



## Environmental justice movements in globalising networks: a critical discussion on social resistance against large dams

Esha Shah, Jeroen Vos, Gert Jan Veldwisch, Rutgerd Boelens & Bibiana Duarte-Abadía

To cite this article: Esha Shah, Jeroen Vos, Gert Jan Veldwisch, Rutgerd Boelens & Bibiana Duarte-Abadía (2019): Environmental justice movements in globalising networks: a critical discussion on social resistance against large dams, *The Journal of Peasant Studies*, DOI: [10.1080/03066150.2019.1669566](https://doi.org/10.1080/03066150.2019.1669566)

To link to this article: <https://doi.org/10.1080/03066150.2019.1669566>



© 2019 The Author(s). Published by Informa UK Limited, trading as Taylor & Francis Group



Published online: 25 Nov 2019.



Submit your article to this journal [↗](#)



Article views: 1590




View related articles [↗](#)



View Crossmark data [↗](#)

## Environmental justice movements in globalising networks: a critical discussion on social resistance against large dams

Esha Shah, Jeroen Vos, Gert Jan Veldwisch, Rutgerd Boelens and Bibiana Duarte-Abadía 

Water Resources Management Group, Wageningen, Netherlands

### ABSTRACT



We examine the social resistance against large dams as environmental justice movements in four case studies - the Sardar Sarovar Project from India, the Hidrosogamoso from Colombia, the 'new water culture' movement in Spain, and the Lesotho Highlands Project from Lesotho - with diverse social, political and environmental contexts. We discuss three broad issues. First, the nature of the involvement of civil society and metropolitan intelligentsia in leadership roles. Second, how cross-class and multi-sectoral alliances have been forged between the local and the global. And third, how the notion of environmental justice in relation to social justice is adopted in these movements.

### KEYWORDS

Environmental justice; social movements; large dams; protest movement against large dams

## Introduction

Since the 1980s, large dams are at the centre of intense debates regarding their profound social, agrarian, and environmental impacts. In the background of these debates, in many parts of the globe, a wide range of social movements have emerged, representing voices of the people marginalised due to the construction of large dams. These movements increasingly use the frame of environmental justice to define their struggles. Some scholars argue that, in general, the environmental justice frame has globalised in two significant ways – through 'the horizontal diffusion of the term by transfer, reproduction and contextualisation' and through 'vertical extension to encompass the concerns that are truly global in nature such as climate change or that do not end at the national border' (Walker 2009, 355). Not just in terms of framing but also in institutional-political and operational ways, these anti-dam movements have increasingly been vertically networked, they have often crossed borders and built international alliances and coalitions. Furthermore, it is argued that these movements are marked by leadership structures that significantly involve NGOs or civil society organisations and urban intelligentsia, often described as 'rooted cosmopolitans' or 'movement brokers' who significantly influence the struggles at the ground at the local and at global levels (Sikor and Newell 2014; Borras 2016). And

**CONTACT** Esha Shah  esha.shah@wur.nl  Water Resources Management Group, 3a Droevendaalsesteeg, Wageningen University Campus, Wageningen, Netherlands

© 2019 The Author(s). Published by Informa UK Limited, trading as Taylor & Francis Group  
This is an Open Access article distributed under the terms of the Creative Commons Attribution-NonCommercial-NoDerivatives License (<http://creativecommons.org/licenses/by-nc-nd/4.0/>), which permits non-commercial re-use, distribution, and reproduction in any medium, provided the original work is properly cited, and is not altered, transformed, or built upon in any way.

lastly, they have also triggered a shift in the notion of justice understood in purely distributive terms – as ownership and control over productive resources – to also involve equal distribution of environmental ills and benefits, representation in decision-making and governance, and recognition of locally diverse cultural norms and rights (Fraser 1996; Schlosberg 2004; Escobar 2008; Borrás 2016). The studies on transnational environmental movements, for instance, on extractive industries have also shown the bottom-up and top-down processes in forging alliances between local protest movements and global environmental organisations (e.g. Osuoka and Zalik 2010; Urkidi and Walter 2011). Similar issues are discussed on social movements related to agrarian issues like land grabbing and land reform (e.g. Borrás 2010; Temper 2019). In this context, a plea is made that there is an urgent need to comprehend the universalising and globalising tendencies of environmental justice movements and examine them in terms of concrete practices and processes which underlie these struggles (Sikor and Newell 2014).

In this article, we examine the anti-large dam movements as environmental justice movements. The large dams may be constructed for single purpose uses, such as for irrigation or hydroelectric power generation, or serve as ‘multi-purpose dams’ which also may include, for instance, flood protection, drinking water provision, and other uses (e.g. Hommes, Boelens, and Maat 2016; Hidalgo-Bastidas, Boelens, and Isch 2018; Shah, Boelens, and Bruins 2019). We engage with four case studies from the North and South with diverse social, political and environmental contexts. They are: the Sardar Sarovar Project from India, the Hidrosogamoso from Colombia, the anti-large dam ‘new water culture’ movement in Spain, and the Lesotho Highlands Project from Lesotho. We have selected these case studies because of our close personal and political association with the protest movements against these dams at some point of our scholarly work, and because we have closely followed their course of development and relevant literature over the years. Although the size of the dams, the submerged area, and the number of affected people vary significantly between these cases, they all include social groups with different interests and all show dynamic interaction between local, national and international movements. All four case studies are contemporary and very relevant for the current context of the anti-large dam movements globally, and two of the cases – the Sardar Sarovar Project on the river Narmada and the anti-dam movement in Spain – are internationally well-known. While we could have selected other cases of important anti-dam struggles (e.g. Moore, Dore, and Gyawali 2010; Del Bene, Scheidel, and Temper 2018; Johnston 2018; Bakker and Hendriks 2019; Boelens, Shah, and Bruins 2019; Fox and Sneddon 2019), the choice of these four case studies from the vast number of such movements over the globe reflects our collective scholarly engagement.

In these selected four case-study movements, we aim to examine two broad issues. First, the nature of the involvement of NGOs, civil society, and metropolitan intelligentsia in leadership roles; how local-national-global connections between these groups have influenced or affected these movements and how cross-class and multi-sectoral alliances have been forged and how tensions and contradictions have been negotiated between the local and the global. The paper thereby engages with the question if and how anti-dam movements are ‘globalising’, and how they relate to the localised, particular places of struggle. Second, how the notion of environmental justice in relation to social justice is adopted in these movements. Neither neatly separating nor merging the issues related to social justice (‘red’ concerns) and environmental justice (‘green’ concerns), we

aim to understand how they emerge and change in relation to each other in the response to the conflict against the large dam.

## Environmental justice

The notion of environmental justice lends itself to many connotations. Here we aim to give a brief review of some of these debates in order to make our own position clear. After a thorough review of the debates on environmental justice, Schlosberg attempts to bridge the environmental ('green') and social ('red') concerns and refers to environmental justice as a matter not only of distribution of environmental ills and benefits but also of recognition of diverse cultural identities and governance norms and forms, and deepening of the democratic right to participation in policy and decision-making processes (Schlosberg 2004, 537). We notice that in activist and academic debates, on the one hand, there is a strong argument to recognise difference and, on the other, there have been many attempts to find a unified or common concept of and stance towards environmental justice. Martinez-Alier et al. (2016) for instance examine whether there is a global environmental justice movement. They argue that since the mid-1990s, an explicit connection is established between the environmental justice movement in the US and the environmentalism of the poor in Latin America, Africa and Asia (Martinez-Alier et al. 2016). They argue that although all environmental conflicts referred to targeted local grievances, there is a global movement for environmental justice. This movement is global because all types of local conflicts appear regularly elsewhere in the world or such issues at local level find global networks and connections and hence operate at a global level.

Despite the fact that he presents a somewhat different stance, this discussion also relates to David Harvey's exploration of how diverse oppositional strategies and struggles rooted in particular places – the kind of locally bounded struggles that Raymond Williams called 'militant particularism' – can be united in a wider, universalistic, global politics. Harvey argues that the achievements of environmental justice come only with 'confronting the fundamental underlying processes (and their associated power structures, social relations, institutional configurations, discourses, and belief systems) that generate environmental and social injustices' (Harvey 1996, 401). Harvey argues that the link between the (global) environmental justice movement and the environmentalism of the poor can be established. There clearly is a two-way movement in the debate on how to understand environmental justice. On the one hand, the idea of justice is broadened to include Nancy Fraser's tripartite schema of distribution, recognition and participation in particular contextualised locations (Fraser 1996), whereas on the other hand, there have been attempts to unify the 'militant particularism' of the local kind into a global political programme.

In this respect, Schlosberg points at the danger of creating a global idea of environmental justice, which he thinks should not come at the expense of 'the localised, particular places where that power and injustice are experienced, known, and resisted' (Schlosberg 2004, 534). Other scholars have equally challenged the idea of such global unity and argued that a closer look at the differences in the context in which struggles for environmental justice are located is required (e.g. Forsyth 2003; Escobar 2008; Perreault, Bridge, and McCarthy 2015; Boelens, Perreault, and Vos 2018). In the absence of such critical

engagement with the differences in history, culture, state structure, and public discourse the global environmental justice movement, only tactically aligned with the local movements, may 'fall in to the trap of staying within a world that is "thinly known"' (Williams and Mawdsley 2006, 669). There are other scholars, however, who even question the binary between the global and local and instead argue that the way framings of justice is scaled in such translocal, transnational movements, is messy and complex (Sneddon and Fox 2008).

