



Sustainable Transport's role in tackling poverty and inequity



A review of SLoCaT member's work on tackling poverty and inequity.

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Inclusive Sustainable Transport in support of action on Equity and Poverty (i-STEP)

Sustainable transport is an important enabler of poverty alleviation and reducing inequality if done right. The SLoCaT Partnership on Sustainable, Low Carbon Transport (SLoCaT) has initiated the i-STEP program to safeguard that growing support for sustainable transport in global processes and sustainable development fully acknowledges the importance of, and support for, the role of both urban and rural transport in the alleviation of poverty, as well as the promotion of inclusive development and equality. The first phase of the i-STEP program includes: (a) a literature review on transport and poverty focusing on urban poverty; (b) a consultation process among SLoCaT members on level of interest in, and dedicated capacity for, transport and equity as an area of activity, and (c) a White Paper to present options for future work on transport, poverty and equity, including the future role of the SLoCaT Partnership for such accelerated work on transport, poverty and equity.

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The Partnership on Sustainable, Low Carbon Transport (SLoCaT) works to promote the integration of sustainable transport in global policies on sustainable development and climate change.

Table of Contents

Page

List of Figures and Tables.....	4
1. Introduction	5
1.2. Definitions.....	6
2. Objectives and Methodology.....	8
3. Key Findings	9
3.1 Understanding Transport Poverty and Equity better	9
3.2 Insights into poverty aspects within transport.....	10
3.3 Insights into equity aspects within transport	11
3.4 Relative importance of poverty and equity in transport projects	11
4. Evaluation of transport projects with regard to equity and poverty.....	13
4.1 Measuring impact and evaluating projects	13
5. Environmental considerations in transport and the poor and disadvantaged.....	17
6. A changing context for sustainable transport and potential implications for equity and poverty.....	18
6.1 Trends identified from the conversations	19
6.2 Areas of tension	20
7. Overall Findings and Recommendations	23
7.1 Overall Findings.....	23
7.2 Recommendations	25
7.3 Key outputs to be considered to increase the understanding of the reciprocal relationship between sustainable transport, poverty alleviation and equity.	26
7.4 Next steps	27
8. Annexes.....	32
Annex I. List of organizations and people interviewed.....	32
Annex II: List of guiding questions circulated to organizations interviews	33

List of Figures and Tables

Box 1: Definitions used in this report

Box 2: Rural and Urban Transport Project Examples where Poverty and Equity are specifically mentioned

Box 3: Typical Social Indicators used for Impact Assessment for Sustainable Transport

Box 4: MDBs take the lead in funding sustainable transport

Box 5: Transport projects and resettlement of people

Box 6: NGO pressure becoming more vocal

Box 7: Building a Body of Evidence for Cycling

Table 1: The distribution of net benefits by income of BRT systems from four city case studies

Table 2: Suggestions for follow-up from the results of the interviews with SLoCaT members.

1. Introduction

1.1. Background and context

As the world becomes increasingly globalized and connected, both physically and digitally, there is little evidence that this is reducing the risks of exclusion and marginalization of individuals and communities. Indeed despite efforts to the contrary, some might say that there is now a greater gap between rich and poor and more inequalities than 20 years ago. The global economy grew sevenfold since 1950 but the disparity in per capita gross domestic product between the 20 richest and 20 poorest nations more than doubled between 1960 and 1995¹. The United States has the most unequal distribution of income of all high-income nations, with over 30 per cent of income in the hands of the richest 10 per cent and under 2 per cent going to the poorest 10 per cent. Several developing world countries such as China as seen the number of very poor reduce considerably but has also partly associated with a large rural population decline.

The potential role of sustainable transport in reducing gaps in wealth and increasing equity within communities can be significant, but decision makers require a better understanding and knowledge base to work from in order to develop policies and programs that can deliver such societal benefits.

Currently the majority of sustainable (urban) transport projects look to alleviate congestion, improve air quality and local access, however the impacts of current transport planning and implementation – and, crucially how they affect the different communities of the poorer and more disadvantaged members of society - do not seem to be fully taken into account or investigated.

Transport as a sector also offers many possibilities to the poorer members of society in terms of direct and indirect employment, as well as simply access to jobs or other services. In much of the developing world many poorly educated or unskilled men find employment as rickshaw, taxi or minibus drivers and these types of jobs are often the first ‘port of call’ for those who have moved from the rural areas to towns and cities. The majority of infrastructure projects, large or small, provide temporary employment opportunities for both men and women and these figures are often cited as key indicators in social impact assessments of internationally funded projects.

Trends in the developing and developed worlds may be slightly different but it is likely that the solutions are rather similar. In the developing world especially Africa and Latin America the more traditional interpretations of poverty (mainly economic) and equity (mainly gender and mobility challenged) are still valid. However there are emerging demographic changes, especially in Africa, that show that we should adapt our thinking. Examples include the high number of unemployed youth, a growing number of single heads of households in Africa, an aging society in Europe and Japan and new major consumers in emerging economic areas. However there is also some evidence that the poverty gap is widening not narrowing and accelerating investments in equitable and sustainable transport can play a defining role in addressing this. There is a growing body of evidence, that draws attention to the need to understand the relationships between connectivity and equitable accessibility in terms of key services and opportunities such as health facilities (hospitals and clinics), educational institutions (primary, secondary and tertiary) as well as to economic opportunities (markets and other economic opportunities) especially for the urban poor, women and the elderly, better.

¹ <http://www.worldwatch.org/rich-poor-gap-widening> & www.worldbank.org/poverty/inequal/index.htm

The Partnership on Sustainable Low Carbon Transport (SLoCaT) undertook a survey² in 2014 to take stock of the existing efforts by SLoCaT members and other organizations working on sustainable transport, poverty and sustainable development. The survey was conducted by the SLoCaT Secretariat to get a better understanding of the manner in which organizations currently working on transport are dealing with poverty issues and to gain insights into their future priorities. This paper builds on the outcomes of the results of the survey with a series of interviews with SLoCaT members to explore more deeply how poverty and equity is integrated into their work. The objective was to update the survey and deepen the knowledge about how these issues were integrated into the work done by the SLoCaT members.

It is felt that this paper is timely as 2015 saw a number of key events and international agreements that should frame the policy and development agenda for the next decade. These include the Sustainable Development Goals, the Paris Climate Agreement and in 2016 the forth coming New Urban Agenda (Habitat III). As sustainable transport plays a defining role in achieving the ambitions of all three increasing the evidence base of the benefits it brings, not only in terms of connectivity but also to society as a whole, is seen as being of use to also achieve the overarching ambitions.

From the interviews, documented in this report and the accompanying literature review 'Transport, poverty alleviation and the principles of social justice' there appears little consensus in the application of methodologies on how to systematically evaluate the positive or negative impacts on poverty with any real detail or certainty of the distribution effects of specific transport projects, or any agreement on indicators or approaches. There is little evidence to suggest that SLoCaT members are using consistent methodologies across a range of transport projects in regions and cities that would allow for the comparison of urban spatial structures, transport provision and their impacts on the distribution of accessibility among different socio-economic groups.

From this rapid review, it is therefore clear also that more guidance is needed for the sector to respond optimally to this opportunity, and for decision-makers to be able to use sustainable transport as an intervention to help address equity and poverty. From the discussions held, it was also felt that SLoCaT and its members are ideally placed to prepare and validate such guidance, and to develop new tools and/or reporting frameworks.

1.2. Definitions

Poverty covers a broad and complex spectrum of social and economic aspects of today's globalized world. The following definitions of poverty and equity have been used in the context of this report and the accompanying review of published literature.

Definitions

Accessibility as applied in 'Accessibility Planning', 'planning for accessibility' is a performance measure aimed at analyzing how well the combined transport networks and land use pattern serves users³. It can broadly be defined as 'the ease of reaching desired destinations from a particular location, given a number of available opportunities and the difficulty or impedance) of reaching them. Usually, opportunities are measured in terms of employment positions, and impedance in units of distance or time. Accessibility is thus determined by three main elements: land use, transport, and the individual characteristics of the person (Venter and Cross 2012). Universal Access, on the other hand, refers to inclusive planning for people with mobility constraints. Accessibility is a product of mobility and proximity, enhanced by either increasing the speed of getting between point

² http://www.slocat.net/sites/default/files/slocat_transport_poverty_survey_and_interview-final.pdf

³ Envall 2007, citing Cervero 1996, Levine & Garb 2002

A and point B (mobility), or by bringing points A and B closer together (proximity), or a combination of both. Accessibility refers to people's ability to get to 'key services at reasonable cost, in reasonable time and with reasonable ease (Social Exclusion Unit 2003) and an accessibility- based approach gives legitimacy to land-use initiatives and urban management tools (Cervero 2005).

Equity (also called vertical equity, social justice, or environmental justice) is concerned with the distribution of impacts between individuals and groups that differ in abilities and needs. In this report we also refer to differences in income or social class. By this definition, transport policies are equitable if they favor economically and socially disadvantaged groups (such as women, immigrants, children, the disabled, the elderly, the poor), therefore compensating for overall inequities (adapted from Litman 2012).

