

# Global governance/politics, climate justice & agrarian/social justice: linkages and challenges

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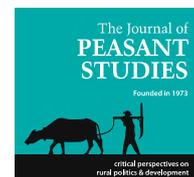
## Colloquium Paper No. 32

# Large Scale Investments in Infrastructure: Competing Policy regimes to Control Connections

*Kei Otsuki, Murtaf Read, and Annelies Zoomers*

International Institute of Social Studies (ISS)  
Kortenaerkade 12, 2518AX  
The Hague, The Netherlands

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# Large Scale Investments in Infrastructure: Competing Policy regimes to Control Connections

Kei Otsuki, Murtah Read, and Annelies Zoomers

## Abstract

*This paper proposes to analyse implications of large-scale investments in physical infrastructure for social and environmental justice. While case studies on the global land rush and climate change have advanced our understanding of how large-scale investments in land, forests and water affect natural resources and social relationships especially in the global South, physical infrastructure – dams, railways, highways, etc. – which often accompanies the land rush has received little attention as a proper unit of study. We argue that in addition to the physical impacts that the infrastructure creates, such as environmental destruction or human displacement, we should pay attention to the concrete ‘infrastructure process’ by which the planning, implementation, management and uses of the infrastructure mobilises various, public, private, global, national and local, actors and often tacitly creates multiple and connected spaces of deliberations. Drawing on three infrastructure projects co-invested by the Dutch international cooperation in Mozambique and Vietnam, we point out that the infrastructure as a ‘public work’ seldom benefits marginalised communities, but the location of responsibility for ensuring distributional equity is blurred in the connected spaces. Moreover, procedural equity for the excluded communities to fully participate in demanding the fair benefit-sharing is not clearly pursued, as the infrastructure is often incrementally built and locally embedded, changing the nature and extent of the connections and often recreating disconnections. We find that the current justice framework fails to effectively identify responsibilities to ensure the equities in large-scale infrastructure projects, as people experience, embed and attempt to govern the infrastructure process themselves in relation to the connectivity. We especially need to consider that the donor community, backed by global governance of international development, exercises its power to promote distributional and procedural equities.*

## **Introduction: Infrastructure and Justice**

Global financial and political movements are intensifying to generate large-scale investments in urban and rural infrastructure. For example, on 25 December 2015, the Chinese-led Asian Infrastructure Investment Bank (AIIB) became operational, with 57 member countries that include not only from the Asia-Pacific region but also from Europe, Latin America and Africa. Its mission statement says that AIIB “will complement and cooperate with the existing multilateral development banks to jointly address the daunting infrastructure needs in Asia” and further to expand investments in large-scale infrastructure in the global South (AIIB, 2015).

Why does such an emphasis on the needs of large-scale infrastructure emerge now? Historically speaking, infrastructure has been always on the international and national development agendas for modernising both cities and countryside. Infrastructure projects have been seen as the conventional projects financed by international development cooperation agencies and banks. The implications of the projects had been discussed in a number of studies on the negative aspects of the large-scale infrastructure, which burgeoned in the 1990s to clarify how constructions of dams, railways, and highways displace massive populations (McDowell, 1996; Cernea, 1999). Consequently, the emphasis on the large-scale infrastructure apparently subsided, replaced by small-scale, community-based and participatory development projects. Yet, in 2015, we witness the resurgence of the large-scale infrastructure projects in the pursuit of economic development, led by emerging economies such as China.

This resurgence is partly justified as the climate change mitigation and adaptation require ‘next generation’ or green and smart infrastructure (e.g. Brown, 2014) and re-designed and smaller-scale infrastructure for the enhanced natural hazards control, especially for water management (Fam and Sofoulis, 2015). However, more fundamentally, it is closely linked to the steady increase of foreign direct investment flows worldwide since the mid-2000s (OECD, 2013), which induced the global land acquisitions and leases for food, fibre and fuel (Borras et al., 2011). As new frontier markets are opened in the process of land rush, various types of infrastructure have become imperative to generate energy; to construct natural resource management facilities; to transport and export products; to accommodate newly contracted workers; or to facilitate consumption in urban areas.

Studies suggest that the resurgence of the large-scale infrastructure projects in relation to the land acquisitions has been simultaneously inducing resurgence of displacement and dispossession of people whose livelihood security is seldom guaranteed in resettlement processes. A new framework to deal with this resurgence of ‘development-induced displacement’ is currently sought after, demanding the global investment framework such as AIIB to adapt more transparent and engaging approaches to ensure ‘free, prior and informed consent’, even when the infrastructure is supposed to envision sustainable and green effects (Sovacool and Bulan, 2013; Neef and Singer, 2015). At the same time, less obvious and yet extensive effects of infrastructure are overlooked. For example, infrastructure such as a power connection, water pipe and irrigation channel creates service grids and produce fragmented spaces of inclusion and exclusion; and it can also work to raise land prices, negatively affecting already marginalised communities. These tacit effects show that infrastructure does not only cause dispossession but also underpin social and power relationships that affect workings of institutions that manage and govern the infrastructure (Ostrom et al., 1993; Otsuki, 2016b).

In spite of the extensive institutional influence that infrastructure generates, the current environmental and social justice framework that deals with the land rush has not clearly dealt with the nature and extent of infrastructure as a proper unit of study. In this paper, we aim to discuss that this relative neglect of infrastructure is caused by a lack of adequate concepts used in the justice framework to deal with connectivity that infrastructure reiteratively produces.

In principle, infrastructure is often a synonym to ‘public work’, and the ‘infrastructure process’ – planning, implementation, management, and use – is often presumed to be shaped in the state domain. However, if we look close to this process, we can observe that it entails mobilisation of extensive networks of global, national and local, public and private sectors who plan, construct, manage and use the infrastructure and the services. With the involvement of various actors, locations of development

become multiplied and interconnected and, because of this connectivity, the question of who are accountable for the ‘public work’ becomes elusive. The new actors such as AIIB further work to reshape existing relationships and connections.