With this discussion in the background, we aim to address the following two questions for our analysis of anti-large dam movements: (1) To what extent have the anti-dam movements at the local level found synergies or provoked tensions with national and international environmental justice movements? (2) What issues, concerns and demands are expressed by local anti-dam movements? The first question is about the character of the alliances between local, national and international anti-dam movements and their effects on the local protest movements (see, e.g. McCully 1996; Khagram 2004; Johnston 2018). On the one hand, it is often criticised that the globalising focus of environmental movements has given priority to campaigning against international capital (especially the World Bank) and its impacts concerning the environmental ('green') issues, thereby overlooking or even ignoring the interests and demands of the locally affected people and hence the concerns of social justice (Sen 1999). On the other hand, international anti-dam movements have been successful in politically questioning and challenging, at global levels, the effects of unequal distribution of environmental ills and benefits of large dams and thereby they have strategically helped local movements (e.g. Khagram 2004; Johnston 2018). Taking into consideration these two-sided arguments, we especially address the ways in which the globalising of anti-dam movements have provoked synergies and tensions between the global and the local. And finally, we also examine the role of leadership in shaping the course and character of the movements. The second question engages with the nature of the local struggles against large dams: the debate on the 'red' and 'green' struggles explained above. We first discuss each case study separately while comparative insights are debated in the conclusion.

### **Sardar Sarovar Project on river Narmada**

In the international debates on large dams, the case of social movement against the Sardar Sarovar Project (SSP) on river Narmada in India is well-known. The SSP is one of the thirty large dams originally planned to be constructed as part of the Narmada Valley project (NVP). The idea of the project can be traced as far back as 1946, just before independence in 1947, when achieving food security was a major challenge in front of the emerging nascent nation. The construction of SSP started in 1961 under Prime Minister Nehru but was stopped due to the conflicts between three states – Maharashtra, Gujarat and Madhya Pradesh – on the issue of riparian rights. The 20-years of interstate conflict ended in 1979 with the final award of the tribunal. However, the action for and against the dam gathered speed only after the World Bank agreed to fund it in 1985.

Between 1961 and 1985 a great deal had changed in the conditions that justified large dams. The overriding concern related to the food shortage and the political implications of the dependence on the ship-to-mouth food aid from the US did not command the same sense of urgency as it did in the 1960s and 1970s (Friedmann 1990). At the same time, the

Nehruvian model of modernity built on temples of large dams and nuclear plants came under criticism from more than one directions. The allegedly capitalist mode of production in Indian agriculture (and consequently the requirement of large dams as source of intensive irrigation) and resulting forms of proletarianisation was an issue that caused intense and prolonged debate among the Marxist scholars throughout the 1970s and 1980s (Patnaik 1990). The environmental and social violence of the green revolution as a model for agrarian development were much criticised as well (Shiva 1988). Ecological and social impact of deforestation and importance of community-managed or pre-colonial water management systems were much in debate too (Bandyopadhyay 1987; Bandyopadhyay and Shiva 1986; Agarwal and Narain 1997). The social movement against the large dam needs to be placed in this wider context of contestations to the development model that hitherto was considered a gateway to modernity.

The debates on SSP were deeply influenced by these mounting criticisms of Indian modernity and democracy, but also sparked a number of specific responses. An intense debate among the proponents and opponents of the dam erupted on the pages of India's premier journal *Economic and Political Weekly* between 1989 and 1990 (Dhawan 1990). This debate rehearsed every contestation that not only marked the movement but also became a major rallying point in the international debate leading to the formation of the World Commission on Dams (WCD) (Moore, Dore, and Gyawali 2010). The knowledge that was contested covered forest loss, seismic risks, extent of the social and cultural impact due to submergence and displacement, reservoir capacity for different heights of the dam, coverage of proposed irrigation area, water logging and soil salinisation as negative ecological impact of intensive irrigation, internal rate of return and cost-benefit ratio of the investment.

In the background of this arena of contested knowledge, however, it is the convergence or conflict between the 'red' and 'green' aspects – between social justice and environmental sustainability – that has proven most challenging in shaping the movement. The first phase of the movement was all about redistributive justice whereas ecological issues were hardly in the picture. The first intense agitation was organised in 1978–1979 immediately after the disputes between three riparian states were settled in the Tribunal Award and dam building was resumed (Dwivedi 1998, 142). The struggle in this first phase was about displacement of high caste and landed class of middle and rich peasantry from the agriculturally advanced Nimar plains in Madhya Pradesh. These farmers practiced capital-intensive agriculture and belonged to the part of peasantry that had most benefited from the state-sponsored green revolution and the accompanied subsidies, cheap electricity (and hence easy access to ground water) and favourable input and output prices. After the introduction of electric pumps and subsidised electricity in the 1970s, these farmers cultivated a number of commercially remunerative crops (Baviskar 1995, 217–218). There was a general feeling among these capital rich farmers and their political constituency that Madhya Pradesh was a loser in the Tribunal Award. The struggle of this politically powerful middle and rich peasantry got support from the Congress party, which was in opposition in Madhya Pradesh legislative assembly at that time. But the movement collapsed soon after the leader of the Congress party won the state election. The struggle in this phase focused on renegotiating the height of the dam in order to save some of the Nimar villages from submergence. Later on, the landed farmers from Nimar plain formed an important constituency of the second and internationally most

well-known phase of the movement, Narmada Bachao Andolan (NBA), which began in 1985–1986 with the entry of charismatic leader Medha Patkar. Their involvement, however, as Baviskar argues, formed a major contradiction in the movement (Baviskar 1995, 219–220). These farmers practiced the kind of high input high output capitalist agriculture that the movement criticised as the reason for making the destructive technology like large dams a necessity. Also, even when the two-thirds of the people displaced by the dam lived in the plains, it was the landed and politically powerful Patidar farmers who were most active in the movement. The landless labourers from lower castes and scheduled tribes, nearly 40% of the people affected, were absent from the protests and ranks of leadership (Baviskar 1995, 220). The movement in Nimar plains in both phases was heavily focused on the issue of displacement and hence redistribution, however, its class character could hardly make it qualify as environmentalism of the poor (Guha and Martinez-Alier 1997, 18–19).

In Gujarat as in Madhya Pradesh the first instances of protests in 1983–1984 were on displacement and better rehabilitation. In the beginning, therefore, the social responses not yet formalised in the anti-dam position were all about social justice and redistribution. In fact, the Gujarat government responded to the years of lobbying by two local NGOs – ARCH-Vahini and Rajpipla Social Service Society – and accepted the principles of rehabilitation prepared by these organisations in collaboration with the research institute Centre for Social Studies in Surat, Gujarat. The rehabilitation policy thus presented in 1987 was by far the most liberal in Indian history. At that time, the acceptance by the Gujarat government to incorporate the terms suggested by the displaced people themselves was a momentous triumph. However, in the next couple of years the activists groups in Madhya Pradesh and Gujarat took a radical no-dam position on the ground that proper rehabilitation of all displaced people was impossible, firstly, because the government had no real idea of the extent of displacement, and, secondly, because it would be impossible for the government to find good quality land for rehabilitation. It was not only the matter of rehabilitation and hence redistribution alone that prompted the no-dam position. The dam was ultimately opposed on the grounds that it would have mostly displaced the poor and marginal tribal people for the anticipated ‘national good’. The movement defined itself as against the model of development that demanded such sacrifice. The question ‘whose development at whose cost?’ became the movement’s main slogan.

The turning point in the movement, however, is often counted as several moments of contact in 1986–1987 with the Northern environmental NGOs. These NGOs, especially in the US, had emerged in response to the exponential increase in the 1970s and 1980s of the lending by the Multilateral Development Banks (MDBs) for large development projects, and their destructive environmental and social impact in the South (Schwartzman 1991, 407–410). While the movement in Narmada valley was gaining momentum in the early 1980s, these Northern environmental NGOs were involved in an intense campaign against the World Bank funded national highway Polonoeste project in Brazil and the resulting agricultural colonisation of a vast region (Schwartzman 1991, 397–405). The campaign largely involved a series of hearings at the US Congress on environmental impact of the international aid projects in general. The campaign succeeded in making the World Bank withdraw its funding for the project in 1985. What is important here is to point out that this first round of campaign on improving environmental performance of the

World Bank and other multilateral development banks did not emerge from the locally expressed concerns by the affected people. It was led by the Northern environmental NGOs who were concerned about the environmental and social impact of multilateral lending in the South. The next round of the campaign against MDBs' lending for road extension in Brazil was more radical and, although led by the Northern environmental NGOs, the campaign closely engaged with the struggle of the local people and their perceptions of their lives and future. It is often portrayed as the first global alliance in the environmental movement (Sen 1999, 391).

Around this time in 1984, back in India, a group of environmentalists walked the length of the Narmada valley and wrote a powerful critique of the environmental (and social) impact of the project which was widely circulated (Kothari and Bhartari 1984). This was the first time that the project was viewed as an environmental issue. The environmental aspect of the movement fully crystallised after the visit of the Narmada valley by the US-based NGO, Environmental Defense Fund, one of the key members of the campaign against MDB lending, and in turn the visit of Medha Patkar to Washington D. C. to meet with the Bank staff and the US politicians. The movement now had a clear alliance with the Northern environmental NGOs, but at the same time, it separated from the key local alliance the local NGOs (Sen 1999, 347). While the movement was further consolidated in close association with the International Narmada Campaign, its stand on the dam shifted from fighting for the rehabilitation of families and communities to fighting against the environmental destructions and later, in 1987–1988, to the 'no-dam' position (Udall 1995). After the intensive lobbying of the Northern Environmental NGOs and the International Narmada Campaign, the World Bank commissioned an independent review of the SSP, and finally pulled out of the project in 1993. The movement against the large dam continued even after the World Bank withdrawal. The construction of the dam was eventually resumed after a long and protracted legal battle and after the Supreme Court gave a verdict to allow the government to increase the dam height. The dam was eventually completed in 2014.