Equality (also called horizontal equity, fairness and egalitarianism) refers to the distribution of impacts between individuals and groups considered equal in ability and need. According to this definition, equal individuals and groups should receive equal shares of resources, bear equal costs, and in other ways be treated the same (Litman 2012).

Mobility refers to a group of users' ability, tendency and/or need to move, resulting in a transport demand. Mobility therefore primarily refers to the demand side of a transport system (SSATP 2015).

Paratransit describes a flexible mode of public passenger transportation that does not necessarily follow fixed schedules, typically in the form of small to medium buses. Paratransit in the developing world is sometimes also referred to as 'informal' transport (Behrens 2016).

Poverty can be defined in either relative or absolute. The World Bank defines 'poverty' as the situation when a person lives on or less than \$1.90 per person per day. However, poverty can also be defined as whether households or individuals have enough resources or abilities to meet basic needs such as food, clothing, and shelter; inequality in the distribution of income, consumption or other attributes across the population (relative poverty); and vulnerability, defined here as the probability or risk today of being in poverty or falling deeper into poverty in the future. People can be disadvantaged in a variety of socio-economic terms if they fall below prevailing standards of living in a given societal context. This can be in relation to income, time and level of accessibility. This report incorporates a broad definition of poverty, and includes social inclusion as an indicator of poverty (note: social exclusion may exist among people who are not poor) and the term 'poor' is used interchangeably with 'poverty'.

Spatial inequity or disparity refers to the geographical location of an individual, group or region affected by a transport infrastructure project (Thomopoulos).

Social exclusion is synonymous with poverty and is a distinct concept that is linked to social capital while others emphasize inadequate social participation, lack of social integration and lack of power (Hayes et al 2008). Thus it can include the lack or denial of resources, rights, goods and services, and the inability to participate in the normal relationships and activities, available to the majority of people in a society, whether in economic, social, cultural or political arenas. It affects both the quality of life of individuals and the equity and cohesion of society as a whole (The UK Department of Communities and Local Government (DCLG) Levitas et al (2007)). The UK Social Exclusion Unit (1997) defines it as 'a shorthand label for what can happen when individuals or areas suffer from a combination of linked problems such as unemployment, poor skills, low incomes, poor housing, high crime environments, bad health and family breakdown. This meaning has been mostly adopted for this report. Social inclusion has not been well defined in the literature, with the focus being on redress of social exclusion. Essentially, to be socially included means access to opportunities for earning a living, accessing services, connecting with others, and having the resources with which to deal with life shocks such as ill-health, bereavement, or unemployment, and the opportunity to participate in governance and civil-society decision-making (adapted from Hayes et al).

Social sustainability describes the extent to which a project will benefit the poor, vulnerable and marginalized; contribute to creating safe and socially inclusive communities; and, minimize adverse impacts, such as resettlement (Multilateral Development Bank Working Group 2015).

Time-poverty is based on the time in which a person spends on activities such as travel, working, domestic and other duties (Lawson).

Transport disadvantaged or transport poverty generally refer to people or households unable to make the journeys necessary to meet their needs (whether for employment or income-generation, health-care or other needs, or to participate in society) due to a lack of transport options. This may be for financial, mobility-impairment, age or other reasons. A consequence is likely to be transport-related social exclusion, and a reinforcement of poverty.

Transport-related social exclusion is the process by which people are prevented from participating in the economic, political and social life of the community because of reduced accessibility to opportunities, services and social networks, due in whole or part to insufficient transport options in a society and environment built around the assumption of high mobility (Lucas 2012).

Underserved - Those that do not have good access to municipal services, generally including transport. In the context of this report this primarily focuses on transport aspect.

Box 1: Definitions used in this report

2. Objectives and Methodology

The main objective of this study is to look more closely at the connections between poverty, equity and transport and see to what extent present practices and funding decisions are achieving pro-poor objectives and equitable sustainable transport. This is being done with a view to build a body of evidence for to help shape the new international agenda and accelerate investments into low carbon transport systems.

The focus of the outreach to investigate this issue with SLoCaT members⁴ focused mainly on the urban context of transport but some observations that are more applicable to the rural context are also included. Interviews with a number of players from the SLoCaT international membership were organized to collect information and observations. Semi structured interviews were made by phone and where necessary or helpful further follow up by email was made.

Around 30 organizations representing a broad spectrum of key players including development and funding agencies, such as the multi-lateral development banks, implementing agencies, city networks and foundations were identified for interview. Based on availability 18 organizations (list in annex) were actually interviewed with a view to establishing their views on how poverty and equity were presently being integrated into transport projects and how this might be improved.

A series of questions (see Annex II) shared prior to a telephone interview looked to establish:

- an up-to-date overview on how poverty and equity are incorporated into transport policy, programs and projects and how this is assessed in both urban and rural contexts;
- to establish, from the perspective of those interviewed what is being done in the area of to poverty/ equity and sustainable transport and why, what the main drivers for doing this are and how impact is being measured giving details of indicators, tools and frameworks.
- to determine any gaps or shortfalls and how these might be addressed;
- to elicit personal views on how successful the impacts of this were also discussed when possible.

⁴ SLoCaT members cover a broad spectrum of those working in sustainable transport and therefore can be considered to be fairly representative. www.slocat.net/members/by-name

From the discussions, a set of recommendations on the role of SLoCaT and its members are proposed in the concluding section of this report.

All of the interviewees are active in some way in promoting sustainable transport; some had a greater focus on combining this with policy development and/or climate change. In addition, the majority were more active in the developing rather than the developed world, although two foundations were also interested in addressing these issues in the developed world (mainly North America rather than Europe). The semi-structured interviews were conducted under Chatham House⁵ rules to allow for a free exchange of experience and observations.

3. Key Findings

The following section outlines the main findings from the interviews under headings within the main focus of this report of poverty and equity.

3.1 Understanding Transport Poverty and Equity better

Establishing a common understanding of the terms poverty and equity within transport was considered an important starting point for the interviews. Generally all the respondents agreed that this work was considered timely as it is in line with developments in the international agenda, such as the Sustainable Development Goals, the Paris Climate Change Agreement and the upcoming New Urban Agenda (HABITAT III) and the outcomes can be useful to scale up action.

i) Poverty

Alleviating poverty and increasing equity were considered by almost all respondents as being core values of sustainable transport. Overall, it was noted from the interviews that poverty was most often interpreted in terms of financial poverty, especially by those with economics training or working in funding institutions. A number of people recognized that this interpretation was possibly a little traditional for the twenty-first century, and that it also gave a uni-dimensional approach to addressing poverty within transport. References were also made to time-based poverty and also to transport poverty i.e. a lack of access by affordable transport. These observations came predominantly, but not exclusively, from those not working on providing funds or specific technical assistance for transport projects.

Overall the majority of respondents considered the poor as one unit, and in most cases poverty stemmed from their economic situation. However it can be said that those working in walking and cycling and foundations were more sensitive to broadening the interpretation of poverty to include other dimensions, such as time-based poverty and location disparities highlighted within cities where the poor and disadvantaged communities had themselves fewer resources to address these issues within communities.

In addition there was a general recognition that any wider interpretation of poverty was not well integrated into transport projects, either as a primary objectives or as a main focus of impact evaluations. It appears to be better integrated into rural projects over urban ones. The main drivers mentioned for urban projects were alleviating congestion and air quality. Funding agencies that focus on intercity and main strategic transport connections mentioned that those on low incomes often benefitted from such projects. There was also

⁵ When a meeting, or part thereof, is held under the Chatham House Rule, participants are free to use the information received, but neither the identity nor the affiliation of the speaker(s), nor that of any other participant, may be revealed - <https://www.chathamhouse.org/about/chatham-house-rule#sthash.hisU5Ejf.dpuf>

recognition that there was an increasing attention to ensure that part of such projects did bring benefits to low income groups.

ii) Equity and justice

Overall it was noted that there were broad interpretations of equity and justice within transport. This included various aspects of social inclusion/exclusion and people's well-being. The most predominant focus for equity was around gender, with all the main funding institutions mentioning gender mainstreaming and their gender units/departments.

However this was countered by the fact that about half of them mentioned this was an area of growing interest overall for their organizations (i.e. not only in transport) and also several mentioned that they were really only just starting their programs and were presently aligning this unit with their transport portfolios. Several mentioned that there were few known experts in this area of transport and that this was a constraint, to some extent. Nonetheless it would be correct to say that overall gender was mentioned most frequently when equity was discussed, and it was also widely recognized that there was not enough attention being given to the differing transport needs of men and women.