On the other hand, the justice framework, which pursues distributional and procedural equities (i.e. marginalised people affected by the infrastructure should be able to participate in negotiations to demand the equitable distribution of costs and benefits of the infrastructure), tends to pursue consensual politics, claiming people’s ‘place at the table’ to participate in negotiations with a particular actor (Schlosberg, 2004 quoted in Banerjee, 2014, p. 809), instead of criticising the relevance of this ‘table’ when multiple actors involve with different agendas within the same project. There is a fundamental lack of understanding “the human capacity to imagine and perform political equality” and possibilities to set up an entirely new table for negotiations at which people recognise their own marginalisation and exclusion experiences and take initiatives in every decision-making throughout the infrastructure process (Velicu and Kaika, 2015: 10).

This paper aims to generate discussions on how to envisage such a new table in the infrastructure process. We suggest that the justice framework needs to pay closer attention to ways that the infrastructure process operates on the one hand, and how people affected by the connections attempt to embed (or reject) the infrastructure in their everyday places, deal with the consequences and seek for a just benefit-sharing on the other. In short, infrastructure inherently connects various policy regimes and invokes everyday justice-seeking, and the pursuit of distributional and procedural equities must build on the interaction between the infrastructure process and everyday justice-seeking, ultimately to clarify the locations of responsibility when any of the equities is neglected.

To explore the interaction between these two processes requires a close examination of actual projects that have involved a wide range of actors and generated controversies over a lack of justice achieved. We propose to examine three infrastructure projects supported by the Dutch international cooperation – irrigation and port access road projects in Mozambique, and drinking water provision in Vietnam. The Dutch cooperation, financed by the Ministry of Foreign Affairs and executed by the Netherlands Enterprise Agency (RVO) is an interesting example, because it is officially adopting the principle of ‘trade and aid’ and actively promoting the involvement of private sectors in the recipient countries’ ‘public works’. Mozambique and Vietnam, in their processes of post-war and socialist market reform, are embracing the privatised public work development, as much as they embrace new foreign investors, since they aim to reduce aid-dependencies and develop frontier markets. We look into how existing inequality is (re)produced as infrastructure is planned, built and locally embedded in each case, and what mechanisms should be there to account for distributional and procedural equities as addressed by those negatively affected by the infrastructure process.

Below, we review discussions on infrastructure and justice in order to clarify what a focus on connectivity between a wide range of public, private and civil society actors and everyday justice-seeking by the affected populations specifically seeks to address. Then, the cases of the specific infrastructure projects identify the emergence of new spaces for deliberation in which different actors are enrolled. We conclude by outlining the implications of this enrolment for deepening our engagement with pursuing justice in the current proliferation of large-scale infrastructure projects.

## **Methodology**

The research on which this paper is based forms a part of a set of larger research projects that have case study components dealing with the Dutch Facility for Infrastructure Development (ORIO), executed by the RVO for the Ministry of Foreign Affairs. The ORIO currently has 65 projects in various stages of implementation, and in June 2015 the entire Facility was transformed into the Development Related Infrastructure Investment Vehicle (DRIVE), which is more clearly targeting the development of private sector in developing countries to construct and manage what RVO terms ‘public infrastructure’ (RVO, 2015). We have selected one ORIO project and one DRIVE project from Mozambique; and one ORIO project from Vietnam in such a way as to highlight different patterns of infrastructure process. Projects in Mozambique are a part of the ongoing applied research project

funded by the Netherlands Organization for Scientific Research (NWO)<sup>1</sup>; and a PhD project financed by the Netherlands Academy for Land Governance Research (Landac)<sup>2</sup>, and the one in Vietnam is based on a completed policy report presented at the Master's course in Sustainable and International Development at Utrecht University, the Netherlands (Keizer, 2015).

The RVO actively allowed the researchers to look into their projects as they expected impact assessments of their infrastructure projects to justify the 'development relevance', as they clearly focus on *private* sector development through the construction of *public* infrastructure (RVO, 2015). At the same time, even the private-sector focused DRIVE builds on the internal assessment carried out by Develop2Build (D2B) programme, which aims to evaluate feasibility of the recipient government's capacity for co-financing the infrastructure. Every project modality has a complex procurement process, involving multiple private and public sectors even though on paper the projects are simply co-financed by the Dutch cooperation via RVO and the recipient government.

The ORIO projects were mostly initiated in the late 2000s, and the researchers involved in assessing the impacts of their projects came to explore the major part of the infrastructure process – the planning, executing, constructing, and managing the infrastructure –, which evolved over at least the last 5 years. In fact, as we see in the ORIO project case in Mozambique, the first planning by the government involving the target population took place nearly ten years ago, but due to a lack of budget from the national government of Mozambique as a co-financer, the project had stopped for years. Meanwhile, new situations and contexts in which the planning would be executed have emerged, forcing the changes in planning to take place. The impact assessment of infrastructure thus requires a longitudinal approach, clarifying the changing political, economic and social relationships that encounter the impacts of each step of the infrastructure process.

In assessing the impacts, the researchers have interviewed the officials both in the Netherlands and the recipient countries, and followed their explanations and policy documents, including the beneficiary profile elaborated based on a so-called socioeconomic diagnosis consisting of quick appraisals. At the same time, the researchers have noticed that the official views hardly tell a full picture of how the so-called targeted beneficiaries' daily experience with the infrastructure process. For example, as participatory planning had become a norm in international cooperation, the official explanations emphasise the relevance of initial consultation and consent building, especially as to the location in which the infrastructure should be built or what shape this infrastructure should have. However, after the infrastructure got to the construction and management stage, the story of participation seemed to end as if the building of the infrastructure was the goal in itself.

Besides, how the beneficiaries are selected in the first place are often unclear, as to define who the potential managers and users are, with regards the ideal of a rather abstract notion of 'development relevance'. The elusiveness of participation and inclusivity poses a fundamental question about the distributional and procedural equities that the infrastructure guarantees if it genuinely claims to be relevant for development.

