

Evidence of the  
Contribution to  
Stabilisation of Transport  
Infrastructure



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## Report Summary

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Transport infrastructure is central to the growth and development of a country and a crucial element in improving the quality of life of citizens. Infrastructure acts as the mainstay of growth and social wellbeing – boosting employment, reducing the high costs of accessing markets, providing ways of accessing isolated communities, and ensuring the provision of basic services. It is equally at the heart of stabilisation missions in the quest to rebuild a coherent post-conflict state, particularly in its contribution to stabilisation through confidence-building in the post-conflict regime. State-building in post-conflict milieus usually start from a very low base after armed conflict, extreme loss of life and extensive devastation of public goods. Stabilisation thus constitutes, in part, the rehabilitation of transport infrastructure, which can contribute to poverty reduction, broad-based economic growth and inclusive social development. The construction of transport infrastructure can provide income and welfare opportunities for people over the short term, whilst from the longer-term perspective, communities may be encouraged to take ownership and maintenance. Ownership requires community participation as well as transparency. Yet equally, challenges to transport infrastructure and its usefulness in stabilisation projects remain – most notably whether or not roads facilitate or mitigate insecurity, or the activities of insurgents. Debates over these issues need further research and more evidence-based studies.



## Methodology

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Electronic databases, academic sources and “grey material” were searched for and collated in order to identify previous relevant studies. Although previous studies provided some evidence of the role of transport infrastructure in stabilisation missions, it was found that there exists a gap and demand for further research and more coherent (and comparative cross-national) investigations and analyses. The limited number of studies and often anecdotal study designs make synthesis and interpretation of previous study findings challenging. There is a clear need for fieldwork based studies to provide clear evidence-based conclusions and recommendations.



## Introduction

For countries that are emerging from a conflict situation, it is essential to deliver access to basic infrastructure services for the population.<sup>1</sup> Economic, political and social factors all combine as elements in the stabilisation project; infrastructure is integral to this, cutting across—and being influenced by—the aforementioned factors.<sup>2</sup> This is because transport infrastructure is vital to most societies in terms of economic and social activities but also because the restoration of damaged infrastructure is a powerful signal to the population and society at large that conflict tensions are reducing and indeed, “the war is over”.<sup>3</sup> The contribution of this simple message is perhaps incalculable in setting the scene for post-conflict stabilisation efforts: “winning hearts and minds” of societies emerging from unstable post-conflict environments is essential.<sup>4</sup>

The purpose of stabilisation is to assist countries emerging from conflict situations to move towards sustainable development. Stabilisation efforts are focused on extending the legitimacy and competency of the state and delivering direct noticeable benefits to the population. These are classed as “quick wins” in the literature and strengthen the population’s support for the post-conflict government and the political process that it epitomises.<sup>5</sup> Stabilisation may support the state through facilitating a political settlement between parties competing for power; supporting the state to fulfil its core functions, of which infrastructure provision is a vital aspect; and facilitate the government’s capacity to deliver what is expected by the population.<sup>6</sup> Thus stabilisation has four aspects:

- i. **Prevent - or contain - violent conflict** - this may require coercive as well as political intervention, whilst working towards addressing the causes of underlying tensions. It may also involve active pursuit of groups who refuse to take part in a non-violent political process.
- ii. **Protect people, key assets and institutions** - where violence persists, a minimum precondition for stability is the provision of sufficient security for men, women and children to begin going about their daily lives and for government to function. This may be done by external military forces acting in support of local ones.
- iii. **Promote political processes which lead to greater stability** - the main aim is to achieve political settlement which create a situation where it is in all parties’ interests to contest power and resources peacefully, rather than violently.
- iv. **Prepare for longer-term development** - stabilisation activities can profoundly affect the chances of successful social and economic development.

<sup>1</sup> Addison, T. *Africa’s Recovery from Conflict: Making Peace Work for the Poor* Helsinki: UNU/WIDER, 2003.

<sup>2</sup> Anand, P. B. *Getting infrastructure priorities right in post-conflict reconstruction*, Helsinki: UNU-WIDER, 2005.

<sup>3</sup> Davis, J. and Lambert *Engineering in Emergencies* London: Intermediate Technology Publications 2002.

<sup>4</sup> Meilahn, K. ‘Cultural understanding within context as a tool for countering irregular threats and as a force for peace’, *Strategic Insights* vol. 6, no. 2, 2007; Mockaitis, T. ‘Winning hearts and minds in the “war on terrorism”’, *Small Wars and Insurgencies*, vol. 14, 2003.

<sup>5</sup> Stabilisation Unit *Quick Impact Projects – QIPs* London: Stabilisation Unit, no date.

<sup>6</sup> World Bank *Building Capacity in post-conflict countries* Washington DC: World Bank, 2003.



Until recently, the goal of reconstruction efforts was relatively straightforward: direct physical aid to the conflict's victims, the lessening of societal dislocation, the restoration of operative social institutions and the restitution of infrastructure.<sup>7</sup> In recent years, however, the objectives of post-conflict reconstruction have developed into a more complex set of considerations. Strategic deliberations are more widespread and post-conflict reconstruction planning and implementation is ever more predisposed towards the goal of stabilisation. However, the challenge is immense, as the table below indicates, just by comparing conflict-affected and non-conflict-affected sub-Saharan Africa (SSA):

*Indicators of Access, Use and Quality of Infrastructure*<sup>8</sup>

Type of Infrastructure	SSA Conflict-Affected	SSA Non-Conflict-Affected	Republic of South Africa	High-Income Countries
Electricity: kWh used per Capita	96	384	3,793	8,421
Telecoms: fixed & mobile lines per 1000 population	19	67	410	1,283
Roads: % paved	13	27	20	93
Water: % of pop. With access to improved water	52	67	86	96

The process is not straightforward and if domination of key infrastructure continues to be under the control of, or is actively utilised by, a particular party to the conflict (even in ostensible post-conflict settings) strains and pressures are likely to endure. Equally, by bringing together different sides to the conflict and by working together to repair infrastructure as part of the stabilisation and reconstruction process, goodwill and post-conflict solidarity may be fostered. It should be noted that transport infrastructure is synonymous with roads for most development agencies, policymakers, and planners.<sup>9</sup>

## Transport infrastructure as a facilitator of conflict

In 1862, Jomini wrote that 'Strategy decides where to act; logistics brings the troops to this point'.<sup>10</sup> Transport infrastructure often shapes insurgent target selection and facilitates the physical spread of violence. This may be through facilitating access to military/insurgent objectives and also mobility as a means of both escape and penetration of new target areas. Because the military activity of non-state actors is constrained by existing infrastructure, violence is often centred on areas that are logistically best developed. However, as Zhukov argues, this focus is self-limiting because although the ease of shifting resources between targets facilitates the diffusion of violence to new locations, the need to distribute limited resources between and across various contested areas limits the ability to sustain fighting in any one place.<sup>11</sup> At the local level, this dynamic makes the relocation of insurgent activity

<sup>7</sup> Green, R. *Rehabilitation: toward sustainable peace and reconciliation for redevelopment* COPE Working Paper 39, IDS Sussex/Centre for Development Studies, University of Leeds, 2001.

<sup>8</sup> Schwartz, J., Hahn, S., Bannon, I. *The Private Sector's Role in the Provision of Infrastructure in Post Conflict Countries* London: Public-Private Infrastructure Advisory Facility Provision of Infrastructure in Post Conflict Situations, Department for International Development, 2004.

<sup>9</sup> Booth, D., L. Hanmer, and E. Lovell *Poverty and transport* London: ODI, 2000.

<sup>10</sup> Jomini, A.-H. *The art of war* Philadelphia: J.P. Lippincott, 1862, p. 62.

<sup>11</sup> Zhukov, Y. 'Roads and the diffusion of insurgent violence: The logistics of conflict in Russia's North Caucasus', *Political Geography*, vol. 31, issue 3, 2012.



more likely than its expansion, in contrast to conventional wisdom on the tactics of unconventional warfare.