3.2 Insights into poverty aspects within transport

From this short investigation and from the results of the interviews the following main groupings of poverty are suggested:

i) Income based poverty

There is a common understanding that as people's incomes increase so does their preference for motorized transport and they tend to travel longer distances. However the poor usually pay more for their transport, accounting for some 40% of household disposable income when the richer members of society enjoy more comfortable transport and have greater choice while only paying 5-10% (Carruthers R 2005⁶).

ii) Underserved individuals and communities due to race, culture, age, gender or ability (transport poverty)

Cities are diverse communities (more so than rural areas) and include not only people who may have moved from other countries bringing with them their local cultures and practices. The underserved are those that are not well served by transport (and often this includes other municipal services). The underserved include those who are able bodied but who don't have access to adequate transport services, and who are therefore underserved or transport poor. They may simply not have access to a private motorized or mechanized vehicle (such as non-car drivers or owners) and it also includes those whose access to transport is compromised individually, whether due to disability, age, or culture.

iii) Mobility reduced due to unintentional circumstances (transport disadvantaged)

This includes those that may be struggling with a physical or mental disability. Currently around 10 per cent of the total world's population, or roughly 650 million people, live with a disability. In most of the OECD countries, females have higher rates of disability than males⁷. Other examples include older members of the population or those travelling with small children who may also be slower and more vulnerable when using transport. Their accessibility needs are great and are frequently seen as an 'extra' burden on transport service providers. Typical examples from the developed world include issues with private

⁶ http://siteresources.worldbank.org/INTTRANSPORT/214578-1099319223335/20460038/TP-3_affordability_final.pdf - Carruthers R., Malize R., Saurkar D., (2005) A Affordability of Public Transport in Developing Countries

⁷ Source <http://www.disabled-world.com/disability/statistics/>

operators whose drivers are often reluctant to stop to pick up those who will need extra dwell time at a stop to board or get off the bus, compromising their contractual performance targets, to the legislative obligation for the provision of expensive infrastructure to make stations and stops accessible, and the accompanying additional maintenance costs which cannot be passed on to the consumer easily and usually have to be paid out of the public purse.

3.3 Insights into equity aspects within transport

Equity was interpreted in a wider context by many of the interviewees and included various aspects but especially those that might be socially excluded for a variety of reasons such as the disabled physically and mentally, low income and marginalized communities, as well as observations about increased numbers of single parent families, and the challenges around addressing the transport needs of an aging society and concerns about (un/under employed) youth.

Remarks were made about changes in family structures, including an increasing number of single parent families in both the developed and the developing world and several interviewees also mentioned the looking at migrant communities and/or other 'underserved' communities.

In addition there are those that suffer disability or social exclusion from:

- **Disability post crisis/accidents:** There are a growing number of people that have not been borne with disabilities but have lost limbs or suffered mental stress from wars, conflicts or accidents (traffic or other). They suffer from a variety of disabilities that may put a strain on the public services of a particular community if there is a number of returning war veterans or if there is an unforeseen accident that may impact a large number of the citizens.
- **Migration:** The topic of migration was brought up on several occasions, especially by those that were based in Europe. There are more than a billion people are migrants, of which almost 250 million of these are outside their own countries⁸. The majority of migrants and displaced populations move to urban areas bringing addition challenges to those that organize and operate transport, especially public transport.

These observations are confirmed in the literature and it is clear that those on lower incomes are disproportionately found among: single parent families, non-indigenous people (such as first or second generation migrants), the elderly, those with mobility difficulties and other vulnerable groups. Those without cars are also much more likely to be on low incomes (Stokes and Lucas, 2011). In addition, it is well documented that women and children often have less to spend, or may choose to spend less, on transport.

3.4 Relative importance of poverty and equity in transport projects

One of the objectives of this study is to build a better understanding of the relative importance of poverty and equity to other considerations in transport project choices (i.e. to what extent these topics may drive a choice of project) and how these topics are integrated into projects at development, implementation and evaluation stages, noting any trends or changes from past, present and future practices).

Many of those interviewed agreed that it was rare to have either poverty alleviation or increased equity as core reasons for any transport project, despite this often being central

⁸ Habitat III Issue Paper http://www.europeanhabitat.com/wp-content/uploads/2016/03/2_Migration-and-Refugees-in-Urban-Areas.pdf

to many organizations. More respondent felt that this had more traction in rural projects, but that in the majority of cases, poverty and equity were not main drivers of urban transport projects. Urban transport project were more often focused on alleviating traffic congestion, improving air quality and the provision of mass transit, and where equity and poverty aspects were included that these were frequently addressed through economies of scale and (targeted) subsidies. The two most frequently mentioned socio economic indicators when talking about equity in urban transport projects were cited as: accessibility and affordability.

**Typical rural road example from the African Development Bank
with a focus on socio-economic benefits**

The African Development Bank community-driven project in Eastern and Central Uganda to rehabilitation roads, build markets and introduce agro-processing equipment took a community-based approach to providing agricultural infrastructure and raising the incomes of farmers with a high level of participation from residents of local communities in setting priorities, selecting labour-intensive projects to build or improve agricultural infrastructure and maintaining it after completion.

This major project included the rehabilitation of 3,089 km of all-weather rural roads and over 200 rural roads. 52 rural markets were constructed and numerous assorted agro-processing equipment units placed. It raised awareness in local communities and mobilized residents to participate in taking inventory, setting priorities, and selecting projects to build or improve agricultural infrastructure and maintain it after completion.

Since 2008, the project area has seen the proportion of marketed agricultural produce increase by 7.5%, farm gate prices up by 36%, post-harvest losses reduced by approximately 20% and a 40% rise in household income. Meanwhile, travel costs have dropped by 63%. Other benefits include: the emergence of rural growth centers and more permanent housing; new schools and health facilities; higher school enrolment; better health, inter alia, because of more numerous antenatal visits to health centers especially for expectant mothers.

**Typical example of urban transport project description:
Transportation, Mobility and Logistics; Urban Development and Regeneration project, San Jose,
Costa Rica from Inter American Development Bank (IADB)**

This project will implement an 11 kilometer tram line spanning San Jose through its city center. It is being implemented between 2012 and 2017 for a total Investment of USD 250 million. The modern, efficient, clean and accessible tram will help reduce CO2 emissions and enable the use of renewable energy in accordance with the government's plan to achieve carbon neutrality by 2021. According to local studies, the proposed tram system in San Jose will reduce automobile traffic by about 4 per cent, resulting in 13,000 t less CO2/ year. The reduction of local pollution and street congestion will be of additional benefit to the local population. At the same time, the project promotes the urban renewal processes of the last 10 years, giving new value to the urban land and accelerating local economic development. The tram will also help to create better conditions for social cohesion and support for the poorest and most vulnerable populations by mobilizing 150,000 daily trips. Finally, the project should improve the reputation of the city of San Jose as competitive, efficient and environmentally friendly city, making it a role model for other Central American cities. The financial-feasibility, environmental and legal studies have shown excellent results⁹.

Box 2: Rural and Urban Transport Project Examples where Poverty and Equity are specifically mentioned

Box 2 shows typical language currently used when describing poverty and equity aspects of transport projects and the first example is taken from the AfDB web site. The urban

⁹ <http://www.iadb.org/en/office-of-strategic-planning-and-development-effectiveness/development-effectiveness,1222.html>

transport example was sourced from the IADB web site and although this MDB was not interviewed, its impact tools were mentioned in a few of the interviews.

A lack of affordable transport can clearly impede access to social and economic opportunity, especially for households with low incomes. The issue of affordability in transport may also be examined relative to the differing levels of income of various groups in a community and although affordability most frequently refers to the financial cost of travel, it is important to note that transport also presents a time cost on passengers, in terms of waiting for services (and low quality informal transport is renowned for not running to timetables), inter-modal changes and/or delays also which can also constrain mobility. The poor usually suffer these time-travel costs more than others.

4. Evaluation of transport projects with regard to equity and poverty

4.1 Measuring impact and evaluating projects

In almost all cases economic impacts are considered an important aspect of the evaluation of transport projects. Benefit cost analysis (BCA) is most frequently used to capture both public and private costs and benefits for society as a whole for transport projects. Ex-post economic evaluation is undertaken using typical indicators such as:

- total annual household transport cost.
- average 'unit transport cost'
- average transport time.

Environmental impact assessments were usually included for most projects. But on the other hand, many of those interviewed mentioned that social impact studies are not systematically carried out for all sustainable transport projects but that this was considered to be desirable. This was mainly due to a lack of capacity rather than a desire not to evaluate the social impact. However this has also led to a lack of credible and robust evidence being available with those institutions that help fund and implement sustainable transport.

It is unlikely that the BCA indicators mentioned above would capture much in the respect to the equity benefits of a project, underlining the need for social impact evaluations. The following box contains a list of typical indicators that may be included in social impact assessments, reflecting a more comprehensive approach but also a more complex and expensive framework for evaluation.