Summing up, we highlight two conclusions which would be comparatively discussed further in the last section of the paper. Firstly, the movement side-stepped the state in forging international alliances, and although refocusing from rehabilitation alone to environmental sustainability broadened the scope of the movement, in the process the idea of social justice as the principal focus of the movement was compromised. Because of the involvement of the Northern environmental NGOs, the significant part of the struggle remained focused on making the World Bank withdraw from the project. However, it is doubtful if withdrawal of the World Bank made any ground level difference to the distributive concerns related to the displaced people. Secondly, the idea of environmentalism of the poor might be difficult to apply here because the movement was significantly formed by the participation of people from different social strata – both tribal and high caste landed rich peasantry; its class character was a major contradiction of the movement (Baviskar 2005).

### **Hidrosogamoso hydropower project on the Sogamoso River**

We now discuss the case study of an important Colombian hydroelectric mega-project, a case in which the social movement was successful in building a national alliance and



scaling up towards international networks, but its forces were weakened at the local level due to powerful elites and oppressive state structures deploying violence, and due to people's profound difficulties to urgently solve basic livelihood needs. Like most countries on the South American continent, Colombia's economy and society are deeply coloured by the extractive-export model of promoting economic growth. Sectors like largescale mining and agribusiness demand not only raw materials but plenty of energy. Accordingly, Colombia has the third largest installed hydropower capacity in South America: 127 hydroelectric projects are in operation, and in 2014 the environmental licenses were processed for another 120 projects (Soler, Duarte-Abadía, and Roa-Avendaño 2015; UPME, 2016). One of the country's largest mega-hydropower facilities, recently constructed, is the hydroelectric project on the lower Sogamoso River, which includes the Tocoporo reservoir: Hidrosogamoso. It is located in the mid-Magdalena, Santander, in the canyon where the Sogamoso River crosses the La Paz Mountains, 62 km downstream from the Suárez and Chicamocha rivers. The case study discussion is based on several periods of field research with the local movements between 2015 and 2019, and preparatory interviews conducted yearly, since 2010 (see also Roa-Avendaño and Duarte-Abadía 2012; Duarte-Abadía, Boelens, and Roa-Avendaño 2015).

Hidrosogamoso was first conceptualised in 1943, the project was resumed in 2009 and completed in 2015. The project owner was previously a Colombian public-private company ISAGEN S.A., now owned by a Canadian multinational, Brookfield Assets Management. The hydropower project's generation capacity is 820 MW, equivalent to covering about 10% of the nation's energy demand. The energy produced is sent to the interconnected national energy grid; the mining, petroleum and agro-capitalist industries are the nation's largest consumers (Roa-Avendaño and Duarte-Abadía 2012).

Although the dominant view in Colombia portrays the Sogamoso riverside territories as unused or socially desolate, the zone's history shows how fishermen, landless rural people and settler farmers lived in the region and took advantage of periodic flooding down river, alternating with diverse productive activities. They have also established a complex network of food exchanges through interaction with the indigenous communities previously settled in the Yariquies highlands, upriver, and in the lower areas, including the wetlands and surrounding zones. These followed the historical practice called 'amphibian rhythm', adopted also by the migrant groups settled here who were displaced by the armed conflicts. The amphibian practices involve moving into and out of the river and swamps depending on the season (Fals Borda 2002). The immigration during the last three decades of the twentieth century shaped the recent settlement patterns along the banks of the Sogamoso River. The river and its associated ecosystems (gallery forests, beaches, islets, wetlands) have offered the sole means of subsistence to hundreds of families fleeing war and hunger (Roa-Avendaño 2010).

The Hydroelectric Project has dammed this river's water, flooding an area of approximately 7,000 hectares, affecting nine municipal territories (Duarte-Abadía, Boelens, and Roa-Avendaño 2015). Building Hidrosogamoso has thus transformed the territory profoundly by converting the productive use of water and land into energy demands, tourism, and other industrial and recreational purposes. Fishing, artisanal mining, subsistence agriculture and pastoralism have been deeply affected; the local populations' food security and livelihoods now depend on the outside market (Novoa, Pardo, and Rico 2011; Duarte-Abadía, Boelens, and Roa-Avendaño 2015). Their settlements are

located in high-risk zones characterised by (para-)military violence, social vulnerability and productive dependence on the (violated) ecology, with no title to land or access to capital. Their organisational forms tend to erode along with local livelihoods, due to the environmental damage caused by the hydroelectric project: the river has always been their refuge and livelihood.

Being aware of these negative impacts attached to the dam construction, local leaders, affected communities, NGOs, regional scholars and alternative media reacted against the project and the company forming a mass social mobilisation. This revolt happened few days after the machines entered the territory. In order to understand the nature of the local struggle and the character of the alliance we describe three constitution stages of the social movement.

The first is related to the foundation of the Living Rivers Movement, *Movimiento Ríos Vivos*. It has grown from the national network that gathered opposition around other dam development projects in Colombia, such as the Salvajina, Anchicava and Urrá dams. These have mobilised against large dam impacts from 1996 onwards, in association with REDLAR – the Latin American Network Against Dams and for Rivers, their Communities and Water. The second stage of mobilisation started more than a decade later with a self-organisation initiative, in 2008, which integrated several leaders from the affected community hamlets in the watershed. In 2011 the *Societal Movement to Defend the Sogamoso River* was set up, comprising environmentalists, NGOs, union organisers, workers, some community leaders and residents of the dam's area of influence. They constituted a regional branch of the Living Rivers Movement. The Movement sought to integrate and unify the watershed's affected people to resist and oppose the project. However, the movement began only after the environmental licensing was issued and after the construction already had begun. Meanwhile, large landowners in the Betulia and San Vicente Chucuri valleys rushed to have their first negotiations with the company. At the same time, amidst misinformation from formal media, the critical mass of information was unattainable for smallholders. This put the majority, who were living in the mid and lower parts of the river valley, at a disadvantage. Project implementers easily ignored the dam's implications for these small farmers, and the latter had difficulties to set strategies for negotiations or resisting the project.

In the third stage, the company made headway in negotiating with various stakeholders in a way that created divisional interest within the social movement. It happened in a context in which the mega-hydropower project had unconditional support of local large landowners, who did get involved in the bargaining process with the company, successfully claiming large compensations for their land that was to be flooded. Many of these local elites have direct linkages with the corrupt para-politics and para-militarism that ultimately determined the political decisions regarding the Sogamoso mega-projects and the security guarantees to develop it. The affected communities did not have the opportunity to negotiate directly with ISAGEN, rather, they were forced to accept the previously established compensation imposed by the company. The regional government and municipalities stepped aside, no longer operating as state authorities defending their constituencies' interests but becoming the company's facilitators. Consequently, the Movement confronted a situation in which the people's joint vision of the watershed increasingly got fragmented, with each group or individual seeking their own opportunities. This inequality in negotiations, and the absence of any genuine consultation or

public discussion of the project, helped polarise communities: some complained and negotiated with the company, others resisted and avoided to receive any benefit from the company (this was the position of Ríos Vivos). There were also many people and communities shifting their positions back and forth – opposing, negotiating, and collaborating at the same time.

Initially, the Movement 'Ríos Vivos' pursued intense education and dissemination of information to publicly debate the impact of the project but it was already late by then because environmental license was legally approved and the construction was already underway. Citizen participation mechanisms, recognised in the Constitution, were used to request a public environmental hearing. However, this did not significantly influence the way the company or governmental institutions behaved. The affected communities intensely felt unprotected due to the individualised negotiations with the company. Despite these obstacles, the 'Ríos Vivos' movement, through the support of national NGOs, continued to organise rallies and protests locally. For instance in Bucaramanga, the regional city centre, they demanded greater governmental support and response. Increasingly, actors with environmental and social concerns partnered. For example, the workers who built the dam also took part, as a strategy to reduce the workload and somehow curb the dam design's impacts. On 14 March 2011, the International Day for Action against Dams, a three-day mobilisation resulted in a negotiation platform among the company and those affected, plus members of the Church, some NGOs, council members from Santander's regional government, the labour union, and others.

These negotiations made little progress in favour of the people affected or the environmental sustainability of the region. On the contrary, they calmed down social unrest, helping to ensure the company's economic sustainability. For this reason, recent years have witnessed many confrontations, marches and protests. Tatiana Roa, Coordinator of CENSAT Agua Viva (National Health, Environment and Work Central Association 'Living Water'), a longtime partner of the movement, explains that the Living Rivers Movement has had two social driving forces. The first had to do with its formation by integrating people and organisations not affected by the project, such as the Labour Union of the Petroleum Industry and other local, national and international NGOs. Its purpose was to make visible the socio-environmental impacts of building the dam. However, their participation often took an ambivalent form – for example, this resulted in claiming individual compensation from the company to purchase individual land and thereby favoured personal or political interests. Their participation in the movement eventually waned and the people directly affected by the dam construction replaced them – from 'environmentalism of the outsiders' to 'environmentalism of the affected families'.

On one hand, social mobilisation has often been weakened when several of these 'outside support agents' started to get involved in the Hidrosogamoso project, in particular when deploying strategies of 'inclusion' and official state 'recognition' politics in the zone. These call for 'people's participation' but generally in the hydropower plant's interests; and they end up denying the variety of locally constructed rights and rules. This way, they contribute to imposing official norms and institutions, and control 'intangible' and 'inconvenient' customary norms and organisational forms. Further, this official/company recognition also declared all 'un-recognised' local stakeholders and norms, those that are not in the interest of the state and market's drive for control, as illegal. In practice, the legal instruments have been used to favour the hydroelectric project (Roa-Avendaño

and Duarte-Abadía 2012). On the other hand, the zone's historical context and socio-political dynamics – the conflicting geopolitical interests, the armed conflict, and the recent settlement by nomadic communities fleeing the war – complicated to organise the affected people into a movement that can negotiate an agreement with the government and/or the company. In any case, the state authorities have failed to enforce the rights of people affected by the hydroelectric project. This alliance between the political and economic powers has made it difficult to even voice the grievances and organise societal actions.