Current debates on the role of transport networks in conflict are divided. The prevailing view holds that modern transportation infrastructure is either irrelevant or unnecessary to insurgents. This argument asserts that insurgents are self-sufficient and usually lightly-equipped and so are much less reliant on external sources of supply than on scavenging and the support (or coercion) of the local population. Mao Zedong was one of the first proponents of this argument, focussing on the development of support amongst the peasantry using the analogy of a fish (the Communists) swimming in the water (the local population).<sup>12</sup> Where external supplies are needed, insurgents can draw on a mix of transport means such as trails, rivers and even air. The adaptive and diverse supply networks of Soviet Partisans during the Second World War and the Viet Minh and Viet Cong fighting against both the French and Americans are held up as emblematic examples. Formal roads were less salient than other routes. Indeed, the ability of insurgents to access the road network is not seen as a major risk factor—if anything, roads reduce the risk and severity of civil conflict by increasing the ability and mobility of government forces, extending their reach and integrating otherwise remote and vulnerable communities into the economic life of a state, with potential beneficial results such as mitigating grievances. This view is found in classical and contemporary literature on counterinsurgency,<sup>13</sup> cross-national studies of civil war,<sup>14</sup> as well as some disaggregated civil war research.<sup>15</sup>

However, a more prudent opinion maintains that insurgent logistics are neither self-sufficient nor boundlessly flexible, but are in fact greatly restricted by extant transport infrastructure. In this view, roads reduce the costs of insurgent operations by enabling rapid access to and extraction from, targets of opportunity, and also enable the swift delivery of supplies. This position is supported by cross-regional disaggregated civil war research.<sup>16</sup> Interestingly, analyses of internal Al-Qaeda documents support this.<sup>17</sup> Furthermore, a study of ISAF combat log reports from the war in Afghanistan supports the argument.<sup>18</sup> This literature is relatively newer and argues that organised violence generally (whether government or insurgent), in flat terrain or mountain valleys is constrained by transport (primarily road)

<sup>12</sup> Mao Zedong *Guerilla warfare* New York: Praeger, 1961.

<sup>13</sup> Campbell, A. *Guerrillas* New York: The John Day Company, 1968; Kilcullen, D. 'Political manoeuvre in counterinsurgency: road building in Afghanistan', *Small Wars Journal*, 2008; O'Neill, B. *Insurgency and terrorism: Inside revolutionary warfare* Dulles, VA: Brassey's, 1990.

<sup>14</sup> Collier, P., & Hoeffler, A. *Greed and grievance in civil war* Oxford Economic Papers New Series, 56, 2004; Fearon, J., & Laitin, D., 'Ethnicity, insurgency, and civil war', *American Political Science Review*, vol. 97, no. 1, 2003; Herbst, J. *States and power in Africa: Comparative lessons in authority and control* Princeton, NJ: Princeton University Press, 2000.

<sup>15</sup> Bohara, A. K., Mitchell, N. J., & Nepal, M. 'Opportunity, democracy, and the exchange of political violence', *Journal of Conflict Resolution*, vol. 50, no. 1, 2006.; Buhaug, H., & Rod, J. 'Local determinants of African civil wars, 1970-2001', *Political Geography*, vol. 25, no. 3, 2006; Murshed, S. & Gates, S. 'Spatial-horizontal inequality and the Maoist insurgency in Nepal', *Review of Development Economics*, vol. 9, no. 1, 2005.

<sup>16</sup> O'Loughlin, J., Witmer, F. & Linke, A. 'The Afghanistan-Pakistan wars, 2008-2009: micro-geographies, conflict diffusion, and clusters of violence', *Eurasian Geography and Economics*, vol. 51, no. 4, 2010; O'Loughlin, J., & Witmer, F. 'The Localized geographies of violence in the North Caucasus of Russia, 1999-2007', *Annals, Association of American Geographers*, vol. 101, no. 1, 2011' Raleigh, C., & Hegre, H. 'Population size, concentration, and civil war. A geographically disaggregated analysis', *Political Geography*, vol. 28, 2009.

<sup>17</sup> Felter, J., & Watts, C. *Al-Qa'ida's (mis)adventures in the Horn of Africa* NY: West Point, 2007.

<sup>18</sup> O'Loughlin, J., Witmer, F. Linke, A. & Thorwardson, N. 'Peering into the fog of war: the geography of the Wikileaks' Afghanistan war Logs, 2004-2009', *Eurasian Geography and Economics*, vol. 51, no. 4, 2010.



networks. Even for lightly-equipped insurgents, locally-supplied goods will likely be restricted to food, water and fuel. Reinforcements and supplies of ammunition and equipment requires open supply routes and logistical connections, most easily found on formal roads.

It should be noted that in a study on the Nepali civil war, Quy-Toan Do and Lakshmi Iyer examined the ability of the government to control insurgencies (rather than examining the ease with which insurgents can start organizing a rebel force, which most studies look at— see above).<sup>19</sup> Replacing poverty by a measure of infrastructure (road length per square kilometre), the study concluded that the presence of roads is associated with lower conflict. In addition, elevation and issues of geography became insignificant when road length was included as a variable, suggesting that any correlation with elevation is linked to the difficulty of building roads in hilly areas and hence a greater ability of insurgents to escape from state forces. When using road infrastructure to proxy for the ease of access to remote areas by government forces, no clear-cut association was detected. Geographic characteristics did not seem to predict the onset of conflict. The findings strongly suggested that factors that enable insurgents to hide (dense forests, hilly areas with no road access) are more likely to determine the intensity of the conflict once it has started, rather than predict where the conflict is likely to start. Overall, the results strongly suggested that poverty reduction was likely to have the additional political benefit of making conflict less likely, by increasing the opportunity cost of recruitment and perhaps reducing the level of grievances felt by the local population. This finding illustrates the long-term benefits of poverty alleviation programmes and transport infrastructure projects with regard to conflict alleviation.

*Poverty reduction makes conflict less likely, but once conflict starts there is a debate on whether or not transport infrastructure can play an enabling role for insurgents. In geographic spaces where level terrain exists, road networks can actually constrain insurgents as government control of these roads limits insurgents' abilities to re-supply.*

## Rebuilding transport infrastructure and timing

Conflicts can have regional, national and/or local impacts on transport infrastructure and these are the same areas in most urgent need of help once peace is restored. This is where Quick Impact Projects may be especially appropriate in delivering transport infrastructure. The lack of resources is commonly most acute in areas where tensions run high and will doubtless correspond with inadequately motivated or non-existent infrastructure managers. Such a scenario may depend on robust political will at the highest level, alongside donor funding and capacity building for infrastructure.

### **Quick impact projects: The example of Provincial Reconstruction Team, Kandahar, Afghanistan**

Under QIPs, government institutions were enabled to deliver local projects, which saw ordinary Afghan people begin to (re)connect with and see the value of their government. QIP funds were needed because most civilian donor agencies were slow and inflexible. QIP funds were used to fund programs that delivered services to people. Apart from programmes run by the Afghan government, delivering small projects like wells, primary schools, and basic health clinics, transport infrastructure was also included. Kandahar was keen to utilise QIP funds for a ring road around the city to reduce military convoys through the center, and also cut civilian casualties from Taliban attacks on the convoys. The plan was that QIPs would roll-out results quickly in order to contribute to the stabilisation mission. Whilst some results were achieved, lessons were also learnt. QIPs were often unsustainable, expensive

<sup>19</sup> Quy-Toan Do and Lakshmi Iyer 'Geography, poverty and conflict in Nepal', *Journal of Peace Research*, no. 47, 2010.



and located according to donor preferences. Rather than create peace dividends and help in stabilisation, QIPs may have exacerbated horizontal inequalities and inadvertently created local perceptions of NGOs capturing donor resources intended to benefit Afghans and not reinforced the authority of the legitimate state.<sup>20</sup>

As part of the stabilisation project, infrastructure reconstruction is especially susceptible to inadequate security and “spoilers”, who may well see infrastructure as an indication of the reach of the state (i.e. the enemy). Reconstruction necessitates expertise, expensive machinery and substantial investment of material and finance and its location is easily identified and open to attack. Therefore, whilst infrastructure may well contribute towards stabilisation, it may also become the focal point of spoiler efforts and may in fact become seen as a symbol to be harassed, attacked and destroyed.<sup>21</sup> This is a particular problem in the role of infrastructure provision as an integral part of stabilisation, as unless conditions are right, infrastructure delivery may equally become de-stabilising and a centre of resistance and animosity. Thus timing is crucial.

