

Public Participation  
in the Governance of  
INTERNATIONAL  
FRESHWATER  
RESOURCES



Edited by CARL BRUCH, LIBOR JANSKY,  
MIKIYASU NAKAYAMA, and KAZIMIERZ A. SALEWICZ

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# Public participation in the governance of international freshwater resources

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Edited by Carl Bruch, Libor Jansky, Mikiyasu Nakayama  
and Kazimierz A. Salewicz

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# Introduction

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## From theory to practice: An overview of approaches to involving the public in international watershed management

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*Carl Bruch, Libor Jansky, Mikiyasu Nakayama, Kazimierz A. Salewicz, and Angela Cassar*

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Clean water is essential to human survival, yet it is increasingly scarce. Despite pressures on this crucial resource, people often have little or no opportunity to participate in watershed decisions that affect them, particularly when they live along international watercourses. The United Nations has identified the rising demand for water as one of four major factors that will threaten human and ecological health for at least a generation. Over the coming decade, governments throughout the world will struggle to manage water in ways that are efficient, equitable, and environmentally sound. Whether these efforts succeed may turn, in large part, on providing the public with a voice in watershed-management decisions that directly affect them. Public involvement holds the promise of improving the management of international watercourses and reducing the potential for conflict over water issues.

Recent years, particularly the past decade, have seen a rapid growth of international law regarding the importance of participatory decision-making generally and in the specific context of international watershed management (Bruch 2001, 2002). The body of emergent law ranges from provisions in international and regional declarations to binding conventions [for example on transboundary environmental impact assessment (TEIA) or international watercourses]. (The various international norms and practices are examined in more detail in chapter 2 of this volume.)

With the normative framework providing a clear set of objectives – transparency, participatory decision-making, and accountability – atten-

tion increasingly has turned to specific approaches for operationalizing these objectives. In some instances, this is done through the development of detailed conventions and protocols, especially at the regional level [for example, within the UN Economic Commission for Europe (UNECE)]. For international watercourses, operationalization has been more through policies of river basin authorities, international financial institutions, and other international organizations. In a number of instances, projects, work programmes, and other informal, less-legalistic activities provide an ad hoc approach (see chap. 2, this volume).

Through experimentation in specific instances and specific watercourses, a body of specific practices is emerging to give substance to the general objectives and requirements that have become ubiquitous. Public involvement is moving from theory to practice, from hortatory to actualized.

This volume collects many of the specific experiences and lessons learned in seeking to enhance and ensure public involvement in international watercourse management. It highlights successful mechanisms, approaches, and practices for ensuring that people have access to information about watercourses and factors that could have an effect on them; that people who may be affected have the opportunity to participate in decisions regarding the watercourse; and that people can seek redress when they are affected by activities in an international watercourse. At the same time, the volume examines conditions that facilitate or hinder public involvement, as well as contextual factors that may limit transference of experiences from one watershed to another.

The analysis in this volume draws upon experiences in various international watercourses, as well as some relevant sub-national watercourses and international institutions (see fig. 1.1). It also considers existing and emerging tools that can improve governance and public involvement.

This overview provides an introduction to the volume. It places the various chapters in the overall context and highlights some of the key lessons learned. The following section of this chapter concerns part I of the book, which examines some of the theoretical frameworks and considerations relating to public involvement in international watercourse management. The next section, corresponding to part II of the book, provides an overview of experiences in various international watersheds. The subsequent section, corresponding to part III of the book, examines the role of international institutions in promoting public involvement in international watercourse management. The fourth section, corresponding to part IV of the book, summarizes some of the innovative experiences in engaging the public in domestic watershed management, experiences that could provide conceptual or model approaches to be adapted for specific international watersheds. The fifth section, corresponding to part



Figure 1.1 Watercourses studied in this volume

V of the book, examines some of the emerging tools that could improve public involvement in the years to come. The final section of this chapter provides a few concluding remarks.

## Part I: Theoretical frameworks and considerations

As a threshold question, it is worth inquiring why public involvement in international watercourse management is important. Most chapters in this volume highlight a number of reasons. Together, they may be said to entail the following:

- improved quality of decisions
- improved credibility and public support
- facilitated decision-making processes
- improved implementation and monitoring.

These reasons mirror most of the highlighted benefits of participatory decision-making in the academic literature (Benvenuti 1996; Milich and Varady 1998; Bruch 2001; Getches 2003; Avramoski 2004; see also chap. 2, this volume).

