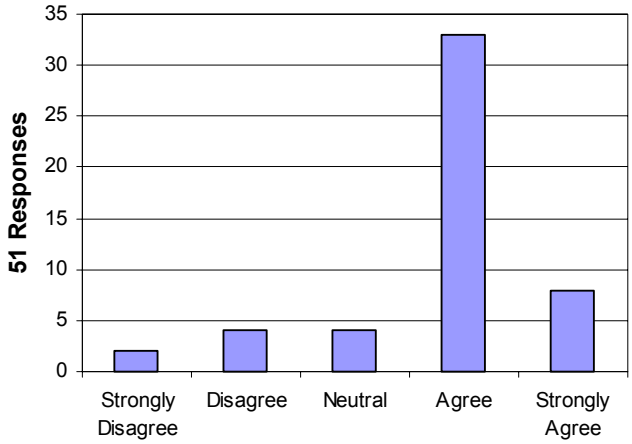
The response indicates that a significant majority of respondents believed that the organisations within the basins they represented could not provide services that were sufficiently adequate to promote cooperation between riparian states. Given that this is the case and there is an identified capacity gap in the provision of services to promote water cooperation between riparian states, there could be two plausible solutions to address the problem: (1) provide regional service providers the financial assistance and tools necessary to develop their capacity to address the needs, and (2) create a new international entity with sufficient capacity and recognition to fill the capacity gaps in the various basins. When indirectly asked whether or not a new international organisation would be welcome to provide services to improve cooperation between riparian states, 45 responses provided mixed results:

There are already too many International organizations involved in improving cooperation between riparian states sharing a water resource.



Needless to say, any number of international organisations with overlapping services could be considered as "too many". The response therefore can also reflect the respondent's opinion on whether or not more cooperation and coordination is required between international assistance agencies working in transboundary basins. When asked a question associated with improving coordination of regional and international organisations within the basin, 51 respondents overwhelmingly agreed that tools such as a common 'notice board' would be of value.

If the "International Cooperation Facility" provided a common 'notice board' for development agencies, NGOs, community groups, governments, and other service providers working within the basin to notify one another of their work activities in order to identify potential cooperative efforts amongst themselves, you believe your organization would need (use) such a service.



As this response indicates that additional coordination between international and regional organisations is desired within shared basins (which is consistent with the awareness of those previously mentioned obstacles to good global governance), and presuming that this current lack of coordination and overlapping of tasks and services influenced the previous question relating to whether or not too many international organisations exist, it can be assumed that a new international organisation would be accepted to fill in the capacity gaps noted. The responses to the 3rd Section of the questionnaire aim to support or refute this hypothesis.

3.1.3. Survey Section 3: Desired Services

The third and final section of the questionnaire attempted to determine the respondent's interest in having an International Water Cooperation Facility created, the services they desired to be offered, the perception of the proposed organisation's ability to lead the Facility, and the likelihood of cost-recovery from the basin states for the services offered.

All 75 respondents (representing 134 basins) were asked to identify the four most desired third-party assistance services from an International Water Cooperation Facility in the basins in which they had experience (Tables 13 & 14, Figures 11-14). Unfortunately, a number of respondents included more than 4 selections of services without distinct prioritization of the services, which may over-represent some services that would not otherwise be selected (two responses representing 4 basins were discarded as *all* services were selected). The following four services had the highest response rate:

1) Assistance in accessing financial resources (45% of respondents)
2) Capacity building (36%)
3) Basin-wide access to knowledge and tools (34%)
4) Assistance in Convening Parties (including providing good offices) (28%)

In assessing the regional distribution, respondents representing Asian basins were twice as likely to request assistance in convening parties, while European basin representatives responded twice as favourably to assistance in designing dispute management systems. Africa had significantly higher response rate relative to the others with respect to requests for diagnosing conflict and also much higher on Education / Training and Capacity Building (although Academics made up 42% of the responses from the African region, and it should be no surprise that they too responded favourably to these services). Finally, Latin American basins had a much higher response rate relative to the other regions with respect to designing, implementing, and adapting institutional and legal frameworks. Excessive analysis of the sub-group responses (regions / actors) is not recommended due to the limited sample of respondents in these sub-groups. However, the overall results do illustrate that third-party services such as mediation and arbitration had a relatively low priority relative to the other services. While it is recognised that respondents would generally acknowledge the need for these services after all else has failed, "Arbitration" was also considered by the majority of respondents to be 'not available or not performed' within the basins surveyed. As such, a low desire for the service would suggest the regional capacity does not exist because it is not sought after. Considering that the proposal for the International Water Cooperation Facility arose from the (PC→CP): Water for Peace Programme recommendations to create a "Water Mediation Facility", the decision to replace "*Mediation*" with "*Cooperation*" when the initiative was first announced in Kyoto appears well-advised as the name of the Facility would immediately develop perceptions of an available service that does not appear to be too much in demand.

As previously mentioned, the PC→CP recommendations also proposed the creation of an International Shared Waters Facility (like the Swedish Proposal) to support the

activities of the "*Mediation Facility*". Through conversations with water experts familiar with these two proposals, it was understood that one of the main aims of both "International Shared Waters Facilities" proposed would be to direct donor funds to some of the smaller basins (with equally pressing conflicts) that cannot access the financial resources that larger "high profile" basins such as the Mekong and Nile receive. An additional argument was that many funds were directed towards the first two 'stages of cooperation' (Developing a Shared Vision), but once that vision was defined, there was significant barriers towards accessing funds for the second stages of "Implementation of the Vision" which were often more capital intensive in an investment environment that is generally risky. As such, the overwhelming survey requests for "Assistance in Accessing Financial Resources" (45% of respondents) suggests that there is a lack of funding opportunities for many basins in the world and an "International Shared Waters Facility" to coordinate funds would be very much needed and well received. The survey did not ask the respondent which "stage of cooperation" they felt relations between riparian states were in, but the other three desired services with high survey responses would generally relate to services required during the first two stages of cooperation, the initiation process and institutional development. Regardless, it should be expected that different basins within all regions will be in different stages of cooperation (i.e. European basins identifying 2nd Stage problems in Section 1) and require different services at different times, so any service provider intending on offering a "one-stop-shop" would have to have a significant capacity to provide various services and have sufficient flexibility to meet the arising demands.

In comparing those desired services with those 'obstacles to cooperation', the survey respondents generally requested the services needed to address the identified obstacles, where capacity building (ranked #2) was requested to address the insufficient capacity building across basin states (#4), basin-wide access to knowledge and tools (#3) may have been selected to address the insufficient cross-border exchange of information (#1), and assistance convening parties (#4) would likely help in improving political will (#2). The issue of "Lack of Stakeholder Participation" (ranked #3 of obstacles) was moderately requested through assistance in participation and stakeholder identification (12%) and in organizing and assisting stakeholder advisory committees (19%). Interestingly, "Lack of Funding Opportunities" ranked 6th on the earlier survey question associated with obstacles to cooperation, less than ½ the number of respondents citing "Insufficient cross-border exchange of information". This could suggest that anyone being asked if they want more money will always support the idea, but it is also very likely that the priorities were reflected differently on this survey as assistance accessing additional financial resources would alleviate the difficulties in regular operating and maintenance costs of vital basin monitoring and information systems that would increase the cross-border exchange of information.

The respondents were asked to list the three most important conditions under which their organisation would employ third-party assistance from an international facility to improve cooperation between riparian states in their regions. Many respondents did not complete the open-answer question, and many more simply re-iterated the services that they would seek from such a facility. Those who did respond reflecting either character or timing indicated credibility, competence and experience, objectivity, impartiality, acceptance among riparians, professionalism, and moral and

political leverage as positive traits. By interpreting the question as the surrounding conditions in which the Facility would be approached, respondents indicated the timing would be related to when all parties agreed to approach the facility, when a clear donor commitment existed, when experts were not available within their organisation or the region, and when there was a long record of hostility and suspicion of existing organisation in the region.

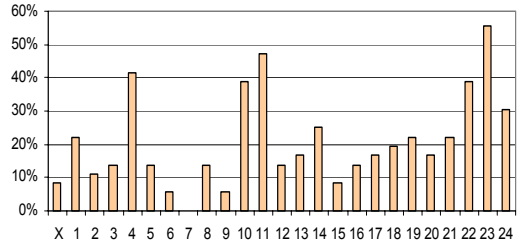
The question posed did not receive the desired response rate, nor the candid comments that would be required to have a clear understanding of exactly when riparians would approach an international third-party facility for assistance in these matters. This is partly due to the fact that the respondents did not have a comprehensive description of the proposed facility (as none currently exists), and partly due to the restricted means in which this information was sought through an electronic survey. Further direct consultations with those high-ranking officials who would approach the Facility would be required prior to its development.

TABLE 13: Desired Services by Region	TOTAL			AFRICA		ASIA		EUROPE		LATIN AMERICA		GENERAL & Misc.	
No Third-Party Assistance is needed.	X	8	6.2%	3	8%	1	2.3%	2	8%	1	6%	1	9%
- Assisting in convening parties;	1	36	27.7%	8	22%	17	40%	5	21%	4	25%	2	18%
- Design of dispute management systems;	2	26	20.0%	4	11%	10	23%	7	29%	1	6%	4	36%
- Facilitating joint fact-finding arbitration;	3	24	18.5%	5	14%	11	26%	5	21%	1	6%	2	18%
- Basin-wide access to knowledge and tools;	4	44	33.8%	15	42%	11	26%	9	38%	7	44%	2	18%
- Assess dispute situations and needs;	5	12	9.2%	5	14%	3	7%	2	8%	2	13%	0	0%
- Mediation / Facilitating;	6	13	10.0%	2	6%	4	9%	3	13%	1	6%	3	27%
- Arbitration;	7	7	5.4%	0	0%	4	9%	3	13%	0	0%	0	0%
- Impartial third party advice;	8	19	14.6%	5	14%	10	23%	1	4%	3	19%	0	0%
- Enforcing agreements;	9	14	10.8%	2	6%	7	16%	4	17%	1	6%	0	0%
- Diagnosing conflict;	10	24	18.5%	14	39%	7	16%	0	0%	3	19%	0	0%
- Assistance in accessing financial resources;	11	59	45.4%	17	47%	19	44%	10	42%	9	56%	4	36%
- Implementation of agreements;	12	11	8.5%	5	14%	2	5%	3	13%	0	0%	1	9%
- Participation and stakeholder identification	13	15	11.5%	6	17%	1	2%	4	17%	3	19%	1	9%
- Establishing joint technical committees;	14	24	18.5%	9	25%	6	14%	4	17%	4	25%	1	9%
- Creating joint development ventures;	15	16	12.3%	3	8%	9	21%	4	17%	0	0%	0	0%
- Best practices analysis and cooperation identification;	16	34	26.2%	5	14%	14	33%	7	29%	4	25%	4	36%
- Performing joint research projects (modeling, data collection);	17	18	13.8%	6	17%	7	16%	3	13%	2	13%	0	0%
- Designing, implementing and adapting institutional and legal frameworks;	18	35	26.9%	7	19%	12	28%	4	17%	8	50%	4	36%
- Organize and assist stakeholder advisory committees;	19	24	18.5%	8	22%	7	16%	6	25%	2	13%	1	9%
- Organize and assist community advisory committees;	20	18	13.8%	6	17%	5	12%	4	17%	3	19%	0	0%
- Encouraging political engagement;	21	31	23.8%	8	22%	14	33%	3	13%	2	13%	4	36%
- Education and training;	22	29	22.3%	14	39%	8	19%	3	13%	3	19%	1	9%
- Capacity building;	23	47	36.2%	20	56%	15	35%	6	25%	6	38%	0	0%
- Research related to the anticipation /prevention /resolution of water conflicts	24	33	25.4%	11	31%	8	19%	6	25%	7	44%	1	9%
TOTAL BASINS:		130		36		43		24		16		11	

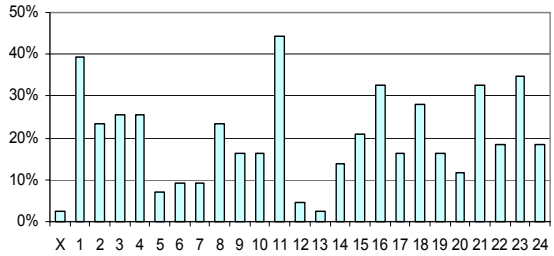
TABLE 14: Desired Services by Actor	TOTAL			Government		Intergov. Agency		RBO		Academic		NGO		Other	
No Third-Party Assistance is needed.	X	8	6.2%	3	11%	1	5%	3	23%	1	3%	0	0%	0	0%
- Assisting in convening parties;	1	36	27.7%	11	41%	7	37%	4	31%	11	29%	1	5%	2	18%
- Design of dispute management systems;	2	26	20.0%	6	22%	2	11%	2	15%	8	21%	4	18%	4	36%
- Facilitating joint fact-finding arbitration;	3	24	18.5%	3	11%	5	26%	3	23%	9	24%	1	5%	3	27%
- Basin-wide access to knowledge and tools;	4	44	33.8%	9	33%	6	32%	3	23%	15	39%	5	23%	6	55%
- Assess dispute situations and needs;	5	12	9.2%	2	7%	2	11%	0	0%	1	3%	3	14%	4	36%
- Mediation / Facilitating;	6	13	10.0%	3	11%	4	21%	0	0%	4	11%	2	9%	0	0%
- Arbitration;	7	7	5.4%	1	4%	1	5%	0	0%	1	3%	2	9%	2	18%
- Impartial third party advice;	8	19	14.6%	6	22%	3	16%	2	15%	3	8%	5	23%	0	0%
- Enforcing agreements;	9	14	10.8%	3	11%	2	11%	2	15%	4	11%	2	9%	1	9%
- Diagnosing conflict;	10	24	18.5%	8	30%	3	16%	2	15%	8	21%	3	14%	0	0%
- Assistance in accessing financial resources;	11	59	45.4%	12	44%	7	37%	4	31%	19	50%	11	50%	6	55%
- Implementation of agreements;	12	11	8.5%	3	11%	2	11%	0	0%	3	8%	3	14%	0	0%
- Participation and stakeholder identification	13	15	11.5%	6	22%	0	0%	0	0%	4	11%	2	9%	3	27%
- Establishing joint technical committees;	14	24	18.5%	6	22%	4	21%	1	8%	2	5%	9	41%	2	18%
- Creating joint development ventures;	15	16	12.3%	1	4%	2	11%	2	15%	5	13%	3	14%	3	27%
- Best practices analysis and cooperation identification;	16	34	26.2%	6	22%	3	16%	3	23%	8	21%	7	32%	7	64%
- Performing joint research projects (modeling, data collection);	17	18	13.8%	2	7%	3	16%	1	8%	9	24%	2	9%	1	9%
- Designing, implementing and adapting institutional and legal frameworks;	18	35	26.9%	6	22%	6	32%	6	46%	11	29%	5	23%	1	9%
- Organize and assist stakeholder advisory committees;	19	24	18.5%	0	0%	4	21%	4	31%	9	24%	5	23%	2	18%
- Organize and assist community advisory committees;	20	18	13.8%	0	0%	1	5%	3	23%	5	13%	6	27%	3	27%
- Encouraging political engagement;	21	31	23.8%	8	30%	4	21%	3	23%	3	8%	11	50%	2	18%
- Education and training;	22	29	22.3%	7	26%	0	0%	4	31%	12	32%	3	14%	3	27%
- Capacity building;	23	47	36.2%	8	30%	8	42%	7	54%	15	39%	6	27%	3	27%
- Research related to the anticipation /prevention /resolution of water conflicts	24	33	25.4%	5	19%	2	11%	1	8%	16	42%	7	32%	2	18%
TOTAL BASINS:		**130**		**27**		**19**		**13**		**38**		**22**		**11**	