The World Bank’s Conflict Prevention and Reconstruction Unit has indeed concentrated, in part, on the timing of such efforts. They conclude that, ‘The evidence suggests that [infrastructure] aid during the post-conflict period is more effective than normal in raising growth. The effect is not uniform. During the first two or three years of the post-conflict decade, aid is no more effective than in normal situations, and by the end of the decade it is also no more effective than normal. The high-impact phase is during the middle four or five years of the decade, when it is much more effective than normal’.<sup>22</sup> Of course, all this assumes that potential spoilers are not active. If they are, then the timing issue becomes absolutely crucial and/or has serious implications for security provision.

Interestingly, DFID has, in some cases, extended the length of its commitments including a ten-year Memoranda of Understanding (MoU), which outlines the basis for long-term partnerships between DFID and development partners. One such example is the MoU between DFID, UNOPS, a project manager and a 10-year contractor whereby the UK will provide £19.5m over 10 years to build and maintain roads in eastern DRC in support of the Government of DRC’s and MONUSCO’s stabilisation plan. In this MoU the UK provides support to re-open the Government of DRC’s and MONUSCO’s priority strategic roads, ensure a sustainable maintenance system is in place to safeguard them in the longer term, and manage the environmental and social impacts of the roads.

DFID will also work with other donors, MONUSCO and the Government of DRC to leverage in other activities and interventions to ensure that the conditions are in place for the roads to lead to increased incomes and improved security. The long-term nature of this MoU is reflected in the fact that the road works and management of direct environmental and social impacts will be implemented over a three-year period by UNOPS and a private sector project manager, in coordination with the Ministry of Infrastructure, Public Works and Reconstruction and MONUSCO. Additionally, a 10-year contract will be let for overseeing the maintenance of the roads, managing the long-term and indirect environmental and social impacts of the roads, and monitoring and evaluating the programme.<sup>23</sup> It is precisely these long-term commitments that are most likely to achieve measurable impacts on the stabilisation project.

<sup>20</sup> Ghani, A. and Lockhart, C. *Fixing Failed States* Oxford: Oxford University Press, 2008.

<sup>21</sup> Zhukov, Y. *Roads and the Diffusion of Insurgent Violence* Working Draft, 2010.

<sup>22</sup> Collier, P., Elliott, V., Hegre, H., Hoeffler, A., Reynal-Querol, M. and Sambanis, N. *Breaking the Conflict Trap –civil war and development policy*, World Bank and OUP, 2003.

<sup>23</sup> See DFID *Business Case and Intervention Summary*, *Intervention Summary, Roads in the East of DRC Phase 2*, no date.



*The provision of transport infrastructure in a stabilisation project is highly vulnerable to the efforts of “spoilers”, who may identify infrastructure as being symbols of the enemy. Unless conditions are right, infrastructure may become de-stabilising and a focus of violent resistance. Studies have shown that transport infrastructure has the highest impact on growth and development four to five years after a conflict’s end. Thus protecting the infrastructure in its initial stage is both vital and a delicate task to achieve. DFID, has, in some cases, extended the length of its commitments including the use of a ten-year MoU.*

## **Transport infrastructure as symbols of governance and state-building**

In an article published in 2011, Van de Walle and Scott argued that public-service delivery (including transport infrastructure) was used in European history as a state tool for penetration (territorial consolidation and the integration of peripheries), for standardisation (homogenisation of the population and its experiences) and for accommodation (including pacification, buying loyalty and power brokering).<sup>24</sup> This review of state-building has important implications for the role of transport in stabilisation. Processes of penetration, refers to a process of establishing the presence, authority and visibility of the state: ‘the ability of the government to act directly upon the population by its own agents, instead of through intermediate local bigwigs’.<sup>25</sup> The aim of penetration is to contribute to the cohesion and legitimacy of the state through a process of political and territorial socialisation and to express the classic definition of the state: the ‘monopoly of the legitimate use of physical force within a given territory’.<sup>26</sup> Transport infrastructure is an important instrument in this process of ‘penetration’ whereby states establish efficient presence in and control of the national territory and socialise the population. Michael Mann used the concept ‘state infrastructural power’ to refer to a variety of penetration processes strengthening the power of the state.<sup>27</sup> Transport infrastructure would be an integral part of such projections. Eugen Weber referred to road-building in nineteenth-century France as a way of linking the centre to the periphery through ‘administrative highways’.<sup>28</sup> This facilitated the movement of troops, tax collectors, school inspectors, etc. as well as other agents of the state. The same applied to France’s railway systems, whose networks radiate to and from Paris.

Processes of standardisation are also important in post-conflict state reconstruction. Standardisation is a process of establishing a national standard of administrative or service delivery standard that applies to the entire polity. Standardisation, as exercised through public services (which are facilitated by improved transport infrastructures), contributes to the creation of a common culture through the presence of similar and readily identifiable public services. Public services diffuse cultural symbols of statehood and nationhood and are symbols of state presence. Through standardisation, transport infrastructure can help

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<sup>24</sup> Van de Walle, S. and Scott, Z. ‘The Political Role of Service Delivery in State-Building: Exploring the Relevance of European History for Developing Countries’, *Development Policy Review*, vol. 29, no. 1, 2011.

<sup>25</sup> Finer, S. *The History of Government from the Earliest Times, Volume III: Empires, Monarchies and the Modern State* Oxford: Oxford University Press, 1999, p. 161.

<sup>26</sup> Weber, M. ‘Politics as a Vocation’, in H. H. Gerth and C. Wright Mills (eds), *From Max Weber: Essays in Sociology* London: Routledge, 1974, p. 78.

<sup>27</sup> Mann, M. ‘The Autonomous Power of the State: Its Origins, Mechanisms and Results’, *Archives européennes de sociologie* 25, 1984, pp. 185-213.

<sup>28</sup> Weber, E. *Peasants into Frenchmen: The Modernization of Rural France, 1870-1914* Stanford, CA: Stanford University Press, 1976.



build a moral unity, in Anderson's terms, an imagined community.<sup>29</sup> Transport infrastructure in post-conflict settings contribute to the manufacturing of positive imagery, and communicates a package of ideals i.e. that the war is over, the state has reclaimed space and the rebuilding has begun as part of the nation-building project. Fearon and Laitin assert that 'the most important determinants of the prospects of an insurgency are most likely *the police and military capabilities of the government, and the reach of government institutions into rural areas*'.<sup>30</sup> By building roads, and subsequently reducing the time needed to travel between two points, a central government can more easily penetrate remote areas and quell resistance.

Processes of accommodation, in divided societies, are a useful way in which transport infrastructure may contribute to the maintenance of a delicate balance between groups. Sharing out public-sector jobs or a promise to provide certain facilities to certain individuals, groups or regions is an excellent instrument to cement political pacts in the post-conflict setting. Bourgeois speaks in this context of 'administrative consociationalism', echoing Lijphart's concept which has largely been applied to political structures at the central level, rather than to a more decentralised level of public-service delivery such as transport infrastructure.<sup>31</sup> A distribution of resources in the shape of transport infrastructure should not just be approached from an equity perspective, but that there is also a strong instrumental dimension to redistribution. The example of Somaliland has been given to highlight the importance of transport infrastructure in post-conflict rebuilding.<sup>32</sup>

As symbols of stabilisation, transport infrastructure can be incredibly powerful, broadcasting confidence in the post-conflict dispensation through tangible representations of statehood and governmental presence. Transport infrastructure in post-conflict settings thus may promote positive imagery and conveys a set of ideas that may help facilitate stabilisation.

#### ***Symbols of stabilisation: Friendship Bridges***

Friendship bridges or "unity bridges" are the terms given to transport infrastructure which link countries, often separated by rivers or straits. Whilst they may be unrelated to conflict, it is a fact that many friendship bridges have been constructed in post-conflict environments, often as a means to either bring two previous antagonists together and/or to symbolise the end of war and the concrete manifestation of peace and development. Thus bridges can play a role as part of the stabilisation project. There are, for example a number of Friendship Bridges in Afghanistan (such as the Afghanistan–Uzbekistan Friendship Bridge and the Tajik-Afghan Friendship Bridge, between Tajikistan and Afghanistan). Both were constructed not only to boost transport infrastructure as a means to promote economic growth and development, but were also clear expressions of Kabul's power projection as a capable state in parts of the country that, in some case, had previously been under the control of the Taliban. Similarly, the Unity Bridge across the Ruvuma River linking Tanzania and Mozambique was also an attempt to symbolise nation-building and state capacity, in this case after a prolonged conflict to rid Mozambique of Portuguese colonialism. It was initially proposed in 1975 shortly

<sup>29</sup> Anderson, B. *Imagined Communities: Reflections on the Origins and Spread of Nationalism*. New York: Verso, 1991.

