A HISTORY OF WATER
SERIES II, VOLUME 3

WATER, GEOPOLITICS AND THE NEW WORLD ORDER

EDITED BY
TERJE TVEDT, GRAHAM CHAPMAN
& ROAR HAGEN

I.B.TAURIS

Water, Geopolitics and the New World Order

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Tvedt, T., Chapman, G. *and* **Hagen, R.**

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Roar Hagen, Graham Chapman and Terje Tvedt

THE GEOPOLITICAL PROBLEMS OF WATER

In August 1947 the British ceded independence in South Asia to two sovereign successor states, India and Pakistan. An English lawyer, Sir Cyril Radcliffe, had the unenviable task of drawing a new international border on a map. He drew it across the world's biggest and most complex canal irrigation system, which linked the waters of the five rivers of old Punjab, now divided between India and Pakistan. India and Pakistan immediately went to war, over the separate issue of Kashmir. On 1 April 1948, on slight pretexts, India shut off the water flowing into Pakistan's Dipalpur Canal and 8 per cent of Pakistan's culturable command area (of the country, not just of this scheme) was deprived of water; so too was the city of Lahore (Michel 1967). In addition, hydroelectric power supplies were cut. Observers flying over the two Punjabs had no doubt where the border lay: to one side the seedlings of the new kharif crops were ready for the monsoon, to the other was a brown and barren land.

There can be no doubt that India was using water as a weapon, though it is in dispute how high up, from provincial to dominion government, knowledge and authority went. After a season had been lost in Pakistan, supplies were resumed. Then it required more than a decade of negotiation by both parties under the aegis of the World Bank, and huge international loans and grants, to arrive at a solution which effectively bifurcated the system, and gave upstream ownership of three rivers to India, and the waters of the others to Pakistan (Chapman 2009). This was the price of national water security in a complex geopolitical setting. A crisis of this sort could be repeated: indeed, many observers think a bigger crisis could evolve around the plateaux and mountains of Tibet, the source of many of India and China's great rivers, where in theory water could be diverted from one basin to another. As if this threat of water insecurity were not enough, proponents of climate change suggest that water stress in many regions may increase in coming decades, exacerbating problems of water sharing and water management.

The following alarmist water-scenario for Asian regions has again and again popped up in mass media since the late 1990s (similar dramatic scenarios have been put forward on the Nile, in South America in the Andes, and in Europe in the Alp region): it threatens that glaciers will melt in the Himalayas, and at first more water will flow in the great rivers of Asia, which have been the home of civilizations for thousands of years and where, now, close to three billion people are living. The Yangtze, Hung He, Ganges, Indus, Salween, Mekong, Irktysh, Sur Darya and Brahmaputra will bring down to the plains much more water than today and threaten to disrupt societies with devastating floods. When the ice has gone, the rivers will discharge less water, and the consequences will be the opposite; droughts and water shortages even more dramatic than today.[1]

The reality is, however, that although nobody knows or can know for sure if and to what extent this scenario will come to pass, for the moment, this New Uncertainty about future waterscapes has become a social fact. It can already impact on the political relationships not only between states such as China, India and Pakistan, and between Afghanistan and Uzbekistan, but also within states, such as between Sindh and Punjab in Pakistan and Assam and the Deccan in India. It could have far-reaching implications for power relations and struggles for power in large river basins and around large water bodies, because this new uncertainty about the future of water landscapes all over the world will in itself influence decision-making processes. It will more and more become a factor in geopolitical reasoning; states and regions that fear or believe that they will be affected by future changes in the way the waters run through their societies will act differently from states who believe that there will be no changes in the physical layer of their water system. Such scenarios, such social interpretations of changing water systems, influence therefore geopolitics and the evolving context of collective action, also because different social systems in the different societies ascribe different significance to these developments.

Similar scenarios, although less dramatic, may be made for regions and countries all over the world, since societies everywhere depend upon, and are becoming more and more dependent upon, water and water control. Any change in climate will manifest itself directly or indirectly in societies as changes in the water landscape. There will either be more rain or less rain, more melting of the glaciers or less melting, more droughts or fewer droughts, more evaporation or less evaporation, or no important changes at all. The water landscape – be it disappearing or overflowing rivers and lakes, or altered or continued patterns of rainfall – will be very important metaphors and mirrors of political relations.

Yet, research on the relationship between political power and water, and how the relationship between water or nature and modern society is mediated or regulated by political power, is still far from being mainstream social science. One major argument behind the traditional neglect of nature in social sciences is found in a widely used text book by Anthony Giddens,

the well-known sociologist. Taking the longer view, human beings have existed on earth for about half a million years. For most of this period very little happened in terms of social development. Agriculture is only 12,000 years old. Civilizations date back no more than 6,000 years. According to Giddens, if we were to think of the entire span of human existence thus far as a 24-hour day, agriculture would have come into existence at 11.56 pm and civilizations at 11.57. The development of modern societies would get under way only at 11.59 and 30 seconds. Yet perhaps as much change has taken place in the last 30 seconds of this human day as in all the time leading up to it (Giddens and Griffiths 2006). Compared to natural changes in the same period the links between social development and the physical environment seems to be weak, and the whole of human history is hardly a ripple in Earth time. The construction of these uneven chronologies between societal and natural developments has laid the foundation for the belief that societies and social change are only influenced by social variables. There is, however, also in mainstream social science, an increasing acknowledgement of the fact that eternal laws of nature manifest themselves in human life spans, even immediately, and have great importance for social life.

The human population has increased from around one million hunter-gatherers in 6,000 BC, to one billion people in 1900 and six billion in AD 2000. In 50 more years it will, it is estimated, be nine billion people. But the amount of water is the same as when humans first walked on earth. The question of who has power over the available and always varying water resources has therefore become more and more important. In 1950 the world had no problems with water availability, and no areas suffered high stress, not even the Middle East. By 2025 it has been estimated that more than 80 per cent of the world population will experience high, or very high, stress on their water resources (Rodda and Siklomanov 2003).

These figures might represent a kind of a quite widespread 'water alarmism', but nonetheless there can be no doubt that there is a growing conflict between water demands and water supply in many parts of the world.[2] As long as water is abundant, it is easy to stay ignorant and unconcerned about who else may be sharing the same river, lake or aquifer. But as water becomes relatively less abundant, coordination of its use becomes more complex as well as more crucial.