Currently, the core of Sogamoso's Living Rivers Movement are women whose livelihoods were based on the flowing river. Their last struggle has focused on re-building their collective memory as a way of resistance and forging rooted cultural identity. They seek to be recognised as victims of development, since the megaproject has caused them a forced displacement (see Moreno, 2019). This movement is currently expanding its struggle, in solidarity with other movements of people affected by extractive projects and coordinating with many communities and socio-environmental networks upstream and nationwide. This involves Ríos Vivos Santander, Ríos Vivos Antioquia, Ríos Vivos Caldas and Ríos Vivos Huila, covering five administrative regions of Colombia where new large-scale hydropower projects are being pursued. At national scale they work as a horizontal organisation, there are some leaders or spokesmen for the five regions and there are 'local coordinators' who represent different sectors. All of them act as what they call 'collective voices', transmitting the outcomes, concerns and proposals of the affected community and encouraging alternative collective plans and processes. Internationally, they are allied with the Movement of People Affected by Dams in Brazil (MAB) and the earlier mentioned REDLAR. However, some leaders of the communities and local inhabitants have criticised this international mobilisation, arguing that such high-scale actions do not contribute to the local struggle. They are still facing the harm done by the dam construction and have to struggle to gain compensations and find alternative ways to recover control of their territory. In contrast, other leaders of this social movement consider international alliances crucially important. Now they were able to show their problems to the international community and obtain funds to develop their own projects, oriented at expanding their visibility and gaining political leadership. National NGO, as CENSAT Agua Viva, help to promote this international interaction, but focus in particular on strengthening solidarity among the people affected by large dams and extractive industries. One of the reasons why Ríos Vivos /Living Rivers is expanding their alliances is to respond to the Government's new plan to construct 13 new dams on the Sogamoso River, or as one of the leaders says: 'Now is the time for resistance. We are keeping an environmental record to register all the data on what has happened to us, because they are planning another 13 more. The clash ahead will be terrible'.

This case shows how the social movement 'Ríos Vivos' in Sogamoso generates new alliances at the national level to strength their fight against future dam construction. They also seek to scale up their struggle to the international level in order to make visible the socio-environmental injustices inflicted upon them. At the same time, Schlosberg's (2004) warning about the risk of globalising and universalising environmental justice claims, at the expense of localised claims and diversities, is very much relevant in the region. Rios Vivos must seek to expand and strengthen their solidarity alliances at national and international levels and also respond to the urgency of local livelihoods needs and the

everyday management of water and territory. While some members step aside of this global networking process, considering that struggles must focus on just local livelihoods and on-the-ground daily needs, many see the interaction with other dam-affected movements and international networks as crucial to engage in a co-learning process, which helps them getting to know alternative ways to confront the territorial transformations. Their translocal mobilisation has made it possible to make the voices of affected people heard in the international spheres that support the defense of human rights and environmental protection, such as Friends of the Earth, Amnesty International, and MAB. Despite earlier disappointments with national and global 'outside support agents', these experiences have taught them how to fight their battles and who to actively involve and or not, rather than simply and passively 'being involved' by supralocal outsiders.

### **The anti-dam movement in Spain**

Spain's history in the last century is deeply impacted by its national dreams to convert the 'dry and backward country' into a 'modern, advanced nation' through the implementation of mega-dams and large hydraulic works. Fundamental to understand the roots of this utopian-flavoured water control project is the socio-political and intellectual-ideological movement of 'regenerationism' that started in the late nineteenth-century Spain (Maurice and Serrano 1977; Ortí 1984). After losing its last colonies in the 1880s, which was termed as the 'Colonial Disaster', Spain's self-image shifted from being a global empire to a degenerated nation in deep economic, cultural and political crisis. This resulted in the quest for a new national identity and political/economic modernisation. As regenerationist leader Joaquin Costa argued, it was urgent to colonise the country inwardly instead of taking distant lands, incorporating all Spain's regions and people into modernity through 'hydraulic solidarity' among the water rich and water poor areas (Costa 2011). The new discourse envisioned ending oligarchy and elitism and empowering peasants; it exalted traditional small-farmer led irrigation, decentralising water governance to river basin confederations, and promoted the expansion of large-scale irrigation and waterworks (Boelens and Post Uiterweer 2013; Swyngedouw 2015; Swyngedouw and Boelens 2018).

Once in power, during the first decades of the twentieth century, regenerationist politicians dramatically failed to materialise their hydraulic dreams, blaming not only the conservative oligarchy but also the 'stubborn, backward peasantry' unable to grasp the enlightened regenerationist future. Somehow, however, Costa had already foreseen that convincing all classes about the benefits of utopian hydraulism would encounter problems; he, therefore, argued for the need of an enlightened dictator to enforce hydraulic solidarity (Costa 1967, 86). Progressive, regenerationist dreams could, indeed, become reality only by silencing the voices of protest (Duarte-Abadía and Boelens 2019). Major hydraulic infrastructure development in Spain started in the rule of dictator Francisco Franco. In his first – Autarchy – period, the regime doubled the number of large dams in Spain from around 80 in 1935 to some 180 in 1955. However, the hydraulic mission of the ruling period of Franco was materialised during the second period, in a large boost in dam construction: from 180 to 730 dams in 1975. The total storage capacity of the reservoirs increased in that period from 8000 to 37,000 mm<sup>3</sup> (Swyngedouw 2007).

The dams formed part of the big hydrological plan of Franco that meant to connect all rivers of Spain and to redistribute the water throughout the country in order to optimise its productive use, including generation of hydropower. While he promised irrigation water to the small producers, in reality much of the water thus dammed was allocated to cities and big land owners, while the electricity was provided to the industrial sector (Swyngedouw and Boelens 2018). The construction contracts were awarded to a handful of powerful construction companies and the forced labour of political prisoners was used in the construction of dams (Lafuente 2002; Acosta Bono et al. 2004; Camprubí 2013). During the dictatorship of Franco protests were not allowed, so the affected people who lost their land, homes and livelihoods could do nothing but accept the impoverished housing and living in resettlement villages (see e.g. Huber et al. 2017). After the restoration of democracy in 1975, the hydraulic mission of the Spanish government continued (Genovés et al. 2008). Many projects for new dams and water transfer envisioned by Franco remained in force. And also the political repression of social protests continued. This hydro-dream culminated into a new National Hydrological Plan (PHN) in 1993, which was initiated by the government and led by the right-wing political party Partido Popular. This plan envisioned the building of ten more dams and the major water transfer canal from the Ebro river in the North to the agro-export zones around Murcia in the South of Spain. This plan generated much debate, while the national coalition of the anti-dam movement was in the making.

Similar to the case of Sardar Sarovar Project on the river Narmada as discussed, the urban intelligentsia and civil society organisations played a crucial role in creating and shaping the anti-dam movement in Spain. The anti-dam protest in Spain was started in the 1990s by a group of researchers from the University of Zaragoza after their visit of the affected villages in the Pyrenees of Aragon. They enjoyed strong support from the abandoned, 'forgotten' rural communities. The researchers recorded the testimonies of the displaced people and studied the impact on biodiversity but also earthquake risks of dam construction (Gómez-Fuentes 2012). The dramatic stories of the villagers affected by dams, such as the Yesa dam inundating three villages displacing 1500 inhabitants, motivated the researchers to broaden their geographical focus and start research on dam victims in other parts of Spain. Researchers of the University of Zaragoza were the main drivers in this initial phase of the anti-dam movement, such as Javier Martínez Gil (hydro-geographer), Pedro Arrojo (economist) and Antonio Casas (geographer). They were soon accompanied by activists from environmental NGOs. This initial field investigation team grew into a movement when researchers of other Spanish universities and local environmental organisations joined the research team. In 1995 Greenpeace Spain and the environmental umbrella group CODA (Coordinator of Environmental Defense Organisations) initiated the formation of COAGRET (*Coordinadora de Afectados por GRandes Embalses y Trasvases* – Coordinator of Those Affected by Large Dams and Water Transfers).

From initially recording the testimonies of the affected villagers the movement shifted its attention to opposing the 1993 National Hydrological Plan proposed by the Spanish government. In 1997 Javier Martínez Gil published his book 'The New Water Culture in Spain', this marked the start of a broader social movement involving many aspects of water infrastructure, water quality and water value (Martínez Gil, 1997). Based on the principles laid out in Martínez' book, in 1998 the NGO 'Fundación Nueva Cultura del Agua'

(FNCA) [New Water Culture Foundation] was founded. The FNCA was coordinated from the University of Zaragoza, but had a wide membership of local water activist platforms and individual academics and environmentalists in Spain and Portugal. The vision of FNCA stressed the 'cultural, emotional, aesthetic and recreational value of rivers' (FNCA 2019, own translation).