Therefore, methodologically, it is important to look for information about how the infrastructure is (or will be) embedded in the ongoing place-making processes – i.e. how people reiteratively produce their places to live, physically, politically and socially – of the locale (Pierce et al., 2011). To this end, focus group discussions and detailed interviews with the local actors – residents and producers who are affected by the infrastructure – were conducted, as well as with civil society organisations and local government officials who observe the infrastructure process.

We have composed ethnographical descriptions of each infrastructure project based on the discussions, interviews and observations of the various actors' activities. The ethnography is effective in exploring the embeddedness of the infrastructure and concrete situations in which the infrastructure operates (Star, 1999), as well as in revealing "the role human creativity plays" within particular policy intervention settings such as infrastructure development (Haenn and Casagrande 2007: 101). The cases

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<sup>1</sup> NWO-WOTRO's Applied Research Fund Project "Bridging the Gap between Policy and Practice on Land Governance, Food Security and Inclusive Business in Mozambique".

<sup>2</sup> Landac – Netherlands Academy for Equitable and Sustainable Land Governance.

are thus presented in this paper not as the official explanation of the infrastructure process but as descriptions of forms and degrees of embeddedness of the infrastructure in the ongoing place-making processes. With the descriptions, we wish to discuss how an infrastructure process creates and connects various nodes of relationships between the involved actors, blurring locations of responsibility (e.g. Massey, 2004). The identification of connections and types of justice that might be sought after leads us to illustrate the potential creation of a new space of deliberation to establish a just infrastructure process. This space is not a mere space of claiming participatory planning and calculation of costs and benefits but a space to envision a foundational change in which that the marginalised populations can decide on whether they are connected or disconnected to the infrastructure process with reference to their everyday place-making processes.

## **Framing Infrastructure in Global Governance of Development**

Approaches to infrastructure have evolved roughly in three stages, as it was used for: (1) nation-state building; (2) participatory planning; and (3) developing global markets.

### *1 Infrastructure for Nation-State Building*

First of all, during the post-world war reconstruction process, development banks were created to bilaterally finance the rebuilding of infrastructure, alongside building of neighbourhoods and new communities who are engineered to have the same values and objectives within the border of a nation-state (Arce, 2003). Infrastructure justified “bureaucratic institutionalisation” of creating “public goods” among the new communities, and thus it was essentially the national governmental project (Dore, 1981: 18). In addition, infrastructure, especially energy stations, railways and highways, as well as irrigation systems to boost agricultural production were considered to be essential to modernising the new nation-states in the post-colonial context of the 1950s–1960s.

Infrastructure was especially essential to cities as post-colonial projects, and it visualised the “modernist vision” of “the powerful . . . [and] . . . other social groups who had gained in the post-independence widening of opportunities” (Rakodi, 2006: 314; see also Beall, 1997). Consequently, in developing countries, two groups of people started to emerge: citizens who benefit from the public goods; and ‘the natives’ who had flown into the cities without being recognised as official citizens of the city and expanded the so-called ‘native locations’ (Furedi, 1973). The native locations turned into informal settlements practically as homes to non-citizens, but the existence of the informal spaces was largely placed under the “policy of benign neglect” (Arimah, 2010:145).

At the international level, the development community began to recognise the failure of modernisation that had led to economic failure and the aggravation of poverty in the newly developing nation-states. Nevertheless, the post-colonial questions of citizenship and exclusion of the natives received little attention. For example, when “a heated debate over the causes of . . . the apparent economic failure” in Africa emerged in the late 1970s, the focus was primarily on the problem of rural and agricultural development, as it was considered to be the fundamental basis of economic growth for developing countries (Amis, 1989: 375). This focus on rural development led to an extensive construction of modernist agricultural infrastructure such as irrigation systems with large canals in arid and semi-arid areas to enable cooperative and mechanised farming, which worked to justify extensive commercial farming while marginalising poor smallholders.

In short, the infrastructure in nation-state building was used as a strong tool for intervention to induce “‘big-D’ Development defined as a post-second world war project of intervention in the ‘third world’ in the context of decolonisation and the cold war” while “‘little d’ development or the development of capitalism as a geographically uneven, profoundly contradictory set of historical processes” kept on evolving throughout the developing world and reproducing informal non-citizens and poor farmers excluded from the benefits of Development (Hart, 2001: 650). The countries like Mozambique and Vietnam, which had turned out to be the socialist regimes during the 1970s after achieving their independence, strongly promoted the state-led Development in the process of nation-state building while consolidating divisions between political elites, entrepreneurs, soldiers (fighting for the civil wars following the independence) and the poor citizens in general.

## *2 Infrastructure, Local Agency and Community Participation*

In the 1980s–1990s, the international development community witnessed the so-called neoliberal revolution, and process towards the end of the Cold War ended the big Development. The structural adjustment policies were implemented, led by the International Monetary Fund and the World Bank, forcing the state to withdraw from the creation of ‘public goods’ and instead introducing the market-led pro-poor approaches. In this revolution, the informal economy, which had been developed by excluded non-citizens in the so-called Third World Cities (Cornelissen 2005), as well as the persistently impoverished countryside, drew bankers’ and development professionals’ attention who began to argue that a lack of property rights and tenure insecurity deprived informal settlers of opportunities to participate in the formal and free market economy and contribute to the nation’s economic growth. Therefore, development intervention needed to focus on formalising the informality and, to this end, informality needed to be effectively visualised (De Soto, 1989; Roy, 2005; Casson et al., 2010).

Infrastructure became a tool for this visualisation of informal spaces, as it was used to gentrify (or upgrade) neighbourhoods in cities; to allocate public services through piped drinking water and sewage systems; to define beneficiaries of water access in irrigation systems in farming areas. The underlying assumption was that enforcement of property rights would automatically turn the non-citizens into official citizens who could potentially participate in neo-liberalised planning and infrastructure governance (Engel and Olsen, 2005; The World Bank, 2009).