In addition to the increase in population it is possible to argue that the twentieth century experienced three global revolutions with huge implications for the demand for water. During that century irrigation became globalized. The land under artificial watering doubled from 1900 to 1950, and doubled again from 1950 to 1990. Without this change, there would have been mass starvation. Secondly, urbanization processes became a global phenomenon, and now more than half of the population live in cities – for the first time in human history – with all that that requires when it comes to water control and water usages. Thirdly, industrialization has also become a global process, with radically new demands on water, for

electric power, for productive processes, for cooling purposes and for cleaning. These developments combined have of course created a foundation for increased competition for the control of water, and thus the question of its quantity, quality and distribution is high on the international agenda.

Scientific description and explanation, public discourse and political reflection, are enabled or disabled by the clarity of the concepts used. Thus, the purpose of this chapter is to discuss and suggest relevant conceptual frameworks in order to understand better the relationships between water and society. This is important because dominant concepts have reflected a social science tradition that has been 'nature-blind' and more interested in conflict than in potentials for cooperation, and have developed within an analytical context where the nation state is the unit that should be understood. Hence one of the major ideas behind the book is to help stimulate a discussion of such issues by presenting contemporary case studies, alongside some comparative historical ones.

SOME KEY CONCEPTS

In the modern world society the limitations of the power of the political system to solve common problems on a regional or global scale are an obvious and very central trait. While such social systems as the economy, art, medical treatment, technology and science are truly global systems and fields of interaction, and river basins as hydrological units are often trans-boundary, the political system is segmentally differentiated into nation states. Formal political power is territorially bounded, while the economy, science, art and water systems are not. Sometimes, but rarely, political territories may coincide with cleavages in the hydrosphere. More generally they do not, so societies claim 'ownership' of some small part of the continuous global cycle and perhaps bend it to their own wishes, with consequential knock-on effects, both to the hydrosphere and other 'natural' systems, and perhaps to adjacent nations.

To meet these challenges there is a growing need for collective action and cooperation on the global and regional level. On this basis the UN and others talk about a New Security Agenda at the same time as most people acknowledge that the world does not have a governing mechanism to solve several of the problems on this agenda. There is an increasing number of initiatives on the global and international level, but there is also the recognition of an increasing gap between the need, and the actual capacity, for making collective decisions that are regionally or globally binding and that have sufficient legitimacy and authority.

Both for general theoretical reasons and because it is of relevance when it comes to the sharing and management of water, the Parsonian distinction between collective and distributive power should be reintroduced in the

discussion of the relation between power and water. The social sciences have long been preoccupied with the distributive aspects of power, as in a zero sum game, enabling one part at the cost of another.[3] But power may also be a necessary means to enable a group of actors to solve problems together, or to enable one group of actors to act on others' behalf. This double perspective on power becomes increasingly relevant due to processes of globalization as these affect the distribution of power between states and raise the problem of collective action on a global and regional level. Developments in the Nile basin may be a case in point.

In the 1980s and early 1990s it was common to talk about the danger of a water war among some of the ten states in the basin. The Egyptian President Anwar Sadat reportedly stated that Egypt would not hesitate to go to war if any of the upstream states took a drop of water from the Nile. Since the latter half of the 1990s, the states in the Nile basin have, instead, joined the Nile Basin Initiative, an initiative that in spite of all its shortcomings has helped to create an alternative Nile discourse among the actors in the Nile basin, focussing more on cooperation than conflict. A combination of economic incentives and measures to build up mutual competence has, in spite of all mistrust and contradictions, been powerful enough to keep the inter-state dialogue going.

The concept of power is one of the broader theoretical issues of collective action problems. Another is that theoretical reflection on rational action has often led to the conclusion that rational individuals cannot cooperate and will nearly always defect on a collective effort to solve common problems. The most remarkable and influential example of such logical reasoning is delivered by rational choice traditions and game theories.[4] One implication for empirical research is that the reasons for successful cooperation will be sought in irrational factors, while the failure of cooperation will be rationally explained. But this approach or model derives from a certain and limited ontology of the social as well as of the 'natural'. The model of thought expressed in the famous 'tragedy of the commons' scenario developed by Garret Hardin does not work for a river basin as for a pasture (Tvedt 2010a). Historical research has brought forth many examples of the close association between the development of political power, power over water and water power, examples which might add to our understanding of the possible cooperative solutions to collective action problems.[5] The questions are: if collective rationality exists, how do we explain it, and what are the mechanisms that might foster it? And can empirical studies of society/water relations prompt new theoretical insights?

The geopolitical tradition stressed how the characteristics of geographical space affected different forms of power and power struggles. The tradition has partly been lost in recent decades, but can be reintroduced in modern theory. The research field can be expanded to cover not only the international system of nation states, but the many different orders resulting from a global trend towards functional specialization. In short, geopolitical

theory should be connected to theories of modernization and globalization. By including water bodies and especially international river basins as one geographical factor affecting state policies and diplomatic strategies it will be possible to benefit from and develop the analytical strengths of this tradition. One of the most fundamental issues in geopolitics and problems of collective environmental action is the way we separate society from nature.

Contemporary social science seems to converge on a conception of modern society as consisting of distinct, more or less autonomous networks of communication and action. Different authors use different names for these entities, such as sectors, spheres, fields (Pierre Bourdieu), discourses (many inspired by Michel Foucault) or function systems (Niklas Luhmann). Examples of such systems, fields or discourses are science, religion, medical treatment, education, mass media, the law, technology and sports.[6] Each system or sector operates in accordance with its own particular codes, rules or values. This kind of societal differentiation implies that significant natural events – such as floods, droughts or rains – resonate differently in different spheres, discourses or systems.[7] Water is a subject of legal regulations within the judicial system, a motive and metaphor in art and poetry, a ritual object or medium, or an expression of God's power, a means of removing human and industrial waste, and a crucial production factor in agricultural systems all over the world.

Functional specialization implies increasing independence and interdependence at the same time. All the social systems become dependent on other systems for their own operations, and therefore all are necessary to the workings of a modern society. Integration of systems and inclusion of individuals in the different spheres of communication and action becomes a permanent theme both in society and the social sciences. However, the economic system of market capitalism and the democratic political system are more basic to the overall performance of society as a totality than the others. With specialization, all other systems must acquire their resources through either the economic or the political system. It is the function of the political system to secure collectively binding decisions (Luhmann and Kieserling 2000); in other words, what the society wants to achieve, as a collective, will be manifested by a decision that binds the actions of all the members of this particular society.[8] These ideas might be highly relevant when trying to understand the relationship between water and power, and studies of water and power may throw light on these theoretical discussions.