<sup>30</sup> Fearon, J. and Laitin, D. 'Ethnicity, Insurgency, and Civil War', *American Political Science Review*, vol. 14, 2002, p. 14.

<sup>31</sup> Bourgeois, D. 'Administrative Nationalism', *Administration and Society*, vol. 39, no. 5, 2007, p. 633.

<sup>32</sup> Azam, J-P. *A State is Born: Transport Infrastructure and Democracy in Somaliland* TSE Working Paper no. 10-229, 2010.



after Mozambique's independence to be a physical expression of solidarity between the two countries, as well as a trade vector and was opened in 2010.<sup>33</sup>

## Dirt roads vs. asphalt: Transportation infrastructure and sabotage

Burying mines and IEDs on or alongside roads is a common method of emplacement by insurgents. The act of burying an IED leaves traces invisible to the eye but which can be detected via optical remote sensing. The burial of mines disturbs soil so that it has a different grain size distribution and often different packing density than surrounding untouched soils (grain size of the disturbed soil is smaller and the packing density lower). These differences will last until the surface is recovered by rain and/or wind.<sup>34</sup> The rate of weathering the surface to reset the soil conditions is dependent on the environment, with desert surfaces potentially maintaining differences for several months. However, in wet environments, the reset time can be virtually instant and in a dusty environment such as next to a well-travelled unimproved surface, it may take only days or hours to conceal the disturbed ground with a covering layer of dust.

The key public proponent that paved roads reduce the risk of IEDs is David Kilcullen, who bases his analysis on the Afghanistan experience.<sup>35</sup> Kilcullen, a former senior counterinsurgency adviser to General David Petraeus, suggests that the primary effect of road construction on IEDs is derived from the pavement.<sup>36</sup> Kilcullen argues insurgents are faced with two options when attempting to place an IED along a paved road. They can dig through the hard surface, but this requires more time or a larger number of individuals than on an unpaved road, making it more likely the insurgents will be disturbed. Furthermore, the intrusion into the tar road makes the IED less problematic to identify. Alternatively, insurgents can place the IED on the surface — either on the pavement or on the sides of the road. ISAF spent significant time considering this option, but decided that the devices would still be easier to see than ones buried in the road, and therefore, they would still be better off with pavement than without it.<sup>37</sup> Kilcullen concluded that IED incidents decline as paving proliferates.

He also argued that road projects provide incentive to locals to report the placement of IEDs. Road projects developed under Provincial Reconstruction Teams (PRTs) — government organisations that combine military and civilian reconstruction experts to work on reconstruction projects in volatile areas — initiate a series of negotiations with local tribal elders to construct portions of the road running through their territory. These elders then distribute jobs securing and constructing the road to their people, giving the populous a sense of ownership over the road. This is particularly the case with PRTs operating under a “10-kilometre rule” which requires that 80 percent of unskilled labour come from within 10 kilometres of the project.<sup>38</sup> Kilcullen contends that while IED attacks may rise in the short-term due to a road project, locals that value the project respond to attacks by immediately repairing the road and providing intelligence on the insurgents they believe are responsible.

<sup>33</sup> Scholven, S. and Struver, G. ‘Tying the Region Together or Tearing it Apart? China and Transport Infrastructure Projects in the SADC Region’ in *Monitoring Regional Integration in Southern Africa Yearbook 2012* Stellenbosch: TRALAC, 2013.

<sup>34</sup> Johnson, J., P. Lucey, K. Horton, E. Winter ‘Infrared measurements of pristine and disturbed soils 1. Spectral contrast differences between field and laboratory data’, *Remote Sensing of Environment*, 64, 1998, p. 34.

<sup>35</sup> Kilcullen, D. *The Accidental Guerrilla: Fighting Small Wars in the Midst of a Big One* New York: Oxford University Press, 2009, p. 102.

<sup>36</sup> Ibid.

<sup>37</sup> Ibid., p. 99.

<sup>38</sup> Ibid., p. 92.



The projects thus deprive insurgents of local support by connecting the population to the Afghan government.

Interestingly, PRTs track the price insurgents offer individuals to attack roads or vehicles and ensure that they pay their road workers slightly more, eliminating any financial temptation for workers to plant IEDs or sabotage road construction projects. Beyond individual employment, decreased travel time, when combined with improved security, encourages the population to invest in crops because products are more likely to reach a market safe and unspoiled.<sup>39</sup> USAID has stressed this particular point, identifying the improvement of roads to market centres as a key indicator of the development of Afghanistan.<sup>40</sup> US government officials have also used improved prosperity in one district to entice tribal elders in others into ensuring security. With local buy-in, ISAF clears new areas, following up with reconstruction projects.

High-level policymakers — both in the military and the State Department — have bought into the connection between roads and security and have played a key role in acquiring funding for road building. Former Afghan Ambassador Ronald Neumann explained that ‘Where we opened roads security increased, the economy expanded, and it became harder for the insurgents to conceal bombs. We endlessly quoted Eikenberry’s statement, “Where the roads end, the insurgency begins”’ (General Karl Eikenberry was the Commander of the Combined Forces Command in Afghanistan).<sup>41</sup> Military officials in Afghanistan have repeated this assertion, stating ‘if you have a paved road here, you have fewer improvised explosive devices (IEDs)’.<sup>42</sup>

However, Foust argues that discussion over road building largely omits how insurgents can adapt to paved roads. Coalition forces and civilians are not the only groups that can take advantage of the new projects. Whether paved or unpaved, roads are still at a fixed location and can be used by anyone and without constant patrols by ISAF, Taliban militants and other insurgent groups can lay down IEDs on the roads and quickly escape.<sup>43</sup> During the Soviet-Afghan war, insurgents were able to use their control of large sections of the country’s roads to prevent the consistent transport of supplies into Afghanistan, preventing the Soviets from supporting a larger force. As a result of reduced travel time and other factors, increased traffic along paved highways may also provide additional incentive to insurgents to target those roads. The level of violence along major paved highways adds weight to this claim. While roads are generally a target for insurgent attacks — with 85.9 percent of all insurgent violence occurring near a road — O’Loughlin finds that insurgent incidents within a five-kilometre buffer of the ring road are higher than general cross-country incidents. This suggested that the ring road had become an excessively prominent target for insurgents ‘because it remains a major transport artery for government and allied forces’.<sup>44</sup>

## Transport and stabilisation

Roads are particularly important in stabilisation efforts as they immediately impact population groups, can contribute to reconciliation through processes of decision-making and participation, and are excellent physical demonstrations of outcome and delivery, which contributes to stabilisation through confidence-building in the post-conflict regime. The

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<sup>39</sup> Ibid., pp. 91-102.

<sup>40</sup> Ibid.-102.

<sup>41</sup> Ronald E. Neumann *The Other War: Winning and Losing in Afghanistan* Washington: Potomac Books, 2009, p. 94.

<sup>42</sup> ‘Roads Key to Afghan Security’ *Daily Times* (Pakistan), May 5, 2008.

<sup>43</sup> Foust, J. ‘Thinking Critically About Road Construction’, *Registran*, May 6, 2008.

<sup>44</sup> O’Loughlin, J. op. cit., p. 487.



impact of roads reconstruction is felt by the population at large in a (usually) non-discriminatory fashion and can directly benefit communities via economic growth, resource distribution, improved governance and security. These last two deliverables are the least open to quantifiable measurement but their intangibility is no less important: an atmosphere of better governance and security as witnessed by improved roads and other infrastructure is vital in the stabilisation process.

In 2011 the World Bank issued a report entitled *Violent Conflict and the Road Sector: Points of Interaction*.<sup>45</sup> This report argued that roads are vital in the stabilisation and reconstruction of a conflict-affected country in that roads impact a wide section of the population and their relationship with one-another through infrastructure construction and maintenance, through processes of decision-making and participation, and most significantly through their outcomes. According to the report, these wide-ranging effects can in turn impact conflict and a country's prospects for stability and resilience. While the roads sector can have profound impacts on societies as well as on conflict, positively and negatively, violent conflict can also affect the way roads sector activities are carried out and whether projects achieve their objectives.