For example, in his chapter on the Mekong River Basin, Prachoom Chomchai points to experiences with the Pak Mun Dam and the Rasi Salai Dam to illustrate his point that failing to effectively involve the public can alienate the public, particularly those who are affected by a project, and can lead to costly protests. Had the decision makers consulted the public, it is more likely that they would have taken the latter's concerns into consideration, improving both the quality and the credibility of the decision. Similarly, in his chapter on the North American Great Lakes, John Jackson describes how Great Lakes United [a regional non-governmental organization (NGO) focusing on the Great Lakes] facilitated the decision-making process in a number of instances. Public involvement can also improve implementation and monitoring, particularly at the local level, as Nancy Gitonga, Roy Hoagland, and Rebecca Hanmer describe in their chapters on Kenyan and Chesapeake Bay watersheds (Cronin and Kennedy 1997).

Although the time, financial, and personnel costs associated with public involvement can deter some agencies, most scholars and practitioners assert that the costs of failing to involve the public generally are greater – and sometimes much greater. As David Getches noted, “Society can pay now or pay later for their decisions” (Getches 2003).

Chapter 2 of this volume, by Carl Bruch, traces the genesis and evolution of norms, institutions, and practices promoting public involvement in international watercourses. It highlights not only the specific approaches but also the international instruments and mechanisms ad-

vancing public involvement in environmental decision-making generally, which together have established a normative framework that seeks to ensure public access to information, participatory decision-making, and public accountability.

A variety of frameworks exist through which to construct mechanisms for engaging the public in watershed management: these are economic efficiency, participatory democracy, collective action and common property resources, integrated water resources management (IWRM), and a hydro-social contract. These different frameworks generally acknowledge the general benefits set forth above, although they rely on them to differing degrees. There are also other frameworks, such as watershed democracy, which has been advanced as a context for promoting direct democracy. The approaches examined in detail in this volume, however, tend to focus more on participatory processes, in which people have a voice in the decision-making process but the decision makers make the ultimate determination.

In his chapter on transboundary ecosystem governance, Bradley Karkkainen examines the increasing role of NGOs and members of the public in governing international resources, focusing on international watercourses. He advances the idea of a post-sovereign world in which the development, implementation, and enforcement of international law is no longer the sole province of sovereign nations. Although it is too early to pronounce the demise of sovereignty as a guiding principle of international law, Karkkainen highlights the new institutional space occupied by non-governmental actors, as well as the role of informal rules.

In the third chapter of the section on theoretical frameworks (chap. 4), Hans van Ginkel explores the meaning and limitations of public involvement in the Information Society. This chapter addresses the same general topic as Carl Bruch's later chapter (chap. 18) on Internet-based tools, but van Ginkel focuses on policy considerations of such tools, particularly in light of information overload, "data smog," and unequal access to electronic tools.

In a number of chapters the challenges of engaging lay people in making decisions for complex, non-linear, natural, social, and political systems are noted. This is particularly a theme of the chapters by John Volkman, Tomlinson Fort, and Bradley Karkkainen, and it merits mention here. Not only are there many uncertainties but also, in non-linear systems, these uncertainties mean that long-term predictions and actions are not possible (Gleick 1987). Accordingly, a flexible, responsive process is often necessary. This process is called adaptive management, and it is discussed in more detail in the section on emerging tools, below.

## Part II: Experiences from international watersheds

The five chapters of part II of the book examine experiences in promoting public involvement in the management of international watersheds on four continents – Africa, Asia, Europe, and North America. Although this constitutes but a portion of the relevant experiences, it is supplemented by portions of other chapters (for example those in the parts on international institutions and emerging tools). Together, they represent many of the leading examples.

The various examples are cause for cautious optimism. Many of the case studies illustrate past failures of nations and watercourse authorities to share information with the public, to provide a venue for the public to participate in decisions regarding proposed policies or projects, or to operate in a publicly accountable manner. However, popular reactions to these failures have driven recent innovation.

There are tentative initial efforts to involve the public in a number of watercourses. Some are more successful than others. For example, Ruth Greenspan Bell and Libor Jansky examine the ongoing evolution of participatory management of the Danube River. In this basin, the construction of the Gabčíkovo–Nagymaros Dam, initially without public involvement or consultation, proved to be a key factor in mobilizing public attention and creating political space for public participation. They contrast this experience with other efforts to clean up the Danube River, and the mixed success with involving the public. There is an increased recognition by policy makers of potential difficulties in implementing a project if the public is not involved in the decision-making process; however, the specific modalities for involving the public are still evolving in a number of regards and progress is irregular. Elsewhere in Europe, public participation has been developing gradually in the management of the Dniester River (Trombitsky 2002) and other watercourses (Avramoski 2004).