Typical Social indicators used for impact assessments for sustainable transport
Accessibility – proximity of destination and access to basic facilities via sustainable transport
Mobility – the ability to travel to a destination of choice and number of movements required to arrive there
Availability – the availability (frequency) of transport services and the choice of mode from origin to destination
Affordability – the percentage of disposable household income that is spent on transport. This can differ between men, women, children, the elderly and young.
Appropriateness – frequency and levels of comfort, personal space and security, accessibility for those that are mentally or physically challenged, design and cleanliness of system.
Reliability – how predictable are the transport services and if there is good levels of passenger information about disruptions and planned and unplanned changes

Safety – passengers must be able to access and ride services convinced of their safety. This includes quality of the driving, vehicle maintenance, technologies applications, tolerance of other road users and the quality and maintenance of the infrastructure. Safety needs to be assured both in the waiting and interchange areas such as stations and stops as well as on vehicle. In addition those that are not actually using the transport, such as pedestrians, cyclists or street vendors are frequently involved in traffic incidents.

Security – passengers should not be exposed to undue harassment, crime or petty theft

Health – exposure to air pollution and other hazardous chemical and materials, dust, light and noise pollution

Information - on fares, bus lines and routes, conditions for disabled or special groups, passenger rights, languages, information on changes and disruptions

Time savings – time spent on using public transport or other sustainable modes should not be more than using individual modes.

Stakeholder and public involvement – how planners, city authorities and operators interact.

Box 3: Typical Social Indicators used for Impact Assessment for Sustainable Transport¹⁰

From the discussions, no consensus could be derived on the tools used for evaluating poverty and equity (ex-ante or ex-post) for transport projects from the interviews. Most of the MDBs used their own tools and indicators required by the project evaluation systems (see Box 5 below). Several (both in the MDBs and from other organizations) mentioned that the tools currently available were sometimes complicated, cumbersome to use or lacking in some way. A few new tools were mentioned such as accessibility mapping (using GIS to map access to key services and jobs within urban areas) but it was widely agreed that a simplicity and clarity were key.

In further discussions it was suggested that the most effective way to address equity and poverty was at the micro level but that any such programs still required a strategic focus and needed to underpin national or regional transport policies. A new framework for addressing these issues within the context of sustainable transport was seen as being worthwhile and that addressing the present lack of capacity both within organizations and at national and local level would also be beneficial.

**Multilateral development banks take the lead
in funding sustainable transport projects**

At Rio+20, the United Nations Conference on Sustainable Development, the Asian Development Bank (ADB) joined seven other multilateral development banks (MDBs) in committing to financing more sustainable transport projects and reporting annually on the sustainability of their portfolio. They set up a Working Group on Sustainable Transport (WGST), tasked with developing a common assessment framework.

The proposed Sustainable Transport Appraisal Rating (STAR) is a tool for assessing the sustainability of ADB transport projects and monitoring changes in the portfolio. It is an overall rating is based on a seven-point scale and uses the following for assessing the impacts on poverty and social aspects:

Basic accessibility - Improve people's access to basic needs and social services, particularly health care and education

Employment - Generate or provide access to quality employment opportunities for the poor

Affordability - Provide transport opportunities that are affordable to the greatest number of people

Safety - Improve the safety and security of transport users and local communities

¹⁰ Source: ADB Report 2009 Social Impact Assessment of Public Transport in Cities
<http://rlarrdc.org.in/images/SIA%20Report%20ADB.pdf>

Inclusion and social cohesion - Provide transport opportunities that are accessible to all groups of society, including women, ethnic minorities, and people with disabilities; foster social cohesion and interaction, and minimize severance of communities and resettlement.

Box 4: MDBs take the lead in funding sustainable transport

Social impacts generally do not have a monetary value readily available, and are not directly captured in measures of economic activity such as Gross Domestic Product (GDP). Yet by definition they affect our well-being. Social impacts such as improvements in community cohesion in a local area or a better local environment resulting from a decrease in pollution are notoriously hard to quantify, let alone monetize. It is known that there are a number of indices that are being used for evaluating social welfare.

There are a growing number of new indexes that try to capture these effects, beyond GDP. Examples include Gross National Income (GNI) per capita, UNDP's¹¹ Human Development Index (HDI) (which consists of health measured by life expectancy at birth; living standards measured by gross national income (GNI) per capita and education measured by mean years of schooling at birth and the expected years of schooling for adults), Inequality Adjusted Human Development Index, the Multidimensional Poverty Index¹² and the new City Prosperity Index – all used to try to capture progress in social development.

Generally however a lack of rigor in the evaluation of transport project in terms of poverty and social impacts was suggested by the interviews. Indeed it was an area that was highlighted and it was felt that currently systematic evaluation of social impacts was considered rather patchy. For example, although the ADB's STAR rating framework exists and looks very promising, it is not yet unilaterally used by all the development banks that signed the RIO +20 agreement.

It was mentioned that present frameworks are not always easy to apply and in some cases the procedures and measurement frameworks were not considered to be ideal or reflecting present sustainability and climate change imperatives¹³. There was also some agreement that there is a shift in emphasis in some of the organizations taking part and that these thematic areas were becoming more important.

Resettlement of people displaced by transport infrastructure projects was rarely mentioned as a core concern and it was not spontaneously brought into the conversations. The author found this somewhat surprising but this may be due to the profile of those interviewed rather than any other factor.

Transport projects and resettlement of people

The Mumbai Urban Transport Project (MUTP) commenced in 2002 to improve transport services in India's premier megacity also involved urban resettlement on an unparalleled scale. Over 100,000 people living along roads and railways tracks needed to be resettled to improve rail and road transport services. While resettling people is difficult anywhere, it appeared almost intractable in the complex socio-political environment of Mumbai, a linear city that lies along a narrow north-south peninsula and is one of the most densely populated urban areas in the world. Almost ninety-five per cent of the affected people did not have legal title to the land they occupied and affected structures included an assortment of residences, businesses, religious and community facilities, schools, dispensaries, nurseries, and so on. Getting people from such diverse social and economic backgrounds to accept homogenous resettlement options was not easy and finding alternative

¹¹ UNDP – United Nations Development Programme

¹² Multidimensional Poverty Index has been developed by the Oxford Poverty & Human Development Initiative. Ten indicators across three categories (health, education and standard of living) are used to construct a measure of poverty: a person is considered 'multidimensionally poor' if he or she is deprived in at least one third of the dimensions.

¹³ This was a general observation and did not refer to the STAR rating system

resettlement sites in land-scarce Mumbai, mobilizing the resources to access and develop these was even more challenging was. The project has become a worldwide example of urban resettlement on a mega scale¹⁴.

Relocation due to the construction of transport infrastructure such as the Delhi metro had significant negative impacts on the social well being of the affected households along the planned lines. The relocated households were given land (on short term leases) as compensation, but their loss of income, increased cost of mobility with many children dropping out of education and other asset losses were not factored in. Relocating households within the vicinity of the metro (i.e. near where they used to live) was not at that time considered to be an option, but in retrospect it may have caused less social suffering¹⁵.

Box 5: Transport projects and resettlement of people

A few years ago UNHABITAT cited major transport projects, as being one of the major causes for the most displacement of people – typical examples include slum clearings for urban expressways or railroads. These split communities and are often planned without due consideration of the social impacts for those poor or informal communities – and with few alternatives the poor are unable to adapt to the changes imposed. This has a variety of negative social impacts. One are the numerous cases of people especially young people being killed by crossing a major road or railway because the planned crossing is too far away from their traditional crossing points and may be poorly planned in respect to their needs and habits.

From those organizations that were working in the developed resettlement was more of a problem in connection with new developments or redevelopments of brown field sites. Here concerns were voiced over the trends in planning leading to a lack of mixed development that is associated (sometimes unintentionally) with socially excluding lower income families. This seems most frequently associated with gentrification of urban areas (often with new or upgraded transport links) where incumbent low-income people may be displaced as part of a rehabilitation or new Transit Oriented Development (TOD) area. Shifting these people away from city centers and transport connections may compound their social exclusion and also as the new area becomes attractive to visit results in increased trip from the outside negating any carbon advantages that may have been assumed. Generally it was agreed that urban sprawl was a challenge for the low income or disadvantaged as they were often displaced for economic development reasons.

The interviewees were also invited to share their views on modal differences. Discussions included comments on the poverty and equity aspects of rail based transport such as high-speed rail, light and suburban rail, BRT, city and minibus services, cycling and walking. Overall it could be said that the very poor were less able to take advantage of more formal public transport projects such as higher end rail projects and BRT, and that lower and middle income sectors of the population probably benefitted most from these types of projects. The price of the transport ticket is very important to those on low incomes who spend a higher percentage of their income on their daily transport needs, especially to access jobs and education. Some discussion was had around the issue of subsidies and how these can help the poor but that often the policy framework around how subsidies are given to operators meant that everyone and not only the poor paid less – with more targeted research into the accessibility needs of the poor it was thought that this mechanism could deliver better results.

It was agreed that little was really known about the distribution of wealth within each group of transport mode. This is further confirmed in the table (Table 1) supplied by WRI on their

¹⁴ Source: World Bank

¹⁵ Source: ADB Social Impact Assessment of Public Transport in Cities 2009

work comparing the BRT benefits in four cities, which shows that mid level incomes appear to gain the most.