To capture both sides of the nature–society divide as well as the relation itself, we suggest that it is fruitful to think of complex and multifunctional water systems. The connections between nature and society are too varied and many-sided to be studied in their totality. The notion of nature or environment as 'one thing', therefore, has to be deconstructed for analytical purposes.[9] Since water is both universal and particular, and continuously

flowing, and all societies have to adapt to or control the way it flows, a water-system perspective is a powerful entry point for comparative research and analyses of geopolitics and collective action.

This approach is concerned with three analytical layers. The first is the physical aspects of the water system. This includes physical facts such as precipitation and evaporation patterns, the way and how the rivers run in the landscape, the way water is stored underground or in glaciers, and the interface between the rivers and the ocean. The second layer consists of human modifications of the water systems: things like embankments, canals, dams, pipelines; in other words, water structures as human artefacts, as historical facts, that have also changed the water system and how it structures and is structured by geopolitical relations and the execution of power today. In archaeological and historical studies, for example, such material artefacts are important sources for research on changes in both society and the natural water system. The third layer consists of the ideas about water: of habits of thoughts; in other words, of symbols and value systems in societies that interpret changes in the water system and inform control and management activities, and at the same time reflect power relations in societies and in relation to the waters. A water system will therefore, as water itself, always be in flux, not only because of constant variations in the hydrological cycle but because of changes and developments in human valuation of water, its uses, and the infrastructure around it.

The endless forms of the interaction between water and society make it hard to conceive of water systems in all their social and natural ramifications. It is therefore advisable to focus analytically on a single social function of water, or a few, at any one time. In this book we concentrate on the nexus of water and political power, because political systems have a central role in the integration of the social systems of modern societies, and therefore are instrumental in regulating the relations between nature and society.[10] Within a water system perspective, the political system itself cannot be understood independently of the ideas and management practices related to water in the different political entities that have developed over time. Although, for example, Mexico and the USA, Egypt and Ethiopia, Jordan and Israel, China and Cambodia, in each case share a single river basin in physical terms, they have all developed different management practices, reflecting the different roles of water in their societies, and reflecting the changing characteristics of the river within their territorial boundaries.

The water-systems approach can be used as an entry point to investigate how changes in the water system affect societies and how changes in the society modify and are manifested in water systems and in human modifications of the same systems. How spatial variations in physical aspects and past modifications of the water systems constrain, structure and provide certain possibilities for political action and how geographical proximity affects the transmission of change are a subject matter of geopolitics'

relation to water. During the era when agricultural civilizations emerged, the first civilizations developed in the fertile and easily watered river valleys of the Nile, The Euphrates–Tigris, the Indus and the Huang He, while the regions dominated by rain-fed agriculture were unable to acquire sufficient surplus from their tilling of the soil to establish any elaborate division of labour. The Industrial Revolution changed the power relations of the world, and it also changed humans' relations to and use of water. In the first phase of the revolution bulk transport was by water, and water was the major source of inanimate factory power until the coming of the steam engine. England and Western Europe had a water system that was much easier to exploit for these purposes than was the case in China, India and Africa, and this fact also impacted power relations until the present day (Tvedt 2010c). The analytical inclusion of water in studies of why states and actors act the way they do and how they act in order to control and share water among themselves makes it natural to re-engage with the tradition of geopolitics.

GEOPOLITICS AND WATER

The geopolitical tradition is about the significance of geographical place and space for the exercise of political power (Dodds and Atkinson 2000; Chapman 2009). It has, however, come under heavy fire for being one-factor oriented and environmentally deterministic. The term geopolitics covers both actual politics, as it takes geographical space into account, and a field of research with particular academic traditions.[11] For purpose of clarity it is advisable to keep this distinction in mind.

Modern geopolitics was instigated by the Treaty of Westphalia (1648), which established European sovereign states that were autonomous, and which finally rejected the residual legitimacy or authority of the Holy Roman Empire.[12] But by creating a system of independent nation states, the new order had created, by definition, an international level of relations, yet no properly international institutions to regulate this new space. Warfare and competition between states in Europe continued, and, for reasons much debated and both related and unrelated to the competition between European states, Europe colonized most of the rest of the world, either peopling it (e.g. North America, Australia) or subjugating it (e.g. Latin America, India).[13] The highpoint of European imperialism around 1900 represents the first true World Order, in which relations between any two territories are dependent at least in part on relations between other territories – in other words, there is a system of interlocking dependencies in which it is difficult to contain change within one part only.

The 500 years of European expansion were what Sir Halford Mackinder called 'The Columbian Epoch'. This epoch closed around 1900 – roughly when Europe had finished colonizing Africa and there were few areas of the

world left where there would likely be further inroads. Mackinder stressed the significance, ending with an explosive analogy:

> From the present time forth, in the post-Colombian age, we shall again have to deal with a closed political system, and none the less that it will be one of world-wide scope. Every explosion of social forces, instead of being dissipated in a surrounding circuit of unknown space and barbaric chaos, will be sharply re-echoed from the far side of the globe, and weak elements in the political and economic organism of the world will be shattered in consequence. There is a vast difference of effect in the fall of a shell into an earthwork and its fall amid the closed spaces and rigid structures of a great building or ship. (Mackinder, 1904: 422)

The end of imperialism resulted in the global adoption of the Westphalian system of nation states, the normal continuation of warfare, and changes in the pattern of the World Order, but still no strongly effective international institutions. When alliances form between sovereign states, it means that on the world map there will be groupings of states, smaller or bigger, for longer or shorter times. The fundamental questions that geopolitics (used to) ask are: are there observable geographical patterns in the alliances of states, and, if so, in what way does basic geography contribute to an explanation of these patterns?