In his chapter on the Mekong River Basin, Prachoom Chomchai observes that popular resistance to some large-scale hydropower dams and other projects has led the Mekong River Commission to develop policies on information exchange and public consultation. The Mekong River is particularly interesting owing to the long history of participatory governance at the local level, with a striking disconnect in the lack of public participation at the national and international levels over most of the past 150 years. Noting some of the differences in the way that historical participatory practices differ from contemporary advocacy, Chomchai highlights ways in which regional efforts to improve public involvement in managing the Mekong River could draw upon traditional local and recent national developments in transparent and participatory governance.

African watercourses are also developing participatory principles and mechanisms for governance. For example, in the Okavango River and Delta, Peter Ashton and Marian Neal highlight regional initiatives (such as “Every River Has Its People”) that have enhanced transboundary governance by improving stakeholder participation in decision-making. More generally, Michael Kidd and Nevil Quinn suggest that the general lack of provisions in instruments governing specific watersheds in Southern Africa may be a contributing factor to their lack of effectiveness. At the same time, they sound a note of optimism in the recent commitment of the Southern African Development Community (SADC) to “increase[...] awareness, broad participation and gender mainstreamed in water resources development and management by 2005.” Promising developments over the past few years can also be found in the Nile River Basin (Shady 2003), Lake Victoria (Ntambirweki 2003), and the Niger River and Lake Chad Basins (Namata 2003).

The North American Great Lakes have some innovative experiences with involving the public in decision-making, which John Jackson explores in his chapter. Although some of this may be attributed to provisions in the organic documents (dating to 1909) for the International Joint Commission (IJC), which governs the waters, he argues that the NGOs and community groups living around the lakes have also created the political space to be involved. Jackson explores a range of ways that a transboundary citizens’ coalition can improve – and, indeed, has improved – governance of a transboundary watercourse. He also examines some of the financial and cultural challenges faced, as well as approaches taken to address these challenges.

One of the common themes running through the experiences represented in the chapters of this book, as well as elsewhere, is the growing effort to inform the public of potential project or policy developments. Some of this is influenced by the development of regional and international norms of transparency, participation, and accountability. However, public outrage over certain projects (about which they frequently were not alerted or consulted) is a substantial factor in the evolution of participatory governance in a number of watercourses. Such responses have often driven initiatives to develop more inclusive and transparent policies and to create formal mechanisms for involving the public. This dynamic holds for many of the watercourses described in this part, as well as for international institutions. For example, in their chapter on the African Development Bank (AFDB), discussed in the next section of this chapter, Aboubacar Fall and Angela Cassar examine the recent developments of transparency and participation in management of the Senegal River, arising in part in response to earlier difficulties when the public was marginalized.

### Part III: International institutions

Because of their role in financing large-scale infrastructure – including dams, diversions, and irrigation systems – international financial institutions can have a significant role in the development of transboundary watercourses. In response to concerns over specific projects, multilateral development banks at the international and regional levels have developed a number of operational policies to ensure transparency, participation, and accountability in the planning and implementation of projects along such watercourses. These include policies governing dams, EIA, resettlement, indigenous peoples, and other relevant aspects. The World Bank, examined by Charles Di Leva, has been a (sometimes reluctant) leader in promoting public involvement in the realm of public financing, and it is starting to affect how private sector finance is conducted. One of the World Bank's innovations is its Inspection Panel, which allows people affected by Bank-funded projects (including dams) to seek redress if the Bank fails to follow its policies. Thus, if the proponents of a particular project and the Bank fail to consult the public, conduct an inadequate EIA, or do not provide for an adequate resettlement plan, aggrieved persons or organizations can submit a complaint to the Inspection Panel.

Regional development banks, such as the AFDB, have also developed policies and practices to improve public involvement in their projects, including those affecting international watercourses. In their chapter, Fall and Cassar examine recent experiences of the AFDB in improving such public participation. Particular emphasis is placed on the Senegal River Basin, where the AFDB has been particularly active in supporting and advancing public involvement.