This assumption was, however, rejected by the increasing evidence that the large-scale infrastructure, which was considered to be essential for the market development in nation-states, caused displacement of a large number of populations, especially those non-citizens and marginalised communities in the native locations. Social movements sprung up to insist on the justice, in particular the distributional justice for the affected populations to demand the fair distribution of costs and benefits of the infrastructure. With the emergence of civil society organisations that advocate for civic rights encouraged excluded populations to more actively question the possibilities for concrete benefits of formalisation, such as compensations and public services (Harvey, 2009).

In the 1990s – 2000s, it was argued that formalisation focus would be rather counterproductive in enhancing inclusivity of infrastructure projects. Scholars instead came to propose alternative planning that builds on informality (e.g. Myers, 2010). They pointed out that the formalisation focus readily defined the indigenous institutional elements, such as the “big-man syndrome”, clientelism and moral obligations to family members and kin groups, to be “anti-developmental” (Booth, 2011, p. s21), although indigenous institutions are an important indicator of the local agency, which does not always “comply with the formal land regulation and tenure registration systems” (Rakodi, 2006: 314).

The attention to local agency comes at a time when community-based resource management projects and non-governmental organisations (NGOs)’ involvement in these projects were popularised in international development (Agrawal and Gibson, 1999). In 1993, Ostrom et al. (1993: 17) have written that planning, implementing and managing infrastructure requires “institutional incentives” among every involved actors who need to ensure “economic efficiency”, “wealth redistribution” and “accountability”. The infrastructure was thus beginning to represent a common resource, which needs to be planned, implemented and managed through community participation. For example, alternative urban planning has been proposed to encourage the potential users of the infrastructure to actively identify with their communities, participate in discussions with donors and mobilise necessary resources to invest in improving the living conditions of the everyday places (Lepofsky and Fraser, 2003).

From the mid-2000s onwards, participatory planning and community-led infrastructure implementation and management had been normalised at least in policy documents largely framed by global governance. For example, the United Nations maintains that participatory programmes are “the only viable methods” to improve living conditions in informal settlements that exist outside the official grid of public service provisions in cities (UN-HABITAT, 2003: 5). In the post-2015 Sustainable Development Goals (SDGs), targets to enhance provisions of infrastructure clearly mention the importance of inclusivity (UN, 2015). In practice, the method of participation has been

identified as a community-based organisations and NGO partnership (or civil society organisation or CSO in the eyes of international donors) with the collaborative state (often labelled as public-private partnership, or PPP). International donors have vigorously supported this partnership, and much of the debates on infrastructure governance argues that CSOs should be included in governing the services provided by the infrastructure, making a way of continuing to make progress towards reshaping governance towards flexible modes that appreciate local agency and everyday experiences of the infrastructure use on the ground (Centre for the Future State, 2010).

### *3 Infrastructure for Global Market Development*

However, this participatory turn and emphasis on PPP in infrastructure planning and management has been overridden by the recent resurgence of large-scale infrastructure implementations, associated with the global land deals that stem from global food and energy security concerns in the mid-2000s (Borras et al., 2011; Sassen, 2013). The land deals were often done between foreign capital investors and the recipient governments, which lead to constructions of new infrastructure to facilitate the access to expanding frontier markets. The literature discusses that large-scale investments in frontier markets generally tend to produce enclaves where selective capital inflows fail to involve local communities, let alone already disadvantaged groups (Ferguson, 2006; Kaag and Zoomers, 2014; Li, 2014).

In addition, increased foreign direct investment flows had de-nationalised the state's territory of control, blurring the location of responsibility (Zoomers, 2010; Sassen, 2013). The de-nationalisation has created "spaces of postdevelopment" in which transnational investment in infrastructure projects reconfigure previous, state-led processes of "exclusion and inclusion" while connecting different actors who undertake a series of construction and management arrangements for the infrastructure (Kirshner and Power, 2015: 70, see also Sidaway, 2007). In practice, the postdevelopment has been reshaping what Howell (2015) calls 'modes of governing' infrastructure that gives more power to private firms to decide on the infrastructure development. The modes are already configured during the public procurement, which occurs when governments purchase goods through tendering. In 2010, the World Trade Organisation (WTO) published the so-called government procurement agreement to set up each member nation-state's regulatory framework to implement infrastructure. It urges a government to emphasise "open, transparent and non-discriminatory procurement" of materials needed for the infrastructure and achieve "value for money" based on the free competition among private suppliers (Otsuki, 2011: 214). Today, procurement policies conventionally follow the free market principle, since it is believed that a price fixed in the market is the clearest indicator to ensure the objectivity of the transparency. There is little space for CSOs to influence this free market principle applied to tendering, and thus they remain receivers of the infrastructure that is decided by PPP that excludes communities and CSOs.

Consequently, community participation in shaping infrastructure governance merely indicates a space in which non-state actors are invited to be consulted and to give consent to a large project scheme, rather than to proactively shape such a space through daily experience (Williams, 2004; Green, 2010; Otsuki, 2015). This invitation is often regarded to be ensuring the procedural equity. But this does not fully take up ways that people who experience the infrastructure process are demanding recognition for their very experiences with the process and exploring ways to govern it. The difficulty for these expressions to be taken up stems from the elusiveness of connections that are created in the tendering process as well as in daily struggles in spaces of postdevelopment.

### **The Embeddedness of Infrastructure and Justice-Seeking**

Then, a question arises: what are the specific conditions by which everyday justice-seeking leads to controlling connections produced by the public infrastructure and its services? In order to answer this question, we need to look seriously into the process of "place-making", that is, "the set of social, political and material processes by which people iteratively create and recreate the experienced geographies in which they live" (Pierce et al., 2011: 56, see also Parés et al., 2014). Or, more precisely, we now know relatively much about the social process (such as the creation of

communities), political process (procurement and consultation) and material process (actual construction of infrastructure) that shape the overall infrastructure process. What is not clear is how these processes interact and lead to facilitate the agentive justice-seeking.