The term geopolitics was coined by the Swedish political scientist Rudolf Kjellén (1916). However, the modern origins of geopolitics can be squarely traced to the seminal paper by Halford Mackinder from 1904, 'The Geographical Pivot of History', quoted from above. He asked the same questions that the army commanders of old had asked, but at a much greater scale, in both time and space, to see the relationship between the physical characteristics of the Earth, the disposition of seas, mountains, rivers and deserts, and the rise and fall of empires. He came to the conclusion that patterns of movement, and therefore possibilities for integration, varied between two vast arenas. One is the area of land-movement, once dominated by horsemen, but united in the new era by steam railways. The other is the maritime-dependent world. The first is the pivot area, later also known as the heartland, mostly comprising what in Mackinder's time was the Eurasian Czarist Empire. From this area throughout history mobile invaders had threatened both Europe (Huns and barbarians) and China (hence the Great Wall). The area had also been the heartland for the Mongol empire. Given its vast resources and the new possibilities of movement by rail, Mackinder viewed it as a redoubt on a global scale. Why had the Western European powers, who by 1900 had direct (or indirect through descendent cultures in the Americas) control of most of the planet, not penetrated this heartland? His answer was that it is defined by drainage: the pivot area on Mackinder's map was where rivers drained either to the Arctic or to inland basins. The Arctic Ocean was

blocked by sea ice, so the maritime powers were unable to penetrate it. Thus the maritime-dependent world is an arc connected by the oceans and seas that surrounds the pivot. If it seems a bit odd that this rest of the world is labelled maritime dependent, a map of population distribution will show that the majority of the population of this arena is coastal. Even the one 'inland' centre of the USA, Chicago, is coastal, via the St Lawrence seaway. Thus, one of the most influential geopolitical works gave rivers systems and their oceanic links a significant role in the scheme of things.

The seemingly inherent determinism of geopolitics, and Hitler's use of it as guide and justification during World War Two, stained its reputation. After World War Two, within academia, political geography – essentially the analysis of spatial patterns of representative structures and voting behaviour – pushed geopolitics aside. This shift coincided with a general belief in the social sciences that prevailed for some time, namely that modern society became more and more insulated from the vagaries of nature and thus made the study of geographical space less relevant. This affected the study of international relations too, and some authors restrict geopolitics to 'a terminological tradition employing a certain set of spatial concepts in international studies' (Østerud 1988), while others align geopolitics with the subject of international political relations in general. Social developments – such as demographic growth, the extension of irrigation, worldwide urbanization, and global industrialization – have all made water systems relevant to society in new ways.

While being fully aware of its reputation, it is still useful to connect to the geopolitical tradition because it has dealt with issues and factors that are becoming increasingly relevant today, especially in relation to international river basins and international aquifers. In a world where more than half of the population – that is, more than 3 billion people – live along river courses shared by two states or more, and where many of the big world players – such as the USA, China, India, Germany, France, Brazil, Turkey and Canada – are either upstream or downstream states in large international rivers (sometimes they are both upstream and downstream, as India and the USA), water as a geopolitical factor can hardly be exaggerated. Geopolitical analyses of relations between states and other actors and water systems, and to give water systems and river basins a prominent place in interpretations of power plays and power relations among states, do not have to be deterministic or develop into superficial one-factorism.

One weakness of the geopolitical tradition is that it paid insufficient heed to complex, variable water systems.[14] This weakness needs to be addressed, as, while water has been important to societies at all times, freshwater has become more important strategically and has attracted more and more political attention in recent years. This is due partly to the growing gap between water demand and increasing water uses and the supply of water in many countries in the world, both rich and poor, and also because modern societies have become increasingly vulnerable to changes in the

physical waterscape and a number of cases that have demonstrated that even modern societies are not the masters of water (the floods in the Rhine in 1995, the Elbe flood in 2002, the Katrina crisis in 2005, and the droughts in the western USA in the 1990s). In general, population growth and processes of modernization make stronger demands on limited water resources. Modernizing also means that the natural environment and water systems become relevant to society in new ways. Together these developments bestow new meaning on the geo-aspect of geopolitics. The geopolitical perspective therefore has to be expanded by connecting to globalization and modernization theories to examine the importance of increased multifunctionality of water in modern societies.

The unregulated growth of functional domains on the global level creates a set of new problems. The nation states of the world connect to these processes of globalization very differently. Some are highly integrated to this process, like USA and Western Europe, while many countries in Africa are less so, and some (like Russia, China and Iran) connect to this process of modernization but reject the Western-type democracy that liberals associate with it. As an example, there seems to be greater technical convergence than religious convergence across the globe – indeed it is the disparity between the two rates of convergence that may be one reason for the growth of Islamic jihadism. But this unregulated growth of functional domains and differentiations among societies also take place within river basins and along major water bodies, with implications for their usage and for power politics. The increased differentiation of autonomous and functionally independent social systems also takes place within states or political entities, with implications for how they relate to each other or can relate to each other when it comes to water resources. One example: when London was still the colonial power in East Africa, it discussed whether it was possible to divert the Nile in Uganda so as to put pressure upon the Egyptian leadership under the Suez crisis in 1956 (Tvedt, Chapter 4 this volume). The British found out in the end that it would be detrimental to their own interests, since it would be disruptive to the political alliances they sought to build with agricultural interests in the Sudan, who were dependent on the same water.

NEW AND OLD SECURITY AGENDAS/WIDE AND NARROW

The struggle for water and the conflict and cooperation among states for sharing and managing international waters is also about 'security'. When analysing security issues, is it useful to talk about 'old' security, as Mackinder had in mind (Westphalian states securing their borders with conventional military means), and 'new' security, as defined by the United Nations Development Programme in 1997 to embrace more categories, and at a personal as well as national level. According to them, the seven categories of

new security are economic, nutritional, health, environmental, personal, community and political. Even if water is not a category by itself, access to freshwater is fundamental to all of them. Moreover, the issue of water security is very high on the agenda in many states and regions in the world (the Jordan basin, the Euphrates–Tigris basin, the Nile basin, the Zambezi basin, the Indus basin, the Mekong basin, the Brahmaputra basin, the Colorado basin, and the Guarani Aquifer and the Nubian aquifer, to mention a few).

Is the 'old security' something of the past, in the post-Cold-War world, where the new agenda is said to be growing in prominence because international-relations theorists, diplomats, many governments, and agencies of the United Nations are increasingly aware of the extent to which the internationalization of crime, terrorism, the trade in narcotics and environmental issues, all impinge, sometimes collectively, on the security of both states and their constituent publics? Or it is better to see them as coexisting – in the present? There are new uncertainties, such as the relationship between different forms of national law and new discourses on law with universal ambitions also pertaining to river systems.[15] Without having institutions and authority to enforce this law on a national level, there is new insecurity about what upstream powers might do to downstream countries, and so forth. As an alternative approach, perhaps it is better to speak of narrow and wide security agendas, because too much focus on 'new' will tend to downplay the fact that old-fashioned power politics among territorial states is still part and parcel of the present-day world.[16] In an era where a kind of universal agreement seems to be developing on the fact that the gap between the need for water (due to its increasing multifunctionality and the water requirements of modernity and demographic development) and the supply of water is decreasing, many actors will acknowledge that the water question is related to both forms of security and power politics.