FIGURE 11: Regional Distribution of Desired Services

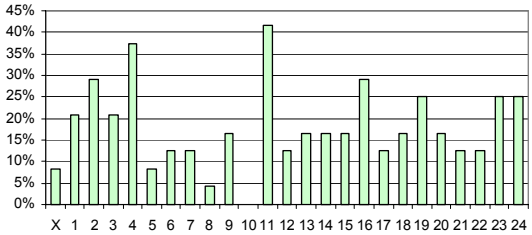
AFRICA (36)



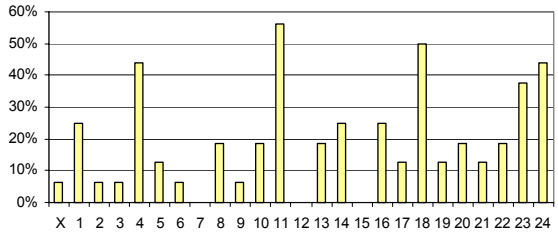
ASIA (43)



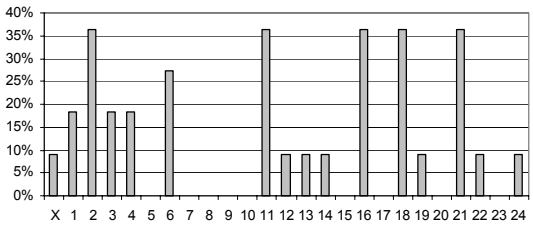
EUROPE (24)



LATIN AMERICA (16)

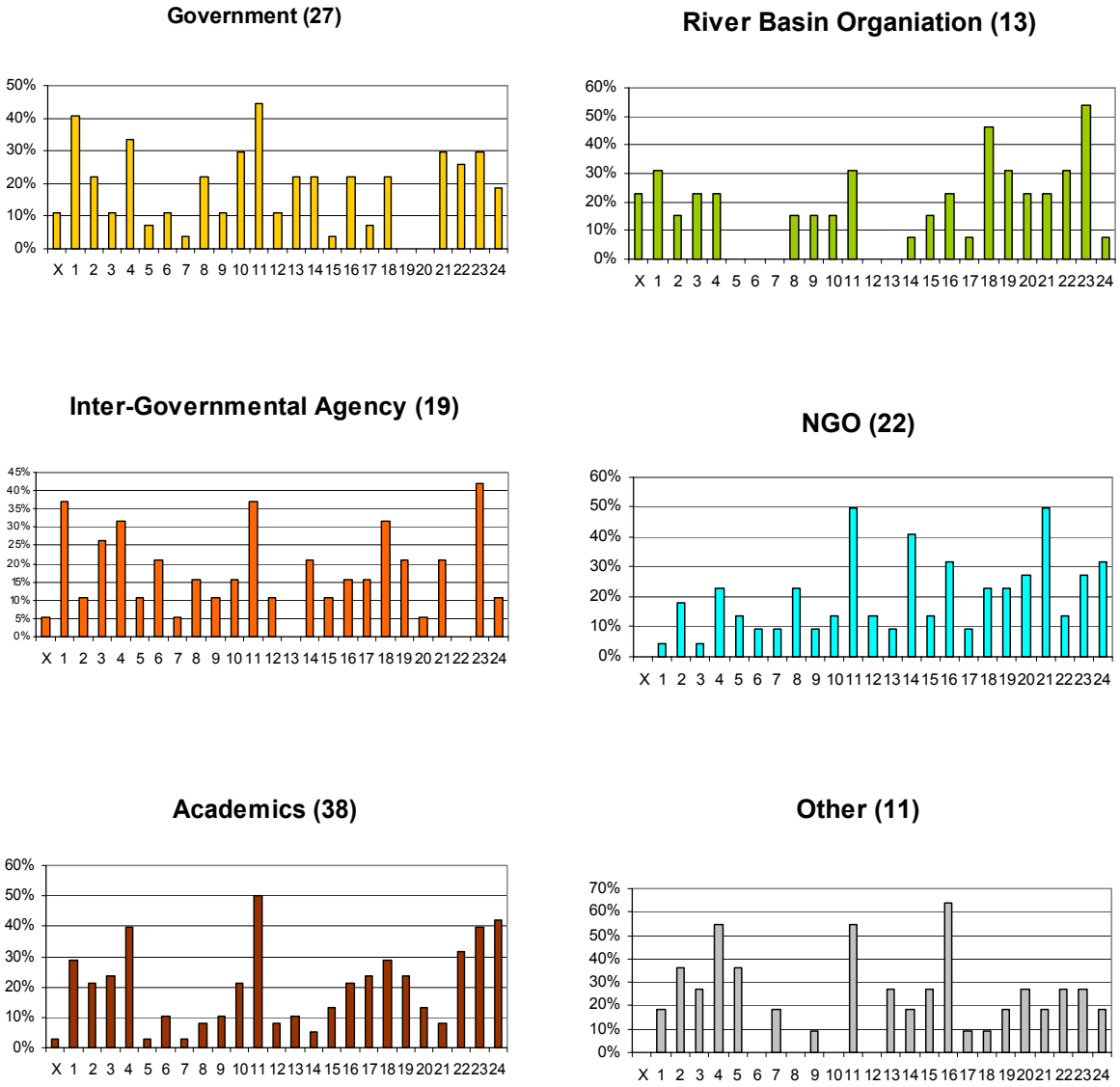


GENERAL & Misc (11)



X - No Third-Party Assistance is needed.
1 - Assisting in convening parties;
2 - Design of dispute management systems;
3 - Facilitating joint fact-finding arbitration;
4 - Basin-wide access to knowledge and tools;
5 - Assess dispute situations and needs;
6 - Mediation / Facilitating;
7 - Arbitration;
8 - Impartial third party advice;
9 - Enforcing agreements;
10 - Diagnosing conflict;
11 - Assistance in accessing financial resources;
12 - Implementation of agreements;
13 - Participation and stakeholder identification
14 - Establishing joint technical committees;
15 - Creating joint development ventures;
16 - Best practices analysis and cooperation identification;
17 - Performing joint research projects (modeling, data collection);
18 - Designing, implementing and adapting institutional and legal frameworks;
19 - Organize and assist stakeholder advisory committees;
20 - Organize and assist community advisory committees;
21 - Encouraging political engagement;
22 - Education and training;
23 - Capacity building;
24 - Research related to the anticipation /prevention /resolution of conflicts

FIGURE 12: Distribution of Desired Services by Respondent



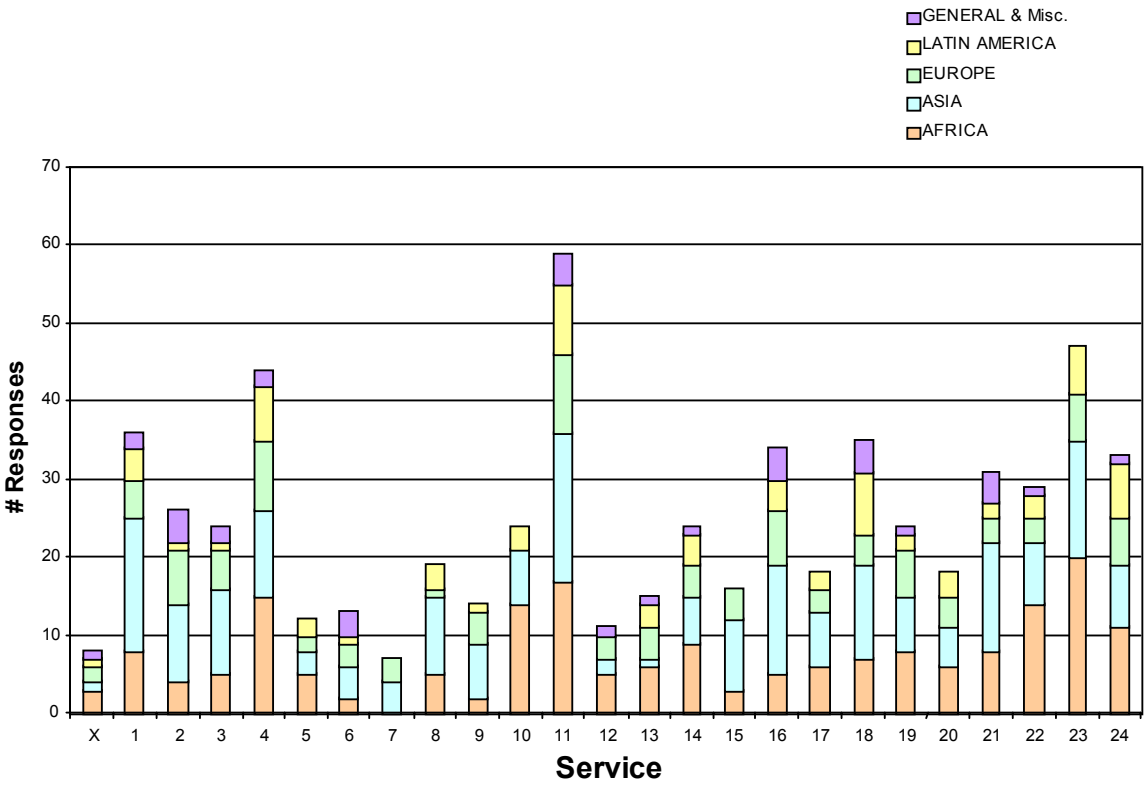


FIGURE 13: Desired Services by Region

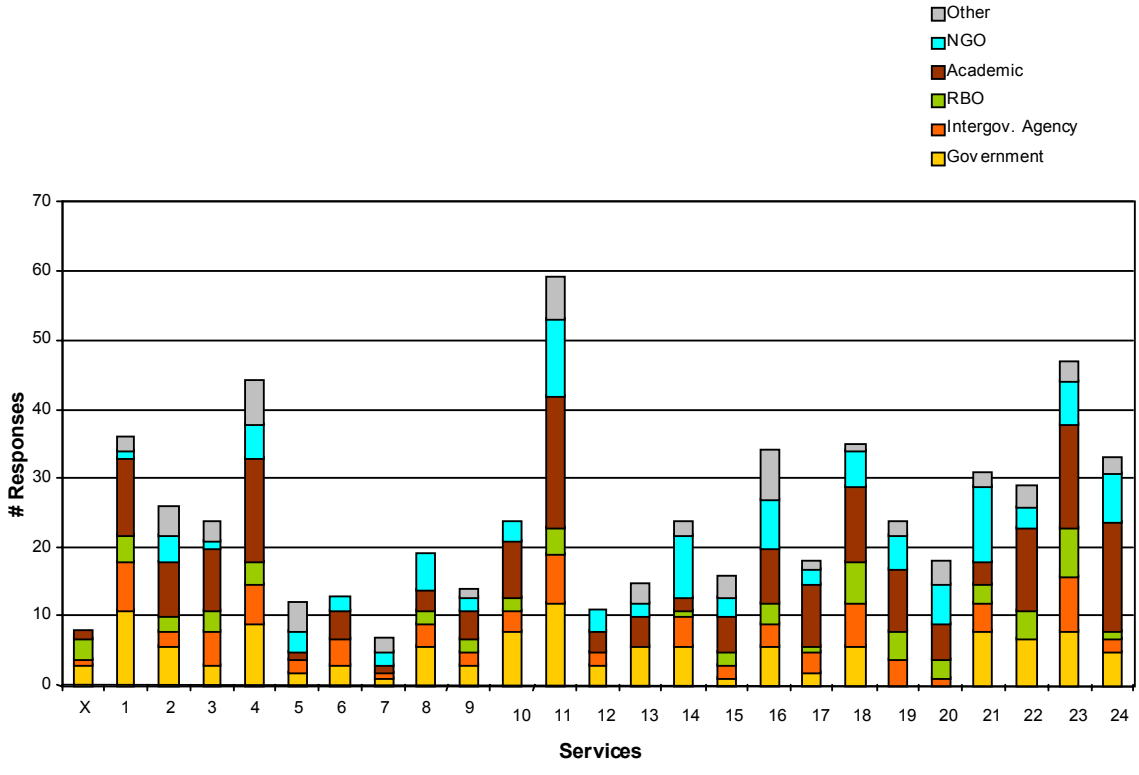
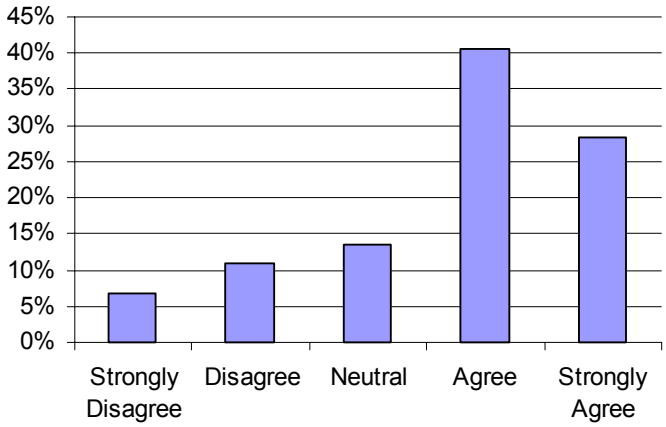


FIGURE 14: Desired Services by Organisation

With the desired third-party assistance services identified, the respondents were then asked if they believed there was a need for an "International Cooperation Facility" to be created to provide a single entry point (a "one-stop-shop") of third-party assistance for those services they desired. The response (illustrated below) indicates an overwhelming majority (69%) of respondents agreed, compared to just 18% who disagreed. Comments from those who disagreed or where neutral about the proposed initiative were generally associated with the need for increased involvement of regional actors, improving coordination / cooperation amongst existing international organisations, and pointlessness of creating a new Facility that would duplicate services that currently exist within the region. All comments relating to this question are listed in Box 2 on the following page.