With regard to economic growth, infrastructure is vital. Without a reliable transport sector, the formal sector cannot develop and a post-conflict society is limited to the growth of the informal sector. In the immediate post-conflict period, the most significant obstacle on attracting private investment is often the dearth of useable infrastructure, which drives up transaction costs and erodes the possibility of returns on investment. Continuing failure to provide adequate infrastructure reflects a lack of serious delivery in the post-conflict era and whilst not only discouraging economic growth and investment, can also be read as an indication that nothing has really changed post-peace. Interestingly, in the initial phases of post-conflict recovery, the state in Uganda placed an extraordinary and sustained importance on the (re-)construction of rural roads. Successive evaluations by the World Bank estimated that the rate of return on investment in these roads was an impressive 40%.<sup>46</sup>

However, this is not without its critics who argue that a new militant humanitarianism infuses post-conflict reconstruction work. Bello argues that there has been a rise in what he terms the "relief-and-reconstruction complex", where the military-political command, World Bank, corporate contractors and humanitarian and development non-governmental organizations (NGOs) come together to participate in relief and reconstruction work alongside national governments.<sup>47</sup> Bello suggests that power structures develop that serve to legitimate particular ideologies, underpinned by a formulaic discourse built on appeals to national and international security, neoliberal economics and a mushrooming, "rights-based humanitarianism".<sup>48</sup> It is important for donors to recognise this critique, irrespective of the merits of the argument advanced.<sup>49</sup> This is particularly important given the extent of the

<sup>45</sup> Rebosio, M. and Wam, P. *Violent Conflict and the Road Sector: Points of Interaction* Washington DC: World Bank, 2011.

<sup>46</sup> Collier, P. *Post-Conflict Recovery: How Should Policies be Distinctive?* Centre for the Study of African Economies, Oxford University, 2007.

<sup>47</sup> Gross Stein, J. *In the Eye of the Storm – Humanitarian NGO's, Complex Emergencies and Conflict Resolution* 2001.

<sup>48</sup> Bello, W. 'The rise of the relief-and reconstruction complex', *Journal of International Affairs*, vol. 59, no. 2, 2006.

<sup>49</sup> Macrae, J. *The new humanitarianisms: a review of trends in global humanitarian action* London: ODI, 2002



community advocating public-private collaboration in infrastructure provision.<sup>50</sup> The Public-Private Infrastructure Advisory Facility (PPIAF) is a classic example, whose remit is to promote the role of public-private partnerships and private sector participation in post-conflict reconstruction and infrastructure development.<sup>51</sup> The PPIAF is actively supported by an array of different donors.

Remaining with the possible negatives, studies from Afghanistan has shown that transport reconstruction and land rights and power may interact quite negatively on the ground in an unintended and under-examined fashion. Delesgues, for instance, has argued that the cost of road reconstruction and the increased insecurity and benefits which have accrued to warlords and other elites raises questions about the entire purpose of the projects.<sup>52</sup> Similarly, another report asserts that ‘in most situations, the triggers for conflict can be related to power and/or resources and, while the reconstruction phase provides opportunities to mitigate underlying tensions, it is also possible to exacerbate them inadvertently’.<sup>53</sup> In fact, a major concern in post-conflict transport infrastructure reconstruction is ‘the disconnect between international donors, who see projects’ economic and societal advantages, and local inhabitants affected by changing socio-political patterns. The former generalize based on understandings of the market economy, access to services, mobility, and security in largely stable settings. The latter worry about land grabbing; control of agricultural production; speculation; rent seeking; recruitment of indentured labour; and increased access to villages for exploitation by corrupt government officials, the Taliban, or foreign troops’.<sup>54</sup> Consequently, ‘Given the interaction’s often-negative outcomes in conflict-affected areas, there should be consideration of whether or not to (re)construct roads—despite their positive effects on some localities—until peace reigns in Afghanistan. Those tasked with security and development should at least change their approach to construction of road infrastructure so that well-placed Afghans do not benefit at the expense of the majority who cannot legally or non-violently defend their rights. There must be a realistic examination and understanding of how (re)construction contributes to, or undermines, peacebuilding in Afghanistan and other war-torn parts of the world’.<sup>55</sup>

As has been mentioned, the debate over the efficacy of roads vis-à-vis sabotage is split. Buhaug and Rød tested determinants behind African civil wars and found that the density of roads is *positively* associated with the risk of civil war — contradicting their initial hypothesis. Separatist conflicts, Buhaug concludes, ‘occur in relatively more, not less developed regions’.<sup>56</sup> These conclusions match studies on Al-Qaeda’s efforts in Somalia. Watts and Felter suggest that one of the primary reasons the Al-Qaeda franchise struggled to take root in Somalia was that the expected low operational costs never materialized. Quoting from several letters between Al-Qaeda members, Watts demonstrates that Al-Qaeda leaders

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<sup>50</sup> Cambridge Economic Policy Associates Ltd *Harnessing Existing Financing Facilities to Promote Public – Private Partnership for Infrastructure Investment and Service Delivery in Post-Conflict Countries*; Cambridge Economic Policy Associates, 2004.

<sup>51</sup> The Public-Private Infrastructure Advisory Facility (PPIAF) ‘Post-Conflict Countries Series: A Strategy for More Investment’, April 2011.

<sup>52</sup> Delesgues, L. *Afghan roads reconstruction: Deconstruction of a lucrative assistance* Kabul: Integrity Watch Afghanistan, 2007.

<sup>53</sup> Mott MacDonald *Provision of infrastructure in post conflict situations*. London: Department for International Development, 2005, p. 10.

<sup>54</sup> Unruh, J. and Shalaby, M. ‘Road infrastructure reconstruction as a peacebuilding priority in Afghanistan: Negative implications for land rights’ in D. Jensen and S. Lonergan (eds.) *Assessing and Restoring Natural Resources in Post-Conflict Peacebuilding* London: Routledge, 2012, p. 378.

<sup>55</sup> Ibid., p. 383.

<sup>56</sup> Buhaug and Rød, op. cit.



discovered that transportation costs were ‘substantial and paralyzing for the Somali franchise’.<sup>57</sup>

It is obvious that further research needs to be done. A starting point has been Malkasian and Meyerle field research in eastern Afghanistan which looked at the Provincial Reconstruction Teams and their involvement in road rebuilding. Although they admit that ‘There is no evidence that PRTs on their own have quelled violence’,<sup>58</sup> after conducting research for two months in 2007 and two months in 2008 while working with four PRTs, Malkasian concludes that in at least three of the four provinces studied — Khost, Kunar and Ghazni — road projects had a positive impact on security. In fact, they showed that there was a correlation between improvements in safety in individual districts and the level of spending on roads. Malkasian concludes that PRTs ‘clearly...helped reduce violence and governance...[T]he strategy of out posting and road building brought security, revitalized local political institutions, and enabled the Afghan government to deliver goods and services to the people for the first time’.<sup>59</sup> Yet evidence supporting a connection between roads and improved security conditions is largely anecdotal and greater research is necessary.

*Debate exists as to whether paved roads reduce insurgent attacks. There is however broad consensus that transport projects can aid in post-conflict community building through the active involvement of local people in reconstruction, by providing employment and promoting community buy-in. Transport infrastructure can both empower and contribute to raising income levels in the short-term, possibly minimising the attractiveness of joining in and/or resuming conflict activities.*

*Infrastructure is vital in economic growth as without a reliable transport sector, the formal sector cannot develop and society becomes locked into informal sector activities. Oftentimes a substantial block to attracting investment is the lack of infrastructure. Failure to provide infrastructure exposes an absence of delivery, which may be interpreted by citizens that stabilisation is a far-off dream and that little of significance has changed.*

## Transport infrastructure and employment

The provision of transport infrastructure *can* deliver components of the stabilisation project, irrespective of who is funding. The most immediate realm is found in employment, which is of great interest to the *United Nations Policy for Post-Conflict Employment Creation, Income Generation and Reintegration*. This unit actively advocates investment in transport infrastructure building as an instrument to provide local employment. According to this body, post-conflict relief and reconstruction activities make available employment to young workers, often their first experiences of organised labour.<sup>60</sup> This has a side-effect of facilitating the (often difficult) transition to the workplace. Employment is often ex-combatants’ most frequent demands and involvement in transport infrastructure provision is one way this may be satisfied, providing immediate income-earning opportunities for ex-combatants as well as returning displaced persons and refugees. Perhaps most importantly, a reinvigorated transport infrastructure can help motivate a range of local markets (both factor input and output markets) and thus help kick-start economic growth.