Distribution of Net Benefits by Income Strata (2012 million USD)					
BRT System	1 (Lowest)	2	3	4	5 & 6 (Highest)
TransMilenio, Bogota	\$ 92	\$ 642	\$ 603	\$ 238	\$ (176)
Metrobús, Mexico City	\$ 11.4	\$ 37.9	\$ 12.2	\$ (9.5)	\$ (16.4)
Rea Vaya, Johannesburg	\$ 18.6	\$ 8.2	\$ 35.2	\$ 353.9	\$ (273.3)
Metrobús, Istanbul	\$ 765.9	\$ 2,308.5	\$ 1,414.0	\$ 969.0	\$ 952.1

Legend: Gain least/Lose Gain most

Table 1: The distribution of net benefits by income of BRT systems from four city case studies¹⁶

From this work and the remarks of those interviewed, one could conclude that as speed increased, equity and social justice may also decrease. For land transport, high-speed rail can be considered as being the most expensive and fastest mode of travel, BRT, metros and Light Rail being the second fastest while walking is the cheapest and slowest. These choices would not reflect any of the co-benefits that may be associated with either end of the speed spectrum. This may also present a promising area of research.

5. Environmental considerations in transport and the poor and disadvantaged

Addressing environmental aspects that matter to the poor was seen as being especially troublesome while at the same time being critical to sustained poverty reduction, achieving the Sustainable Development Goals and the internationally agreed Paris Climate Change agreement. Several of the organizations interviewed also had climate concerns as a core value and driver for their work.

Several major conflicts and concerns were expressed on how we shift to low carbon pathways for transport and the following summarizes the four core themes mentioned in the majority of the interviews.

- A present mismatch between increasing the availability of transport for those who today already fully utilize low carbon modes such as walking, cycling, intermediate modes¹⁷ (and public transport when it is available), and the distances that are currently normalized for a daily commute to work, school or other facilities. As the majority of people using these low carbon modes fall into the category of low income – under the present paradigm for transport development shifting their daily trips to motorized modes, in order to give them the opportunities to lift themselves out of poverty, creates a vicious circle that increases environmental risks and probably lengthens their daily commutes.

¹⁶ Social, environmental economic impacts of BRT systems Embarq WRI

¹⁷ Intermediate modes of transport include a variety of mechanized modes such as hand or animal carts and other vehicles that adapted to local contexts and needs.

- Discussions on how to improve the measurement of sustainable transport impacts, especially in terms of uplift out of poverty and increasing equity. It was observed by many that much of the investment in transport infrastructure benefits the middle and upper classes rather than the poor. These social groups use motorized personal transport the most and also consume more products and services. In turn this effect is often measured as increased national or local GDP (and considered a ‘good thing’). On the other hand, little is known about or measured in terms of the positive or negative impacts on local communities or national development of those that use sustainable modes of transport most (either because they have no other choice), or those that can afford to make choice but choose not to consume (such as those that choose not to own a car, for example).
- Secondly some grave concerns were shared about the dilemma of investing in ‘greener’ transport options. Addressing the environmental impacts of transport often result in increased costs – buses with higher environmental performances also come with a higher price tag. Usually environmental performance increases with price, resulting in higher capital costs for vehicles and infrastructure at the expense of increased connectivity, as choices have to be made. High speed rail, metros and BRT all come with differing price tags and are much more expensive than regular city bus networks, cycle or pedestrian infrastructure. Although the political recognition of an expensive mega project is great and more attractive, in reality these choices also divert public money from high impact low cost projects with less visibility and media interest.
- There is a tendency for a focus on the technology and innovation to ‘solve’ the pressing problems facing transport such as its carbon footprint, inefficiencies and distortion in the market place. However it was also observed by many that this may also create a ‘digital’ divide between those that have easy access to the Internet, a smart phone and can join car clubs/ bike sharing and other shared options that rely on a fairly high level of digital literacy and technological understanding, and in some cases the latest programs and hardware. Indeed as many second hand cars are currently exported between richer and poorer countries – exactly how this will work with technologically complex vehicles that will need garages to have the latest equipment and may rely on propriety on-line diagnostics to be maintained is not at all understood.
- The societal aspects of quality of life, general welfare and work/life balance go beyond alleviating poverty and equity but are nonetheless important all over the world, in every culture and probably to every individual. Indeed it is well known that the deepest values of humankind revolve around family, friends and appreciation by others rather than money, goods and consumables. In this respect more and cheaper transport may not deliver what people crave, but carefully balancing the social, environmental and economic benefits that transport may fulfill these needs better.

6. A changing context for sustainable transport and potential implications for equity and poverty

The transport sector is a dynamic sector and it has seen profound changes over the past decade. There has been a shift towards contracting many transport services out to the private sector for both operations and infrastructure and numerous new business models have been developed, some more successful than others. The provision of transport-

associated services¹⁸ has also exploded especially within the digital domain, creating many new business opportunities and jobs. However it was observed that this might create new areas of exclusion. An aging population may find it too complicated to learn how to access transport in a new digitally based environment, private operators engaged under contract to deliver a service are judged on results and KPIs may not be compensated for an extra dwell time at a bus stop to pick up a passenger in a wheel chair and the time to properly strap them in. Providing services at off peak times and to low-income neighborhoods needs public support and subsidies to make the services profitable. It is thought that it is likely that these market developments affect the disadvantaged and 'underserved' more than those that have transport choices.

6.1 Trends identified from the conversations

Key trends observed that were felt to be of some importance to poverty and equity aspects include the following.

i) Changes in the market structure of transport service provision

The impacts of increasing the privatization of public transport operations in particular can have fairly serious negative effects on the poor. There has been a growing trend over the past twenty years to move away from publicly owned and operated services. Shifting the operation of transport services and in some cases infrastructure management to the private sector is seen as a way to increase efficiency, productivity and to lower costs and risk for the public sector. The reduction or non- existence of subsidies and informal versus formal transport all pose serious challenges when we consider those that need affordable transport services most but are probably least able to pay.

This trend also impacts those that work in the informal sector – a key employer of low skilled (or even illiterate workers – usually male). Many minibus drivers, or those that accompany the driver working to get profitable passengers, motorcycle, rickshaw or other taxis drivers are themselves locked into this sector not by choice but as a consequence of little education, the informal nature of the sector and availability of opportunity. However they, themselves are also quite vulnerable to any change in market structure, as this group are often out of the social net, do not pay tax on income and have no security of employment beyond the next day.

ii) Socio-Demographic changes

Generally it was agreed that people were living longer everywhere but that this was becoming pronounced especially in Japan and Europe where transport systems will need to change and adapt to a predominately aging population. On the other hand, the majority of the population in Africa, Latin America and some parts of Asia is under thirty years old, and under employment of youth is a growing challenge. Increasing the provision of jobs in the transport sector can be a solution.

Religious extremism has also grown over the past fifty years and is no longer confined to inaccessible areas. This has an undeniable impact on equity and even if transport connectivity to health and education opportunities is in place, if cultural restrictions curtail this access, families suffer and child mortality increases.

The past fifty years has seen many changes in traditional family structures and there are an increasing number of single heads of households or re-composed families.

¹⁸ Such as Uber or Lyft

iii) A lack of capacity and coordinated policy development

Poor integration between national, regional and city policies and programs that may include transport, environmental and social aspects was mentioned in several interviews. National poverty strategies rarely included a transport dimension.

The paucity of attention to equity was also noted by many of the interviewees. Few institutions and governance structures at national level really encourage an integrated approach and this is an area that can certainly be improved. As clarified by the development banks, decisions on transport are driven by a country's national strategy and the nature of requests for help from their governments.

Suggestions and guidance can be put forward but it is the national entities that have the last word. Integrated benefits can be both difficult to achieve and difficult to measure. Too often, the pre-development and development of infrastructure projects have a focus on narrow, short-term cost-benefit analysis at the expense of generating long-term sustainable value. The systems in place for evaluating potential projects may fail to take long-term (sustainable) value into account integrating life cycle costs or benefits that are hard to quantify or that accrue diffusely across communities. Therefore cross-sector projects that might integrate environmental transportation infrastructure with energy and/or water infrastructure, for instance, and that might bring numerous benefits are rare especially if there is no single entity with capacity to manage and account for the "all-in" benefits of projects.