There are not only new transnational problems, but also new ways of coming to terms with global and regional problems. Keeping geographical space in mind and applying the water perspective we might see how functional differentiation above the national level – at least regionally if not globally – bestows new meaning to geographical space and river systems. The EU Water Framework embodies such new principles.[17] The EU Water Framework Directive obliges its members to set up bodies of water management based on natural properties of river basins independent of national borders. This is another example showing that modernization does not make geographical space less relevant; on the contrary, it acquires new importance relevant to social structures that are typically modern. The increased differentiation of society is also reflected in the directive which sets up specific regulations for different types of activities.

Thus, while commonly there is an increasing gap between the need for and expectations of regional actions above the nation state and the actual capacity to make collectively binding decisions, the EU and its water

directive represents an exception on a continental scale. However exceptional, the point may also be made that the EU together with an increasing number of actors, organizations, bodies and the whole of the New Security Agenda and similar issues, are threads in the fabric of an emerging new world order that addresses and transforms the shattering effects of the explosive social forces Mackinder spoke of.

POWER: COLLECTIVE AND DISTRIBUTIVE

Since optimal water usage requires some sort of cooperation, there is a need to revisit theories of collective action and political power. It is about the old question 'who can do what to whom?' but not only in the negative sense. It is crucial to develop a notion of power that can help to explain both conflict and cooperation. The sociological discipline's dominant tradition has regarded power as such as something 'bad', as basically an instrument for a minority to use to repress and exploit a majority. This general, critical attitude may be observed in studies of international affairs and in water studies too, for instance in Conca's (2006) exploration of non-state alternatives in global management of water.

The role power has to play in solving problems of collective action has proved to be hard to integrate analytically. Political science and studies of international relations recognize that power and transnational institutions are necessary means to solve international conflicts and bolster cooperation. By bringing the water issue into the picture, the terms of geopolitics and power can be discussed in new ways. Power over water is a universal source of social power, although to very different degrees from location to location and according to historical periods.[18] Now, as before, political power is necessary to exploit water flows and to direct water to run where the power holders think it is most useful, and controlling sources of water may become more important in the future than it ever was in the past. While it is well-established knowledge that the first civilizations and city states rose on the banks of the great rivers of Mesopotamia and Egypt, closely connected to new forms of water control, there is no systematic empirical knowledge or theoretical discourse on the relationship between power and water in general. Yet fountains were symbols of emperors' and popes' power in Rome, and today countries name their biggest dams after their state leaders or national heroes (Iraq and Saddam Hussein, Egypt and Nasser, Turkey and Atatürk, and so on).[19]

One solution is to connect to the suggestion by sociologist Talcott Parsons (1960) that power has both distributive and collective aspects. With distributive power, the power A has in a system is, necessarily and by definition, at the expense of B, as in the famous definition by Robert Dahl (1957). Collective power is when individuals in cooperation can enhance their joint power over third parties or nature.[20] In the social sciences,

collective power has mostly been ignored (Hagen 2010). Parsons claimed that behind the critical attitude towards power lies a utopian conception of an ideal society in which power should not play any part at all. The actors' deep and long-run dependency on the goals and capacities of social organization is shoved into the background. And since power as such is seen in a negative light, those who assert that power is necessary in general fail to explain, or do not find the 'opportunity' to explain, exactly which problem power is supposed to solve. They are therefore also unable to demonstrate how power might be generated to serve communal rather than sectoral interests. The literature in general fails to connect collective power and collective action, and to demonstrate how collective power may contribute to the solution of collective action problems and social dilemmas.

COLLECTIVE ACTION AND COLLECTIVE ACTION PROBLEMS

For the last 35–40 years the research community has been familiar with all the problems inherent in the call for collective action (Mancur Olson (1965), of course, is usually credited for drawing scientific attention to the problem of collective action). Earlier, it was widely believed that the public or collective good itself was enough to motivate collective action. The new critique, however, pointed out an inherent conflict between individual and collective interests in collective action. Public goods, in contrast to private goods, are accessible also to those that do not contribute to their production, and are vulnerable to sponging.

The inherent conflict in collective action between individual and collective rationality is further explored in game theory in The Prisoner's Dilemma. The original idea behind the basic conundrum is as follows. Two prisoners are held incommunicado in separate cells, and each is asked if the other has committed a crime. The level of punishment depends on whether one, both or neither indicates the other's guilt. There are different versions of the game, but the general conclusion is that if each person follows his own interests, the two players will produce an outcome that is not optimal for either. As an example, if both assume that the other will keep the faith and not point to the other's guilt, then both get light sentences. But it seems unlikely they will do so, because if one acts in good faith and the other informs, then the informer goes free and the concealer gets a long sentence. So both inform, and both get a moderate sentence.

Free riders are also a problem for collective action. When many pay the costs of joint action, one or a few may collect the benefits for free. If most people pay their road taxes to maintain roads, those that dodge the tax get the benefits for free (until enforcement – which brings us back to power). Of course, when everybody chooses this individually rational strategy the collective or public good is not realized. Taking the prospect of mutual defection into account the rational choice again would be to cooperate, but

the actor selecting this strategy risks ending up in the sucker's position, carrying the cost of contributing to a collective good that will not be realized. The rational choice therefore is *not to participate* in collective action because this strategy gives the best result irrespectively of the actions of the others. However, problems of collective action *are solved* and collective action *does* take place, and the theoretical challenge is to explain how successful collective action comes about.

The theoretical puzzles of collective action has attracted intense and widespread scientific interest. The main form of explaining collective action today is by invoking some non-rational characteristics of the actor. There are a multitude of such explanatory devices such as values or identity, for instance, the most common of which is the social norm.[21] The argument is: 'Social norms have a *grip on the mind* that is due to the strong emotions their violations can trigger … If norms can coordinate expectations, it is only because the violation of norms is known to trigger strong negative emotions, in the violator himself, and in other people' (Elster 1989: 100). Internalized social norms may guide individual behaviour and produce actions that are beneficial to the group, but established norms may also hinder collective action and prevent actors from finding solutions to common problems. The debate over collective action within rational choice theory gives contradictory signals.[22] The norm of sovereignty, for example, manifested in the Westphalian system of sovereign nation states may be such a norm that at one time helped establishing solutions to some types of international collective action problems, but which at the same time obstructed collective action to solve other types of collective action problems at the regional and global level. The norm of river basin planning that has become dominant after the Tennessee Valley Project in the 1930s is a norm that has solved a number of important problems in water management, but it also, if implemented dogmatically, contradicts the long-term policy of transfer of waters between river basins (as has been the tradition in Sri Lanka for many hundreds of years), and the new initiatives in China (where the national water strategy is to even out the differences in water situation between the south and north in China by huge transferals of water from one basin to another), and in India (the so called river-link plan). How do new norms emerge and how could social norms be consciously modified or manufactured such as to solve actual problems of collective action? The above explanatory device cannot satisfy this need for rational self-management.