There is a need for an "International Cooperation Facility" to be created to provide a single entry point (a "one-stop-shop") of third-party assistance for those services you indicated you desired in this survey:

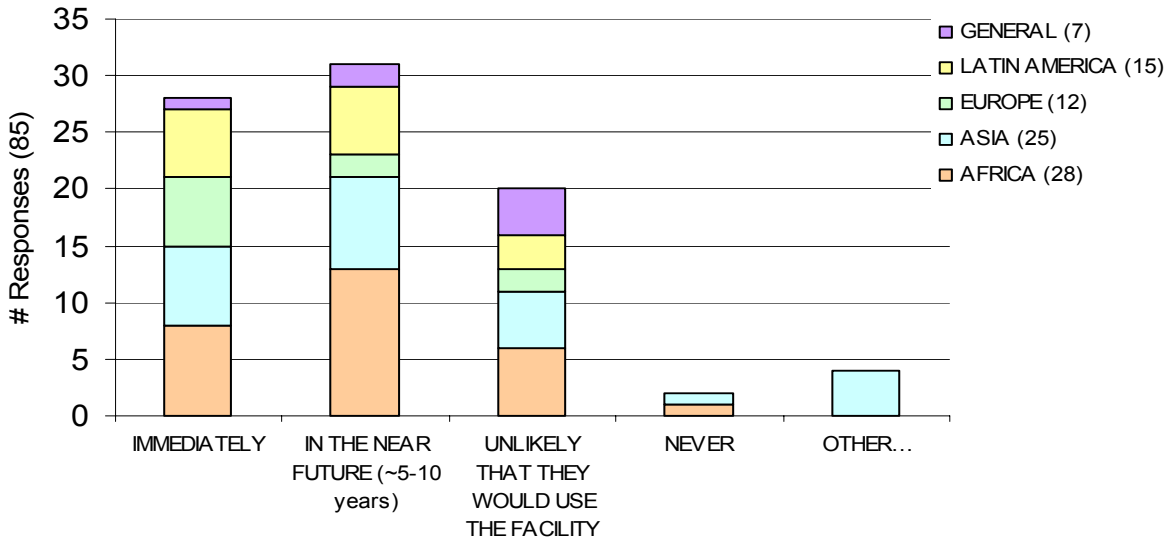


BOX 2: COMMENTS ASSOCIATED WITH THE NEED TO CREATE AN INTERNATIONAL WATER COOPERATION FACILITY

1. *"It is more likely that a regional organization will do this. Conflict management would be an area for an outside organization to be involved in." – Aral Sea, Scheldt, Nile*
2. *"This could result in a bureaucracy which will be dominated by lawyers" – SunKosi, Mekong, Columbia*
3. *"The role is already played by river basin organizations that are established for this purpose and understand the political and social situations relevant to effective dispute resolution. Countries in this region would not agree to outside 3rd parties being brought in to resolve disputes." - Mekong*
4. *"Our organization is itself involved in facilitating cooperation between riparians. We would not need a third a party." - General*
5. *"Would not employ" – Caspian Sea*
6. *"It is unlikely that the existing groups will use yet another agency" - Colorado*
7. *"The demands and recommendations may not be applicable in a global content, specific requirements may be too costly to take into account." - Mekong*
8. *"There are bodies in the region (bilateral commissions, ICPDR) and also institutions/institutes established by EU in the field" - Danube*
9. *"The need exists but many organisations already fill many of the individual functions. Need for the facility would depend on the power of authority." - Mekong*
10. *"I believe the countries must create capacity themselves, and should not rely on a 'Facility' - The proposal is not workable or practical, and is driven by selfish motives." – Inkomati, Limpopo, Orange*
11. *"... depends on the correct approach" – General*
12. *" Depends on context (specific context) of each river basin" – Middle East, Mekong*
13. *" The process and ownership should remain with us and not handed over to the third party" - Limpopo, Zambezi, Pungwe*
14. *"In theory I agree, but it must be something that provides guidelines that are not too rigid. Each of these situations are unique and by applying a "cookie cutter" approach effectiveness will be diminished. Conditional upon cooperation and coordination of existing efforts, rather than creating yet another duplicating organization that is redundant and results in institutional turf guarding. It is very difficult to get these countries to cooperate when they witness spats between international organizations." – Kura & Araks/Aras, Caspian Sea*
15. *"I think there is already too many european instututions and bureaucrats. I think enough would be if people talked less and worked more and were open to cooperation and new approaches. But maybe people would be more open to cooperation while forced by some international institution" – Sumava, Bela*
16. *"No, because this already exists at the National Level (in Europe) and at the International Level (INBO / RIOB) - Rhône, Roya*
17. *"This should be complementary to existing mechanisms to avoid duplication and reinventing the wheel. For example, the GEF has a lot of expertise and experience in the field - and it's accompanied by funding - which should be built upon. Also, resources like IW:LEARN (www.iwlearn.net) are already doing much of the work. Furthermore, one has to be careful about not developing un(der)-funded mandates" - Ganges-Brahmaputra, Salween, Danube*
18. *"Almost all transboundary water issues first and foremost require political will from each country or jurisdiction to have any chance of successful resolution. Technical and mediation type services are required sometimes but mainly it needs ultimate commitment from political leaders in the area. This political will can only be enhanced or demanded through strong democratic and stakeholder intervention." - Nelson / Saskatchewan*
19. *"Every situation is unique - a central facility tends to provide the same set approach to all situations. As an example, the GEF GIWA approach designed for seas and macro basins, is not appropriate for sub-basins where issues are more specific and often more complex." - Lake Tanganyika, Tumen River, Dnieper River*
20. *"It has been tried before and it has not been too successful" – Aral Sea*
21. *"Take note of already running initiatives eg. UNESCO, UNECE" – South-Eastern Europe*

All 56 respondents of the full survey (representing 98 basins) were asked to estimate the urgency for an International Water Cooperation Facility creation to meet the needs of their respective transboundary basins. The results illustrated below, suggest that the respondents representing 85 basins believed the stakeholders within those transboundary basins would consider approaching the Facility within the immediate future and most likely within 10 years. Some comments that were made were associated with regional sovereignty of the process and the difficulties associated with the conditional use of the International Water Cooperation Facility, whereby ALL disputing states are expected to agree to use the Facility prior to any requests for services. The comments are presented in Box 3.

With respect to those basins you have identified, please comment on the urgency of creating the "International Cooperation Facility". In your opinion, the Basins you have identified would likely consider using the Facility…

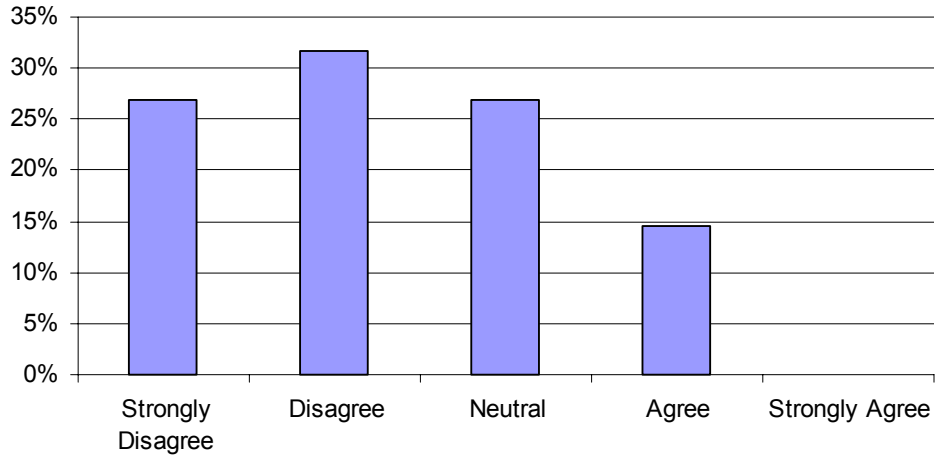


BOX 3: COMMENTS RELATING TO "OTHER" CHOICE SELECTED ON URGENCY OF CREATING A WATER COOPERATION FACILITY

1. *"Possibly - Depending on the quality and relevance of information and questions/problems to assess/analyse, it would signal the inability of existing agreements to be implemented."*
2. *"The existing cooperative agreement may be seen as more relevant (MRC, ASEAN, GMS, etc,)."*
3. *"Extremely difficult to get all countries to sign up to existing river basin authority, so adding another tier of administration may make the more reluctant and feel more 'dictated to'. If Facility could clearly be seen as beneficial to development in countries however, it could help overcome existing difficulties of MRC and strengthen the system."*
4. *"Vastly differing political structure, economic status, and priorities would make consenting will of all difficult to obtain in order to agree to use this facility."*

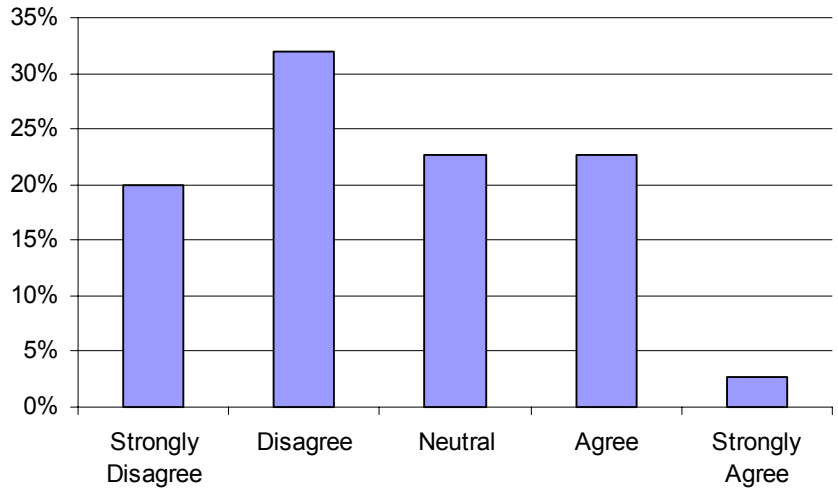
Given the desire for the International Facility and the urgency in which it's services would be sought, it was then important to determine the likelihood that the Facility would be able to be supported sufficiently to be financially sustainable. Of forty-one respondents, only six (~15%) agreed that their organisation would be willing to financially contribute to the on-going administrative costs of the Facility. Of these six positive responses, one was the subordinate of another who responded: "Strongly Disagree: "You can't pay for a service provider that you may never use rather pay if a service is obtained", a second was from a UNESCO representative, and the others were from two river commissions, and a local NGO. While it is recognised that a number of riparian stakeholders in developing countries would not normally cover the administrative costs of an intergovernmental aid agency (lending a primary negative response to this question), representatives from the World Bank and some donor countries and other intergovernmental agencies were included in this survey, and their support was not offered. Specific telephone interviews were arranged with other potential funding agencies to discuss the proposed initiative and their response (if they supported the proposal) was generally conditional upon a clearer definition of the proposed Facility, it's targets and goals, and the financial requirements (which were not available at the time of this assessment).

You believe your organization would be willing to financially contribute to the on-going administrative costs of the International Facility and its core staff if the Facility proved that it was a beneficial contribution to improving cooperation in transboundary river basins throughout the world.



As a number of respondents represented stakeholders within transboundary basins as opposed to representatives of donor agencies or intergovernmental aid organisations, a question was asked in order to determine whether the respondent believed that stakeholders within the river basins would have the capacity to reimburse the Facility for the services offered. Of the 75 responses, more than 50% believed the riparian states would *NOT* be able to reimburse the Facilty for the costs of third-party assistance.

Those riparian states that benefit from the services provided by the International Cooperation Facility would be willing to reimburse the Facility for the costs of the third-party services provided.