The anti-dam movement in Spain not only became very active, mobilised a large number of people at the national level, and succeeded in stopping a large water transfer project, but also made several global alliances; it was inspired by other such movements in India and Turkey and, later, the final report of the WCD (2000) (personal communication FNCA 2019). In its turn, the FNCA actions and experiences motivated new hydro-ecological sister networks and anti-dam alliances in other parts of the world, particularly in Latin America. The FNCA was initiator of many researches and publications (e.g. '*Fluviofelicidad*' by Martínez Gil (2010), approximately translated as: 'The happiness of the flowing river'). FNCA also organised an online 'water policy observatory' and many local activities and conferences on the new thinking on water use and its ecological values. This initiative grew into a large social movement when FNCA organised massive street protests against the Ebro transfer in Zaragoza which was attended by 250,000 protesters in the year 2000; similar protests in Madrid (200,000 protesters in 2001), in Brussels (15,000 demonstrators in 2001) and in Barcelona (150,000 campaigners in 2002) were also organised. These protests resulted in abandoning the plan for the Ebro transfer. This marked a major success for the movement. Not surprisingly, the movement was challenged by the national rightwing Popular Party, and by large export farmers from the South (Murcia) who would have become the beneficiaries of water transfer from the Ebro to southern Spain.

But not every protest was successful. The protest against the Itoiz dam did not result in stopping the dam although the protestors won the court case and the government was instructed to reduce the height of the dam (see Barcena and Ibarra 2001). The government, however, did not follow the ruling and the construction of the dam was continued despite an attempt by a group of eight eco-saboteurs to stall the construction by damaging the structure. They protested against the impact on the ecosystem but also against the enormous overcapacity of the reservoir compared to the need for water in Pamplona.

Most anti-dam protests in Spain are neither just 'red' or 'green' but – depending on the case and socio-environmental impacts – tend to focus on a dynamic mix of 'red-green', including other issues, ranging from corruption, high water prices, privatisation, etc. The saboteurs were sentenced to jail for 5 years. Although the dam was finished in 2010, the protests related to the dam continued. The protestors also raised the voice against corruption during the construction, seismic risks and the high water price that favoured large plantation owners and forced smallholders to abandon their land. Several government officials were later given long sentences (from 11 and 31 years) for corruption related to the construction of the dam and the irrigation canals. Despite these achievements of the movement, however, Franco's hydraulic policy was left unchallenged during the democratic transition because of its image of productivity and neutrality supposedly producing unquestionable benefits under the leadership of cultured experts.

But recently, cracks have appeared in the hydraulic expertocracy: local (valley-based) activists, farmers, and water management professionals have raised organised voice against mega-hydraulism. Many such local level protest coalitions have managed to bring the river 'back to life'. They are backed by the struggle at national level of the

New Water Culture and are based on organised information and debate meetings in the valleys and have strategically used the European Framework Directive which states that all European rivers must have ecological flows. The dynamic conversation between the 'red' and the 'green' concerns is much apparent in the history of anti-large dam mobilisation in Spain.

For example, the communities from the valleys of the Río Grande, a tributary of the Guadalhorce in the South of Spain set up a diverse grassroots alliance to stop the plans for a dam that would divert the water from their river to the city of Malaga for tourism and industry development (see Poma and Gravante 2015; Duarte-Abadía, Boelens, and du Pre 2019). In 2003, this grassroots alliance created the Cerro Blanco Anti-Dam Platform, which got support from the local ecological activists' organisation, the Jara Association. This 'green' NGO that had studied and educated on local ecology for many years, together with the irrigator communities that were mainly concerned with losing their livelihood sources, successfully protested against the dam. However, the government later revived the project quietly. In 2006, the Cerro Blanco project was approved by the Ministry of Environment by conveniently re-naming it as 'an azud' (the local Arab name for a small dam) while planning pipelines to divert most of the water from the Río Grande to the city. This time, the 'green' Jara Association provided the leadership and organised large social mobilisation against the plan. It included many actors such as local school teachers, local businesses, NGOs, and local politicians, and together they formed the network *Coordinator in Defence of the Rio Grande River*. The platform organised a multitude of creative activities, starting discussions at the local *feria* village-market events, activities for children, Rio Grande environmental education leaflets and books for school children and the broader public. Jara also mobilised the valley's communities to protest on the streets of Malaga, showing the urban dwellers that their protest was not a NIMBY action but was profoundly related to the endangered continuity and dignity of social and environmental life in the valley.

The success of this movement lied in balancing the 'red' and 'green' concerns while at the same time making several local, national and global alliances during the course of its development. The *Coordinator* created links to the supportive networks at increasingly broader scales. First, it networked with many local foundations and initiatives, for example, the Andalusian branch of the New Water Culture, and later also with its national alliance Greenpeace. The platform also strategically used the contents and representatives of the European Framework Directive to defend the cause of living rivers and ecological flows. At the same time, JARA had to navigate carefully among the activist organisations because involving foundations that were seen as 'too radical' by the local villagers or 'too environmentalist' by the farmers could weaken the local platform's coherence and force. Confronted with the large multi-actor and multi-scalar opposition network, the government had to withdraw the plans, and instead it made an alternative design taking the water from a downstream weir – this would leave the river untouched. Meanwhile, the *Coordinator* continued to enlarge its alliance also with local, national and international academic partners in order to carry out social and ecological studies that may defend (and 'scientifically express') the importance of the Rio Grande living flow regime for the conservation of valley's ecological environment and social communities (see Duarte-Abadía, Boelens, and du Pre 2019). In the following years, these academic and societal network partners, in a multi-scalar 'red-green' alliance, proved to be extremely important whenever



(as in 2009 and 2017) the government revived the construction plans of the dam on the Rio Grande river. The challenge is not yet over.

To sum up, we would like to highlight three important factors for the important success of the anti-large dam movement in Spain: the role of urban intelligentsia, the movement based on the balance of 'red' and 'green' concerns, and the active formation of the local, national and global alliances as the basis of the movement's mobilisation.

## Lesotho Highlands Water Project

The Lesotho Highlands Water Project (LHWP) with an original planned costs of 8 billion US \$ envisioned the construction of multiple dams in the highlands of Lesotho, interconnected through tunnels, with the principle aim to supply water to the Vaal River system in South Africa. The project commenced in 1986 following the signing of a Treaty between two countries, but ideas for the project date back to at least the early 1950s. An agreement was only reached after the 1986 *coup d'etat* in Lesotho that brought to power a military dictatorship that was more inclined to collaborate with the South African Apartheid regime (Meissner and Turton 2003). Despite radical political changes in both countries in later years the LHWP remains associated to this highly undemocratic period (Thabane 2000, 634).

The transferred water is to serve South Africa's Gauteng province, the economic centre of the country where some 37% of its GDP is generated by predominantly mining and other industries; the province is also home to a large urban population, including Johannesburg. Because of this economic value, 'the Vaal River is one of the most strategic natural resource assets of South Africa' (Meissner 2005, 192). Against this water-scarce economic boom area, Lesotho stands out as a water abundant area with a very poor economy, not as a coincidence but as a result of 'structural economic integration or political subordination' (Ferguson 1994, 177). There is a specific historical context to this situation in the present. In 1865–1868 and later in 1880–1881, the Basotho tribe escaping the war withdrew to the 'defensive mountain strongholds' (Thabane 2000, 637), now known as Lesotho. In the process, they lost a lot of fertile land to what is now South Africa. Although this happened more than a century ago, in the negotiation over the LHWP in the late 1960s, Lesotho demanded that South Africa handed back this lost territory (Meissner 2005, 200). The LHWP is one of the largest water infrastructure projects in Africa. The main dams constructed in the first phase of the LHWP are the Katse Dam (completed 1996, phase 1A) and the Mohale Dam (completed 2003, phase 1B). Besides the water delivery to South Africa the first phase of LHWP also included hydropower generation for domestic use.

From within Lesotho there has been little resistance against the idea of the project as such, and responses have mostly focused on the impact and on the way compensation to the affected people was dealt with in practice. Only international NGOs involved in global debates on large dams, such as Environmental Defense and International Rivers Network, seem to have questioned whether the construction of the dams was needed and justified. The international resistance against the project went partly in parallel to the development of the WCD guidelines (1998–2000). Directly affected communities, church groups, local NGOs and international NGOs formed alliances and collaborated in their response to the negative effects with the church-based local NGO Transformation Resource Centre (TRC) playing a central role (see Meissner 2005). Their arguments focussed almost solely

on the social effects, while the environmental impacts of the dams have largely remained secondary, even for the international environmental organisations involved in the alliance. This is for instance exemplified by their 'lessons learned' document which in its summary lists 24 lessons, none of which relates explicitly to environmental issues (Thamae and Pottinger 2006).

There are several reasons for the low levels of organised and visible resistance. The most important being the fact that the affected people are low in numbers, they lack organisation and are unfamiliar with dam development processes and lack know-how to interact with the processes. Both dams were constructed in very poor, remote areas with low population density and relatively low total number of affected people (as compared to other large dams elsewhere in the world). For the Katse Dam 71 households were displaced while for the Mohale dam 425 households were resettled (Devitt and Hitchcock 2010). Braun (2008) gives a detailed account of a resettled woman from the project area who gave testimony to a hearing for the WCD, in which she narrated the injustices that she and fellow resettled people experienced in terms of broken promises and the loss of home, dignity and community. Her struggles illustrate how their marginalised positions and limited knowledge of the 'language of the project developers and financiers' (both literal and figurative) works against them. The affected community got divided over several locations making it even more difficult to organise (Thabane 2000; Devitt and Hitchcock 2010).

The reasons for the absence of organised social resistance could also be the fact that the project included various procedures to deal with environmental and social concerns based on lessons learnt from other dam projects internationally. And in the process, environmentalists and social experts were co-opted into the dam development process by giving them a role in the 'Panel of Environmental Experts' that reviewed risks and monitored progress relating to the social and environmental risks management. The Panel was formed based on the World Bank's requirements stipulating such measures. The relocation and compensation process was converted into a consultancy assignment which was implemented by a team of rather critical anthropologists (see Devitt and Hitchcock 2010). While they adequately informed people about the project and facilitated them to express their dissatisfaction, they at the same time used the trust that they had gained to organise these communities to make them give consent for the resettlement in compliance with their consultancy assignment. One of their strategies was the organisation of elected local committees with whom they could work, while they made an agreement with these committees and traditional community leaders that they would select 'young and educated people from the affected villages' (Devitt and Hitchcock 2010, 79) to serve as 'Community Liaison Assistants', being paid by the consultants. While these bright youngsters played a crucial role in organising the communities for effective participation, they also became dependent on and loyal to the consultants and their project.