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<sup>57</sup> Watts, C. and Felter, J. *Al-Qaida’s (Mis)Adventures in the Horn of Africa* NY: West Point, 2007, p. 20.

<sup>58</sup> Malkasian, C. and Meyerle, G. ‘Provincial Reconstruction Teams: How do We Know They Work?’, *Letort Papers*, March 2009, p. 11.

<sup>59</sup> *Ibid.*, p. 21.

<sup>60</sup> International Labour Organization *United Nations Policy for Post-Conflict Employment Creation, Income Generation and Reintegration* Geneva, Switzerland: ILO, 2009.



### ***Transport infrastructure and employment- the example of Liberia***

In its Empowerment for Change project, the UN Trust Fund for Human Security actively sought to address issues around peace consolidation, in particular, disillusionment caused by long-term unemployment and poverty. The project engaged District Development Committees (DDCs) – members elected by the respective counties – to participate in decision-making processes on project identification, formulation, implementation, and monitoring. Capacity development workshops strengthened local community structures for the planning and management of recovery and reintegration programmes. This community engagement ensured that project activities responded directly to the needs of local communities and empowered them to define and implement appropriate responses. Through 104 labour-intensive micro-projects, immediate employment opportunities were created in five key sectors – roads and bridges, education, health, food, water and sanitation. As a result, the transportation infrastructure was significantly improved, transforming the lives of nearly 400,000 residents by opening up access to markets, improving communications and increasing access to schools and health facilities. As an additional benefit, the improved transport infrastructure also facilitated the resettlement of displaced people to their communities of origin.<sup>61</sup>

Indeed, the flow of donor assistance directed to transport infrastructure investment can make use of labour-intensive and labour-friendly techniques that further contributes to stabilisation, in that large numbers of the population have a stake in continued peace and development. Funding can be leveraged by the operational employment of ex-combatants, displaced persons and returnees, for example by rebuilding feeder roads in areas most impacted by conflict. Land recovered by mine action or transport projects can be utilised to validate more productive activities. Through this, collective rebuilding of communities can help restore social and human capital as the delivery of transport infrastructure supports the revitalisation of community networks, local agricultural production, health facilities, and local physical transport infrastructure.<sup>62</sup> External resources should be apportioned after a hands-on needs assessment process, handled through community decision making processes.<sup>63</sup> This approach improves the allocation of resources, empowers local communities and aims at maximum buy-in by affected populations.<sup>64</sup> Thus for transport infrastructure to contribute to a stabilisation project, it should engage a wide range of existing stakeholders, including government and community associations (although there is an urgent need to avoid the creation of parallel institutions).<sup>65</sup>

## **Transport infrastructure and governance**

A key aspect of transport infrastructure and its competent provision is that it is in itself often a reflection on the state of governance in a country; countries with poor roads and diminished transport infrastructures almost always have similarly poor governance levels

<sup>61</sup> UN Trust Fund for Human Security *Rebuilding communities in post-conflict Liberia: Empowerment for change*  
<https://docs.unocha.org/sites/dms/HSU/Outreach/Liberia/034/Liberia%20Project%20Summary%20034.pdf>

<sup>62</sup> Cliffe, S. Guggenheim, S. and Kostner, M. (2003) *Community-driven reconstruction as an instrument on war-to-peace transition* CPR Working Paper No 7, World Bank.

<sup>63</sup> Nyheim, D., Gaigal, C. and Leonhardt, M. *Seven Steps for Conflict Impact Assessment – a methodology for planning in conflict* London: Saferworld, 2000.

<sup>64</sup> Bush, K., 'A Measure of Peace: Peace and Conflict Impact Assessment of Development Projects in War Zones', The Peace-Building and Reconstruction Programme Initiative, Working Paper 1, IDRC, Ottawa, 1998.

<sup>65</sup> United Nations *United Nations Policy for Post-Conflict Employment Creation, Income Generation and Reintegration* Geneva: UN, 2009.



and a diminished state. The 2007 World Bank Governance and Anti-corruption Strategy (GAC) define governance as the manner in which public officials and institutions acquire and exercise the authority to shape public policy and provide public goods and services. This provision of public goods and services is obviously central to the transport sector in two major ways: as the *manner* in which public policy is developed and public goods and services delivered; and as a key *determinant* of violent conflict. Whilst governance issues are vital, technical capacity is just as important. It is usual in post-conflict societies for there to be a dearth of skilled and experienced professionals. The civil service may be devastated, leaving a vacuum in many areas of government. Oftentimes, the majority of the technical as well as senior and middle-level management positions in government may be vacant, with a subsequent weak human resource base. Training and capacity building to develop a professional and operational public administration and a cadre specialised in the provision of infrastructure thus becomes a major challenge in the stabilisation process, one that may last many years.

Weak governance institutions multiply risks of violence. The research highlighting that poverty (especially the level, growth and structure of a country's income) is the most significant correlate of violent conflict has been supplemented by a focus on the role of governance. For instance, Fearon and Laitin used low income as a proxy for a *weak state*, which they see as unable to effectively control its territory or provide public goods.<sup>66</sup> *Institutions* are the focus of other studies with findings that "indicate that lack of secure property rights and enforcement of the law is a fundamental cause of civil war" and pointing to the quality of institutions in explaining this.<sup>67</sup> Divisions can translate into biased or ineffective institutions. In many conflict-affected contexts, divisions and inequalities present in a society manifest themselves in the way governance is exercised.<sup>68</sup> The state's ability or willingness to deliver sound policy and provide public goods and services (such as transport infrastructure) in an equitable fashion can be deleteriously affected by various factors related to the conflict situation, including depleted state capacity, factional interests, futile decision-making processes, a lack of prioritization and remoteness from the country's citizenry. Such limitations are significant for the transport sector in various ways; in some environments the fragilities may block the development of any coherent transport strategy, thus resulting in a lack of planning, lack of building and servicing of the transport infrastructure and an ad-hoc and often unpredictable decisions that contribute to citizen frustration and the overall climate of instability.

Equally, in other situations, governance weaknesses may result in the development of transport provision that advantages certain population groups or regions at the expense of the rest of the country. This can then play into current societal divisions and even perform a role in escalating conflicts. Moreover, unequal provision of transport infrastructure weakens state legitimacy, which is almost always a key governance problem in both conflict and post-conflict environments.

Thus it can be said that transport infrastructure can be part of stabilisation in a variety of ways. A well designed (and maintained) transport system enhances the legitimacy of a state in the eyes of recipients. In Liberia, for example, popular opinion that the post-war government was not renovating the road infrastructure quickly enough lessened government

<sup>66</sup> Fearon, J. and Laitin, D. 'Ethnicity, Insurgency and Civil War', *American Political Science Review* vol. 97, no. 1, 2003, pp. 75-90.

<sup>67</sup> Djankov, S., & Reynal-Querol, M. *The Causes of Civil War* Washington, DC: World Bank, 2007.

<sup>68</sup> Stuart, F. (2002) *Horizontal Inequalities: A Neglected Dimension of Development* Helsinki: UNU/WIDER.



legitimacy.<sup>69</sup> Quick and effective implementation of provision is thus indispensable, *alongside* public information campaigns that satisfactorily explain the extent of the project and how ordinary people are to benefits. A comparable problem developed in South Sudan, where the new state's goals in addressing the rebuilding of the transport sector was intimately linked to the desire to demonstrate to warring parties the material benefits of peace, re-connect communities previously separated due to mined roads, expedite the return of internally-displaced persons, improve access for the security forces to the hinterland and generate employment.<sup>70</sup> All of these were seen as integral to the stabilisation project and to nation-building.<sup>71</sup>

Community participation in decision-making about transport infrastructure may help overcome consequences of poor governance if they comprise a widespread diversity of stakeholders in the projects' design, execution and monitoring. For governance actions to diminish risks associated with conflict, it is vital to make certain that stakeholders are truly representative of local communities. Obviously, if those involved belong to a particular side to a conflict, the process may be sabotaged from the beginning and the roll-out of infrastructure seen as lacking in legitimacy. It is thus critical that those participants chosen to be involved include a cross-section of the communities affected in terms of income levels, ethnicity and other qualities. They cannot be merely political supports of the post-conflict government. Consultations on transport projects that will traverse large spatial areas should methodically comprise population groups and regions that have been marginalised from previous social and economic development efforts. This is absolutely crucial to stabilisation attempts. An example of such an attempt is the Community Development Councils in Afghanistan.<sup>72</sup>