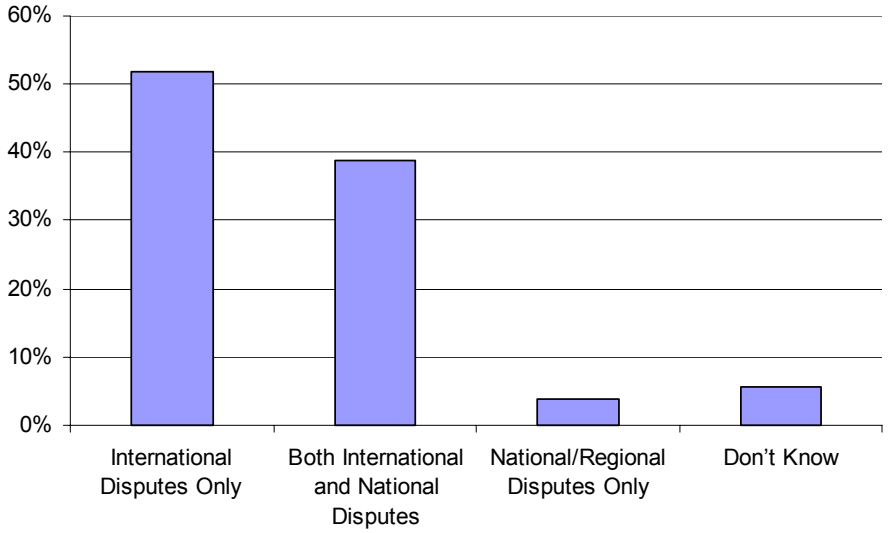
BOX 4: COMMENTS ASSOCIATED WITH THE RIPARIAN STATE'S CAPACITY TO PAY FOR THIRD-PARTY ASSISTANCE SERVICES

1. *"Facility should be on a grant basis with contribution from riparian states."*
2. *"This has to be a joint decision by all basin states and would depend on the circumstances. If you pay for a service, call the terms(?), but what if the outcome does not suit my expectations - then I don't pay!"*
3. *"They hardly can pay for the projects, asking them to pay for these services will not induce them to use them."*
4. *"All basin states of the 2 river basins might not have the capacity to agree."*

It was the researcher's intention through the survey design to ask questions relating to financial sustainability following questions regarding the desire for the Facility. Based on the response and the associated comments, it would be fair to suggest that many respondents would have less desire to create the Facility if the services weren't offered for free (perhaps a majority). Given that no positive responses were made that illustrated how paying for these services would increase 'ownership' of the process and result in more successful dispute resolution practices, it could be argued that without stakeholder 'ownership' the effectiveness of the Facility could be in doubt. Therefore, despite strong support to create such a Facility, without long-term effectiveness and financial sustainability the proposed initiative could result in what was often described in the survey responses and interviews alike as "a Facility aimed at keeping those in the International Development field working, but providing little benefit to those who really need the assistance on-the-ground".

One way to achieve financial sustainability is to 'expand-the-pie' of clients to those who could pay more for the services, and in effect, support those who do not have the capacity to pay. Providing third-party assistance for those national / sectoral water disputes that may be occurring within a country's own borders could be one method to

generate financial returns on services provided (perhaps private companies involved in disputes on private-public partnerships and drinking water distribution would be more willing to pay for services). There are likely far more of these disputes than those between riparian states, but there are significant obstacles with respect to recognition of national soverienty issues and existing legal frameworks when providing third-party assistance in dispute resolution. However, it may be possible that some services offered by the International Water Cooperation Facility could be translated at the national level without significant difficulties. It was asked to the respondents whether they believed the International Water Cooperation Facility should provide these services at the International level only or include National disputes as well. Fifty-two percent of the 54 respondents indicated that only International disputes should be considered, and 43% believed National disputes should be included.



When asked about which four organisations (UN entity, an international legal institution, a water-related international NGO, and an Academic Institution) respondents provided a variety of responses. The purpose of the question was to determine indirectly the respondent's perception of those four organisations that have proposed to undertake the initiative – and this would be identified by the relative number of times these organisation's names came up when asked who would be best suited to coordinate the Facility's activities, develop a robust database of service providers, and provide third party assistance for those services desired by the respondent to improve cooperation within international river basins. Of the 57 individuals solicited, only 41 responded to this question and many of those responses were incomplete. The responses are provided in the following paragraphs.

The United Nations Entity with an Interdisciplinary Approach to Water Issues

For the UN Entity for this initiative, the UNDP was proposed the highest number of occasions, almost twice as much as the second highest recommendations tied between UNESCO, UNEP and the GEF. Other organisations included UN Water, the Commission on Sustainable Development, and UNESCO-IHE. The UNDP's field presence and long-term water-related project experience is likely credited for the high response rate. Of the 6 respondents recommending UNESCO, half of these new of the proposed initiative.

For the most part, respondents were in favour of having a UN agency in the lead, however one respondent preferred to "have a solid block institute in the lead – such a the World Bank or GEF" as the "Problem is the unimpressive track record in water of most UN organizations, plus they are so fragmented and busy with coordinating things among themselves".

An International Legal Institution:

Only 13 recommendations were made for an International Legal institution. This was due to the respondent not knowing of one to recommend or uncertainty on whether or not a legal institution should be a lead agency. Of the 13 responses, five were made for the International Law Commission and the UN International Court of Justice, and 3 were made for the Permanent Court of Arbitration (all three respondents recommending the Permanent Court of Arbitration were aware of the proposed initiative).

A Water-Related International NGO with a Wide Scope of Interest:

Comments relating to which International NGO should be included were varied from those who believed no NGO should be included to a number who felt local NGOs should be included. The Global Water Partnership (GWP) was recommended five times compared with the WWF (3) and the World Water Council (2 – one of which new of the initiative) and the remaining recommendations going to Green Cross International, Organisation of American States, IUCN, RiverWatch, International Rivers Network, International Water Management Institute, INBO/RIOB, and the Overseas Development Institute ODI & Arcadis Euroconsult.

An Academic Institutions Involved with Transboundary Waters:

The response rate for the Academic institution was also generally low with many respondents calling on the use of local universities within the transboundary basins to be included as Partners in the initiative. UNESCO-IHE received the highest number of recommendations (5) with the Universities Partnership for Transboundary Waters close behind with 3 (with one respondent knowing of the initiative).

Other:

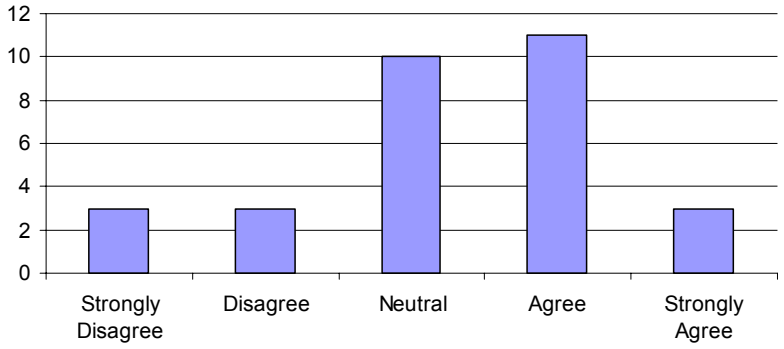
There were few others recommended to be included as partners leading this initiative, but The World Bank was recommended by 7 respondents – the second highest 'vote'

rate behind UNDP (11 recommendations). Considering that "Assistance Accessing Financial Resources" was highest on the list of desired services, a multi-national development bank would certainly address this concern.

Other comments associated with the question dealt primarily with the need to de-centralize the "Facility" and allow more local organisations to be directly involved. One response recommended that "the Secretariat should be both small housed by the riparian state where located".

As the respondents had the opportunity to recommend whom they believed would be best suited to coordinate and lead the International Water Cooperation Facility, they were then asked what they thought of the proposed Facility Partners.

UNESCO, the World Water Council (WWC), the Permanent Court of Arbitration (PCA), and the University's Partnership for Transboundary Waters (UPTW) have proposed to coordinate the Facility and develop a network of experts throughout the world to offer assistance in providing those services you stated in Question1 of this Section (http://www.unesco.org/water/wwap/pccp/index.shtml) Do you feel these organisations are capable of coordinating the proposed Facility?



Respondents who indicated that they were 'Neutral' or in 'Disagreement' with the proposed Facility Partners were offered additional space to elaborate and these comments are outlined on the following page in Box 5.

BOX 5: RESPONDENT'S COMMENTS ON THEIR PERCEPTION OF THE PROPOSED FACILITY PARTNERS CAPABILITY TO LEAD AN INTERNATIONAL WATER COOPERATION FACILITY

1. *I'm not familiar with PCA and cannot comment on their capacity.*
2. *No, UNESCO does not have the necessary water management experience; WWC and PCA are OK.*
3. *A local NGO would be more appropriate for each basin case. The UPTW should incorporate local universities depending on the basin under study.*
4. *ONLY if they actively work to cooperate with other organizations. Inter organizational bickering is one of the biggest wastes of money and energy in these projects and creating one more layer of it could just exacerbate the problem.*
5. *No experience with these organizations.*
6. *UPTW lacks University of London. UNESCO, WWC and PCA have not showed any competence in dealing with transboundary issues so far.*
7. *IWA-knowledge available and stakeholders are involved.*
8. *GWP-CATAC has the advantage to know the region (researcher's note: Latin America).*
9. *Some people in these organisations practice "exclusionary politics".*
10. *WWC is weak, PCA is expensive.*
11. *The situation is very local and cannot be generalized. The above tend to work at a level higher than the level of practical possibility. There is need to be relevant and practical. These are too global and have limited local focus.*
12. *Provided that stakeholders, people in the basin should be addressed – Not only politicians should interact.*
13. *UPTW is seen as an American Institution, their other institutes do not necessarily represent the regions appropriately.*
14. *I like more practical organisations, not administrative.*
15. *You need as much clout and credibility as possible – I would be concerned if UN was to take the lead – it could go the academic route.*
16. *Probably, it will be good to check more a regional approach with the facility more on coordination and promotion.*
17. *As far as I know, this is not sufficiently within the mainstream of Unesco's purposes for it to be a suitable body. The PCA could well be a suitable body. I am unfamiliar with the WWC or the UPTW.*
18. *I think UNESCO is not specialized in Water - better World Bank. WWC is too close to international organisations and almost same as one - better real representative NGO.*
19. *The issue is one of demand not supply.*
20. *Not confident that the WWC is sufficiently stable or representative to provide the service. Unable to comment intelligently on the others. Don't know the UN structure very well, so homed in on UNEP, but no problem with UNESCO. Commented on WWC. Don't know PCA or UPTW.*
21. *I think they have the authority to give an opinion related with the topic so that they can leader the initiative. Because in Central America they haven´t participate in the discussion. There's no evidence of their participation in this field.*
22. *GCI specialises in environmental conflict situations and has strong links to a variety of community & stakeholder organisations internationally. The WWC does not have this focus on conflict resolution/avoidance/mitigation, nor does it have much in the way of stakeholder representation.*
23. *We didn't know about UPTW.*
24. *These organizations would not be accepted in this region (researcher's note: Mekong). Specific local understanding is critical to dispute resolution; these organizations could never provide such understanding. Cooperation between river basin organizations with direct experience would be far more useful than this proposal.*
25. *World Bank Involvement can be of great help.*
26. *But could involve local experts.*
27. *Too many duplicate programs already exist.*
28. *They might be able to co-ordinate the activities but need to hire competent consultants/water professionals to carry out the work.*
29. *Stockholm International Water Institute has a wide range of contacts and is perceived as neutral in these issues which is imperative if one is to have any clout with various riparians in a river basin.*
30. *They do not have sufficient international capacity and clout.*

3.1.4. Summary – Assessment of Needs and Role of the IWCF

Based on the survey results, interviews and literature review, the following conclusions can be drawn on the need for an International Water Cooperation Facility and the role in which it can play in improving global transboundary governance.

- There IS a need for additional third-party assistance to promote cooperation in transboundary basins.
- The capacity to address these needs requires an extremely wide scope and sufficient flexibility to address the spatial and temporal demands.
- By coupling the concepts outlined in the "*International Shared Waters Facility*" proposal with this most recent "Water Cooperation Facility" initiative, it is likely that major strides towards fostering peace between countries within transboundary basins, reducing poverty through the development of water resources in a cooperative environment, and improving human and ecosystem health through sustainable transboundary practices could be achieved.
- On a whole, respondents indicated that each of the potential services offered by the International Water Cooperation Facility were offered within the large regions categorised in this study.
- It was generally perceived that the regional organisations could not adequately provide these same services.
- There is a strong desire to better coordinate those service providers and aid agencies active within the basins.
- Achieving financial sustainability for the initiative will likely prove difficult.
- The perception of the proposed Facility Partners was mixed. Less than half provided support and 20% disagreed outright. The remainder identified concerns relating to water-related experience, excessive bureaucracy and overly centralized without sufficient recognition of regional organisations, and a lack of awareness about these organisations.
- The majority of the respondents felt the scope of the Facility should be limited to International disputes, however 43% believed national disputes should also be considered.

Given that there is an identified desire for an International Facility to be created to offer third-party assistance services to promote cooperation, design considerations for the Facility can be proposed in order to improve the likelihood of developing a sustainable, fair and robust Facility to provide services in an effective and efficient manner. These are discussed in the following section.

3.2. Design Considerations for an IWCF (Second Study Objective)

This section aims to reconsider each of the aforementioned design dimensions (scope, membership, centralization, control, flexibility) based on the findings from the survey, the literature review, and telephone interviews and reflect on how the International Facility can provide services in a manner that is consistent with the design principles of effectiveness, efficiency, fairness, robustness, and sustainability. Table 15 summarises some of the potential advantages and disadvantages related to each of proposed design considerations.

3.2.1. Scope

The proposed Facility design had a broad scope that would provide a "one-stop-shop" for assistance in promoting cooperation and providing third-party dispute resolution to riparian states within transboundary river basins. The Facility would provide these services through academic research, training and direct assistance using their vast network of water experts. Based on the survey findings, such a robust-serving Facility would be desired by the majority of the respondents.