Another important reasons for the lack of social resistance was the matter of timing. By the time the affected communities were informed about the dam construction it was too late and as a result the communities were not sufficiently organised and their opinions got divided on how to respond to the resettlement announcements (Thabane 2000). The affected communities responded with anger once they were well-informed (long into the development process) and in response they wrote letters to the King, to the Prime Minister and the chief executive of the LHDA demanding their attention, however, the community's plea was met with no response. The people then had no other option but to

move as directed by the consultants responsible for the resettlement programme (Devitt and Hitchcock 2010, 80). People also accepted the offers based on the promises made, many of which were not kept (Thamae and Pottinger 2006).

Eventually when people did mobilise themselves to take actions into a different direction from what was politically instigated, both traditional authorities and politicians reverted to intimidation, after which local communities reverted to obedience, but at the cost of trust in their leaders and the whole dam development process (Devitt and Hitchcock 2010, 82). The global alliances against large dams largely limited their involvement in the case to contesting issues affecting the struggle at global level. For instance, International Rivers Network contested Kader Asmal becoming the chairman of the WCD, as he was known as a supporter of the LHWP in his former position as South African minister of water. Another such effort was a public hearing by the WCD in Cape Town which was informed by the affected communities. In the course of the project the social and environmental policies of the World Bank regarding large dams and resettlement processes were refined in accordance with WCD guidelines. Through the panel of social and environmental experts hired within the project it became easier to bring concerns to the attention of project management and donors. Some of these experiences with the process and their (limited) influence over project implementation have been published, both independently (Devitt and Hitchcock 2010) and as a contribution to the international alliance's reflection document (Thamae and Pottinger 2006) demonstrating their alignment in trying to influence the project. The Save the Narmada Movement also joined the alliance of interest groups that campaigned against the LHWP (Meissner 2005), however, these efforts had no noticeable impact.

To sum up, in the case of LHWP the organised local resistance has remained rather insignificant in influencing the project as a whole; it focused predominantly on proper processes of resettlement and compensation. The absence of urban intelligentsia or civil society organisations playing the role of 'broker' or a catalyst is rather glaring, in fact these actors were successfully co-opted in the development process. Although the alliances with global anti-dam movements were formed, particularly in the process of influencing the WCD guidelines and their implementation in later phases of the project, these remained rather peripheral in either forming an effective mobilisation or even influencing the project. It is important to note that the environmental or 'green' concerns have played only a minor role in the opposition to the LHWP, and are strongly overshadowed by the social or 'red' concerns.

## Discussion and conclusions

In this concluding discussion, we draw parallels between the four cases and show that in all cases the dams were part of the process of nation-building and their construction processes mark the alliance between regional, national and international political, private and financial powers. The dams form part of the expansionist and extractive development processes that aim to gain economic, political and cultural-discursive control over territory and resources. From the point of impact and consequences, the dams largely affected the already marginal communities and this way they mark internal colonisation. The large dam on the Narmada river displaced a substantial tribal population; Hidrosogamoso displaced and impacted the livelihood of war-displaced migrant communities, local

fishermen, artisans, pastoralists, and subsistence farmers; in Spain, the explosion of dam projects displaced numerous poor smallholders; and the Lesotho Highland project affected a relatively sparsely inhabited area displacing poor communities. One can argue that the underlying fundamental political-economic forces and processes that create dams and displacement share common regimes of expert knowledge and legitimising discourses and languages (see also, Kaika 2006; Nixon 2009, 2011; Hommes, Boelens, and Maat 2016; Menga and Swyngedouw 2018; Shah, Boelens, and Bruins 2019). And hence, large dams are indeed a global socio-environmental issue of justice in relation to these universalistic threats.

The local protests against the dams, however, were organised around a veritable combination of the 'red' and 'green' concerns. Most of them were mainly focused on the issues of compensation, and resettlements, and environmental damages caused by the large dams, however, they also included other issues such as – fighting corruption, opposing industrialisation, defending identity, claiming control over resources, preservation of ecosystems, increased prices, contesting privatisation, and about having a voice in decision-making.

In terms of the character of local and global alliances shaping the social resistance against large dams, we think that the combination of the particular, historically contingent local issues and contexts played a far more crucial role for the dissent to develop and be expressed. In the cases of the SSP on the river Narmada and anti-dam culture in Spain, it was only on the bedrock of historically contingent local conditions that the international alliances were created, which eventually played an influential role both at the local and global level. We think that Harvey's point that 'diverse oppositional strategies and struggles rooted in particular places', i.e. 'militant particularism' must be united in a wider, universalistic, global politics to be effective, needs to be critically modified. We think that in our case studies the 'militant particularism' found the productive alliance with the global partners only when certain ground conditions were locally available. The historically and culturally contingent local conditions, therefore, played a far more crucial role for the movement to emerge in the first place. We at the same time want to emphasise that our case studies show that the local anti-dam movements were inspired by a diverse set of issues and they also found certain alliance with global partners that benefitted the organisational context of the movement and also made them globally visible, however, such global alliances did not necessarily benefit the struggles locally. The question of justice is an integral part of issues around which the social resistance was organised. Our case studies *prima facie* suggest that even when a significant part of the population, negatively affected by the dam, belonged to the marginal section of society, the outcome of the protest movements based on cross-class, multi-sectoral, and local-international alliances did not always and necessarily improve substantial livelihood and property issues at the ground level for the affected population.

Furthermore, we think that the role of 'urban intelligentsia' or 'movement brokers' in the anti-dam protest movements requires reflection (see also, e.g. Baud and Rutten 2004; Ahlers, Zwarteveen, and Bakker 2017). The role of urban intelligentsia was catalytic in shaping the movement against the SSP in India and the anti-large dam 'new water culture' movement in Spain. Their involvement in the respective contexts broadened the scope of the movement, provided a vision and ideology, including the organisational

know-how, and a powerful political voice to the cause of protest. The initial protests against the SSP, prior to the involvement of the urban activists, collapsed precisely because such vision and organisational skills were not available. However, the alliance with the international NGOs shifted the focus of the movement from rehabilitation and resettlement to environmental sustainability. This made the movement internationally visible and made World Bank withdraw out of the project, but had little impact on changing the fate of the affected people as the dam was nevertheless built. Specifically for the case of the SSP, the alliance with the international environmental NGOs privileged the 'green' component at the cost of the 'red'. In a similar vein, the anti-dam protest in Spain was started in the 1990s by a group of researchers from the University of Zaragoza after their visit of the affected villages in the Pyrenees of Aragon. They were inspired by the international anti-dam movement, and were focussed on both 'red' and 'green' issues. The national anti-dam movement used past cases to show the negative effects. This did not always directly help the already affected people, but helped create an overall climate of critical thinking that questioned the dam building subsequently. Over a decade this movement grew into massive street protests against national (mega-infrastructure-based) water policies that eventually shaped the new water culture movement in Spain.

The absence of a well-organised and well-informed activists/intelligentsia-supported network had much drastic impact on the emergence of the protest movement in two other cases. In Colombia, in the case of the Hidrosogamoso dam, some of the urban and middle class interests sided with the private company hired to design and implement the dam. The absence of an overarching vision and organisation, the presence of paramilitary terror, the migrant status of peasant settlers, and the lack of a intelligentsia/activists network providing critical support during the first (dam design and construction) phase, could be counted as an important reason for the weak self-organisation of the affected people and the fact that these people were also easily divided in terms of their interests. Eventually, the NGOs fought the dam at national level and helped to organise local protests, but the effective local leadership for the protests only emerged after the dam had been built. In Lesotho the affected communities were not organised and not aware of the effects of the dam. The WCD guidelines, developed on the global stage, in parallel to the project, both helped to co-shape the LHWP procedures and be a reference point for opposition. The struggles of the movement and those on the panel of (international) social and environmental experts, hired by the project, often aligned, which made it possible to put pressure from both sides, however, in effect the experts worked to protect the interests of their employers rather than the affected people.

In conclusion, we want to emphasise three points. First, the issue of environmental justice raised by the large dams is indeed global in terms of its discursive importance and the widespread socio-territorial transformations it generates. However, how it translates in organised protests and how the protests eventually develop depends significantly upon the specific local context and histories, more than the global alliances. Second, not all protests movements addressed the 'red' and 'green' concerns equally, and finding the balance between the issues of social justice and achieving environmental sustainability was a struggle in the making of the movements. Third, the urban intelligentsia played a significantly important catalytic role in creating and shaping the local-global protest, their absence or them rather partnering with dam-developers, especially in Lesotho and Colombian cases, limited the mobilisation against the large dams. In the end, we want

to emphasise that detailed histories of social responses to large dams, including the anti-dam movements, are needed to understand the way the local and global are mutually constitutive in the making (or not) of the political struggle and how these struggles have been effective in building networks among actors that have addressed both local issues and created transnational solidarity.

## Disclosure statement

No potential conflict of interest was reported by the authors.