### **Community Development Councils in Afghanistan**

The National Solidarity Program is an extensive initiative reaching over 29,000 villages in Afghanistan with an investment of over \$1 billion and is one of the most effective experiences of community driven development in conflict affected countries. Through the Community Development Councils (CDC), local communities have elected to use approximately 20% of the resources for roads sector projects, resulting in approximately 10,000 projects in total. For a CDC to be established, at least 40% of eligible voters need to cast their vote; there is no candidacy or electioneering in the process and CDCs are composed of equal number of men and women. The CD acts as the point of contact between the state and local populations and their main functions include selection of projects, identification of future development needs and how resources should be apportioned. The result is that the NSP has now constructed 550 Km of secondary roads and 17,545 Km tertiary roads through the implementation of 6,967 road sub projects in 6,276 communities within 306 districts of Afghanistan, directly benefiting more than 7.4 million people. In employment terms, the road projects have created some 4.5 million labour days for local communities.<sup>73</sup>

<sup>69</sup> Tamagnini, A. and Krafft, T. 'Strategic Approaches to Reintegration: Lessons Learned from Liberia', *Global Governance*, vol. 16, no. 1, 2010.

<sup>70</sup> World Bank *Final Project Proposal for the Proposed Sudan Emergency Transport and Infrastructure Development Project (SETIDP)* Washington DC: World Bank, 2005.

<sup>71</sup> Whaites, A. 'States in Development: Understanding State-building' A DFID Working Paper, Governance and Social Development Group.

<sup>72</sup> Sakhi, F. *The National Solidarity Program (NSP) in Afghanistan through the Lens of the SDV Study on Societal Dynamics and Fragility* Washington, DC: The World Bank, 2010.

<sup>73</sup> Sakhi, F. *The National Solidarity Program (NSP) in Afghanistan through the Lens of the SDV Study on Societal Dynamics and Fragility* Washington, DC: The World Bank, 2010.



The World Bank promotes the use of ‘community-driven development’ (CDD) to reinforce local level creativity, capacity and governance, and provide transport infrastructure. A variety of studies, have found CDD approaches to be well-suited to contributing to stabilisation. They are frequently capable of delivering benefits across the population, relatively quickly, they may help fortify local communities and the execution can be adaptable. Importantly, CDD helps avoid high-value targets for spoilers or criminals, which may include pricy materials. A good example is the Burundi Road Sector Development Project (RSDP), which incorporated a community-based road maintenance element. Appreciating that discrimination over ethnicity and differences vis-à-vis land were significant aspects of the Burundi Civil War,<sup>74</sup> the project designed a community based road maintenance programme so as to improve security, improve social cohesion, create employment and enrich the sustainability of transport investments. Following participatory consultations with local community leaders and other stakeholders, associations were created to manage regular maintenance work on ten kilometre-long stretches of road. In doing so, these short pieces of road assumed community ownership and were visible manifestations of the stabilisation process after the conflict had ended.

Equally, in post-conflict environments, often ripe with rumours and misperceptions, the question of who may benefit and who may lose from a transport infrastructure project is ever-present. This can undermine the stabilisation goal, possibly even reigniting conflicts. Thus as part of any transport infrastructure programme, transparency is central. The publication of budgets and the involvement of citizens to monitor expenditures is one method of increasing transparency. An example would be the India Rural Roads project, aimed at (in part) diminishing conflict in Maoist-affected areas through the roll-out of development projects.<sup>75</sup> Donors have experimented with displaying the cost of contracts by using symbols in the form of the number of gravel trucks, bags of cement etc. This all helps community monitoring. In post-conflict settings, transparency and active communications with all affected communities and stakeholders in the criteria for selection of projects to be constructed, the operational plan, and the awarding of contracts, is vital.

Two examples would include the RAIDP in Nepal and the Protection of Basic Services Project (PBS) in Ethiopia. RAIDP has sought to strengthen accountability by reducing corruption such as collusion amongst and between contractors, the unpredictable payment to employees and unsanctioned sub-contracting to under-qualified companies.<sup>76</sup> In the Protection of Basic Services Project (PBS) in Ethiopia, which includes support to rural roads, independent nongovernmental entities and civil society organizations are central.<sup>77</sup> “Community score cards”, “citizens’ report cards” and “participatory budgeting” are deployed as bases for community meetings between service providers and local beneficiaries, concluding with approval of action plans.<sup>78</sup> An independent evaluation of the first phase of this initiative has found that it has helped improve the quality of services provided by the Ethiopian government.<sup>79</sup>

<sup>74</sup> Brachet, J., & Wolpe, H. *Conflict-sensitive development assistance: the case of Burundi* Washington, DC: The World Bank, 2005.

<sup>75</sup> Richard Morgan and Dan Reiter “How War Makes the State: Insurgency, External Threat, and Road Construction in India”, mimeograph, Department of Political Science, Emory University, October 17, 2013.

<sup>76</sup> World Bank *Project Appraisal Document on a Propose Grant to the Kingdom of Nepal for a Rural Access Improvement and Decentralization Project* Washington DC: World Bank, 2005.

<sup>77</sup> IPE Global *Evaluation Report. Evaluation and Design of Social Accountability Component of the Protection of Basic Services Project, Ethiopia*, 2010.

<sup>78</sup> Berry, C., Forder A. and Sultan S. (2004) *Service Delivery in Difficult Environment* London: DFID, 2004.

<sup>79</sup> Tedesse, S. et al *Evaluation and Design of Social Accountability Component of the Protection of Basic Services Project, Ethiopia* New Delhi: Infrastructure Professionals Enterprise, 2010.



*The provision of transport infrastructure may help improve governance (or at least public perceptions of governance) through participation, particularly if a diversity of stakeholders is involved. A wide cross-section of communities affected may demonstrate a new set of norms in governance formerly not seen, whilst equally promoting community assent and approval to efforts by the state to roll-out post-conflict public goods.*

## Conclusions

Based on the literature, the following conclusions regarding transport infrastructure and stabilisation in post-conflict contexts may be summarised. It is essential to ascertain all the pertinent stakeholders, including community civil society structures, and make sure that they are included in the reconciliation and reconstruction processes associated with stabilisation. In this endeavour, it may be required to vigorously seek out stakeholders as counterbalancers to those partial parties who campaign for themselves. When planning for post-conflict stabilisation through the delivery of infrastructure sectors, early engagement and preparatory planning is recommended *before* a peace-agreement is fully endorsed. If transport infrastructure renovation is to be truly contributory to stabilisation programmes, long-term commitment is required.

Major transport infrastructure reconstruction activities have got to be led by dependable and credible local or national state institutions and actors. In the case where such bodies may have been in existence for a relatively short period, developing viable institutional frameworks and suitable assistance will be required.<sup>80</sup> Good governance is an integral aspect of the infrastructure project and this includes transparency, capacity and accountability in contracting and procurement. Local buy-in and the use of local skills and material as far as practically possible are significant in helping stabilisation and ensuring endurance in the long-term preservation and maintenance of infrastructure once rolled-out. As such, capital payments for projects by donors should comprise clear transparency clauses in the allocation of funds for infrastructure projects. Obviously, stakeholders from the United Kingdom must also be aware of bribery and corruption legislation.<sup>81</sup>

The rapid restoration of transport infrastructure aids in the perception by the local communities that normality is returning and that stabilisation is working. This contributes to the peacebuilding process. Thus reconstruction of significant transport infrastructure - perhaps emblematic roads or ports - should be evaluated in the light of the wider support such commitments will make to the wider processes associated with the post-conflict settlement. As part of this, reflection on sector prioritisation, the inclusion of previously marginalised groups, institutional development and long-term policies for transport infrastructure development should make sure that they take up questions of conflict sensitivity in post-conflict infrastructure development. Ensuring that the project is pertinent to community needs/problems is obviously part of this and is linked to the 4 stabilisation 'P's (Prevent - or contain - violent conflict; Protect people, key assets and institutions; Promote political processes which lead to greater stability; Prepare for longer term development). The basic needs of the local communities should be front-ended and, as part of the emblematic aspect of transport infrastructure the visible demonstration of the benefits of peace need accentuating. Existing humanitarian, stabilisation and recovery priorities should be measured up against the proposed infrastructure project.