For example, as infrastructure is produced, it opens up new physical spaces of deliberation among the communities that are affected by this infrastructure. It grows into the existing social, political and material processes (Corsin Jiménez, 2014), and it becomes “sunk into and inside of other structures, social arrangements and technologies” (Star, 1999: 381). As a result, once it is produced, it is embedded in and further rearticulates the ‘assemblage’ of people, power, capital and goods (MacFarlane, 2011). As Ingold (2011: 6) discusses the subject of “production”, the production of infrastructure urges us to place the verb “to produce alongside other intransitive verbs such as to hope, to grow and to dwell, and against such transitive verbs as to plan, to make and to build”. Infrastructure, as it is produced and embedded, grows into the connections between different spaces of postdevelopment vis-à-vis the existing context of place-making. This means that any infrastructure will need to be managed and its services eventually co-produced based on ongoing experiences and local agencies.

The justice framework has been ambivalent about such unpredictable nature of infrastructure process and necessities of justice-seeking as the consequences of infrastructure change incrementally.

Originally, justice framework was developed in North America to address the issue of ‘distributional equity’ to emphasise that the environmental and energy burdens are not shared equally among populations (Malin and Petrzela, 2010; Hernández, 2015). The distributional equity problem has been recently discussed at a global scale since the toxic waste came to be exported from developed countries to developing countries (Pellow, 2011; Schlosberg, 2013). Indeed, controversial infrastructure that entails eviction and displacement undoubtedly indicates the distributional inequity. At the same time, the scholars would argue that the ways that the marginalised communities are forced to accept the infrastructure without having much say about their wishes show a more fundamental problem of ‘procedural inequity’ (Lake, 1996). According to the focus on procedural equity, the communities as citizens must come together and present their decisions about constructions, management or use of infrastructure, rather than be explained to about the decisions already made by experts (e.g. Bergmans et al., 2015).

Therefore, the justice framework has led to clarify the importance of democratic participation, in order to promote recognition in addition to redistribution (cf. Fraser and Honneth, 2003) and to demand information about risks, workings of markets where the services are provided, and possible pitfalls of embracing the infrastructure (Keeling, 2010). The pursuit of participation is important in order to build a readily collective ‘justice seeking strategy’ (Banerjee, 2014) and to improve accountability of governments and foreign investors (Culley and Hughey, 2008).

The problem is that the promotion of participation remains to focus on consensus building and social learning to conduct activities such as community risk assessment through ‘public participation’, which aims to facilitate interactions between diverse community members, governmental officials and non-governmental organisations’ workers on the reconstruction plan (Otsuki, 2016a). However, whether public participation can be promoted in more fundamental investment decision-making and deciding on modalities of infrastructure governance remains elusive. The practice of public participation usually presupposes the existence of established organisations and movements that are readily invited to the explanation meetings for residents. In this invited space, the government, international cooperation or company officials explain their plans, and the residents can contest and give their opinions to nominally participate in the decision making, but they are seldom considered to be agentive creators of their towns’ future development because they do not create the space of participation by themselves (Otsuki, 2015).

Or, once the communities manage to produce their space of participation, it is not easy for them to understand who must be enrolled to this space unless they have crafted a mechanism of following the connections and constantly monitoring the growing and changing infrastructure process. In the following, we will examine the possibilities of this mechanism by looking into three patterns of infrastructure process in Mozambique and Vietnam.

## Three Infrastructure Processes, Connections, and Justice-Seeking Conditions

### *Rehabilitation of Irrigation System in Munda Munda, Mozambique*

Much of the existing infrastructure in Mozambique was built during the colonial period. In Nante in Maganja da Costa district, Zambezia Province in central Mozambique, the Portuguese opened large-scale ranch with irrigation systems, excluding the natives to benefit from the ranch and irrigation infrastructure. In 1976, Mozambique became independent, turning itself into a socialist regime, and it nationalised land properties. The former Portuguese ranch became public land, and the state let people enter the area. After the prolonged civil war ended in 1992, Mozambique created a new land law in 1997, giving land users' rights known as DUAT – *Direito de Uso e Aproveitamento da Terra* for those who use the land in productive ways. However, irrigated land, which was suitable for rice production, was retained by the government, which decided to manage it as 'protected area'. According to the farmers, Government does not give DUAT because irrigation system is the 'public good', that is, a property of the government. Therefore, the farmers had been in ambivalent positions since the independence because they were allowed to cultivate without DUAT.

In 2001, the farmers in an area called Munda Munda in Nante organised themselves to create an association, and in 2005, their entity was legalised in collaboration with an advocacy NGO called ORAM, so that they can officially demand DUAT and consolidate their engagement with the irrigation (Beekman and Veldwisch, 2012; Veldwisch et al., 2013). Meanwhile, after the post-civil war reconstruction and nation-state building, Mozambique turned itself into a donor-darling, actively inviting foreign investors and creating one of the world's fastest growing frontier markets (Hanlon and Smart, 2008; Kirshner and Power, 2015). The government sought to develop the Zambezia Province, which remained to be the poorest region in the country, by creating Zambezi Valley Authority in the Ministry of Planning and Administration. In this development plan, Nante's rice production was targeted to be modernised. In 2009, the Mozambican government obtained 8 million euros from RVO to co-finance the ORIO project to rehabilitate the colonial irrigation system and create 3,700 hectares of irrigated rice plantation areas. Of the 3,700 hectares, the association would manage 700 hectares among its 1,500 users.

The consultation and pre-studies were done in participatory manners about the rehabilitation, which was eagerly anticipated by the farmers. However, the communication stopped for some years. In the beginning of 2015 when one of the largest floods hit the area and destroyed all the remaining irrigation systems, farmers seemed to be clearly frustrated by the delays of this project. The reason for the delay was that the Mozambican government (Ministry of Agriculture's Institute of Irrigation) could not prepare the 10 million euros to co-finance the project, and RVO failed to establish the project management unit for the infrastructure. In 2015, the government finally managed the fund from the World Bank, which agreed to conduct studies on flood control around the Zambezia River basin. In mid-2015, the management unit was finally established among three Dutch private companies (or Mozambican companies with Dutch associates): WE Consult; Tenders2Go; and Zamiri. This management unit will develop the procurement processes for the government to acquire necessary equipment for construction through a series of tendering; to manage the entire irrigation system; and to carry out the 'capacity development' of association members to engage with the project.