## ORCID

Bibiana Duarte-Abadía  <http://orcid.org/0000-0003-4203-050X>

## References

- Acosta Bono, G., J. Gutierrez Molina, L. Martinez Macias, and A. del Rio Sanchez. 2004. *El canal de los presos (1940–1962). Trabajos forzados: de la represión política a la explotación económica*. Barcelona: Critica.
- Agarwal, A., and S. Narain. 1997. *Dying Wisdom: Rise, Fall and Potential of India's Traditional Water Harvesting Systems*. New Delhi: Center for Science and Environment.
- Ahlers, R., M. Zwarteveen, and K. Bakker. 2017. "Large Dam Development: From Trojan Horse to Pandora's Box." In *The Oxford Handbook of Megaproject Management*, edited by B. Flyvbjerg. Oxford: Oxford University Press.
- Bakker, K., and R. Hendriks. 2019. "Contested Knowledges in Hydroelectric Project Assessment: The Case of Canada's Site C Project." *Water* 11 (3): 406. doi:10.3390/w11030406.
- Bandyopadhyay, Jayanta. 1987. "Political Ecology of Drought and Water Scarcity: Need for an Ecological Water Resource Policy." *Economic and Political Weekly* 22 (50): 2159–2169.
- Bandyopadhyay, J., and Vandana Shiva. 1986. "Drought, Development and Desertification." *Economic and Political Weekly* 21 (3): 1448–1450.
- Barcena, I., and P. Ibarra. 2001. *The Itoiz Reservoir in the Basque Country: A Local Conflict Becoming (Inter) National*, 6–11. Grenoble: European Consortium for Political Research Joint Sessions.
- Baud, M., and R. Rutten. 2004. *Popular Intellectuals and Social Movements: Framing Protests in Asia, Africa, and Latin America*. Cambridge: Cambridge University Press.
- Baviskar, A. 1995. *In the Belley of the River: Tribal Conflicts and Over Development in the Narmada Valley*. New Delhi: Oxford University Press.
- Baviskar, Amita. 2005. "Red in Tooth and Claw? Looking for Class in Struggles Over Nature." In *Social Movements India: Poverty, Power, and Politics*, edited by Raka Ray and Mary Fainsod Katzenstein, 161–178. New York: Rowman and Littlefield Publishers.
- Boelens, R., T. Perreault, and J. Vos, eds. 2018. *Water Justice*. Cambridge: Cambridge University Press.
- Boelens, R., and N. Post Uiterweer. 2013. "Hydraulic Heroes: The Ironies of Utopian Hydraulism and its Politics of Autonomy in the Guadalhorce Valley, Spain." *Journal of Historical Geography* 44: 44–58.
- Boelens, R., E. Shah, and B. Bruins. 2019. "Contested Knowledges: Large Dams and Mega-hydraulic Development." *Water* 11 (416): 1–27. doi:10.3390/w11030417.
- Borras, S. M. 2010. "The Politics of Transnational Agrarian Movements." *Development and Change* 41 (5): 771–803.
- Borras, S. M. 2016. *Land Politics, Agrarian Movements and Scholar Activism*. The Hague: International Institute of Social Studies.
- Braun, Y. A. 2008. "How Can I Stay Silent?: One Woman's Struggles for Environmental Justice in Lesotho." *Journal of International Women's Studies* 10 (1): 5–20.
- Camprubí, L. 2013. *Engineers and the Making of the Francoist Regime*. Cambridge: MIT Press.

- Costa, J. 2011. *Política hidráulica: misión social de los riegos en España* (Vol. 2) [Water policy: social mission of irrigation in Spain]. Madrid: Biblioteca.
- Costa, J. 1967. *Oligarquía y caciquismo. Colectivismo agrario y otros escritos*. Madrid: Alianza.
- Del Bene, D., A. Scheidel, and L. Temper. 2018. "More Dams, More Violence? A Global Analysis on Resistances and Repression Around Conflictive Dams Through co-Produced Knowledge." *Sustain. Sci* 13: 617. doi:10.1007/s11625-018-0558-1.
- Devitt, P., and R. K. Hitchcock. 2010. "Who Drives Resettlement? The Case of Lesotho's Mohale Dam." *African Study Monographs* 31 (2): 57–106.
- Dhawan, B. D. 1990. *Big Dams: Claims and Counter Claims*. New Delhi: Commonwealth Publishers.
- Duarte-Abadía, B., and R. Boelens. 2019. "Colonizing Rural Waters. The Politics of Hydro-territorial Transformation in the Guadalhorce Valley, Málaga, Spain." *Water International* 44 (2): 148–168.
- Duarte-Abadía, B., R. Boelens, and L. du Pre. 2019. "Mobilizing Water Actors and Bodies of Knowledge. The Multi-Scalar Movement Against the Río Grande Dam in Málaga, Spain." *Water* 11 (3): 410. doi:10.3390/w11030410.
- Duarte-Abadía, B., R. Boelens, and T. Roa-Avendaño. 2015. "Hydropower, Encroachment and the Re-patterning of Hydrosocial Territory: The Case of Hidrosogamoso in Colombia." *Human Organization* 74 (3): 243–254.
- Dwivedi, Ranjit. 1998. "Resisting Dams and 'Development': Contemporary Significance of the Campaign Against the Narmada Projects in India." *The European Journal of Development Research* 10 (2): 135–183.
- Escobar, A. 2008. *Territories of Difference: Place, Movements, Life, Redes*. Durham, NC: Duke University Press.
- Fals Borda, O. 2002. *Historia doble de la Costa. Resistencia en el San Jorge, Universidad Nacional de Colombia*. Bogotá: El Áncora Editores.
- Ferguson, J. 1994. "The Anti-politics Machine." *The Ecologist* 24 (5): 176–181.
- FNCA (Fundación Nueva Cultura del Agua). 2019. <https://fnca.eu/la-fundacion>. Consulted 2 June 2019.
- Forsyth, T. 2003. *Critical Political Ecology: The Politics of Environmental Science*. London: Routledge.
- Fox, C., and C. Sneddon. 2019. "Political Borders, Epistemological Boundaries, and Contested Knowledges: Constructing Dams and Narratives in the Mekong River Basin." *Water* 11: 413. doi:10.3390/w11030413.
- Fraser, N. 1996. "Social Justice in the Age of Identity Politics: Redistribution, Recognition, and Participation." *The Tanner Lecture on Human Values Delivered at Stanford University*.
- Friedmann, H. 1990. "The Origins of Third World Food Dependence." In *The Food Question: Profits Versus People?* edited by Henry Bernstein, 13–31. London: Earthscan Publications.
- Genovés, J. C., M. García Moyà, C. Sanchis Ibor, V. Vega Carrero, and L. Avellà Reus. 2008. *Case Studies Synthesis, Spain – Institutional Framework for Local Irrigation Management in Spain: The Case of Upper Genil and Low Jucar Valleys*. [http://www.isiimm.agropolis.org/OSIRIS/report/Isiimm-SynthesisSpain\\_eng.pdf](http://www.isiimm.agropolis.org/OSIRIS/report/Isiimm-SynthesisSpain_eng.pdf).
- Gómez-Fuentes, A. C. 2012. "Movimiento social por una Nueva Cultura del Agua en España." *Espacios Públicos* 15 (35): 96–113.
- Guha, R., and J. Martinez-Alier. 1997. *Varities of Environmentalisms: Essays North and South*. London: Earthscan Publications.
- Harvey, D. 1996. *Justice, Nature, and the Geography of Difference*. Cambridge: Blackwell Publishers.
- Hidalgo-Bastidas, J. P., R. Boelens, and E. Isch. 2018. "Hydroterritorial Configuration and Confrontation: The Daule-Peripa Multipurpose Hydraulic Scheme in Coastal Ecuador." *Latin American Research Review* 53 (3): 517–534. doi:10.25222/larr.362.
- Hommes, L., R. Boelens, and H. Maat. 2016. "Contested Hydrosocial Territories and Disputed Water Governance: Struggles and Competing Claims Over the Ilisu Dam Development in Southeastern Turkey." *Geoforum* 71: 9–20. doi:10.1016/j.geoforum.2016.02.015.
- Huber, A., S. Gorostiza, P. Kotsila, M. J. Beltrán, and M. Armiero. 2017. "Beyond 'Socially Constructed' Disasters: Re-politicizing the Debate on Large Dams Through a Political Ecology of Risk." *Capitalism Nature Socialism* 28 (3): 48–68.