Koremenos (2001) hypothesised that scope increases with greater heterogeneity among the Facility Partners involved, and these linkages of heterogeneous interests may generate new opportunities for cooperation. Further, Koremenos (2001) suggested that sharing benefits of cooperation between the Facility Partners is facilitated with a larger scope of services provided, and creating incentives for these Partners to remain committed to the collective interest will also be easier with a greater scope of services provided. While Koremeno's conjectures all point to advantages of increased scope, creating these linkages have increased costs associated with the extra bargaining costs related with additional issues and the greater probability that some Partner will "hold up" the agreement to gain additional benefits (Koremenos 2001). Even though the Partnering organisations may share common interests in promoting cooperation between states, their positions may disagree on the appropriate means of addressing the issue, and these consultations increase costs. Therefore, the scope for an international facility should also consider which issues are best dealt with independent from the alliance of Partner organisations. It is suggested the scope of services be increased until the marginal cost of adding another issue roughly equals the marginal benefit. In the end, the scope of services to be provided by the International Water Cooperation Facility will inherently be determined, and limited by, those services that the Partnering organisations can provide effectively and efficiently through their network of water experts and mediators.

Needless to say, the scope of services provided should not overlap those existing services deemed effective and efficient currently available within the regions. Carius (2004) identified a number of institutional gaps in water management and conflict prevention that could potentially be addressed by an International Water Cooperation Facility. The services to 'fill' the gaps identified by Adelphi Research through a telephone survey and selected face-to-face interviews with water and conflict experts are briefly described in Box 6.

BOX 6: Insights from Adelphi Research Assessment on Potential Scope
Based on Comments outline in Carius (2004).

Providing a platform for knowledge transfer and communication

The report argued that a problem in addressing water related disputes is less associated with a deficit in academic research but the accumulation of knowledge that exists in donor agencies on how to integrate sustainable water management and conflict prevention and peace building. Thus, while accumulating knowledge from past experience is very common on the technical level, water and conflict does not yet have such learning mechanisms with regard to policy development. It was further argued that since there is no one-fits-all strategy to resolve water disputes, strategies and programmes need to be assessed on a regional basis (for each river basin), which would take into account the regional differences and diversity of the structural sources of 'water conflicts'. It was therefore proposed that the Water Cooperation Facility could fill this gap by providing concise policy briefings on successful cases for conflict intervention and conflict transformation in the water sector, facilitate a process for donor agencies to discuss success cases, and conduct roundtable discussions amongst regional stakeholders to discuss success cases.

Bridging the gap from science to policy making

The Adelphi Research assessment recognised that there was a need for an intermediate institution that could translate policy demands to scientific communities and vice versa. It was suggested that the International Water Cooperation Facility could coordinate and integrate existing networks and platforms that address environment and security linkages through a broader communication process by conducting policy briefings, newsletters, expert workshops, and public hearings. Through this work, major environmental and development institutions and peace and confict networks could potentially benefit from links that other institutions had already established and encourage links beyond the traditional constituencies into regional networks and local expertise.

Developing guidelines and best practices

It was suggested that the Facility could provide guidelines on stakeholder involvement as the right level of stakeholder involvement was considered as a crucial aspect in river basin management and conflict prevention and peace building efforts.

Demand driven research

It was argued that research on river basin management, conflict prevention, and peace building needs could be conducted by the Facility if it were demand driven. It was further argued that the Facility would have to prove itself to be both legitimate and capable of performing this work as donor agencies already have a network of professional researchers in which they can directly approach for services.

Program review and external assessment

It was recommended the Facility could review or assist in reviewing and assessing existing bilateral and multi-lateral donor programs on river basin management, identifying major constraints and shortcomings and providing recommendations to improve these programs to donor agencies rather than offering a broad portfolio of services that require long-term donor commitments.

Providing a network of experts

It was suggested that an expert pool or reference database with experts in river basin management as well as conflict prevention and peace building would fill an identified gap in available services.

The Adelphi Research assessment did not argue to limit the services that the IWCF should offer, rather it was suggested that a specified scope and regional focus would likely generate increased interest from bilateral and international donors in order to support the creation of the facility. Further, it was argued that the IWCF could develop a broad portfolio of services, which could be further developed over time. In discussions with potential donor agencies, there was a common caution to ensure that the initiative start off with a small and focused approach rather than a robust explosion of costly activities without a proven added advantage and record of experience. It is understood that the proposed Facility Partners intended on adopting a similar low-cost focused approach, even though others may have perceived earlier proposal announcements differently.

The Facility Partners had already foreseen some of the institutional gaps and potential services identified in the Adelphi Research assessment during the ongoing development of the initiative (which is still in progress and expected to be fully designed later this year). Based on the response from this study's global survey, recommendations to limit scope by isolating out a few specific services would be premature. While assistance accessing financial resources was ranked highest in the response, most other services were also desired by at least one or more respondents from each of the regions solicited, so demand appears to be wide in scope. It would be valuable for the Facility Partners to refine the scope of services through further consultations with the regional stakeholders and riparian governments during the development of the Facility. Based on insights gained from this study's survey and interviews, a few specific services that have been considered by the Facility Partners, or suggested by Adelphi Research are briefly discussed. In particular, the development of a computer-based global network of dispute resolution specialists with water-conflict experience (Box 7), and the development of clearing house databases (Box 8).

BOX 7: Insights on the Development of a Global Network of Water Experts

Developing a global network of experts involved with water conflicts and transboundary cooperation had been foreseen by the Facility Partners, with the Partners themselves 'kick-starting' the creation of the network of networks by including each of their own vast rosters of professionals in the field. A number of water experts interviewed who work outside of Europe and North America indicated that establishing contacts with other regional 'conflict resolution' specialists and water experts was at times dependent solely on luck, and developing these linkages was desired. Further, survey respondents were favourable towards the idea of a 'notice board' to coordinate regional agencies. The US Institute for Environmental Conflict Resolution (US IECR) provides a good template for a roster of conflict resolution specialists and should be approached for advice if the Water Cooperation Facility were to develop a network database (www.ecr.gov). The US IECR is a federal program established by U.S. Congress to assist parties in resolving environmental, natural resource, and public lands conflicts within the United States of America. Among other services they provide, their national referral system of over 200 qualified environmental facilitators and mediators is available to all parties involved in an environmental dispute. Further, the U.S. Institute helps parties determine whether collaborative problem solving is appropriate for a specific environmental conflict, how and when to bring all parties to the table, and whether a third-party facilitator or mediator might be helpful in assisting parties reach consensus or resolve the conflict. Further information on the Roster program overview, mediator's roster entry criteria, and a model for standard mediator conduct is available in Appendix E. It should be noted that the criteria outlined in the US IECR are designed for experts in the much broader field of environmental conflict resolution, increased restrictions specifically focusing on water-conflict issues could limit the overall referral system, so criteria should be designed as a balance between expertise and its' applicability for each expert field.

BOX 8: Insights on Developing Electronic Clearing Houses and Databases

With respect to establishing knowledge transfer platforms and databases, it should be noted that there are currently efforts to realise a similar type of platform through International Waters Learning Centre (IW:Learn) and also through the GWP Transboundary Waters Toolbox. The GWP's Transboundary Waters toolbox is combined with a larger group of toolbox initiatives available online at the GWP website, however the available information within the toolbox is generally limited without any indication of submission dates of the case studies to determine how current the developments are. Through conversations with others at GWP it is understood that they felt that that the toolbox should be improved to be more effective (to date, no external assessment of the toolbox's overall effectiveness has been performed). IW:Learn is affiliated with the GEF, UNDP and UNEP and they are currently developing an international database system for storing, searching and retrieving best-practices and lessons learned from the international waters managers throughout the world (http://www.eco-insight.org). Their aim is to create a web-enabled database that is accessible, user-friendly, intuitive with a self-sustaining population process and low cost. Initiated before December 2002, the website is still under construction with little or no progress since this time (no new case-studies and only two regions are included - South East Asia and Latin America). In speaking with representatives at GEF, it is understood that additional funding has been allocated to finalise and launch the website, but no timeline for completion was available. Further, when asked why IW:Learn had not coordinated their activities with other transboundary portals like the GWP Toolbox and the UNESCO Water Portal, the GEF representative indicated that coordination had been considered and was desired, but time constraints with other projects made coordination amongst the parties difficult to pursue at the time. These are good examples of situations one respondent described as "not needing any new doors of assistance to be opened, only fully opening those doors that have remained only partially opened.

Others interviewed from developing regions questioned the effectiveness of web databases and portals in general, claiming that regional stakeholders do not always have the means to access the information through an internet connection, and the information was often provided by experts from Europe or North America and did not always identify with the "on-the-ground" problems faced in their regions. However, the response to the survey question asking if the "International Cooperation Facility" should provide a common 'notice board' for development agencies, NGOs, community groups, governments, and other service providers working within the basin to notify one another of their work activities in order to identify potential cooperative efforts amongst themselves, the response was overwhelmingly in favour that such a service be established. When sharing best-practices and lessons learned, one respondent involved with transboundary dispute resolution and knowledge dissemination highlighted the political sensitivities to having a third-party sharing these 'lessons learned', and argued that such knowledge sharing is best performed by the respective riparian governments themselves.

Survey respondents also indicated a strong desire for a Facility offering services comparable to the proposed "*International Shared Waters Facility*"[7] to coordinate donor funding. It should be noted that the report was specifically developed to address the financing mechanisms of transboundary water management, and the scope outlined in the "*International Shared Waters Facility*" would not address the large demand and variety of services to improve cooperation and third-party dispute resolution identified in this study. Nonetheless, using the Water Cooperation Facility as an additional mechanism to/with the GEF to coordinate donor funding would be very much well received.

Many respondents also believed that the Facility should expand its scope to include conflicts of national interest (i.e. Private-Public Partnership, sectoral issues). For reasons of legality and sovereignty, not all proposed services would be able to be offered in the National arena, however the Facility Partners should consider offering those services that are transferable when the demand arises as cost-recovery may prove to be easier within private sector water conflicts.

[7] Additional information relating to the scope of services of the "*International Shared Waters Facility*" proposal can be obtained through the Swedish Ministry of Foreign Affairs.

However, while it is argued that the scope should be targeted and focused, it should be recognised that the creation of yet another Facility to provide a limited set of services amongst the sea of existing initiatives could exasperate the problem of coordination and overlapping of services that most survey respondents and interviewees identified as a key obstacle to improving third-party assistance for cooperation in transboundary basins. However, without a distinct and publicized added advantage over the number of other networks and initiatives in the field of improving transboundary cooperation, the question of whether governments and other regional stakeholders had sufficient incentive to exclusively approach the Facility for assistance would remain unanswered. Linking the appropriate Partners within the Facility could create the added advantage needed, and this is discussed further in the next section on Membership.

3.2.2. Membership

Membership rules determine who benefits from an institution and who pays the costs. In addition, the heterogeneity of the membership can increase the scope of services that can be provided and provide an added value to the initiative. With the large scope of services required to improve transboundary cooperation both spatially and temporally across the globe, an exclusive partnership of four distinct organisations would make it difficult to provide an effective and efficient "one-stop-shop" for all third-party assistance services desired to improve transboundary cooperation. Further, an exclusive Partnership can both perpetuate negative perceptions from other institutions not directly involved in the initiative and may limit the opportunity for those regional organisations within the transboundary basins to participate and build their own capacity within the field. Accounts in interviews indicated that some organisation/agencies could potentially react in rather irresponsible ways if they were not included as an official partner (i.e. cutting ties with the proposed Facility Partners in other unrelated initiatives).

Simultaneously, excessive membership through an entirely inclusive structure has the potential of reducing institutional effectiveness through excessive bureaucracy and increased problems ensuring equal distribution of benefits to the multitude of Partners collaborating in order to meet their own agendas. This in turn increases the enforcement problem of providing sufficient incentive for individuals to voluntarily contribute to the collective initiative. Further, disenchanted members and "Free-Riders" could potentially damage the reputation of the Facility, which could be devastating in such a politically sensitive environment as transboundary conflict resolution. Despite these potential obstacles, a more inclusive partnership is worth pursuing because it could be the first step towards a much-desired coordination of the service providers involved in transboundary basins. Given that peace building and improved transboundary water cooperation is in the interests of all service providing agencies and regional stakeholders alike, everyone would benefit from wider participation, so enforcement should not be an impeding issue and an inclusive membership could potentially work. UN-Water is an example of multiple organisations coordinating an increasing number of activities on water and could provide a good start to build a platform to include other organisations involved with transboundary cooperation and conflict resolution (i.e. GEF, GWP, regional actors, etc.). Further incentives for potential future members to actively work within an "International Water Cooperation Facility" structure could be provided through increased ownership in the

Facility through early engagement in the design process and using the Facility as a coordinating body for the donor agencies, thereby attracting service providers while simultaneously making the most effective use of limited funds in a coordinated approach as the '*International Shared Waters Facility*' proposal argued.

A coordinated approach with an inclusive membership like a cooperative network of organisations who can each illustrate their added advantage in the field would allow for a wide scope of transboundary cooperation services to be addressed in an efficient and effective manner. The inclusion of regional service providers with their shared value systems, culture, trust and long-term personal commitment to transform the conflict situation should provide a significant added-value if linked with other international institutions. Once coordinated, the real service gaps could be identified and filled by the best institutions that are capable of addressing the issues with the regional experience. If such a 'Cooperative' were established, other organisations and agencies would have an incentive to let the Facility know what they were doing in which region because they could potentially benefit from the identified service gaps and Facility assistance. In addition, through a larger network of organisations benefiting from the activities of the Water Cooperation Facility, additional mechnisms to fund the ongoing operational and administrative costs for the small core staff could potentially arise, which could include modest membership fees from participating agencies.

Based on comments from interviewees and survey responses, it would appear that increased coordination amongst service providers is not only favourable, but mandatory in order to provide services that are perceived to be effective – How can an international aid organisation promote cooperation amongst riparian states when they themselves are perceived to be incapable of providing services in a coordinated way?

3.2.3. Centralization

Many of the survey respondents and those interviewed stressed the importance of using regional organisations to provide the desired services. In addition, the survey results suggest that there are currently organisations within the regions providing the desired services, but additional capacity building is required to adequately fulfill the demand. It is unlikely that a centralized international Facility would be able to sufficiently address these concerns or change any negative perceptions that the initiative is merely creating an ineffective bureaucratic white elephant.