What is unclear is that as the irrigated land remains public, the infrastructure project seems to expect the users (e.g. farmers) to pay taxes over the use, and the farmers are unable to properly discuss on this payment requirement as their struggle for obtaining DUAT to continues. Meanwhile, the members engage in distribution of land and determination of the irrigated land size for each farmer, creating blocks and determining the leadership structure for each block. In one focus group discussion, the association members insist that "infrastructure project needs to consider security of land rights" (Nante, 17 September 2015).

The farmers' insistence on land rights is not exactly equal to the demand for formalisation of informality. It shows the wish to control their land and production, as they also created a cooperative in 2005 to commercialise the rice in addition to the association. With the rehabilitation of irrigation, they expect to increase the commercialisation opportunities, as the rehabilitated irrigation can also

attract other infrastructure projects to improve conditions of access roads that had been damaged by the recent floods. With the infrastructure, they also expect to more effectively engage in improving the plantation in longitudinal manners, by demanding the provision of technical assistance. In short, with the better control of their land and engagement with all the actors involved in the potential commercialisation of rice, they expect to be better connected with a larger context of economic as well as social and political development. As one association member puts this sentiment: *Esta terra é nossa. Mas não temos documentos, ficamos isolados* – This land is ours. But we do not have the documents ...so we stay isolated. The connection is vital for each farmer's livelihood and place-making.

This awareness for the connection makes farmers attentive. For example, apart from the 700 hectares, the ORIO will irrigate 3,000 hectares for the commercial production. With the infrastructure, the relationship between the smallholders' land and the commercial land, in a similar way to the colonial times, will be configured. The farmers are thus eager to stay inside the negotiations as they continually receive different officials and researchers. The struggle for the land user rights is a part of this justice-seeking through the association and cooperative. One association member summarises their attitude by saying: "development is good, but we need to be prepared." This attitude must be more strongly supported, ultimately to let the association and cooperative be a part of the management structure. At this moment, no NGOs or local government offices that are following this infrastructure process are actively making this follow-up.<sup>3</sup>

### *Construction of a New Access Road to the Port of Beira, Mozambique*

As Mozambique is eager to develop its expanding frontier market, the port cities, which had been developed during the colonial times, now receive renewed attention for their potential contribution to boosting the foreign investments. The city of Beira, in the province of Beira in southeast of Mozambique is one of the major port city. In 2010, Beira Agricultural Growth Corridor was implemented with the financial support from the DFID as well as Norwegian and Dutch embassies in Mozambique. The Corridor consists of a highway and rail to link Beira to the coal mine in Tete in the northeast of the country and to Malawi and Zimbabwe. Along the Corridor, agricultural development projects would be implemented to open up "unexploited" 10 million hectares of land (Beira Corridor Initiative, 2016).

As seen in such large-scale corridor development, infrastructure development in Beira has been seen as the major driver of southern African development. Beira's port is managed by Cornelder de Mocambique, which is a PPP consisting of Cornelder Rotterdam and CFM – *Portos e Caminhos de Ferro de Moçambique*, the Mozambican national ports and railways authority. The port serves the hinterland of central Mozambique, Zimbabwe, Zambia and the Democratic Republic of Congo and, thus, it is considered to be one of the southern Africa's major ports, as well as a major motor of local development as it provides employment and attracts new investments. Indeed, the port's turnover has been growing exponentially, but the current transport infrastructure leading to the port does not have enough capacity to meet this growth.

In 2013, a Dutch private sector consortium presented the so-called Beira Masterplan: Vision for 2035 for the port development that includes the access road construction to RVO's new DRIVE programme. DRIVE essentially provides funding to infrastructure firms so that they can enhance their competitiveness in tender applications. As in the ORIO project, the Mozambican government needs to co-finance the 50% of the entire budget, but as this requirement proved to delay the plan, as seen in Nante, the access road project in Beira included provisions to enable the Mozambican government to borrow money from the Dutch development bank (FMO) at attractive rates. Currently, the pre-implementation studies are expected to be finalised in the first half of 2017 after which tendering will follow.

According to RVO, the D2B-DRIVE projects "must contribute to the development of the private sector, improving people's ability to provide for themselves" (RVO, 2016). And, this private sector is

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<sup>3</sup> Though with the NWO applied research project, a small action research budget was made available to promote an advocacy NGO's engagement in this process.

admittedly Dutch businesses, even though the infrastructure process is officially financed as a form of untied aid. The masterplan is thus practically a set of business plans of the Dutch and other foreign investors, and it is presumably why it includes only a vision for urbanisation and industrialisation while the area where the port access road is planned is a floodplain, used predominantly by small-scale farmers for sweet potato and rice cultivation. The masterplan does not present any vision for these farmers who would have to leave their land once the new road is constructed.

In Mozambique, farmers who lose their land due to the construction of public infrastructure would receive a compensation of 3,000 *meticais* (around \$60) per plot. In some instances farmers have been offered new plots instead of financial compensation. First of all, this compensation is very little for the farmers to re-establish their livelihoods elsewhere, especially as the new infrastructure would lead to the gradual conversion of farmland into an extension of the city. Even if the farmers decide to give up farming, the unemployment rate is quite high in Beira and the informal sector is overcrowded.

The usual argument tells that the infrastructure development will lead to the expansion of employment opportunities, which will absorb the ‘redundant’ farmers. For this to be a reality, however, there needs to be a long-term plan for and inclusion of local businesses into the infrastructure implementation and maintenance as well as training of the farmers to be able to fully engage in the city’s development. Currently, the skilled labour in Beira is imported from foreign or Maputo-based firms that have no interest in incorporating farmers or informal local labourers.