In addition to financial institutions, a number of other international bodies seek to encourage public involvement in international watercourse governance. River-basin authorities, many of which are described in part II of this volume, focus on a specific watercourse. The World Commission on Dams (WCD) – which involved cooperation between the World Bank, the International Union for the Conservation of Nature, and other organizations – was a transparent, consultative process to address the controversial aspects of large-scale hydropower dams; and the Dams and Development Project of the United Nations Environment Programme (UNEP) is continuing the work of the WCD (WCD 2000; UNEP 2003; Van Dyke 2003). UNEP also is a leader in developing and making publicly available information on transboundary watercourses (Cunningham 2003). The Global Environment Facility (GEF) does much to advance public participation in the management of interna-



tional waters through integrated water-resources management, transboundary diagnostic analyses, and strategic action programmes (Gonzalez 2003).

At the regional level, a number of bodies complement efforts by river-basin authorities to strengthen public participation in transboundary watercourse management. In his chapter, Geoffrey Garver outlines the array of mechanisms that the North American Commission for Environmental Cooperation utilizes to improve transparency, public participation, and accountability in the region, highlighting examples where these tools have been applied to watershed management. In Europe and Central Asia, the UNECE serves a similar role; in fact, it has developed a number of strong regional conventions for improving governance of transboundary watercourses (UNECE 1992), EIA (UNECE 1991), and public involvement generally (UNECE 1998). Both the SADC and the recently re-established East African Community seem poised to serve similar roles in Southern and East Africa, respectively, as outlined in the chapters by Kidd and Quinn and by George Sikoyo.

#### Part IV: Lessons from domestic watercourses

Domestic watersheds frequently provide a laboratory for developing management techniques that can be adapted and applied at the international level. For example, Chomchai in his earlier chapter reports that the Mekong River Commission (MRC) is drawing upon the lessons learned from the Murray–Darling Basin Commission in formulating the MRC's public participation strategy. This part of the volume highlights some novel approaches from Africa, Asia, and North America that may serve as models for improving public involvement in transboundary watercourse management.

In her chapter on management of Kenyan fisheries, Nancy Gitonga surveys a number of approaches for involving the public in decisions to manage fisheries. Experiences highlighted in her chapter show that stakeholder involvement can be instrumental to the effective implementation of control measures to rehabilitate exhausted fisheries. Perhaps the most innovative approach that she examines is the establishment of beach management units to manage Lake Victoria fisheries at a local level. This practical approach to managing shared resources in an international lake in a coordinated manner between the local, national, and regional levels has shown great promise.

In the United States, the Chesapeake Bay has been a model for parti-

icipatory, interjurisdictional management for more than two decades. In their chapters, Roy Hoagland and Rebecca Hanmer examine the experiences in involving the public in management and operational decisions from the non-governmental and governmental perspectives, respectively. Notable for its size, population, and economy, the bay is also distinguished by the numerous national, regional, state, and local authorities that have responsibilities affecting it. The lessons learned over the years in involving the public in such a politically, administratively, socially, and ecologically complicated context are likely to be relevant to many trans-boundary watercourses. The chapter by Tomlinson Fort III, addressing standard-setting in the Delaware Estuary, explores mechanisms for involving not only the general public but particularly the regulated community in determining standards that will affect conduct (and expenses incurred) by numerous parties. His chapter draws upon experiences representing a regulated industry; it highlights some of the tensions inherent in the process and also practical ways that have helped to facilitate continued, constructive collaboration (again in a multijurisdictional context). Lessons learned in other US watersheds may also be relevant, particularly with regards to multijurisdictional experiences between federal, state, and local authorities (Griffin 1999; Hayes 2002).

The final chapter in part IV (by Mikiyasu Nakayama) addresses lessons learned regarding public involvement in developing and implementing resettlement schemes associated with dam construction in Indonesia. This chapter highlights ways in which public involvement can improve resettlement. It is also significant for its methodology: by comparing predicted impacts with actual impacts, the underlying survey presents opportunities for improving the overall assessment process. Such a comparative analysis of predicted and actual impacts also could be applied in the context of environmental and social impact assessment to improve trans-boundary impact-assessment processes.

One significant lesson from domestic watercourses – and one that also applies to international watercourse management – is the importance of involving the public in the correct manner. Not all approaches are equally effective: Gitonga and Fort in part IV, and Mary Orton in part V, all provide contrasting experiences of conflict and acrimony in participatory processes, and then constructive, outcome-oriented dialogue within the same watershed. The former experiences tend to be painful for the governing authorities, so that they come to dread (and avoid) public involvement. At the same time, when done constructively, public involvement can be an enriching, consensus-building process that enhances not only the substantive decisions that are made but also the working relationships among the various parties involved.