While regional organisations may not currently have the capacity to improve transboundary water cooperation, and some services may only be effective through the use of an international networks (i.e. high ranking political officials from donor states to assist convening parties), the subsidiary principle should be applied where the International Water Cooperation Facility exists and offers its direct assistance services only so long as the time it takes to increase capacities and transfer responsibilities to the lowest appropriate level within the regions. Currently existing regional organisations that are perceived as neutral bodies exist in the form of the OAS, SADC, UN Economic Commissions, etc. If these regional bodies were interested, the "International Water Cooperation Facility" initiative could instead be a one-time "Program of Action" with set goals and targets to assist these regional organisations in developing a "Regional Water Cooperation Facilities", or small low-cost extensions ('arms') to these existing

neutral organisations. These 'arms' to the regional bodies could potentially be sustained through innovated funding mechanisms within the regions and associated regional development banks, thereby creating more 'ownership' over the development process. During the transfer of tasks under the "Program of Action", the International Water Cooperation Facility could provide the linkages and coordinate activities to develop standards and provide a unified international platform to voice the transboundary concerns and funding needs of the regional nodes. After which point, the role of the International Water Cooperation Facility and its small core staff and their role as central 'node' facilitators would be reduced until it is completely phased out and the linkages between the various regional networks are established. This self-destructing philosophy is generally not consistent with the way many organisations operate, so it may prove difficult for some agencies to adopt such a paradigm shift.

3.2.4. Control

The 1994 restructuring of the GEF[8] illustrated the difficulties in sharing control between three aid agencies working for a common goal but with different perspectives on how to meet that goal. An independent assessment deemed the collaborative arrangement as ineffective and called on the creation of a Secretariat that would be organisationally, administratively, and functionally independent from the implementing agencies and organisations, and allowing other organisations to implement projects beyond the three original agencies (Sjöberg 1999). The restructuring took place and by the end of the process, an innovative governance system consisting of an Assembly, Governing Council, and a functionally independent Secretariat existed.

This example should be considered in the development of an International Water Cooperation Facility designed as an inclusive cooperative network of major transboundary aid organisations. As such, having an organisationally, administratively, and functionally independent Secretariat with a small core staff that is advised by an advisory board elected by the transboundary alliance of implementing agencies that form the governing council, could potentially make for a truly effective organisational structure. Other organisations should be allowed to implement projects beyond the member agencies. The advisory board members could be rotated every four years until the International Facility (or Program) is dissolved. "Regional Water Cooperation Facilities" could adopt a similar governing structure for those agencies operating within their regions. The greatest problem that could result from not having a lead agency is that aspects of accountability could be watered down, leaving a Facility designed to assist to resolve conflicts without a strong backbone. Perhaps the Facility Partners could consider a revolving leadership role like that within the European Union administration, where states (in our case organisations) rotate leadership of the union every 6 months.

3.2.5. Flexibility

In order to avoid conflicts from exasperating into greater consequences, the provision of dispute resolution services needs to be expedient and capable of accommodating a wide

[8] The reader is encouraged to look at Helen Sjöberg's Working Paper entitled "Restructuring the Global Environmental Facility" for an in-depth review of the process and outcomes (GEF).

range of new circumstances that develop. As such, flexibility within the governing structure and institutional rules of the Water Cooperation Facility would be required to meet the needs. The de-centralized inclusive membership described above could potentially offer a governing structure that is more flexible to change than four well-established organisations operating from a central location. The institutional flexibility required should be identified by periodic independent assessments on how the Water Cooperation Facility Program of dissemination to regional bodies is meeting targets and goals. Recommendations from these independent assessments should be acted upon immediately.

Facility Members (or Program Participants) should be able to join or withdraw from the initiative whenever a new work-plan is prepared, and at the frequency in which the costs of negotiating new agreements outweighs the benefits of a flexible governing structure. Major organisations and development banks involved in improving transboundary waters cooperation should be urged to commit to the full multi-year "Program of Action".

The Facility should develop transparent application criteria to assess all future partner organisations in the initiative in order to provide an overview of each organization's capabilities and to identify potential service gaps or overlaps during the design phase of the Facility. In Appendix C a survey is provided as a potential template.

With respect to the Facility's guiding principles, the UN Watercourses Convention could be adopted as the legal framework. Even if the Convention never enters into force, it carries significant weight and will have influence in the development of other water resource agreements, as well as the resolution of controversies (McCaffrey 2000). Box 9 provides some examples. With respect to a standardised Code of Ethics for third-party dispute resolution specialists, some mediation organisations like International Alert and the US Institute for Environmental Conflict Resolution have created their own code of ethics, and these can be downloaded from their websites (www.international-alert.org, www.ecr.gov). These codes could provide a framework to establish the Facility Member's guiding principles when retained to provide these services. Some flexibility in the guiding principles should be considered in light of the politically sensitive issues addressed.

BOX 9: Influence of the UN Watercourses Convention

The fact that, to date, only 12 states of the 35 needed for the Convention to enter into force have ratified the document is construed by some not only as waning support, but also that the Convention may not actually have codified the current status of international water law (Eckstein 2002). However, even if the Convention never enters into force, it carries significant weight and will have influence in the development of other water resource agreements, as well as the resolution of controversies (Eckstein 2002). For example, prior to its adoption by the UN General Assembly, the ILC's Draft Articles had already significantly influenced the drafting of other international agreements, including the UN/ECE Convention on the Protection and Use of Transboundary Watercourses and International Lakes, the SADC Protocol on Shared Watercourse Systems, the Agreement on the Cooperation for the Sustainable Development of the Mekong River Basin, and the 1991 Protocol on Common Water Resources concluded between Argentina and Chile. This trend has continued even after the Convention's adoption as evident in the 1999 Draft Protocol to the 1992 UN/ECE Convention on the Protection and Use of Transboundary Watercourses and International Lakes (Eckstein 2002). Of particular significance, the Convention was referred to in 1998 by the International Court of Justice (ICJ) in the Gabcíkovo-Nagymaros case, implicitly endorsing the principle of equitable and reasonable utilization as a governing principle of International Water Law. Remarkably, this was done prior to any state ratifying the 1997 UN Watercourses Convention (Wouters 2001).

TABLE 15: Potential Advantages/Disadvantages of Design Considerations

Dimension	Aspect	ADVANTAGES	DISADVANTAGES
Scope	Broad	Would provide "one-stop-shop" convenience. Provides greater opportunities for partnering organisations to further their individual agendas and thus creates greater incentive to actively contribute. Increased opportunities to offer assistance to those in need.	Requires significant capacity to be able to effectively and efficiently address a variety of issues regionally on-demand. May take some time to establish credibility and a proven record of experience in all fields. Risk of overlapping with existing services available
	Narrow	Easily defined and manageable, less vague for those considering approaching the Facility for assistance. Reduced risk of overlapping services with existing agencies.	Demand for narrow set of services could fluctuate significantly which would make the administrative and operational aspects of the facility a challenge.
Membership	Exclusive	Facilitates the mechanics of organisational control. Reduced uncertainty of member behaviour. Greater benefits to the limited partner organisations.	Exclusive partnership of four agencies would make it difficult to provide an effective and efficient "one-stop-shop" for all third party assistance services desired throughout the world. In addition, exclusivity can perpetuate negative perceptions from other institutions not invited to contribute.
	Inclusive	Increased heterogeneity of membership can increase the scope of services that can be provided. Potential to improve agency coordination and develop and identify new collaborative arrangements and opportunities. Increased ability to raise awareness for the initiative.	Potential loss of effectiveness and efficiency due to excessive bureaucracy to ensure equal distribution of benefits between partnering organisations. Difficult to create sufficient incentives for all volunteering organisations to contribute. Increased difficulties associated with organisational control, which could potentially damage reputation.
Centralization	Central	Greater control for implementing agencies and less uncertainty regarding the activities within the Facility.	Increased difficulty associated with expanding the centralized 'web' of experts to potential regional contributors.
	Regional	Increased understanding of value systems and culture and improved efficiency in addressing local / regional problems. Increased stakeholder participation	The Self-Destructing philosophy is generally not consistent with the activities of most organisations, and therefore a new paradigm must be considered. Some loss of control of operations within the Facility. Time and expenses associated with establishing regional nodes.
Control	Lead Agency	Increased accountability for actions, which would likely make the Facility more desirable for parties to approach.	Potential supply-driven approach with lead agency opting to assist in regions where their organisation would benefit most (grande-standing). Potential in fighting associated with unequal distribution of benefits to member organisations.
	Functionally Independent Secretariat	Not influenced by agencies own agendas and presents a non-partisan, neutral approach.	Potential increase in disputes associated with Facility direction and operations that would have to be overcome at the cost of time / money.
Flexibility	Ad-hoc response	Not constrained by pre-meditated set of rules and could address concerns as they come up to the satisfaction of those seeking the services (i.e. have a menu of legal frameworks that could be pursued).	Does not present a clear picture of the guiding principles and may be a disincentive to those considering approaching the Facility for assistance.
	Set guiding principles	Familiarity for those approaching the Facility for assistance. Increased accountability.	More difficult to adjust to uncharacteristic requests and associated situations.

3.3. Assessment of Proposed IWCF (Third Study Objective)

For this independent assessment, the Facility Partners made available a preliminary Draft Document on the originally proposed design of the Water Cooperation Facility. The assessment outlined in this report was based on that document and the findings from the survey and associated interviews. As the Draft Document was confidential due to the preliminary nature of it, respondents to the survey and those interviewed were only provided information about the Facility that was publicly available over the Internet (Appendix D). As a result of the limited availability of design information, the respondent's perception of the proposed Facility likely differed from that envisioned by the Facility Partners undertaking the initiative.

A second limitation to this assessment regards the progress reports that were presented to the Facility Partners on an ongoing basis during the preparation of this thesis in order to ensure that the findings and recommendations from this work would be available for consideration prior to the complete development of the Facility. It appears that some of the recommendations from the progress reports were acted upon or were in line with the Facility Partner's own thinking during the development process. A disadvantage to performing an assessment simultaneously to the Facility's development is that the non-static design renders an inaccurate assessment of the Facility under the current conditions.

The International Water Cooperation Facility was to be a formal network of four equal partner organisations comprised of UNESCO, the World Water Council, the Permanent Court of Arbitration, and the Universities Partnership for Transboundary Waters. These partners would operate under an MOU amongst them, and have an advisory board directing the activities within the secretariat located in Europe. This governing structure was how the Facility was described to interviewees and survey respondents. However, one Progress Report recommendation that was either acted upon or which coincided with the Facility's development was the concept of adopting a more inclusive governing structure with a functionally independent secretariat with no 'lead' agency. As such, a detailed assessment of the originally proposed Partner organisations with respect to Membership and Control design dimensions would be redundant, as they would not represent the whole system. Through this study's limited assessment, the four Partners were determined to each have complimenting expertise that can provide a good foundation in which to expand the cooperative network of transboundary water organisations.

The issue of decentralisation is new in this report and not available in previous progress reports. Any plans to revise the centralized concept outlined in the original Facility proposal into a "Program of Action" to decentralise the process was not known at the time this report was completed. It is recommended that the Partners consider the subsidiary principles and transfer authority to provide the services at the lowest appropriate level in order to improve efficiency and effectiveness (particularly with respect to mediation as it was discussed earlier in this report that regional mediators with shared culture and value systems generally were considered more effective than that those international mediators provided by inter-governmental bodies like the United Nations).

4. RECOMMENDATIONS FOR FURTHER ACTIONS

The results of the survey indicated that an International Water Cooperation Facility as defined in its' originally proposed design would be welcome to the majority of respondents surveyed in this study. The researcher will be requesting feedback from those same respondents on the design considerations developed as part of this study. The feedback comments will be compiled into a brief report and presented to the current Facility Partners. It is recommended that findings presented within this report be considered in the context of any suggestions made by the target audience following their review.

The 'need' for a Facility was based on a desk-top study and electronic survey to a targeted audience comprised of transboundary water professionals and conflict specialists (due to the limited scope of this study). While the 'desire' for an International Facility exists from others working within the same field, the 'need' relative to other pressing water-related issues (sanitation, drinking water, etc.) could only be judged based on a limited number of interviews with high-ranking decision makers within the international development field and a comprehensive literature review. While there was some support through these interviews, it is recommended that the current Facility Partners use their contacts and recognition for further consultations on this matter and adapt the design of the Facility accordingly.

Renewed pressure should be put on the development banks to adopt a coordinated and innovative approach to financing aid in sensitive investment environments like transboundary basins.

Further identification of aid agencies active within the field of improving transboundary waters cooperation should be performed and a transparent assessment of these organisations's effectiveness and value-added to an International Water Cooperation Facility (or "Program of Action") should be performed. Potential service gaps and overlaps should be addressed at an early stage of development. The selection criteria to include other organisations into the 'cooperative network' should be clearly defined and *all* agencies (including the existing ones) should perform the internal assessments.

Upon identifying a suitable Alliance of Transboundary Cooperation Aid Agencies, these organisations should be quickly invited to provide inputs into the design at this early stage of the development process of the Facility. The current Facility Partners should identify regionally neutral organisations and determine their interest, commitment and capabilities in expanding their agenda to coordinate and promote water cooperation within the transboundary basins in their regions if a decentralised process were considered. Target dates, milestones, and deadlines for the dissemination of activities to the regional bodies should be developed if a decentralised "Program of Action" were to be adopted. It would be valuable for the Facility Partners to refine the scope of services through consultations (i.e. roundtables) with the regional neutral organisations, stakeholders and riparian governments at an early stage of development of the Facility.

Finally, the findings of this study suggest that water experts within the field of transboundary waters cooperation have an urgent desire to approach the Facility for assistance in many regions. Those developing the Facility should do so without haste.