In short, this port access road project demonstrates a classic example of the foreseeable infrastructure process that entails displacement and fails to benefit those displaced. Naturally, some resistance to this plan or demand for fairer compensation are emerging, but they remain to be weak at this moment. One potential reason for this weakness is that the majority of farmers are women, many of whom are widowed or without children, and they do not have strong family support or knowledge to organise themselves. The sense of resignation is also prevalent, as a number of farmers had already lost their land due to the city’s industrial expansion, without receiving the 3,000 *meticais*. According to them, local leadership is so corrupt that the compensation opportunities are distributed unfairly and that the money allocated for the farmers simply disappeared. As many of other similar cases show in Mozambique, “you must be on the...[community leader’s]... list ...[of friends] if you want to receive benefits” (interview in Maganja da Costa, 16 September 2015).

There is currently an advocacy NGO trying to address the issue of fair compensation, insisting on the need to carefully calculate de facto value of land that each farmer is required to give up. Because land officially is the state property, its commercial value is a contested matter in Mozambique (Chizane, 2007). However, the mechanism of justice-seeking needs to go beyond the compensation, as the farmers in the current form are disconnected from the masterplan and forced to become invisible. If they need to relocate, they should, for example, be a part of the Agricultural Growth Corridor that focuses on the farmland development for smallholders. The Beira Masterplan can envision such a new connection with ongoing other infrastructure projects in order to address the current exclusion while the farmers themselves need to organise themselves, including disadvantaged women, to overcome the resignation.

#### *Water connections in Ba Ria Vung Tau, Vietnam<sup>4</sup>*

In 2009, RVO approved a project in Vietnam to provide piped water connection in the province of Ba Ria Vung Tau. A half of the province’s approximately 115,300 persons had been connected to piped water but received insufficient and poor quality water. The other half of the population “uses unsafe or polluted untreated or poorly treated water by collecting rainwater, digging wells or buying expensive bottled water. This lack of drinking water causes diseases and hampers economic development” (RVO, 2009). The project envisioned that, after implementation of water pipes, more households would be connected and the quality of the water be improved.

The state’s water supply and sanitation centre (CERWASS) is responsible for the infrastructure process, in collaboration with the Dutch engineering company Royal Haskoning DHV that will

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<sup>4</sup> This case draws on the policy report that is made available by Keizer (2015).

implement two water stations and connection pipes. The infrastructure was expected to raise the connection rate to 90% of the 'poor', defined as those who have the family income lower than 2 dollar/person/day (RVO, 2012). According to CERWASS, households within 5 meters from the distribution pipeline get a free connection and water meter. Households who need more than 5 meters of piping to their property will only be connected when this is technically possible and when they agree to pay the total distance of piping minus those 5 initial meters. CERWASS will inform households in three ways to make them aware of the possibility to get a water connection. They will make an announcement through the loudspeaker system, on the radio and through the local people's committee. After this announcement households can apply for a connection. CERWASS will examine whether a connection is technically possible and after signing an agreement, connect the family. For the households who live too far away, the state will repay 35% of the costs to improve their water source, and the poor and minorities will only have to pay 54% (3.000 dong/m<sup>3</sup>) of the water price (5.600 dong/m<sup>3</sup>).

While most of the households in the province are in the category of the poor, the water connection began to differentiate levels of this poverty. All the households that do not live on the main road and do not have a connection to the piped water system are invariably the most poor with low housing conditions. The better off households are within the 200 meter from the distribution pipeline and they are connected. The roads and water connections differentiate the values of properties, as well as the economic opportunities. Most of the houses on the road have their businesses, using the piped water, and they can afford to be on the road and connected.

Most households who are not connected live far away from the distribution pipeline and who are unable to pay for the extended pipelines even with the subsidies. However, more fundamental problems started to be detected, as some households, even on the main road, have realised that they cannot be connected since they do not have the so-called 'family book' on the property. This disconnection is only overcome as the people seek for the local leadership that has "contacts with high people" or for their own contacts at the local people committee. One quote says: "only people with a good relationship with the government get special treatment" (interview, April 2015 in Keizer, 2015: 54). To get connected to water pipes, the people need connections with officials in Vietnam.

This infrastructure project clearly shows that as water pipes are distributed, different strategies to get connected are deployed by individual households. In this process, those who benefit the least from this infrastructure process are the marginal, undocumented (e.g. those without family books) and politically disconnected people. As Keizer (2015) writes, there needs to be a complementary policy to ensure the connections to all the households, but this can only be demanded when those excluded demand their participation in deciding how the water gets distributed and the quality guaranteed.

### **Who Controls the Connections?**

The three cases demonstrate different patterns of connections mainly between three spaces: the space of infrastructure project as the space of postdevelopment consisting of a national government and the Dutch donor and private sectors; space of the users who are connected to the project; and non-users who are still affected by the connections. Within each space, nodes of social and power relationships are formed, making both identification of accountable actors for the project and self-organisation by those who are affected to seek justice less straightforward.

After all, the question in each case can be summarised as: who should be taking a lead in governing this infrastructure process when we duly address distributional and procedural equities? One potential and less involved actor in exploring this question is the local government that can work to intermediate demands for accountability of each infrastructure process. The local government, especially in the context of post-socialism, is oftentimes corrupt and incapable of monitoring the fair benefit distribution, as witnessed in the port access road's compensation in Mozambique or the water connections in Vietnam. Yet, it can be a strong ally to the users and non-users as citizens of each locale if opportunities are given to the officials to act on this activity related to the infrastructure process.

The local governmental officials are also realising that they must substantially change the ways they understand governance of the infrastructure, not as a project per se but as a process that evolves by involving its constituencies. For example, according to one local governmental official in Maganja da Costa in Mozambique: “We have been trying to engage with farmers’ development in our district . . . to give our support to the association. But we do not have investors who bring resources” (interview, September 2015). If the local government does not have human and financial resources to monitor the infrastructure process, why doesn’t each project include the component to support the local government?