## Part V: Emerging tools

In addition to experiences in domestic watercourses, a wide range of emerging tools and approaches facilitate public access to information and involvement in international watercourse management. These tools range from information development and dissemination, to public participation in decision-making, to dispute settlement.

Increasingly, the Internet presents opportunities to disseminate information on the status of transboundary watersheds and projects that could affect them, as well as providing an avenue to solicit public input regarding decisions on projects and broader policies. Technological aspects of information gathering, processing, and dissemination have become central to decision-making in water-resource systems. In fact, significant advances in natural resource management, development planning, and environmental protection could not take place without technical and methodological advances in information technology. Accordingly, information technology – and the Internet in particular – are becoming standard tools for professionals, scientists, advocates, and decision makers in their daily activities. In his chapter on Internet-based tools, Carl Bruch examines how various watercourse authorities, governmental agencies, academic and research institutions, and international organizations are utilizing the Internet to improve public participation in international watercourse management. His chapter reviews a variety of Web pages, decision support tools, chat rooms, and other innovative Internet-based approaches.

Decision support systems (DSS) provide tools for members of the public, government, and technicians alike to identify possible outcomes of a range of options facing decision makers. As such, they can help everyone to understand the trade-offs that must be made. In his chapter on DSS, Kazimierz Salewicz traces the evolution of DSS as tools for decision-making, highlighting their increasing public accessibility. Looking forward, he explores options for making DSS available over the Internet. In her chapter on alternative dispute resolution, Mary Orton also considers practical means for diverse parties to utilize DSS to understand possible outcomes and build common ground in a polarized decision-making context.

Adaptive management is another emerging tool for managing watercourses, as well as natural resources more broadly (Salafsky, Margoluis, and Redford 2001; Murray–Darling Basin Ministerial Council 2003). John Volkman considers experiences with adaptive management in the Columbia River Basin, one of the more-developed applications of adaptive management to a significant watercourse. Karkkainen and Fort also

advance adaptive management as an important tool for resolving problems in a watershed. Fort highlights one of the difficulties associated with adaptive management: the iterative approach inherent in adaptive management may be resisted by parties who want more stringent (or less stringent) actions.

In light of the occasionally contentious nature of public hearings and consultations, watershed authorities are turning to alternative dispute resolution (ADR) methods to facilitate public involvement in a constructive way. Mary Orton's chapter examines the application of ADR methods to the revision of a management plan that pitted businesses against recreational users against environmental concerns. These experiences from the Colorado River are particularly striking for the contrasts between approaches to public participation that were problematic and those that were ultimately successful. In this specific example, various tools were employed to bring people together to constructively discuss and settle on a final management plan. One tool – the use of surveys – was also used successfully in the Chesapeake Bay, as highlighted in Hanmer's chapter.

Transboundary environmental impact assessment (TEIA) builds upon experiences in national-level EIA to ensure public involvement in projects with transboundary impacts (Cassar and Bruch 2004). In his chapter on the development of TEIA in East Africa, George Sikoyo focuses on the participatory process that the East African Community is undertaking to develop TEIA guidelines. In addition to addressing an emerging tool – TEIA – the process is notable for its broad, consultative nature not only in one country but across three countries.

Publicly accessible tribunals represent the final tool, and chapter, considered in this volume. Although accountability through tribunals is less developed than transparency or public participation, formal and informal mechanisms have developed rapidly over the past decade. In addition to the Inspection Panels in place at the World Bank and under development at the AFDB, and the Citizen Submission Process of the North American Commission for Environmental Cooperation, other quasi-judicial mechanisms are emerging. For example, Juan Miguel Picolotti and Kristin Crane examine experiences over a period of three years with the Central American Water Tribunal (CAWT). The CAWT is unique among these bodies in that it is a citizen-led initiative, with no formal mandate from governments. Notwithstanding this limitation, however, the CAWT has been able to provide an informal venue in which to bring public attention to violations of international law relating to water use and development in Central America.

## Conclusions

Public participation makes sense. The economic, political, decision-making, and human rights bases are all well established. International agreements, declarations, and other instruments regularly attest to the critical importance of an informed and engaged public, generally as well as in the particular context of international watercourse management. Until recently, though, the practical details were lacking regarding how to involve the public in decision-making.