5. CLOSING COMMENTS

In David Suzuki's book "The Sacred Balance", the author interviews Edward O. Wilson and asks why ants are so successful as a species of social insects. His response was that they dominate the world because they behave as a "super-organism":

> *"A colony of ants is more than just an aggregate of insects that are living together. One ant is no ant. Two ants and you begin to get something entirely new. Put a million together with the workers divided into different castes, each doing a different function – cutting leaves, looking after the queen, taking care of the young, digging the nest out and so on – and you've got an organism, weighing about ten kilograms, about the size of a dog and dominating an area the size of a house."*
>
> (Source: Suzuki, D 1997)

The 'dog' is fostering peace between countries within shared river basins, reducing poverty through the development of water resources in a cooperative environment, and improving human and ecosystem health through sustainable transboundary practices. The International Water Cooperation Facility (or "Program of Action for Improving Water Cooperation") can provide the linkages that make the 'dog' walk, but the effectiveness and success of this initiative in coordinating those development agency 'ants' will inherently be based on whether they themselves believe there is a need for a coordinated approach and are willing to make serious commitments towards the process. In a field of good intentions easily frustrated by external forces and limited funds, some international development workers appear to cast a dark cloud of protectionism on some initiatives and pessimism on other 'competing' organisations with the like goals. The proposal to establish a low-cost Water Cooperation Facility with a functionally independent secretariat presents an ideal opportunity for coordination amongst transboundary waters service providers to engage themselves in the cooperative and coordinating processes they intend on recommending and developing within transboundary basins. I commend UNESCO, the World Water Council, the Permanent Court of Arbitration and the Universities Partnership of Transboundary Waters for initiating the development of this often-recommended proposal and for adopting a pragmatic and open approach to its design and development in the best interests of those riparian states in need of these services most. It is apparent through the study's survey that the creation of such a Facility is urgently desired, and therefore, I wish those involved in it's development a successful launch in the very near future.

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APPENDIX A

SURVEY RESPONDENTS BY BASIN

Regional Distribution of Responses

AFRICA				
Basin #1	**Basin #2**	**Basin #3**		
Zambezi				Gov
Nile	Nile			Gov
Incomati	Limpopo (Olifants)	Orange		Gov
Limpopo	Zambezi	Pungwe		Gov
Kunene	Okavango	Orange		Gov
Nile (Lake Victoria)				Gov
Orange	Zambezi			Gov
Niger				RBO
Nile	Sabi			NGO
Kunene	Orange	Okvango		NGO
		Nile		ACAD
Zambezi	Lake Chad	Nile		ACAD
Nile	Nile (Kagera)			ACAD
Okavango	Limpopo			ACAD
Incomati	Nile			ACAD
Incomati				ACAD
Zambezi	Limpopo	Sabi		ACAD
Lake Tanganyika				ACAD

ASIA				
Basin #1	**Basin #2**	**Basin #3**		
Jordan				GOV
Jordan	Jordan (Yarmouk)	Disi Aquifer		GOV
Mekong				RBO
Mekong				RBO
Middle East Region	Mekong			RBO
Mekong				RBO
Mekong				RBO
Mekong				RBO
Aral Sea (Syrdarya)	Aral Sea (Amudarya)			RBO
Aral Sea				INT-GOV
Caspian Sea				INT-GOV
Ganges-Brahmaputra-Meghna (Ganges)	Ganges-Brahmaputra-Meghna (Teesta)	Ganges-Brahmaputra-Meghna (Brahmaputra)		INT-GOV
Ganges-Brahmaputra-Meghna	Salween			INT-GOV
Mekong				INT-GOV
Caspian Sea				INT-GOV
Ca / Song-Koi		Caspian sea		INT-GOV
		Jordan		NGO
Mekong				NGO
Jordan (Yarmuk)	Jordan			NGO
Mekong	Ganges-Brahmaputra-Meghna Basin	Tigres Euphrates		NGO
Aral Sea				ACAD
Ganges-Brahmaputra-Meghna (SunKosi)	Mekong			ACAD
Indus				ACAD
Mekong				ACAD
Jordan				ACAD
Euphrates-Tigris River Basin				ACAD
Kura and Aras/Araks	Caspian Sea			ACAD
Aral Sea	Mekong			ACAD
	Tumen			ACAD

Note: **RED** indicates a Partial Survey

Regional Distribution of Responses

EUROPE				
Basin #1	**Basin #2**	**Basin #3**		
Dnieper				GOV
Rhône	Roia			RBO
Danube				INT-GOV
		Danube		INT-GOV
Narva (Peipsi/Chudskoe)	Daugava/Zapadnaya Dvina	Nemanus		INT-GOV
	Black Sea			INT-GOV
	Scheldt			ACAD
Danube				ACAD
Dnieper	Western Dvina	Pripyat		ACAD
		Dnieper		ACAD
Nestos basin				ACAD
Elbe (Spree)				PRIVATE
Elbe (Sumava)	Odra (Bela)			PRIVATE
Wisła	Odra			OTHER
SE Europe General				OTHER
Vistula (Bug)	Danube (Morava)	Danube (Mures)		OTHER

LATIN AMERICA				
Basin #1	**Basin #2**	**Basin #3**		
Sarstun				GOV
La Plata (Prata)	Amazon			GOV
La Plata				GOV
Rio Grande	Colorado	Grijalva (Usumacinta)		RBO
Lempa				RBO
Colorado				INT-GOV
Lempa	Coatan	San Juan		NGO
Lempa	Cuenca Río Paz			NGO
La Plata (Apa)	La Plata (Rio Miranda/Rio Paraguay)	La Plata (Rio Taquari/Paraguay)		NGO
Lake Titicaca	Amazon (Vilcanota River)			PRIV

GENERAL & MISC.				
Basin #1	**Basin #2**	**Basin #3**		
General				GOV
General				GOV
Nelson-Saskatchewan				GOV
General				INT-GOV
Australia - General				NGO
General				NGO
		Columbia		ACAD
General				ACAD
		Columbia		ACAD
General				ACAD
General				OTHER

Note: **RED** indicates a Partial Survey

APPENDIX B

QUESTIONNAIRE

THE DESIGN OF AN INTERNATIONAL FACILITY TO ASSIST IN …

IMPROVING COOPERATION BETWEEN RIPARIAN STATES SHARING WATER RESOURCES

In recent years there has been a growing awareness of the potential conflicts that could arise between countries sharing a water resource. There have been a number of recommendations indicating there is a need for an international facility to assist in promoting co-operation between riparian states sharing water resources in transboundary river basins. In addition, the recently published findings of the United Nation's World Water Assessment Program reiterated this recommendation. Organisations within the International Water Community are currently in the process of developing such a facility. Theoretically, this International Facility would provide a single entry point (a "one-stop-shop") for stakeholders within transboundary river basins (i.e. government, NGOs, river basin commissions, community groups, inter-governmental agencies, etc.) access to the tools used to promote cooperation within the basin to anticipate, prevent, and/or resolve international water-related disputes through academic research, training, and/or direct assistance.

This survey is part of a Masters Thesis at IHE Delft prepared for the purpose of determining through expert's experiences exactly what the needs for such a facility are, the services and focus areas this facility should consider, and the associated capacities that would be required to improve integrated transboundary water resources management through increased cooperation between riparian states sharing a common water resource in transboundary river basins[1]. Those organizations designing the "Cooperation Facility" are interested in learning from the findings of this questionnaire when they are presented in my thesis report. Your experiences and advice presented herein could make a substantial contribution to improving cooperation between riparian states sharing a water resource as your recommendations are considered during the design phase of this new International Facility.

If you have any questions, or wish to provide additional insights on this matter, please contact:

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NOTE: If you require more space for your answers, pleased add an additional sheet.

[1] "Integrated Water Resources Management in Shared River Basins" is defined as riparian states that share a common resource that are capable of:

- Creating an enabling environment to allow inter-sectoral and international cooperation and planning in such a way that the waters are shared equitably and sustainably (*Political Will*);
- Having a reliable information base for political, legal, institutional progress can be made. Including cross-border cooperation and exchange of information and other relevant data, establishment of crisis procedures, increased capacity building, joint research and planning, and joint development ventures (*Technical Cooperation*);
- Having a legal framework in place that all riparian states can agree upon in order to harmonize the national laws and regulations between countries in an effective and integrated global manner (*Legal-Institutional Framework*).

Section 1: Your Organisation

1) Please indicate with an "X" which classification best represents your organisation:

☐ Federal Government	☐ Municipality	☐ Private Sector Business
☐ National (State/Province) Government	☐ Non-Governmental Organisation	☐ Universities (Academia)
☐ River Basin Commission	☐ Inter-Governmental Agency	☐ Water Expert
☐ Sub-basin (Watershed) Organisation	☐ Water User Association	☐ Concerned citizen group
☐ National Water Authority	☐ Water Service Provider	

☐ Other….

2) What, if any, have been your 1-3 most important work projects within (or related to) river basins where the water resources are shared by more than one country (transboundary river basins)?

Basin Name A: .....

☐-A current dispute exists in the basin ☐-Potential dispute in the near future ☐-No foreseeable disputes

Dispute(s) Details: .....

Work Project: .....

What Role did you play?

Place an "X"→ ☐ Previous Work ☐ Current Work

Basin Name B: .....

☐-A current dispute exists in the basin ☐-Potential dispute in the near future ☐-No foreseeable disputes

Dispute(s) Details: .....

Work Project: .....

What Role did you play?

Place an "X"→ ☐ Previous Work ☐ Current Work

Basin Name C: .....

☐-A current dispute exists in the basin ☐-Potential dispute in the near future ☐-No foreseeable disputes

Dispute(s) Details: .....

Work Project: .....

What Role did you play?

Place an "X"→ ☐ Previous Work ☐ Current Work

3) *Please indicate how you feel about the following statements:*

a) *Improving cooperation among countries is one of the most important water resources management problems facing the world community.*

Strongly Agree	***Agree***	***Neutral***	***Disagree***	***Strongly Disagree***
☐	☐	☐	☐	☐

b) *The work you do is very much involved in improving cooperation between countries sharing a water resource in an international river basin:*

Strongly Agree	***Agree***	***Neutral***	***Disagree***	***Strongly Disagree***
☐	☐	☐	☐	☐

c) *Your organization's ability to make/affect decisions that can significantly improve the way countries cooperate in sharing their water resources is high:*

Strongly Agree	***Agree***	***Neutral***	***Disagree***	***Strongly Disagree***
☐	☐	☐	☐	☐

d) *Your personal ability to make/affect decisions within your organization is high:*

Strongly Agree	***Agree***	***Neutral***	***Disagree***	***Strongly Disagree***
☐	☐	☐	☐	☐

4) *How many years have you worked in the water-related field?*

.....

5) *How many years have you worked in promoting cooperation to anticipate, prevent, and/or resolve international water-related disputes through academic research, training, and/or direct assistance?*

.....

Section 2: Improving Cooperation in Transboundary river basins

1) *With regards to those transboundary river basins you have identified, please rank the **FOUR** most important problems (1=most important) you are confronted with in improving cooperation between the countries sharing the common water resource. In the space below each problem, please provide one sentence explaining why you believe the problem persists.*
(Place an "1-2-3-4" in the appropriate boxes) ONLY SELECT 4 BOXES FOR EACH BASIN

PLEASE INCLUDE BASIN(S) NAME HERE →	*A.*	*B.*	*C.*
- Insufficient cross-border exchange of information; Explain why →	☐	☐	☐
- Lack of stakeholder participation across borders; Explain why →	☐	☐	☐
- Lack of crisis procedures / Emergency response plans; Explain why →	☐	☐	☐
- Joint research and planning; Explain why →	☐	☐	☐
- Political will to create an enabling environment; Explain why →	☐	☐	☐
- Lack of joint development ventures; Explain why →	☐	☐	☐
- Insufficient capacity building across all basin states; Explain why →	☐	☐	☐
- Lack of dispute resolution mechanisms; Explain why →	☐	☐	☐
- No agreed legal/institutional frameworks; Explain why →	☐	☐	☐
- Basin wide monitoring of water quality and quantity; Explain why →	☐	☐	☐
- Enforcing agreements; Explain why →	☐	☐	☐
- Insufficient education and training; Explain why →	☐	☐	☐
- Cultural / Ethical / Religious tensions Explain why →	☐	☐	☐
- Lack of confidence between disputing parties Explain why →	☐	☐	☐
- Lack of funding opportunities Explain why →	☐	☐	☐
- Other1 (include here) → _____ Explain why →	☐	☐	☐
- Other2 (include here) → _____ Explain why →	☐	☐	☐

2) *For **EACH** method to improve cooperation between countries listed below, please indicate WHO in the basin is providing the service (or is assisting the stakeholders) to improve cooperation.*

a) **YOUR ORGANISATION** provides the service.
b) The service is provided or assisted by another organisation that you know of within the region (**REGIONAL EXPERT**).
c) You know that the service (or associated assistance) is unavailable or is not performed in the Basin (**NONE / NOT PERFORMED**).
d) You're uncertain whether or not the service can be obtained (**DON'T KNOW**).

PLEASE INCLUDE BASIN(S) NAME HERE →

	A.				B.				C.			
	Your Organisation	Regional Expert	None / Not Performed	Don't Know	Your Organisation	Regional Expert	None / Not Performed	Don't Know	Your Organisation	Regional Expert	None / Not Performed	Don't Know
DIRECT ASSISTANCE												
- Convening parties;												
- Design of dispute management systems;												
- Facilitating joint fact-finding arbitration;												
- Basin-wide access to knowledge and tools;												
- Assess dispute situations and needs;												
- Mediation / Facilitating;												
- Arbitration;												
- Impartial third party advice;												
- Enforcing agreements;												
- Diagnosing conflict												
- Designing, implementing and adapting institutional and legal frameworks;												
- Assistance in accessing financial resources;												
- Implementation of agreements												
- Participation and stakeholder identification												
- Establishing joint technical committees;												
- Creating joint development ventures;												
- Best practices analysis and cooperation identification												
- Performing joint research projects (modeling, data collection);												
PUBLIC INFORMATION & OUTREACH												
- Stakeholder advisory committees;												
- Community advisory committees;												
- Political engagement;												
TRAINING												
- Education and training;												
- Capacity building;												
RESEARCH												
Research related to the anticipation /prevention /resolution of water related conflicts												
- Other; _____												

Section 3: Design of an International Third Party Facility to Assist in Improving Cooperation between Riparian States in International Basins

The recommendations of the United Nations World Water Assessment Program concluded that an International Facility should be created to assist governments, inter-governmental agencies, and NGOs in promoting cooperation as a means to anticipate, prevent, and/or resolve international water-related disputes.