The immediate problem for the empirical analysis is that the established norm, value or identity is taken as given and not explained – it is the explanation. Social norms, like the norm of state sovereignty, are assumed to evolve by hidden hand mechanisms just as prices coordinate actions in the market to care for the common good and therefore relieve the individual of considering anything but self-interest. Likewise, social norms make individual acts conform to the needs of the social group, or the larger

society, without the actor having to recognize or at least to be motivated by the positive collective consequences of the action. Social norms are assumed to come into existence because they solve problems for, and are needed by, the social system. This implies leaving the security agenda to chance and to the forces of evolution. The main problem with explaining collective action by invoking internalized social norms, values, and the like, is that the explanation disconnects the relation between the selection of the action and any assessment of the consequences of that action.

When these defects of the norm-solution to collective action problems are recognized, one reaction has been to widen the concept of what is rational interest-maximizing behaviour.[23] Actions motivated by norms or values might be considered rational in this sense to the extent that the actor evaluates different courses of action as a means to realize his or her values or interests, and eventually relates several norms in a hierarchical order of generality. To the extent such assessment of consequences is introduced, apparently the emotions lose part of their grip on the mind of the actor, and one would suspect that rationality weakens the integrative forces of the social norm and thus collective action becomes more uncertain. The theoretical limitation of this explanatory strategy is that the actors are allowed to observe some, but certainly not the collective consequences of their actions, because this assessment would again confront the actor with the dilemma of choosing between individual and collective rationality, leading to the original formulation of the problem where individual dominates collective rationality.

This constitutes the paradox of the theoretical discourse on collective action; in order to establish an explanation of successful collective action the basic assumptions of what constitute rational behaviour must be abandoned. It is therefore possible to argue that what is counted as the theoretical solution to the problem in reality cannot account for the problem. In these cases there are no dilemmas, and one consequence is that the subjective meaning of collective action cannot be explained by the social sciences (Hagen 1999). As underscored by Elster (1989: 34), a theory of collective action based on the premises of rational choice must: 'emphatically not try to explain successful collective action in terms of the benefit it brings to the group'. The theoretical debate on collective action has created and rests on a bifurcation of action types, of individual rationality versus actions motivated by social norms, often also ontologized as two human types – homo economicus and homo sociologicus. The social sciences hence will tend to overlook the rational aspects of collective action, and the concept of collective rationality remains underdeveloped. There is at present no theory that can explain rational collective action. Actual cooperation in large river basins may form empirical cases that can help develop such a theory, at the same time as struggles for power in international river basins are modern examples of a new type of geopolitics. Concepts are needed that explain both the genesis of the problem of

collective action and its solutions and failures, and this theoretical approach must enable observation of the rational aspects of collective action.

There is discussion of the *cooperator's dilemma* (Lichbach 1996), a concept that underlines the collective side of the distinction, and the actor's interest in finding a cooperative solution. The cooperator recognizes the benefits of concerted collective action and understands the different and interconnected lines of actions of several actors in order to achieve the common good. These interdependencies can be simple or complex, running from mere coordination where actors do the same thing, for example applying standards or methods of measuring water, to complexes of interaction where the actors play very different but mutually supportive roles to bring about the collective outcome.[24] Collective rationality is an intrinsic part of collective action. But it is important not to make assumptions about the actors that limit their ability to assess consequences, for instance that actors observe only collective and not individual consequences, which is a contradiction in terms since the one is unthinkable without the other. The social dilemma is therefore a social and subjective reality, and everybody is both a cooperator and an egoist, shifting between the two horns of the social dilemma.[25] Psychic and mental confrontation are important factors, since, based on such experiences, actors may be convinced that they must sacrifice self-interest to bring about the collective or common good. This rational solidarity can only be conditional – one is willing to give up self-interest to gain as a group member only if enough others do it too.

Collective action raises not only two opposing rationalities but corresponding normative expectations as well; one *should* cooperate and one *should* do as best as one can to fend for oneself. Individual interests are not intrinsically 'bad' but are labelled as selfish from the perspective of the collective interest. As several chapters in this volume report, the idea of management of international or transnational water bodies is to set up a collective mechanism with power enough to stop individual stakeholders or actors to do harm to the collective or to any of the other stakeholders.[26]

Instead of explaining problems of collective action by making assumptions about the involved individuals that limit their rationality, we take the problem of collective action to be a special kind of communication – or relation – and ask under what social circumstances collective rationality may prevail over individual rationality. By that we not only ascribe full cognitive capacities to individuals, but also believe that such capabilities are stimulated and fostered by the social system of collective action. In a certain sense action comes before the actor, evolving from subjective experiences of interdependency and contingency.

One social condition that favours collective rather than individual rationality is public discourse. Only collective rationality can be presented as a legitimate normative expectation within the affected group. Individual rationality, on the contrary, cannot be generalized; one cannot for instance

address the collectivity and literally assert that we should all defect. In public discourse the actors may develop a shared understanding of the collective purpose and oblige each other towards their individual roles in the collective undertaking. Public agreement is seldom sufficient, apart from those rare conditions where collective decision-making and collective action take place under the public scrutiny of the involved actors or stakeholders. Under modern conditions the two generally are separated and the link is created by the mass media.

Publicity, a shared understanding, and fair distribution of collective benefits and burdens are all important steps to bring about collective action, but collective action will also in general depend on collective power. Collective power solves social dilemmas or collective action problems by making collective rationality prevail over individual rationality; by threatening individual rational strategies of defecting collective actions with negative sanctions – in the last resort by the use of force. In order to have the power to act, a collective must be able to restrict the choices of its own members. Internal restrictions are necessary to acquire collective goods, and it is the function of the political system to regularly supply these. Power both restricts and enables, and it enables by imposing restrictions. It is this nexus that is hard to grasp theoretically, although it happens all the time, not the least in international river basins.