As the chapters in this volume illustrate, the specific standards and institutional practices are still emerging. Although implementation is still nascent in many instances, the experiences thus far are promising. Around the world – from Africa, to the Americas, to Asia, to Europe – institutions are putting in place detailed policies and institutional mechanisms to provide the public with information about the status of watercourses and factors that could affect the watercourses, to ensure that the public has a meaningful opportunity to participate in decision-making processes, and increasingly to offer a means for affected members of the public to seek redress for harm arising from mismanagement of international water resources. As the various governmental, non-governmental, intergovernmental, and research institutions develop these approaches, there is an urgent need to share these experiences, to adapt the experiences to the particular contexts of various watercourses, and to build local capacity.

This volume examines the experiences in many watercourses around the world, drawing lessons learned and highlighting areas for further development. In addition to sharing experiences, the chapters in this volume also identify some of the considerations – linguistic, political, legal, traditional and cultural, geographic, and institutional – that should be kept in mind in extending and adapting the approaches to other watersheds.

However, this is an iterative process. As practice has expanded rapidly over the past decade, there has also been an effort to update and expand the normative framework governing international watercourses. Thus, the International Law Association (ILA) found it necessary to revise its Helsinki Rules on the Use of Waters of International Rivers, which were approved in 1966 and formed the foundation for the 1997 UN Convention on the Law of the Non-Navigational Uses of International Watercourses. Its revised *Rules on the Equitable and Sustainable Use of Waters* includes an entire chapter on “Individual Rights and Public Participation,” with specific provisions addressing individual rights and duties, public participation, information, education, rights of particular commu-

nities, and right to compensation (ILA 2004). Other articles of the revised Rules address impact assessment, access to courts, and remedies.

It is likely that, as the world becomes more and more interconnected, as new technologies emerge (as the Internet, computers, and wireless technologies have over the past few decades), and as economic and political integration continues, the iterations of normative and institutional development will continue. In many ways, though, the most dramatic changes are taking place now. Government and governance is increasingly open: this has long happened at the local level around the world; the quiet revolution is at the national and international levels, as governments commit to transparent and participatory processes. They are even agreeing, albeit gradually, to be accountable to members of the public for their actions. Shared rivers and lakes are likely to continue to provide a primary context in which to foster and facilitate public participation in transboundary governance.

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# Public Participation in the Governance of International Freshwater Resources

Edited by Carl Bruch, Libor Jansky, Mikiyasu Nakayama and Kazimierz A. Salewicz

## Contributors:

Carl Bruch •  
Libor Jansky •  
Mikiyasu Nakayama •  
Kazimierz A. Salewicz •  
Angela Cassar •  
Bradley C. Karkkainen •  
Hans van Ginkel •  
Ruth Greenspan Bell •  
John Jackson •  
Prachoom Chomchai •  
Michael Kidd •  
Nevil W. Quinn •  
Peter Ashton •  
Marian Neal •  
Charles E. Di Leva •  
Aboubacar Fall •  
Geoffrey Garver •  
Nancy Gitonga •  
Roy A. Hoagland •  
Rebecca Hanmer •  
Tomlinson Fort III •  
John Volkman •  
Mary Orton •  
George Michael Sikoyo •  
Juan Miguel Picoletti •  
Kristin L. Crane

Clean water is essential to human survival, yet it is increasingly scarce. Despite pressures on this crucial resource, people often have little or no opportunity to participate in watershed decisions that affect them, particularly when they live along international watercourses. The United Nations has identified the rising demand for water as one of four major factors that will threaten human and ecological health for at least a generation.

Over the coming decade, governments throughout the world will struggle to manage water in ways that are efficient, equitable, and environmentally sound. Whether these efforts succeed may turn, in large part, on providing the public with a voice in watershed management decisions that directly affect them. Public involvement holds the promise of improving the management of international watercourses and reducing the potential for conflict over water issues.

This volume examines the experiences in many watercourses around the world, drawing lessons learned and highlighting areas for further development. In addition to sharing experiences, the chapters identify innovative approaches, as well as some of the considerations – linguistic, political, legal, traditional and cultural, geographic, and institutional – that should be kept in mind in extending and adapting the approaches to other watersheds.

Carl Bruch is a Senior Attorney of the Environmental Law Institute in Washington, D.C., USA. **Libor Jansky** is a Senior Academic Programme Officer in the Environment and Sustainable Development Programme at the United Nations University, Tokyo, Japan.

**Mikiyasu Nakayama** is a Professor at the Institute of Environmental Studies, Graduate School of Frontier Sciences, the University of Tokyo, Japan. **Kazimierz A. Salewicz** is a Systems Analyst specializing in Decision Support System and water resources management in international river basins, Vienna, Austria.

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