<sup>80</sup> Center for Strategic and International Studies and the Association of the United States Army *Post-conflict reconstruction – Task framework* AUSA and CSIS, 2002.

<sup>81</sup> Department of Trade and Industry, Foreign and Commonwealth Office (2004) *UK Bribery and Corruption Law; UK Trade & Investment* ([www.hms0.gov.uk/acts/acts2001/20010024](http://www.hms0.gov.uk/acts/acts2001/20010024))



The past history of donor coordination in post-conflict situations is not encouraging. High level political engagement is vital but it can also distort competition for projects, make coordination ineffectual and waste resources. Strong leadership committed to cooperation and the long-term stabilisation vision is essential. This is not least because, as has been highlighted, donor support to transport infrastructure within post-conflict societal settings has the ability to do both damage as well as good. Transport infrastructure projects are generally capital intensive and whilst offering opportunities for employment, income from contracts and beneficent delivery of services, in post-conflict societies these very same things may develop as reasons for disagreement or possibly renewed conflict.<sup>82</sup> Hence it is crucial to ground any transport infrastructure programme as part of stabilisation efforts on planned and strategic identification of the diverse issues related to the conflict. Simply reconstructing previously existing infrastructure without a strategic understanding of the historical and social context and the potentials for both stability and possibly instability is nonsensical. The endowment of transport infrastructure necessitates long-term strategic endeavours and the “Do No Harm” principle is essential.<sup>83</sup> Indirect negative consequences should be contemplated thoroughly.

Finally, the issue of sustainability should be addressed. Recurring costs where sustainability is an issue makes the project impractical. There is little point in road reconstruction if the situation is so insecure that people cannot or will not use the road. When drawing up a proposed transport infrastructure project, the potential problems of discontinuing the project if it proves to be unsustainable needs to be identified. The monitoring and evaluation component of the project is essential here.

## Gaps in the evidence

- i. What links are there between roads and security?
- ii. How can the broader impact of efforts on stabilisation and the political settlement associated with transport infrastructure be measured?
- iii. How might scoping exercises identify potential stakeholders as well as spoilers in transport infrastructure reconstruction projects?
- iv. Can best practise project sequence frameworks be identified and developed?
- v. What wider environment is required to assist in the stabilisation goal with regard to transport infrastructure?
- vi. How can the effectiveness of infrastructure in stabilisation be quantified?
- vii. How might transport infrastructure contribute, in post-conflict contexts, to subjective feelings of well-being and security - as well as objective realities?
- viii. What opportunities exist for collaboration with non-DAC partners for stabilisation efforts in the transport infrastructure realm?

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<sup>82</sup> Hoeffler, A. ‘Fragile States and Conflict Recurrence’ in J. Hewitt, J. Wilkenfield & Gurr, T. *Peace and Conflict* 2010.

<sup>83</sup> M. Anderson *Do no harm: how aid can support peacebuilding* Boulder, CO: Lynne Rienner, 1999.



## Annotated Bibliography

<p>Michelle Rebosio and Per Egil Wam <i>Violent Conflict and the Road Sector: Points of Interaction</i> Washington DC: World Bank, 2011</p>	<p>Roads are vital in the stabilization and reconstruction of a conflict-affected country, impacting on population groups and their relationship with one-another through infrastructure construction and maintenance, processes of decision-making and participation, and most significantly through their outcomes. These effects can in turn impact conflict and a country's prospects for stability and resilience.</p>
<p>David Kilcullen, "Road-Building in Afghanistan: Part 1 of a Series on Political Maneuver in Counterinsurgency," <i>Small Wars Journal</i>, April 24, 2008.</p>	<p>It is argued that ISAF have engaged in a successful road-building program as a tool for projecting military force, extending governance and the rule of law, enhancing political communication and bringing economic development, health and education to the population.</p>
<p>John Unruh and Mourad Shalaby 'Road infrastructure reconstruction as a peacebuilding priority in Afghanistan: Negative implications for land rights' in D. Jensen and S. Lonergan (eds.) <i>Assessing and Restoring Natural Resources in Post-Conflict Peacebuilding</i> London: Routledge, 2012.</p>	<p>Donors assume that road (re)construction will lead to economic development, peace, and security. But the interaction between road (re)construction and land tenure in a stable political environment is different from that in a conflictual country such as Afghanistan. As far as most Afghans are concerned, road (re)construction has undermined the land tenure system. There must be a realistic examination and understanding of how (re)construction contributes to or undermines peacebuilding in Afghanistan and other war-torn parts of the world.</p>
<p>Anand, P. <i>Getting infrastructure priorities right in post-conflict reconstruction</i>, Research Paper, UNU-WIDER, United Nations University (UNU), No. 2005/42, 2005.</p>	<p>Key challenges for infrastructure sectors in post-conflict reconstruction are identified. A framework is developed for assessing alternative infrastructure policies for their impact on three key dimensions of (i) governance and state rebuilding, (ii) conflict prevention and peace, and (iii) poverty reduction, with evidence from Afghanistan, Bosnia-Herzegovina, Croatia, East Timor and Rwanda.</p>
<p>Center for Strategic and International Studies (CSIS) and the Association of the United States Army (AUSA) (2002) <i>Post-conflict reconstruction – Task framework</i>; AUSA and CSIS.</p>	<p>A framework is presented of the range of tasks often encountered when rebuilding a country in the wake of violent conflict. It is designed to help indigenous and international practitioners conceptualize, organize, and prioritize policy responses. By laying out the universe of options, the framework is intended to help identify shortfalls and gaps in reconstruction process and capabilities. It is also geared to assist planning and coordination efforts.</p>
<p>Mott MacDonald <i>Provision of infrastructure in post conflict situations</i>. London: Department for International Development, 2005</p>	<p>The paper reviews experiences by providers and reveals the following to be the key issues affecting infrastructure provision: immediate issues – such as lack of security provision and funding; underlying problems – such as lack of institutional capacity, corruption, conflict sensitivity and governance; and problems of</p>



	response – strategy and sector prioritisation, roles of key stakeholders, short and long-term solutions, procurement and long-term financing
Jean-Paul Azam <i>A State is Born: Transport Infrastructure and Democracy in Somaliland</i> TSE Working Paper n0. 10-229, September, 2010.	Discusses how Somaliland has developed an unexpected democracy after seceding from Somalia, while turning its port of Berbera into a success story, competing successfully with the long established ones in the Horn of Africa. A game-theoretic model shows that redistributing some of the resources from trade is a key condition for sustaining this efficient political equilibrium



## Transport Programmes referred to in the Report

**AFGHANISTAN** - Quick impact projects and Provincial Reconstruction Teams in Kandahar Province as a means to promote buy-in by local communities to the ISAF mission and reduce IED incidents through paving of roads.

**BURUNDI** - Road Sector Development Project (RSDP) produced community based road maintenance programmes so as to improve security, improve social cohesion, create employment and enrich the sustainability of transport investments.

**DRC** - DFID/UNOPS/DRC Government project to reconstruct roads in the eastern DRC as part of MONUSCO's stabilisation agenda.

**ETHIOPIA** - Protection of Basic Services Project includes support to rural roads, which has helped improve the quality of services provided by the Ethiopian government.

**INDIA** - Rural Roads Project aimed at diminishing conflict in Maoist-affected areas through the roll-out of development projects.

**LIBERIA** - District Development Committees worked together with donors to ensure that project activities responded directly to the needs of local communities, with labour-intensive micro-projects involving roads and bridges.

**MOZAMBIQUE-TANZANIA** –“Friendship Bridge” as a means to both bring two previous antagonists together and/or to symbolise the end of war and the concrete manifestation of peace and development.

**NEPAL** - poverty reduction projects through provision of road infrastructure in formerly Maoist-held geographies.

**NEPAL** - Rural Access Improvement and Decentralization Project has sought to strengthen accountability by reducing corruption in transport infrastructure projects.

**NORTH CAUCASUS** - Road construction in North Caucasus as a response to lower insurgent activities.

**SOMALILAND** - transport infrastructure as a vehicle to provide public-sector employment and cement political pacts in the post-conflict setting.

**SOUTH SUDAN** - rebuilding of the transport sector linked to the desire to demonstrate to warring parties the material benefits of peace.

**UGANDA** - initial phase of post-conflict recovery expressed through sustained importance on the re-construction of rural roads with significant rates of return on investment in these roads.



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