COLLECTIVE POWER AND MULTIFUNCTIONAL AND COMPLEX WATER SYSTEMS

The problem of collective action is represented in what seem to be very abstract models, but these models of interaction often presuppose a particular physical environment. Garret Hardin (1968: 1244) modelled the problem of collective action as the 'tragedy of the commons'. As an example, a pasture is shared by herders, each of whom wishes to maximize his yield; each additional animal has both a positive and negative effect as the herder gets a higher return but the pasture is degraded. By 'the remorseless working of things', the actions of self-interested individuals do not promote the public good. Hardin writes: 'Therein is the tragedy. Each man is locked into a system that compels him to increase his herd without a limit – in a world that is limited … Freedom in a commons brings ruin to all'.

The recent conventional solution to such sustainability problems has been privatization, in which the individual pursuing his own interests is supposedly part of a hidden hand that maximizes welfare because it is then in an individual's interest to protect his resources or his own land. The alternative is regulation by some higher authority, such as a government which is 'in power'. We may only speculate how the theoretical discussion would have proceeded if the example for the logic of collective action was a river and not a pasture. The general problem of collective action pertains

to rivers, too, as several competing uses of water, each of which is individually rational, might turn out to have negative collective consequences. An obvious example is the abstraction of water for irrigation by too many riparians, to the point where there are no fish and no water for domestic consumption or transport. Significantly, because the nature of the resources is not the same as 'a pasture', the issues may not play out in the classical manner. The public rights of free passage, and private rights for fishing, may limit the water for irrigation. Clearly there are complex hierarchies of rights and powers involved.

River systems and their man-made manipulation are important areas where competition among states can be studied but where also cooperation among states can be found, and cooperation and conflict can exist at the same time. Recognizing how the French statesman Cardinal Mazarin used the Rhine as a corridor for fair trade rather than a boundary, and made plans for cooperative development of rivers in Poland, Bohemia and Germany, it has been asked: *who will be the Mazarin of Asia today*?[27] The Westphalian system was created as a solution to a collective action problem – and gave birth to a whole set of new problems that challenges the principles of sovereignty itself.

Within the theory of international relations, and the theory of international environmental governance, regime building has become a strategy of environmental protection (Haas 2008). The concept of governance designates political systems with the ability to govern without being states and without their own means of 'hard' power. Even if there are several examples of successful regimes that solve particular collective action problems (Barrett 2003), the sheer number of regimes and the treaties they support may also be an indication of a weakness of this solution, which might become more evident in a water-system context. Rivers and water bodies are always both local and global, they are territorialized to a specific geographical place, but this locality may be part of a global food-web. An international regime might not be the appropriate institutional form to address the reciprocal causality between local disturbances and regional and global systems (Conca 2006). The regime building strategy might work better when the problem is a single issue such as emission of toxic pollutants, than when it comes to the complexity of water systems.

This is what the European Union is hoping to achieve by implementing the Water Framework Directive (WFD). The WFD represents something new in political management of water and the natural environment in general.[28] While earlier directives took issue with one or a few problems at a time, as for instance water pollution, river basins and watersheds are the ordering principle in the WFD, adopted in 2000.[29] Within each river basin, according to the WFD, all water-related aspects have to be taken into account in an integrated manner. This principle establishes high internal integration within the water system, and is an effort to arrive at a higher level of external integration as well. Taking the river basin approach creates opportunities to

resolve transboundary problems because they are 'more easily transformed into collective problems that need to be solved together by all countries of the basin' (Moellenkamp in Liefferink et al., Chapter 11 this volume). In fact, Moellenkamp stresses the creation of a discourse of 'river basin solidarity', phrased as 'joint responsibility' and 'common ground'. This approach to the integration of social and natural systems meets with resistance from established organizational structures, but there is also a more fundamental dilemma of fit and interplay: the more one opts for a river basin approach, the harder it is to reach out outside that specialized water domain, and a river basin authority might also eventually compete with generic governmental bodies.

Collective and distributive powers are two sides of the same coin. Political power is collectively accumulated and distributed to repress strategies that may be individually rational but that may undermine the collective or common good. Even if political power serves the political system and enables it to reach its goals, and is legitimized both substantially and formally, it has an unpleasant side too. For example: taxes might be recognized as necessary but hardly desired by those who pay them. These internal relations within the collectivity must be distinguished from a situation where power is used by one group against another. The stronger collectivity uses its power, for instance, to acquire water rights of another, but even in these cases water conflict is rarely cutthroat and the power holders avoid employing physical force and prefer to get their way by deception.[30] The most effective use of power may in some cases be directed towards framing the opponent's conception of the situation, or to have power over knowledge, to paraphrase Foucault.

There are a growing number of new actors and institutions that address problems of collective action at the international and global level: the United Nations with its subsidiary bodies and specialized agencies, and intergovernmental organizations such as the WTO, WHO, the Group of 77 or, the G8. Alongside these formal bodies there has been a surge in the numbers of non-governmental organizations (NGOs) and international non-governmental organizations (INGOs) often depicted as belonging to or representing an emerging global civil society.

The explosion of so-called 'civil society' actors is a striking development also on the global water arena. Civil society is defined in very many different ways, but in general it refers to the space of voluntary activities and uncoerced collective action that can help to solve social problems independent of and in opposition to formal political structures.[31] It includes several different types of actors and activities. Some see a big role for civil society actors in a new world order, either as an alternative to traditional forms of representative democracy or at least as an important extension of conventional politics. Very often civil society in today's political jargon has become synonymous with NGOs, which portray themselves as being representatives of this civil society, although they to a very large extent have

been funded by donor governments and are led by people who move between positions in the three sectors (Tvedt 1998). Their public task has become to underline (and perhaps exaggerate) the severity of the problems to solve and the need for collective action. These developments pertain to the water sector too. The World Water Council, the World Water Forum, the Global Water Partnership, and the World Commission on Dams all give civil society and NGOs a prominent role.[32] The International Rivers Network is an activist network. The European Union uses direct democracy and public involvement as supplements to representative government structures, and thus a vital factor of its Water Framework Directive is including stakeholders such as NGOs, economic actors and the general public in the political management of water.[33] One important concern is to initiate social learning and understanding of the collective action problematic among those affected. So far the experiences are mixed.[34]

SUMMARY AND CONCLUSION

This chapter has pointed to three processes of globalization that bestow new meaning on the concept of the geopolitical. The first is the processes of functional specialization that create vast networks and circuits of meaning across and above the nation state. This leads to the second process of finding new means for making collectively binding decisions that can regulate the interaction among these social systems on the regional and global level. Add to this a whole new set of environmental issues, where we have focussed on the management of international water bodies in a context where water scarcity is looming and the uncertainties of future waterscapes are growing. The global political system is faced with the challenge to achieve both internal and external integration of the many social systems at the same time that one has to cater for the needs of the natural systems, since these systems provide a basis for societal existence in the long run. It is in this context we use the distinction between new and old world orders, where the new points to mechanisms for building collective power and making collective binding decisions beyond the segmented systems of territorial states.