- Johnston, B. R. 2018. "Large-scale Dam Development and Counter Movements: Water Justice Struggles Around Guatemala's Chixoy Dam." In *Water Justice*, edited by R. Boelens, T. Perreault, and J. Vos, 169–186. Cambridge: Cambridge University Press.
- Kaika, M. 2006. "Dams as Symbols of Modernization: The Urbanization of Nature Between Geographical Imagination and Materiality." *Annals of the American Association of Geographers* 96 (2): 276–230.
- Khagram, S. 2004. *Dams and Development. Transnational Struggles for Water and Power*. Ithaca, NY: Cornell University Press.
- Kothari, A., and R. Bhartari. 1984. "Narmada Valley Project: Development or Destruction?" *Economic and Political Weekly* 19 (22/23): 907–920.
- Lafuente, I. 2002. *Esclavos por la patria: la explotación de presos bajo el Franquismo*. Madrid: Editorial Temas de Hoy.
- Martínez-Alier, J., L. Temper, D. Del Bene, and A. Sccheidel. 2016. "Is There a Global Environmental Justice Movement?" *Journal of Peasant Studies* 43 (3): 731–755.
- Martínez Gil, F. J. 1997. *La nueva cultura del agua en España*. Bilbao: Editorial Bakeaz.
- Martínez Gil, F. J. 2010. *Una nueva cultura del agua y de la vida*, 125. La experiencia fluviofeliz. Zaragoza: FNCA.
- Maurice, J., and C. Serrano. 1977. *J. Costa: crisis de la restauración y populismo (1875–1911)*. Madrid: Siglo XXI Editores.
- McCully, P. 1996. *Silenced Rivers: The Ecology and Politics of Large Dams*. London: Zed Books.
- Meissner, R. 2005. "The Transnational Role and Involvement of Interest Groups in Water Politics: A Comparative Analysis of Selected Southern African Case Studies." Doctoral diss., University of Pretoria.
- Meissner, R., and A. R. Turton. 2003. "The Hydrosocial Contract Theory and the Lesotho Highlands Water Project." *Water Policy* 5 (2): 115–126.
- Menga, F., and S. Swyngedouw. 2018. *Water, Technology and the Nation-state*. London: Routledge.
- Moore, D., J. Dore, and D. Gyawali. 2010. "The World Commission on Dams + 10: Revisiting the Large dam Controversy." *Water Alternatives* 3 (2): 3–13.
- Moreno, J. 2019. *Energías Del Despojo: Desplazamiento Forzado Por Megaproyectos. Memoria y Resistencia en Torno a Hidrosogamoso*. Bogotá: Universidad Nacional de Colombia.
- Nixon, R. 2009. "Unimagined Communities: Developmental Refugees, Megadams and Monumental Modernity." *New Formations* 69: 62–80.
- Nixon, R. 2011. *Slow Violence and the Environmentalism of the Poor*. Cambridge: Harvard University Press.
- Novoa, L. D., C. A. Pardo, and A. L. Rico. 2011. *Estudio Histórico sobre los territorios de San Vicente de Chucuri y Betulia que serán inundados por la proyectada hidroeléctrica sobre el río Sogamoso 1980–1992*. Bucaramanga: Universidad Industrial de Santander.
- Ortí, A. 1984. "Política hidráulica y cuestión social: orígenes, etapas y significados del regeneracionismo de Joaquín Costa." *Agricultura y Sociedad* 32: 11–107.
- Osuoka, I. A., and A. Zalik. 2010. "The Dilemmas of Global Resistance Against Extractive Capital: The Oilwatch Network in Africa." *Canadian Journal of Development Studies/Revue Canadienne D'études du Développement* 30 (1-2): 237–257.
- Patnaik, Utsa. 1990. *Agrarian Relations and Accumulation: The 'Mode of Production' Debate in India*. Bombay: Sameeksha Trust and Oxford University Press.
- Perreault, T., G. Bridge, and J. McCarthy, eds. 2015. *The Handbook of Political Ecology*. London: Routledge.
- Poma, A., and T. Gravante. 2015. "Analyzing Resistance From Below: A Proposal of Analysis Based on Three Struggles Against Dams in Spain and Mexico." *Capitalism Nature Socialism* 26 (1): 59–76.
- Roa-Avendaño, T. 2010. *Crisis alimentaria y la respuesta de los mundos locales, el caso de una organización de pescadores, campesinos e indígenas*. Quito: Universidad Andina Simón Bolívar.
- Roa-Avendaño, T., and B. Duarte-Abadía. 2012. *Aguas Represadas. El caso del proyecto Hidrosogamoso en Colombia*. Bogotá: Censat Agua Viva- Friends of the Earth Colombia.
- Schlosberg, David. 2004. "Reconciling Environmental Justice: Global Movements and Political Theories." *Environmental Politics* 13 (3): 517–540.



- Schwartzman, Stephan. 1991. "Deforestation and Popular Resistance in Acre: From Local Social Movement to Global Network." *The Centennial Review* 35 (2): 397–422.
- Sen, Jai. 1999. "A World to Win – But Whose World is it, Anyway?" In *Civil Society, the United Nations, and the Multilateral Future*, edited by John Foster and Anita Anand, 337–390. Ottawa: United Nations Association in Canada.
- Shah, E., R. Boelens, and B. Bruins. 2019. "Reflections: Contested Epistemologies on Large Dams and Mega-hydraulic Development." *Water* 11 (3): 417. doi:10.3390/w11030417.
- Shiva, Vandana. 1988. *Staying Alive: Women, Ecology and Survival in India*. New Delhi: Kali for Women.
- Sikor, T., and P. Newell. 2014. "Globalizing Environmental Justice?" *Geoforum* 54: 151–157.
- Sneddon, C., and C. Fox. 2008. "Struggles Over Dams as Struggles for Justice: The World Commission on Dams (WCD) and Anti-dam Campaigns in Thailand and Mozambique." *Society and Natural Resources* 21 (7): 625–640.
- Soler, J. P., B. Duarte-Abadía, T. Roa-Avedaño. 2015. "¿Por qué y cómo se imponen las hidroeléctricas en Colombia?" In *Extractivismo, Conflictos y Resistencias*, edited by T. Roa-Avedaño, and L. Navas. Bogotá: Censat Agua Viva.
- Swyngedouw, E. 2007. "Tecnonatural Revolutions: the Scalar Politics of Franco's Hydro-Social Dream for Spain, 1939–1975." *Transactions* 32: 9–28.
- Swyngedouw, E. 2015. *Liquid Power: Contested Hydro-modernities in Twentieth-century Spain*. Cambridge: MIT Press.
- Swyngedouw, E., and R. Boelens. 2018. "... Not a Single Injustice Remains'. Hydro-territorial Colonization and Techno-political Transformation in Spain." In *Water Justice*, edited by R. Boelens, T. Perrault, and J. Vos, 115–133. Cambridge: Cambridge University Press.
- Temper, L. 2019. "From Boomerangs to Minefields and Catapults: Dynamics of Trans-local Resistance to Land-grabs." *Journal of Peasant Studies* 46 (1): 188–216.
- Thabane, M. 2000. "Shifts from Old to New Social and Ecological Environments in the Lesotho Highlands Water Scheme; Relocating Residents of the Mohale Dam Area." *Journal of Southern African Studies* 26 (4): 633–654.
- Thamae, M. L., and L. Pottinger. 2006. *On the Wrong Side of Development. Lessons Learned from the LHWP*.
- Udall, Lori. 1995. "The International Narmada Campaign: A Case of Sustained Advocacy." In *Towards Sustainable Development: Struggling Over India's Narmada River*, edited by William Fisher, 201–230. New York: M. E. Sharpe.
- UPME (Unidad de Planeación Minero Energética). 2016. *Registro de Proyectos de Generación*. [http://www1.upme.gov.co/documents/registro\\_proyectos\\_generacion\\_ago2016.pdf](http://www1.upme.gov.co/documents/registro_proyectos_generacion_ago2016.pdf). Consulted 3 June 2019.
- Urkidi, L., and M. Walter. 2011. "Dimensions of Environmental Justice in Anti-gold Mining Movements in Latin America." *Geoforum* 42 (6): 683–695.
- Walker, G. 2009. "Globalizing Environmental Justice: The Geography and Politics of Frame Contextualization and Evolution." *Global Social Policy* 9 (3): 355–382.
- Williams, Glyn, and Emma Mawdsley. 2006. "Postcolonial Environmental Justice: Government and Governance in India." *Geoforum* 37: 660–670.
- World Commission on Dams. 2000. *Dams and Development: A New Framework for Decision-making: The Report of the World Commission on Dams*. Earthscan.

**Esha Shah** is Assistant Professor at the Department of Water Resources Management of Wageningen University, The Netherlands. She has worked with University of Sussex and Maastricht University and held a position of fellow at the Indian Institute of Advanced Study in Shimla, India and at the Nantes Institute of Advanced Studies, France. Her work concerns history and anthropology of water technologies, debates on GMOs, and farmers' suicides in India. Currently, she is working on the way human subjectivity relates to modes of rationality and has published a monograph on the history of subjectivity and objectivity in genetic science (Routledge, 2018).

**Jeroen Vos** is assistant professor at the department of Water Resources Management of Wageningen University, the Netherlands. As water policy advisor he worked for a decade in Bolivia and Peru

with different international development organizations. He is author and editor of several books on water management in Latin America and co-editor (together with Boelens and Perreault) of 'Water Justice' with Cambridge University Press. His current research interests are the dynamics and discourses of water use by agribusinesses in Latin America and its effects on water users' communities. He has published several articles on virtual water trade and water stewardship certification.

**Gert Jan Veldwisch** is Associate Professor with the Water Resources Management Group of the Department of Environmental Sciences at Wageningen University. His research focuses on the practices, policies and politics of agricultural water management, specifically this includes the study of farmer-led irrigation development, water grabbing, waste water use in agriculture, agrarian change, and issues around water justice. Currently he works mostly in sub-Saharan Africa.

**Rutgerd Boelens** is Professor Water Governance and Social Justice at Wageningen University; Professor Political Ecology of Water with CEDLA, University of Amsterdam; and Visiting Professor Catholic University of Peru and Central University of Ecuador. He directs the international Justicia Hídrica/Water Justice alliance ([www.justiciahidrica.org](http://www.justiciahidrica.org)). Research areas include: political ecology, water rights, legal pluralism, cultural politics, governmentality, and social mobilization. Among his books: 'Water Justice' (with Perreault & Vos, Cambridge University Press, 2018), 'Water, Power and Identity. The Cultural Politics of Water in the Andes' (Routledge, 2015) and 'Out of the Mainstream: Water Rights, Politics and Identity' (with Getches & Guevara-Gil, Earthscan, 2010).

**Bibiana Duarte-Abadía** is a PhD Researcher at the Centre for Latin American Research and Documentation (CEDLA), University of Amsterdam. She is graduated as an ecologist from Pontificia Universidad Javeriana in Bogotá with a Masters in International Land and Water Management at Wageningen University. She has worked on research projects related to hydrosocial territories transformations in Colombia, Mexico, and Spain, specifically in fluvial and highland territories. She is a member of the international Justicia Hídrica/Water Justice alliance. Her articles and publications are focused on the political ecology of water, social movements, ethnoecology, extractive industry, dams, hydropower, and mining sector.