6.2 Areas of tension

It was observed from the interviews that there are some areas of tension between the ambition to achieve some overarching goals and the realities of implementation, the political nature and sensitivity of transport and how it is financed.

i) Economic imperatives

a. Increased globalization at the cost of localization

With increased globalization there is a growing rather than closing gap between the rich and the poor. Transport is a key sector for employment especially if the formal and informal sectors are combined. However there are tensions within the sector and between the formal and informal sectors.

b. Measurement frameworks

Present indicators and measurement of impact frequently focus on time savings – however this underpins a self-created problem. As the poor are moved out from central areas due to transport the longer the commute and therefore any time savings can be considered to be beneficial to the poor. But had they not had to move to the outskirts of towns the first place their commute time would be significantly not marginally reduced.

c. Fiscal regimes and taxes

In addition there are known tensions between the fiscal regimes around energy and transport. Fuel taxes are lucrative sources of funding for governments and any improvements in efficiency means more miles/kilometers driven on less fuel, or for less tax revenues. In California, a recent state report noted that by 2030, as much as half of the revenue that could have been collected will be lost to fuel efficiency. As a result, the state risks running out of money to run its public transit (buses and trains) at the same time that California is promoting Transit Oriented Development. The current gas tax is seen as a doubly regressive tax; sales taxes on non-luxury goods require low-income families to pay a much higher percentage of their income than wealthy people. But in the case of the gas tax,

low-income drivers are also actually paying more dollars, not just a higher percentage of their income¹⁹.

d. Creating a digital divide as a trade off for efficiency gains

Efficiency may lead to the creation of a digital divide, as new transport services become more intermodal and Internet based. It is clear that efficiencies from this approach include real-time saving on by removing wasted kilometers driven, maximizing capacity and loads in freight and moving us away from single use and ownership of vehicles, bringing low carbon benefits. However services frequently require Internet or smart phone technologies to access them. On-demand (such as Uber or Lyft) and shared services such as car or bike sharing often require this. Bank accounts are frequently needed in order to get access to a credit/debit card, that are in turn needed for internet banking for payment of services.

In addition, more private operators are using yield management computer based programs for getting lower prices/best deals for rail or public transport as long as the booking is done via the Internet. Yet if you do not actually have a house number or recognized address this can pose a problem as you may only have limited Internet access. Not all slum dwellers or those living in informal are actually very poor and most would have a mobile phone but they may be outside of this formal system. Investigating how to address these challenges and include them in the development of options better adapted to those that are poor creates new paradigms and business cases.

ii) Social imperatives

a. Socio-demographic changes

There are strong demographic changes with an aging society in some areas and a predominately younger society in others.

Changes in family structures and differing transport requirements at different life stages have already been mentioned as key areas of concern. Increasing that the understanding of connectivity to jobs, education, health and leisure facilities spatially that are provided (or could be provided) by transport services are appropriate to the majority of those living in that section of towns and cities. Transport systems remain in place for many years and people need different transport services to different locations at certain stages in their life. Someone over 60 on a limited income is less interested in accessing major shopping centers or schools but is very keen on being able to get the hospital or clinic – but they may have chosen their residence when they had younger children and school and sports facilities. While areas where the populations are predominantly younger than 25 years old, their transport needs are different again. However the planning and provision of transport cannot only focus on the majority as the value of a transport trip to those that are not ‘choice riders’ but ‘captive riders’ – i.e. those that have little or no choice – is higher.

Women trip chain more frequently and require transport in off peak times of the day more often than men, but they also benefit from proximity of destinations not just from access to longer distance and usually more expensive and time consuming services. But little is known as why they might use or not use a transport service, despite gender mainstreaming climbing up the political agenda since a number of years.

ii) Spatial changes

Global market integration and a tide of movement from rural areas to cities has affected social structures and travel horizons. Such trends have also brought more women into the

¹⁹ <http://www.publicadvocates.org/2015-02-16/paying-for-the-transportation-low-income-families-and-all-californians-need>

work force in many low-income countries, such as into the garment industry as in Bangladesh. But these changes have also drawn many women into precarious employment it is well known that women are in more positions of care, unpaid work and temporary jobs.

The present dislocation between land use and transport planning and the imperfect institutional relationships between governance structures (i.e. local and regional governments) and the multiple stakeholders in land use planning often affect low income populations in unexpected or perverse ways. For example the quality of public space and 'liveability' of neighborhoods and the safety of citizens can be reduced by the building expressways or flyovers. These projects may displace people as mentioned or just reduce the proximity of some services such as schools, health centers and markets causing extra hardship.

iii) Environmental imperatives

a. Low Carbon /decarbonization pathways

Concerns were raised in particular around the challenge to provide accessibility and retain (for those on low incomes and who use low carbon modes most) low carbon mobility habits. The majority of new innovations focus on technologies that are not accessible to everyone. Electric cars/buses are still very expensive and need clean electricity – such options are of little interest if you (or your city) do not yet have 24-hour household electricity.

iv) Political imperatives

a. New strategic focus of organizations

Several of those interviewed mentioned changes and shifts of focus within their organizations. Examples include the AfDB ten year strategy 2013 – 2022 that will focus on two objectives to improve the quality of Africa's growth: inclusive growth, and the transition to green growth.²⁰ The first and overarching objective is to achieve growth that is more inclusive, leading not just to equality of treatment and opportunity but also to deep reductions in poverty and a correspondingly large increase in jobs. The new ten-year strategy aims to broaden and deepen that process of transformation, mainly by ensuring that growth is shared and not isolated, for all African citizens and countries, not just for some. It also aims to bring about growth that is not just environmentally sustainable, but also economically empowering. It is felt that when growth is inclusive as well as "green", it will create the jobs that Africa needs. The Bank will invest in infrastructure that unlocks the potential of the private sector, championing gender equality and community participation and support green growth.

b. Transport is not an attractive 'career' portfolio

Unfortunately in the major of cases in the political arena, transport is not seen as being a key portfolio. Transport therefore tends not to attract the types of politicians that are comfortable making difficult but visionary decisions that will pay off after their political mandate may have ended. Turning around transport in a period of 3-5 years is not easy as the natural inertia in the market often delivers but later. Helping to ensure that transport is seen as a key action area for addressing poverty and equity can help to also put more sustainable transport projects on the ground.

²⁰ http://www.afdb.org/fileadmin/uploads/afdb/Documents/Policy-Documents/AfDB_Strategy_for_2013%E2%80%932022_-_At_the_Center_of_Africa%E2%80%99s_Transformation_-_Executive_Summary.pdf

c. Reputation and moral management

Shareholders of large companies, NGOs and civil society generally are getting more vocal about large and expensive megaprojects – and major transport infrastructure projects certainly fall into this category. Both environmental and social equity sometimes suffers as large projects are attractive politically and thus such project objectives may be treated as a highly malleable concept in the hands of decision-makers. Many come up with post ad-hoc rationalizations about why equity or environmental protection featured in virtually every project, with every ‘dollar’ spent benefitting a disadvantaged community somewhere in the city or in local communities. Accountability in all areas of public life is on the increase, and this includes the voice of local communities affected by transport projects. NGOs are also getting more organized in demanding ethical behaviors.

NGO pressure becoming more vocal

Brazil’s National Development Bank (BNDES) failed to detect a raft of illegalities and serious social and environmental problems when agreeing to finance a controversial highway project through the Bolivian Amazon, according to an international coalition of organizations that published a complaint against them. The coalition argues that the development bank – the world’s third biggest, with a larger portfolio than the World Bank – is financing major infrastructure projects across the Amazon with insufficient analysis of whether or not they are legal, or of their social and environmental impacts. The coalition is calling on BNDES to urgently reassess its methods for selecting projects that pose significant risks to the world’s largest rainforest and its indigenous and traditional communities.²¹

Box 6 :NGO pressure becoming more vocal

7. Overall Findings and Recommendations

This section puts forward a synthesis of the findings and makes recommendations for further activities that could be undertaken by SLoCaT and its members.

7.1 Overall Findings

Almost all those interviewed without exception agreed that assessing poverty and equity was complex. For transport, this was not made any easier by the wide variety of types of transport intervention and the many different aspects associated with transport projects – these include policy development, institutional and structural aspects of roles and responsibilities in planning, organizing, financing, operating, the various intersections between public and private sectors, modal specifics, soft and hard aspects (such as social programs to help disadvantaged communities, high end technology based projects, engineering and infrastructure) as well as training and capacity building. Inadequate and/or a lack of disaggregated data, undercounting and undervaluing walking and cycling trips, ignoring short trips or children’s travel all add to the difficulty in quantifying social inputs and impacts of sustainable transport.

Trying to apply a common framework to understand the distribution of (social, economic and environmental) benefits of transport improvements, and in particular sustainable transport, was seen as being desirable but seen by some as being somewhat utopic.

Significant differences between the developed and the developing world were observed from the interviews. However generally speaking it was felt that despite poverty alleviation

²¹ Source: <https://www.globalwitness.org/fr/press-releases/latin-americas-biggest-development-bank-overlooks-widespread-illegalities-financing-major-highway-project-amazon/>

being a core value of many organizations, poverty reduction strategies were rarely included as a core component of major transport project development.

Overall it was universally agreed that low income people depend more heavily on public transport (formal and informal) services and often have longer travel times (time poverty); they usually pay more (as a percentage of their household disposable income); and are exposed to more risks and carry a heavier burden from road accidents, air pollution, noise disturbance, harassment and crime than middle and high income people. However the details of how transport projects could be used to change this is not considered in any great level of detail. In addition, along the same lines, the fact that the value of a public transport trip to a captive rider is much higher than to a discretionary passenger was rarely brought up in the discussions or that this might be a useful indicator to gauge the impact of interventions.

The Avoid – Shift – Improve policy framework for sustainable transport was seen as being useful policy framework – but there is an increased requirement for the governance dimension to be added and the new iteration of it under the terminology ‘EASI’ was mentioned. This includes the important dimension of an enabling environment moving the framework to: Enable – Avoid – Shift and Improve. The aspect of governance in relation to poverty and equity is also seen as being underdeveloped.