The interdependencies of these processes are manifested in the open and complex water systems of the world, as more people use more water for many more purposes than before. The dilemma of choosing between cooperation and conflict becomes more pressing for nations sharing the same water basin, and geopolitics in the traditional sense is intensified. However, there is also a new connection between geography and politics. Political systems are always territorial because the physical force needed to accumulate and distribute power depends on the physical characteristics of this space. With increased technological capacities and economic resources power has become less reliant on the physical properties of the terrain, on

the other hand it has become more of a political task to regulate, protect and restrict human interaction with natural systems.

To grasp the old and new meaning of politics and geography we have discussed different aspects of power and its importance. To say that political power is also collective power, and a precondition for solving collective action problems of a certain scale and complexity, is not to idealize it. The distribution of collective power is unpleasant, since it will limit and frame the aspirations of every individual actor. The actual collective action is usually a compromise – nobody is entirely happy with the situation or the outcome – but they accept it because they fear the alternative may be worse – this is the default position of collective rationality.

NOTES

1 Xu and Grumbine, Chapter 14 this volume.
2 See for instance, in this volume: Zeitoun (Chapter 3), Timmerman (Chapter 12), Xu and Grumbine (Chapter 14), Daoudy (Chapter 18), and Karaev (Chapter 19).
3 Also, when power is assumed to be *productive* as in Michel Foucault (Foucault and Faubion 1997), power is part of a process of social control and discipline. For an overview on social theories of power, see Haugaard 2002.
4 For a discussion of rational choice theory and collective action problems made relevant for water governance, see Waterbury, Chapter 2 this volume.
5 See, for example, the first two volumes in this series: Tvedt and Jakobsson 2006; Coopey and Tvedt 2006.
6 For instance: Bourdieu 1975, 1996; Luhmann 2000, 2004; Foucault et al. 2007.
7 Haldén demonstrates in Chapter 13, this volume, how perceived climate change resonates with different social systems in the case of Somalia and is used strategically for political reasons.
8 Of the three major forces of integration, this chapter (and book) deals mainly with the 'utilitarian' approach to the forces of common or collective interests, and power – backed by the institutional use or threat of physical violence, while a few chapters deal with the third force of integration, the identities of ethnicity, language and heritage.
9 For a further discussion of this, see Tvedt 2010b.
10 Earlier volumes of this series have dealt with other aspects of water systems and their social functions.
11 We prefer the term geopolitical to the more used hydropolitical. The term hydropolitical is too narrow, underplaying the multifunctionality of water systems and the broader context in which conflicts or cooperation over water unfolds. The term hydropolitical also indicates that it is a kind of sub-category of geopolitical, but it is rather a variant of it, in some cases being more important than any other geographical factor while in other cases being of very little importance.
12 See Beaudry's chapter on the Peace of Westphalia and the water question (Chapter 7 this volume).
13 On the role of river systems in imperialism, see the Pádua (Chapter 8 this volume) and Kampanje-Phiri (Chapter 9 this volume).

14 Attempts at revitalizing the tradition fail to recognize the geopolitical import of fresh water systems (Ó Tuathail 1996; Dalby, Routledge and Ó Tuathail 2006; Dodds 2007; Dodds and Atkinson 2000; Flint 2006).
15 See Kassa, Chapter 22 this volume.
16 Many chapters in this book are testimony to this, not least when it comes to the water question.
17 See Liefferink, Wiering and Leroy, Chapter 11 this volume.
18 This includes water used as a weapon and means of force, see the fascination studies in Sawyer (Chapter 5 this volume) Nicholson (Chapter 6 this volume).
19 See McGregor's chapter on water, power and colonial and post-colonial statemaking in the mid-Zambezi Borderlands (Chapter 20 this volume).
20 This distinction between the collective and distributive aspects of power seems to fit several of the cases studied in this volume rather well; see, for instance, in this volume: Quinn (Chapter 10), Chapman (Chapter 15) , Daoudy (Chapter 18) and Karaev (Chapter 19).
21 See Elster 2007 for an overview of the literature on this topic.
22 This is the phrase used by Waterbury in Chapter 2 (this volume).
23 See Lichbach 1996 for a discussion of this strategy. In general Lichbach finds that no theory of collective action within the field of rational choice theory fulfils both criteria of logical completeness and logical consistency; in other words, if they are complete they are logically inconsistent.
24 For a systematic account of collective interdependencies, see Barrett 2007.
25 Beaudry demonstrates how participants to the Treaty of Westphalia encountered such dilemmas, a treaty which did not speak directly of collective rationality but of 'the benefit of the other' (Chapter 7 this volume).
26 See for instance Timmerman's chapter regarding Spain and Portugal (Chapter 12 this volume), and Chapman (Chapter 15 this volume) on such institutions not being realized due to 'natural causes'.
27 See www.turkishweekly.net/columnist/3177/water-and-westphalia-in-the-21st-century.html (accessed on 27 December 2009).
28 See Liefferink, Wiering and Leroy, Chapter 11 this volume.
29 The term *water basin*, to include aquiferbased units, may be more appropriate. For the (neglected) geopolitics of groundwater see Jarvis (Chapter 21 this volume).
30 See Zeitoun (Chapter 3 this volume) for the Israel–Palestine conflict, and Mustafa (Chapter 17 this volume) for the conflicts over water in the Indus basin.
31 The Centre for Civil Society at London School of Economics makes uncoerced collective action a defining characteristic: www.lse.ac.uk/collections/CCS/what_is_civil_society.htm (accessed 28 December 2009).
32 Ruth Langridge addresses these type of actors and institutions in Chapter 23 of this volume.
33 'A stakeholder is anyone who feels affected by how water resources are managed. This includes people who receive negative effects, such as those downstream (e.g., fisherfolk on coastal lagoons), or people concerned with aspects of the environment and wildlife. All of these, and others, should be considered as groups from which to select stakeholder representatives' (Abernethy 2005: 66).
34 On this issue, see Liefferink, Wiering and Leroy (Chapter 11 this volume) and Timmerman (Chapter 12 this volume).

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