This Facility would assist by acting as a third party that provides academic research, training, and direct assistance on-demand to the disputing parties in the international basin to jointly diagnose, jointly define, jointly create and jointly implement options for anticipating, solving or managing difficult shared water resources conflicts in a non-binding approach.

*It has been proposed that this "**International Cooperation Facility**" should be a joint endeavour of four types of organisations:*

1) *the appropriate United Nations entities,*
2) *an international legal institution,*
3) *a water-related NGO with a wide scope of interest, and*
4) *an academic institution(s).*

Together these organizations would coordinate the Facility's activities and provide assistance through a network of experts to provide a 'level-playing field' environment to facilitate riparian states to join together to improve cooperation. They would work to develop a broad network of service providers to create a robust database in which they would draw upon to provide the best third party assistance to those organizations that approach the facility in need.

In the next section of the questionnaire, the questions relate to the services that would be desired from such a facility, the need for the creation of such a facility, the design and structure of the facility, and the conditions that the Facility should operate for organizations to employ the Facility to assist in improving cooperation between riparian states sharing common water resources.

Please continue with the next section of the questionnaire below…

1) *Assuming an "International Cooperation Facility" was created, what do you think would be the **FOUR** most desired (1=most desired) third-party assistance services to improve cooperation between the riparian states in the basins you have identified?*

NOTE: The list is not comprehensive – If there are additional third-party assistance services that you feel are needed more to improve cooperation between the riparian states, please indicate in the 'Other' box below and add comments if necessary.

(Place an "1-2-3-4" in the four boxes) ONLY SELECT 4 BOXES FOR EACH BASIN

PLEASE INCLUDE BASIN(S) NAME HERE →	*A.*	*B.*	*C.*
No Third-Party Assistance is needed.	☐	☐	☐
DIRECT ASSISTANCE			
- Assisting in convening parties;	☐	☐	☐
- Design of dispute management systems;	☐	☐	☐
- Facilitating joint fact-finding arbitration;	☐	☐	☐
- Basin-wide access to knowledge and tools;	☐	☐	☐
- Assess dispute situations and needs;	☐	☐	☐
- Mediation / Facilitating;	☐	☐	☐
- Arbitration;	☐	☐	☐
- Impartial third party advice;	☐	☐	☐
- Enforcing agreements;	☐	☐	☐
- Diagnosing conflict;	☐	☐	☐
- Assistance in accessing financial resources;	☐	☐	☐
- Implementation of agreements;	☐	☐	☐
- Participation and stakeholder identification	☐	☐	☐
- Establishing joint technical committees;	☐	☐	☐
- Creating joint development ventures;	☐	☐	☐
- Best practices analysis and cooperation identification;	☐	☐	☐
- Performing joint research projects (modeling, data collection);	☐	☐	☐
- Designing, implementing and adapting institutional and legal frameworks;	☐	☐	☐
PUBLIC INFORMATION & OUTREACH			
- Organize and assist stakeholder advisory committees;	☐	☐	☐
- Organize and assist community advisory committees;	☐	☐	☐
- Encouraging political engagement;	☐	☐	☐
TRAINING			
- Education and training;	☐	☐	☐
- Capacity building;	☐	☐	☐
RESEARCH			
- Research related to the anticipation /prevention /resolution of water related conflicts (visioning)	☐	☐	☐
- Other; _____	☐	☐	☐
- Other; _____	☐	☐	☐
- Other; _____	☐	☐	☐

Additional Comments: _____

2) *In your opinion, what are the three most important conditions (1=most important) under which your organisation would employ third-party assistance from an international facility to improve cooperation between riparian states in the international basins you are familiar with?*

1. .....
2. .....
3. .....

Additional Comments: .....

3) *The following statements relate to the NEED to create an "International Cooperation Facility" to provide those services you indicated in Question 1 of this section.*

Please indicate how you feel about the following statements:

a) *There is a need for an "International Cooperation Facility" to be created to provide a single entry point (a "one-stop-shop") of third-party assistance for those services you indicated in Question 1 of this section.*

Strongly Agree	***Agree***	***Neutral***	***Disagree***	***Strongly Disagree***
☐	☐	☐	☐	☐

If you are unsure or disagree, please explain why: .....

b) *An "International Cooperation Facility" should be created because other service providers operating within the regions of the international basins you identified cannot adequately provide third-party assistance services you indicated in Question 1 of this section.*

Basin Name	***Strongly Agree***	***Agree***	***Neutral***	***Disagree***	***Strongly Disagree***
A.	☐	☐	☐	☐	☐
B.	☐	☐	☐	☐	☐
C.	☐	☐	☐	☐	☐

Comments: .....

c) *There are already too many International organizations involved in improving cooperation between riparian states sharing a water resource.*

Strongly Agree	***Agree***	***Neutral***	***Disagree***	***Strongly Disagree***
☐	☐	☐	☐	☐

Comments: .....

With respect to those basins you have identified, please comment on the urgency of creating the "International Cooperation Facility". In your opinion, the Basins you have identified would likely consider using the Facility…

PLEASE INCLUDE BASIN(S) NAME HERE →	A.	B.	C.
IMMEDIATELY	☐	☐	☐
IN THE NEAR FUTURE (~5-10 years)	☐	☐	☐
UNLIKELY THAT THEY WOULD USE THE FACILITY	☐	☐	☐
NEVER	☐	☐	☐
OTHER…	☐	☐	☐

Comments: .....

4) *The following statements relate to the <u>OPERATIONAL</u> aspects of a proposed "International Cooperation Facility".*

Please indicate how you feel about the following statements:

a) *If the "International Cooperation Facility" provided a common 'notice board' for development agencies, NGOs, community groups, governments, and other service providers working within the basin to notify one another of their work activities in order to identify potential cooperative efforts amongst themselves, you believe your organization would need (use) such a service.*

Strongly Agree	***Agree***	***Neutral***	***Disagree***	***Strongly Disagree***
☐	☐	☐	☐	☐

Comments: .....

b) *You believe your organization would be willing to financially contribute to the on-going <u>administrative</u> costs of the International Facility and its core staff if the Facility proved that it was a beneficial contribution to improving cooperation in transboundary river basins throughout the world.*

Strongly Agree	***Agree***	***Neutral***	***Disagree***	***Strongly Disagree***
☐	☐	☐	☐	☐

Comments: .....

c) *Those riparian states that benefit from the services provided by the International Cooperation Facility would be willing to reimburse the Facility for the costs of the third-party services provided.*

Basin Name	***Strongly Agree***	***Agree***	***Neutral***	***Disagree***	***Strongly Disagree***
A.	☐	☐	☐	☐	☐
B.	☐	☐	☐	☐	☐
C.	☐	☐	☐	☐	☐

Comments: .....

d) *Should the Facility focus on Transboundary disputes between nations or include national / regional/local disputes?*

☐ International Disputes Only ☐ Both International and National Disputes

☐ National/Regional Disputes Only ☐ Don't Know

5) *It was proposed in the World Water Assessment Programme that the Facility be comprised of four types of organisations (again listed below), please indicate the specific organisations (their names) that you feel would be best suited to coordinate the Facility's activities, develop a robust database of service providers, and provide third party assistance for those services you indicated in Question 1 of this section to improve cooperation within transboundary river basins:*

(Place an "-" in the space if you do not know a specific organisation that could best provide these services)

Type of Organisation	**Name**
United Nations Organisation:	
International Legal Institution:	
NGO:	
Academic Institution(s):	
Other?	

Comments: .....

IT IS CRITICAL THAT YOU RESPOND TO THE ABOVE QUESTION PRIOR TO PROCEEDING WITH THE QUESTIONNAIRE.

6) *UNESCO, the World Water Council (WWC), the Permanent Court of Arbitration (PCA), and the University's Partnership for Transboundary Waters (UPTW) have proposed to coordinate the Facility and develop a network of experts throughout the world to offer assistance in providing those services you stated in Question1 of this Section (http://www.unesco.org/water/wwap/pccp/index.shtml) Do you feel these organisations are capable of coordinating the proposed Facility?*

Strongly Agree ☐ ***Agree*** ☐ ***Neutral*** ☐ ***Disagree*** ☐ ***Strongly Disagree*** ☐

Comments: .....

7) *If any of these organizations (UNESCO, WWC, PCA, UPTW) are different from those you proposed in Question 5 of this Section, please explain why you did not choose these organizations.*

Comments: .....

8) *The Facility would develop a global database to enable other service providers to include their contact information to be drawn upon as the need arises in specific cases. Do you think your organization would be interested in adding their contact information to this database?*

Yes ☐ ***No*** ☐ ***Don't Know*** ☐

Under what conditions? .....

Thank you for your insights and completing this questionnaire, if you have any further comments or concerns regarding the creation of an International Cooperation Facility, please include these below. In addition, please complete the following information for my records. Confidentiality can be assured. The information can be forwarded to the Facility Partners for their database if you place an "X" in the box below. Please forward this questionnaire to others whom you believe would be interested in adding their contact information to the database.

Name: .....
Organisation: .....
Position: .....
Address: .....
Telephone: .....
Email: .....

Forward Contact Info to Water Cooperation Facility Partners? (Place an "X" in the box) ☐

ADDITIONAL COMMENTS: .....

If you have any further questions or comments, please contact me at:

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THANK YOU

APPENDIX C

PROPOSED ORGANISATION ASSESSMENT FORM

INTERNATIONAL WATER COOPERATION FACILITY MEMBER APPLICATION FORM

This survey is designed for the purpose of establishing a governing council and advisory board comprised of a small number of organisations working to improve transboundary water cooperation as part of the International Water Cooperation Facility.

Through a detailed response, a standardized overview of each organization's capabilities will be available in order to identify potential service gaps or overlaps during the design phase of the Facility. The capacity the candidate organisations to provide third-party assistance services in transboundary river basins will be compared against an earlier survey aimed at determining the desired services of those stakeholders within various basins.

Any other material or arguments illustrating how your organization can contribute to the successful operation of the Water Cooperation Facility is also welcome.

If you have any questions or concerns, or wish to provide additional insights on this matter, please do not hesitate to contact me at your convenience.

1) *How many years has your organization been directly involved in the water-related field?*

.....

2) *How many years has your organization specifically worked at promoting cooperation to anticipate, prevent, and/or resolve international water-related disputes through academic research, training, and/or direct assistance?*

.....

3) *In the following table, please indicate in the 'GENERAL INFORMATION" section, the numerical value associated with the queries for each region. In the "THIRD-PARTY ASSISTANCE SERVICES" section, please indicate those services your organization or network of experts can provide with an "X" and, if applicable, indicate in which Regions these experts have experience relating to that service.*

	Experience ?	REGION					
		Africa	Asia	Europe	North America	South America	Global
GENERAL INFORMATION							
# FIELD OFFICES / REGION							
# WATER EXPERTS (Contacts) / REGION							
Total # Water Projects (past and present) / Region							
Approximate Total Project Costs / Region							
THIRD PARTY ASSISTANCE SERVICES							
DIRECT ASSISTANCE							
- Assisting in convening parties;							
- Design of dispute management systems;							
- Facilitating joint fact-finding arbitration;							
- Basin-wide access to knowledge and tools;							
- Assess dispute situations and needs;							
- Mediation / Facilitating;							
- Arbitration;							
- Impartial third party advice;							
- Enforcing agreements;							
- Diagnosing conflict;							
- Assistance in accessing financial resources;							
- Implementation of agreements;							
- Participation and stakeholder identification							
- Establishing joint technical committees;							
- Creating joint development ventures;							
- Best practices analysis and cooperation identification;							
- Performing joint research projects (modeling, data collection);							
- Designing, implementing and adapting institutional and legal frameworks;							
PUBLIC INFORMATION & OUTREACH							
- Organize and assist stakeholder advisory committees;							
- Organize and assist community advisory committees;							
- Encouraging political engagement;							
TRAINING							
- Education and training;							
- Capacity building;							
RESEARCH							
- Research related to the anticipation /prevention /resolution of water related conflicts (visioning)							

Additional Comments: _____

4) *What is your organisation's prime mandate?*

5) *What do you consider to be your biggest asset towards contributing to the Water Cooperation Facility?*

6) *What other initiatives / programmes has your organisation developed (that are currently active and maintained) that could contribute (or compliment) the WCF Agenda?*

7) *What foreseeable initiatives has your organisation considered, or currently developing, that may contribute (or compliment) the work proposed in the Water Cooperation Facility?*

8) *How will partnership with the Water Cooperation Facility contribute to improving your organisation and meeting your organisation's mandate?*

9) *Are you currently involved in other International Initiatives with other International Water Organisations? If so please describe the actors involved and a brief description of the most significant projects or initiatives.*

10) *On average, how much donor funding is raised annually by your organisation (or directed through your organisation) for transboundary cooperation water-related issues?*

11) *What is your organisation's current operating budget for activities associated with promoting cooperation and/or providing third-party dispute resolution to countries sharing a common water resource?*

12) *Is your organisation willing to financially contribute to the administrative costs and associated operating costs of the core staff of the Facility? If so, how much and under what conditions?*

APPENDIX D

INTERNATIONAL WATER COOPERATION FACILITY BROCHURE (Kyoto 2003)

APPENDIX E

US Institute for Environmental Conflict Resolution
Additional Information

- *Roster program overview*
- *Mediator's roster entry criteria*
- *Model for standard mediator conduct*