Increasing the body of knowledge in a more focused fashion was suggested by several as being helpful to understand how to better use sustainable transport provision as a massive impetus to addressing poverty and equity challenges in both urban and rural situations. Numerous benefits, in terms of connectivity but also in societal cohesion were mentioned.

Presently most organizations use the ‘lowest common denominator’ approach, which means that benefits accrued from any project should deliver a positive trickle down effect to everyone. However there is little knowledge to what extent these benefits are being enjoyed, by whom, or if small changes in the project preparation could have delivered significantly more to groups that are more disadvantaged than others. An example includes the lack of understanding on how sustainable transport could be made more gender sensitive – and if more women were able to access transport, how this might empower them and bring major improvements to whole families rather than just to individuals.

Overall it was agreed that there is also a lack of deep understanding and capacity on how to address and find solutions to alleviate the different burdens that those that are transport disadvantaged carry. More often than not – the poor were bundled as one rather than designing projects that would help specific groups. Gender can be considered the exception as there are a growing number of projects that try to include a gender dimension, that said there is still a lot of work still to do before one can say that we have gender sensitive transport planning or delivery.

It was also recognized that there were challenges to addressing both poverty and equity. In particular it was pointed out that a country's overall poverty reduction strategy also required an engine of growth to create more to distribute. Infrastructure sectors, in particular transport, contribute to poverty reduction both directly by providing the poor with transport access that allowed them to connect to opportunities and services, and indirectly by enabling the economy to expand and thereby provide more economic opportunities and employment and more services that could be taken up by the poor. However detailed understanding of how this works could be improved. In addition poverty and equity respond well to micro level projects, which require extra effort to organize and manage, and they also need to be designed to underpin strategic goals and policies. Capacity at national and local levels to implement all of the above were cited as being major constraints.

Nonetheless there were also many positive references to change within organizations that ultimately should help increase the level of action to address these topics better and align them with sustainable transport goals. High-level strategic focus backed by programs and finance to provide more equitable transport and increase the understanding of the positive impacts of integrated and well-funded transport projects were mentioned.

7.2 Recommendations

Many people noted the co-benefits of sustainable transport and it is therefore proposed that promoting multi-sectorial programs could also help improve transport equity and poverty. A program or project could, for example, be developed around a include shared interest areas that might include transport with food production, environmental protection and women²²'s empowerment as strategic objectives and be undertaken in the peri-urban outer edges of urban settlements where employment for women is difficult. It is suggested that this would deliver higher benefits in terms of poverty alleviation and social equity than a transport focused project.

In this respect those that today are the main users of sustainable transport should be seen as part of the solution and not part of the problem.

Key areas of action for SLoCaT and its partners to include in their working program include:

- strengthening institutions on the socially equitable transport and its dimension in poverty alleviation;
- promoting pro-poor policies and a better understanding of the distribution of the benefits;
- strengthening capacity at national and local levels including community, NGO and grass roots capacity;
- building a better evidence base for decision-making.

It was also considered normal, but from the discussions unsatisfactory, to consider those that are poor as one group, with similar profiles and transport needs. In the same vein, those that are 'transport poor' should not be considered as one entity with a common profile either. Identifying projects that could be considered beneficial for specific rather than general, disadvantaged people could help to build a more robust body of knowledge and identify indicators that could be included in more transport projects to measure poverty and equity distribution better.

It was felt that SLoCaT is in the privileged position having representatives of all the modes of transport as members to take a lead in this area. It was suggested that by working with this international membership promising areas and opportunities could be jointly explored and further built on to create a more robust body of international evidence that can be used for policy and project development and guidance.

Building a body of evidence on cycling

Outlook Report on the Global Impact of Cycling on the Global Goals

Cycling is an affordable and low carbon transport mode. Both cycling infrastructure investment and operations are also low cost, however the capital investment in bikes can be a constraint to the very poor. In addition cycling helps to improve health and can be enjoyed by people of all ages – overall making it a win-win-win transport mode from a poverty and equity aspect. It can also help to deliver on Sustainable Development Global Goal #1 'No Poverty'. However, it can do more than that for disadvantaged communities but there is less knowledge on how it can help to provide much needed jobs for low skilled people. Improving the body of evidence by initiating a major study to investigate

²² This could also be directed toward older or younger members of society in the same way

science- based facts and figures on how cycling can positively impact local, regional and even national economies, as well as having a direct and positive impact on households is proposed by SLoCaT members European Cyclists' Federation and World Cycling Alliance.

Box 7: Building a Body of Evidence for Cycling

7.3 Increase the understanding of the reciprocal relationship between sustainable transport, poverty alleviation and equity.

i. Improve supportive and inclusive policies and institutions

Improving institutional cross-sectorial and horizontal decision-making to include the three main dimensions of sustainable development – economic aspects (affordability, access to opportunities), social concerns (health, safety, noise, increased active travel (for some) and transport independence irrespective of age or gender), and environmental protection (clean non-polluting transport options, land take and efficiencies) takes extra effort. There is a general lack observed for this to happen at either national or local level, and without this imperative and framework for action it is difficult to inclusive policies to be multi-sectorial. Looking at the effects of globalization and urban development is especially relevant for the developing world where large populations are rapidly urbanizing and connecting to global markets, while populations in some urban areas in the developed world are declining, creating challenges for both national and local authorities

ii. Increase the understanding of distributed impacts

The sustainable qualities of growth – be it green or inclusive – matters to the poor and disadvantaged more. Current approaches appear to focus on a trickle down effect that is difficult to establish that the positive benefits of a transport project is evenly distributed to a variety of low income groups. Increasing certainty about the positive impacts of sustainable transport (to whom and why) as well as increasing the understanding about who is able to take up the opportunities that improved connectivity and transport options brings via specific interventions is seen as being helpful. The unintended consequences of development, densification and other forms of development designed to provide greater economic opportunities and efficiencies, can also damage people's well-being, quality of life and autonomy, especially for those who maybe disadvantaged in some way, by increasing levels of violence and/or degrading the environment. For example, while policymakers seek ways to unlock women's potential in the economy and workforce, little is yet understood about how their economic empowerment is affected by macro conditions, and how these vary by country, region and culture.

Monitoring progress on the sustainable development goals in terms of transport improvements would help create a body of knowledge and also cross fertilize ideas across sectors, modes and regions.

iii. Develop more robust tools for measuring impacts

More in-depth research and adapting tools to improve the understanding of the impacts of expected benefits to different socio economic aspects in terms of poverty alleviation and equity could help focus and priorities policy, project and program developments.

iv. Document case studies and good practices more thoroughly

There is presently a paucity of examples that can directly be showcased that they have benefitted the poor most.

v. **Initiate and promote pro poor technology solutions for the developing world.**

The poor and those that are today mobility disadvantaged risk to suffer even more as transport moves into the digitalized universe. Car and bike share schemes usually require home based Internet access; smart phone capability, identity cards, bank references and credit or payment cards in order for people to be able to join the scheme. This can be a significant barrier to the poor who may not have a legal residence, recognized house number or address – and there are some 3 billion people today that fall into this category.

7.4 Next steps

Overcoming such issues are not insurmountable but will require attention and innovation as well as proper legal frameworks. The ‘beauty’ of transport is that it has many dimensions; it impacts the life of simply millions of people every day and in addition it presents many opportunities for achieving many of the global ambitions such as climate change, sustainable development or urban development.

First and foremost poor and the majority of vulnerable groups of society are today high users of the most sustainable modes when it is available, adapted for their needs and is affordable. This can be considered to be an advantage and not a disadvantage as convincing those that are already used to the private car can be considered to be more effort than keeping the members of society using the lower carbon modes of transport but with higher rates of satisfaction.

From this work it is clear that there is a knowledge gap on the value-added of understanding how sustainable transport can serve those on low incomes, beyond just the fact of a better level of connectivity. Indeed from the few examples cited by respondents, the transport benefits were strategically underpinned by other benefits such as getting produce to market, constructing local market facilities, improving access to water and increasing educational and health opportunities. Few interviewees could immediately bring more than one example of a national or international project that had demonstrably improved equity and poverty. It is suggested, therefore a mapping exercise to identify projects and suitable tools could be useful. Inspiring examples of success could therefore be observed as a present gap or shortfall, and SLoCaT and its members are well placed to help build a better evidence base for decision-making.

The roles and responsibilities for driving such changes ahead are not clear and the work of SLoCaT and its members could be very useful to help debate and suggestion solutions. The following table helps to steer suggestions for action.

Table 2: Suggestions for follow-up from the results of the interviews with SLoCaT members.