One problem is that the current policy regimes to deal with the large-scale infrastructure are not clarifying the roles that could be played by the existing multi-level governance. This is also linked to the fact that the necessary capacity of development actors involved in the infrastructure projects is the capacity to observe social and political dynamics beyond the particular infrastructure’s physical reach, and to imagine how the infrastructure process will be embedded or disrupt the existing dynamics. In practice, this means that planners, governmental officials as well as the donors and their partners must be more present in the people’s everyday places, and they participate in monitoring the actual operation of the infrastructure process. In this sense, local government’s very physical presence in the locale of infrastructure is an advantage, and it needs to be given sustainable roles.

After all, the focus of the debate about the governance of infrastructure pays more attention to the provision of infrastructure than serious follow-up in identifying necessities for justice-seeking. Advocacy NGOs and social movements work towards ensuring distributional and procedural equities to duly participate in planning of the infrastructure and obtaining of rights to land and water or to compensations if displacement is required. But they often leave after the infrastructure management is in sight after the initial goals of rights and compensations are achieved. They also need to have a long-term presence to accompany both users and non-users, to explore the possibilities of not only getting fair share of the benefits but of co-producing the benefits on their own initiatives.

The attention to more disadvantaged groups such as women or marginalised, often minority, populations needs to be incorporated into the accompanying of each infrastructure process since standardised designs of irrigation channels, roads, or water distribution pipes, as well as many other infrastructure, are usually catered for the readily better connected people. In order to address the disadvantage, organisations of people must develop their capacities to prepare themselves for justice-seeking by looking into points of potential connections, not only within one infrastructure process but in relation to other, ongoing and planned infrastructure projects. The capacity development, which is invariably a component of the ORIO projects currently focuses exclusively on management of the physical infrastructure in terms of maintenance, production using the infrastructure and payment for the use. People must wait for advocacy NGOs and activists or researchers to detect their problems to develop their capacity to claim justice.

The donors like RVO justifies its heavy focus on private sector development because it is the way for ‘the people to manage their lives themselves’ (RVO, 2012, quoted in Keizer, 2015). Obviously, the private sector development does not automatically develop people’s capacity to manage their lives – they need to be aware of their rights to engage in multi-level and scale governance that makes sure that the private sector development benefits the public (cf. Bevir, 2013). The infrastructure process in fact generates responsibilities for them to hold every possible actor accountable and to deal with specific issues such as material installation, physical and social connections, coordination of the infrastructure with other infrastructure processes. Infrastructure governance becomes truly inclusive when users and non-users are fully allowed to connect their spaces to the space of infrastructure process and to deliberate and ultimately to convince the state and private firms to be included in their ongoing place-making context.

## Conclusions

This paper has discussed the nature and extent of large-scale infrastructure projects currently promoted in the global South, with particular reference to three case studies from Mozambique and Vietnam. Drawing on a review of infrastructure and justice, the paper has shown that ensuring distributional and procedural equities is not so much about the promotion of people participation in consultation about particular infrastructure processes but about the recognition of the ongoing place-making process through which continual monitoring and follow-up of the infrastructure process is envisioned. The cases of irrigation in Mozambique and water connection in Vietnam have illustrated that the physical infrastructure is inevitably embedded in ongoing place-making where livelihoods activities are shaped, and it recreates the existing disjuncture between those who are (or who will be) connected and who are not. As a public work, the infrastructure must entail the procedure of monitoring the disjuncture and establishing ways to co-manage the process with all the affected citizens.

In practice, local organisations and potentially the local governmental offices are at the pivotal point for establishing and managing this procedure, but they should be seen as the ones that link the national government, international donors, and CSOs. Considering the new infrastructure projects such as those promoted by the RVO's DRIVE are clearly focusing on the foreign business development in relation to the global market, international donors will play in particular an important role in ensuring this linkage to be established. Their power to co-finance the infrastructure and demand transparency of the operation by the recipient country's government can also be used to enable this.

Theoretically speaking, the focus on how physical infrastructure process is embedded in everyday places is simultaneously a focus on the hidden infrastructure of a nation-state— the transaction and knowledge infrastructure – that lies beneath democratic capitalism (Martin, 2013). The inclusivity in establishing distributional and procedural equities is only possible when every person can freely participate in generating her own capital for investment through business development, in relation to, but independently from, the state, private sector and the infrastructure projects (Enright, 2013). In this sense, the demand disadvantaged groups should make of the government and the donors is to give equal opportunities to everyone to have and manage the connections to quality services; if this access is not guaranteed, they should be able to establish the services for themselves with alternative sources that should be created to safeguard the exclusion in official infrastructure processes. In other words, justice needs to represent a form of globally articulated infrastructure governance that allows citizens themselves to make processes and procedures of capitalist development. The officials and private firms as well as CSOs are duly invited to participate in this mode of governance.

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**Global governance/politics,  
climate justice & agrarian/social  
justice: linkages and challenges**

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## **About the Author(s)**

**Kei Otsuki** is Assistant Professor at International Development Studies, Department of Human Geography and Planning, Utrecht University in the Netherlands and a visiting research fellow at United Nations University, Japan. She has published widely on frontier governance in Brazil. Her recent writings include environmental justice in post-Fukushima Japan and land governance and local development in Mozambique and Ghana. She would like to acknowledge the funding support from NWO-WOTRO's Applied Research Fund for the case study of irrigation in Nante, Mozambique, discussed in this paper.

**Murtah Read** is a PhD candidate at International Development Studies, Department of Human Geography and Planning, Utrecht University in the Netherlands. His research theme centres on governance of urban infrastructure development in Beira, Mozambique.

**Annelies Zoomers** is Professor of International Development Studies, Utrecht University, and the chair of the Netherlands Academy of Land Governance for Equitable and Sustainable Development (LANDac). She has been involved in various land-related research projects and has published extensively on the global land rush and local development.