Category of Follow-up Action	Organizations that should lead	Role of SLoCaT	Role of Foundations and Philanthropic organizations
Knowledge Management	<p>It is suggested that SLoCaT and its members are well positioned to work to build a better evidence base. Its members include organizations that cover both developed and developing world and the wealth of knowledge and experience could be brought together in a pragmatic manner.</p> <p>It is suggested that a council of SLoCaT members might lead a major program of thematic studies. This could include a cities dimension (WRI); Non-motorized transport (Walk21 and ECF), Modes (UIC, UITP etc.) and others.</p>	<p>SLoCaT can play an important role in building a consensus for defining poverty and equity in terms that may be more relevant to transport backed by science based evidence. It is also well positioned to collect and share what has worked and where there have been successes. This is ongoing within the SLoCaT working program for climate change but not yet for poverty and equity. Indeed the nexus between low carbon transport and equity is not yet discussed, providing an opportunity for SLoCaT to take the lead.</p>	<p>Provide support for series of studies to clearly document the importance of sustainable transport in alleviating poverty and increasing equity, with a view to providing guidance to decision-makers. There is a gap for specific work to be commissioned such as employment, age and life stage, gender and technology for greater equity.</p>
Capacity Building	<p>Many of SLoCaT members have the opportunity to organize webinars, seminars, workshops and training and a program where different organizations are able to take lead could be arranged to maximize both opportunities and capacity within the membership. Combining resources and knowledge between and among the members can bring solid efficiency in</p>	<p>SLoCaT has a strong convening and facilitating role in implementing capacity building programs. Developing a modular training and capacity building program by SLoCaT could be useful for all SLoCaT members and also shared with education establishments. Funding would</p>	<p>Using the strong convening power of Foundations, greater attention can be gained to a broad audience, especially outside the transport sector. In addition there is a need to train experts in this from the Global South which may fit with the values and objectives of these</p>

Category of Follow-up Action	Organizations that should lead	Role of SLoCaT	Role of Foundations and Philanthropic organizations
	<p>delivery – suggested lead organizations include UN bodies and MDBs, professional associations such as UIC and UITP, city networks such as WRI/Ross Centre for Cities and research partners such as Wuppertal Institute</p>	<p>need to be sourced for an open platform approach.</p>	<p>organizations.</p>
<p>Increase technical assistance via a facility for policy and project development</p>	<p>Resources for the provision of technical assistance appear to be a major constraint within organizations – up stream and down stream (i.e. within those that fund and prepare projects and those that implement or evaluate them). A number of SLoCaT members could be in a position to take the lead in this. Increasing assistance under a specific program could deliver added value and improve projects with small but significant changes.</p> <p>This can also be associated with the various climate and Rio +20 commitments that were made by SLoCaT members.</p>	<p>Poverty and equity are not yet seen as key drivers for project preparation. SLoCaT has access to a unique pool of experts that include academia, social scientists, transport, city and climate change experts that could be useful for providing expert advice coordinated by SLoCaT.</p>	<p>Foundations are active in providing technical assistance and this could be additionally focused by supporting such a facility.</p>
<p>Tools</p>	<p>The tools available are not easily applied or widely available²³. It is felt that if this is not clear to SLoCaT members it is unlikely to be clear or well used to those at national, regional or city levels. Some of SLoCaT</p>	<p>SLoCaT could undertake a mapping exercise of present tools that could also highlight those that SLoCaT member may feel are most suited to the transport needs. A review of methodologies including the work</p>	<p>Accessing programs and work done on this issue in other parts of the work and support for this review is considered both useful and timely.</p>

²³ From the interviews few people could actually cite tools that they would recommend for assessing poverty and social impacts.

Category of Follow-up Action	Organizations that should lead	Role of SLoCaT	Role of Foundations and Philanthropic organizations
	<p>members are already developing useful tools and studies (examples include the ITF with a study looking at low volume public transport in urban areas and that can be more widely promoted via the SLoCaT network and also to a wider audience.</p>	<p>done on this in the US and Europe could be fruitful.</p> <p>SLoCaT can also develop a simple results based common framework that would allow tracking and monitoring the Sustainable Development Goals and the Climate Change Agreement in respect to poverty, equity and climate change. Developing a simple framework as a starting point might focus on issues such as:</p> <ul style="list-style-type: none"> - Does the proposed investment meet an important need of a disadvantaged community, by reducing disparities and/or increasing opportunity? - If so, is the benefit significant, rather than incidental to other primary benefits? - Are low-income residents the primary beneficiaries? - How engaged is the community in the project? . 	

Category of Follow-up Action	Organizations that should lead	Role of SLoCaT	Role of Foundations and Philanthropic organizations
Outreach	Increasing awareness of the role of transport as a key factor in providing people with opportunity to jobs, education and health is often talked about but little is really known how this works and the differences between accessibility and mobility, if those with the greatest needs are given the correct attention. Within the SLoCaT membership a retreat to explore how this could be better addressed in considered to be a worthwhile suggestion.	SLoCaT secretariat would take the lead in arranging this and also in considering how to use the conclusions and outputs within the international agenda. It's excellent connections with major international agencies and the United Nations would help to provide the opportunity to take this forward.	Addressing poverty and equity are core values of these organizations the knowledge and direction that they could bring to such a retreat would be of high value.

8. Annexes

Annex I. List of organizations and people interviewed

ORGANIZATION	CONTACT PERSON
African Development Bank (AfDB)	Ali, Aymen A. Osman
Asian Development Bank (ADB)	Tyrrell Duncan
Central Andean Development Bank (CAF)	Nicolás Estupiñan
CODATU	Mael Martinie
DFID	Elizabeth Jones
GIZ	Armin Wagner
EMBARQ, The World Resources institute (WRI) Ross Center for Sustainable Cities	Dario Hidalgo
EBRD	Matthew Jordan-Tank
European Cyclists' Federation (ECF)	Bernhard Ensink
European Investment Bank (EIB)	Meryn Martens
Ford Foundation	Amy Kenyon
Health Bridge	Kristie Daniel
Hewlett Foundation	Margarita Parra
Institute for Transportation and Development Policy (ITDP)	Luc Nadal
Kfw	Solveig Buhl
Ministry of Transport Chile	Andrés Gómes-Lobo Echenique
Nordic Development Fund (NDF)	Leena Klossner
United Nations Economic and Social Commission for Asia and the Pacific (ESCAP)	Peter O'Neill
Volvo Research and Education Foundations (VREF)	Henrik Nolmark
Walk 21	Bronwen Thornton

Annex II: List of guiding questions circulated to organizations interviews



i-STEP Interview Preparation Document

1. Introduction & Background on i-STEP Project

The i-STEP project is being supported by a group of organizations: Ford Foundation, Hewlett Foundation and CAF, the Central Development Bank of Latin America.

The main output of this work is to look more closely at the connections between poverty, equity and transport and see to what extent present practices and funding decisions are achieving pro-poor objectives and equitable sustainable transport.

This is being done with a view to build a body of evidence for to help shape the new international agenda and accelerate investments into low carbon transport systems.

We are interviewing a number of players in this field or which your organization is one. The outputs will be used to complement an international literature review and feed into a White Paper that will be presented for discussion to key interested parties at an international round table workshop in New York in June.

We are looking to establish:

- an up to date overview on how poverty and equity are incorporated into transport policy, programs and projects and how this is assessed in both urban and rural contexts.
- to determine any gaps and how these might be addressed
- In short we are looking to establish, from your perspective what you are doing on poverty/ equity and transport? Why are you doing it? How are you approaching this and measuring impact (do you have specific indicators, tools and frameworks) and overall what impact is this having? We would also be interested to have your opinion on any gaps and shortfalls and if possible suggestions that you may have to address these.

We are grateful for your participation and please also let us know if you are happy to be quoted in our report or if you prefer to remain anonymous.

2. Guiding Questions

1. Would you say your work mainly is concentrated on;

Type of work:

- Policy development
- Project Preparation
- Implementation

Focus

- urban
- rural

- both urban & rural

Geographical Scope

- Developed countries
- Developing World
- Specific region

Sub-theme

- Transport Infrastructure
- Transport Service Provision
- Both

2. How would you describe the way you address poverty/equity overall in your transport work? Among poverty reduction, inclusive transport, gender or other issues, where is your organization most active?
3. To what extent does poverty alleviation guide your work/organisation values?
4. In your field of work what sort of social impacts of transport interventions are the most important? At what stage of project cycle social impact assessments/discussions come?
5. What tools do you have/use to measure impact in poverty (and equity – are they the same?)
6. How would you rate the majority of your transport projects in the past decade in terms of achieving a good outcome to alleviate poverty and increase equity? Do you see an improving trend? Would you agree or disagree that we are making progress on addressing poverty through improving transport? A strong agree, neutral or disagree – why?
7. How important would you say that the affordability of transport services plays a role in your area of work?
8. In your work do you see any social inclusion issues between modes? (*e.g between mass transit and others, between BRT/metro and Minibus taxis, or 3 wheeler/rickshaws and BRT /metro, cycling, walking*)
9. In your view do you see any gaps or bottlenecks in this area of transport work? *What key areas need more attention? What is internal that needs to be done by the organizations? And in which these areas SLoCaT or an external group would be able to help?*
10. Do you see the international development agenda as a key driver of this trend?