



The Role of Transport and Transit Corridors in Fostering International Cooperation for Sustainable Development: Issues and Recommendations

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A New Station, New

Lao Bao international checkpoint, Laos © Flickr/Asian Development Bank

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Introduction

This paper aims at defining transit and transport corridors, outline factors influencing development of the corridors, highlight the role done by UN Habitat in promoting the development of transport and transit corridors, and ultimately explore the role played by transit and transport corridors in promoting international cooperation for sustainable development. This review will be based on cases undertaken at national and regional scales from different areas around the world.

Normatively in development practice, transport and transit corridors are meant to boost economic growth at the local, regional and international scale, promote connectivity between cities, peoples and resources, facilitate intra and inter regional trade and provide access to landlocked countries to international gateways such as ports. On the other hand, the role of the corridors on international cooperation and sustainable development has sparsely been explored. Corridor development is a key instrument used to promote sustainable development at the local and regional scale of countries, and promote intra and inter regional cooperation in addition to other benefits. UN Habitat has worked with national and international agencies engaged in development of transport corridors to enhanced sustainability and international cooperation using objective planning frameworks and facilitating informed decision making based on international experiences and best practices.

Contemporary transport corridors are not entirely new inventions but are mostly a re-establishment of old trade routes and major movement patters such as following existing energy infrastructure, water ways, settlement patterns, transport modes or other geographical dispositions that favour or inform the development of such corridors along a given route.

This is true of the Gao-Kano pre-colonial trade route between Mali and Nigeria that was operational from the 14th century¹. Despite the location on already existing corridor activity such routes trigger new dynamics like urban growth, concentration and expansion of centres along the route, up scaling of infrastructure and other investments along the route. Although, it must be noted that in some exceptional cases, development corridors chart out an entirely new routes and territories without initial activity associated with the route. This is true of LAPSSET (The Lamu Port Southern Sudan-Ethiopia Transport) corridor in Eastern Africa that includes the creation of a modern port at Lamu in the South East coast of Kenya, and the creation of a new railway network of more than 6,000 km to connect Lamu to South Sudan, Uganda, Ethiopia, Uganda, DRC, Cameroon, Chad and Central African Republic. The corridor incorporates energy links and an extensive road network within the region². The network is in response to new political and economic opportunities in Central and Eastern Africa and a bid to reduce the cost of doing business through transport connectivity costs.

1 UN-Habitat, *The State of African Cities 2010 : Governance, Inequalities and Urban Land Markets*, UN-Habitat, 2010

2 Information available at <http://www.lapsset.go.ke/>



Introduction to Transport and Transit Corridors: Definition and Typology

Corridors do not have a specific definition but rather derive their meaning when addressed from a physical perspective; where there are transport corridors, energy corridors, infrastructure corridors and other functional dimensions. Healey (2004) defines corridors as *linear agglomeration of economic activities and people along the physical backbone of transport infrastructure*³. They can further be defined as routes connecting different centres of economic significance, joining places to interest areas; such as inland regions/countries to ports, resources to industries and products to markets⁴. *The State of African Cities Report 2010* refers to urban corridors as urban or semi-urban systems structured along major arteries of agglomeration and usually take a liner or ribbon shape; extending over long distances, with logistics hubs such as intercity highways, waterways or railways. These incorporate the urban fabric, industrial establishments and rural lands under the influence of one or more urban cores.

Transit and transport corridors comprise of a collection of routes constructed from the transport networks of adjoining countries and bounded by gateways; and are usually multimodal and have multiple border crossings⁵. This leads to complexities due to presence of borders, conflicting objectives by different countries and a multiplicity of jurisdictions to oversee and maintain the transport corridors. Many of these corridors develop due to

pre-existing natural resources, physical features or other anthropogenic interests in national or regional development needs. They have nodes, links and end points along the system and are usually developed along pre-existing multimodal transport networks, or are designed to accommodate multimodal transport networks.

Transport and transit corridors comprise of the following;

- a) Road networks
- b) Rail connections
- c) Telephony infrastructure
- d) Fibre connections
- e) Electric lines
- f) Water ways
- g) Airports

Even though the primary aim of development corridors is to spur economic growth along its route and improve connectivity of various places to access infrastructural services, it is possible to point out subtle differences between them to derive different typologies of transit and transport corridors. At the study of minute differences in corridors, J. Arnold, G. Olivier and J.F Arvis (2005)⁶ analysed the typology of corridors as follows:

- i) *Domestic Corridors*; a network of routes within a national context of transport networks, aimed and promoting internal trade and economic development along the route and is usually established using national legislation and developed or jointly managed by national or regional authorities and often cross provincial/internal regional borders.

3 Healey, P. 2004. The Treatment of Space and Place in the New Strategic Spatial Planning in Europe. *International J. Urban and Regional Research*, 28(1): 45–67. February

4 UN-Habitat, *The State of African Cities 2010 : Governance, Inequalities and Urban Land Markets*, UN-Habitat, 2010

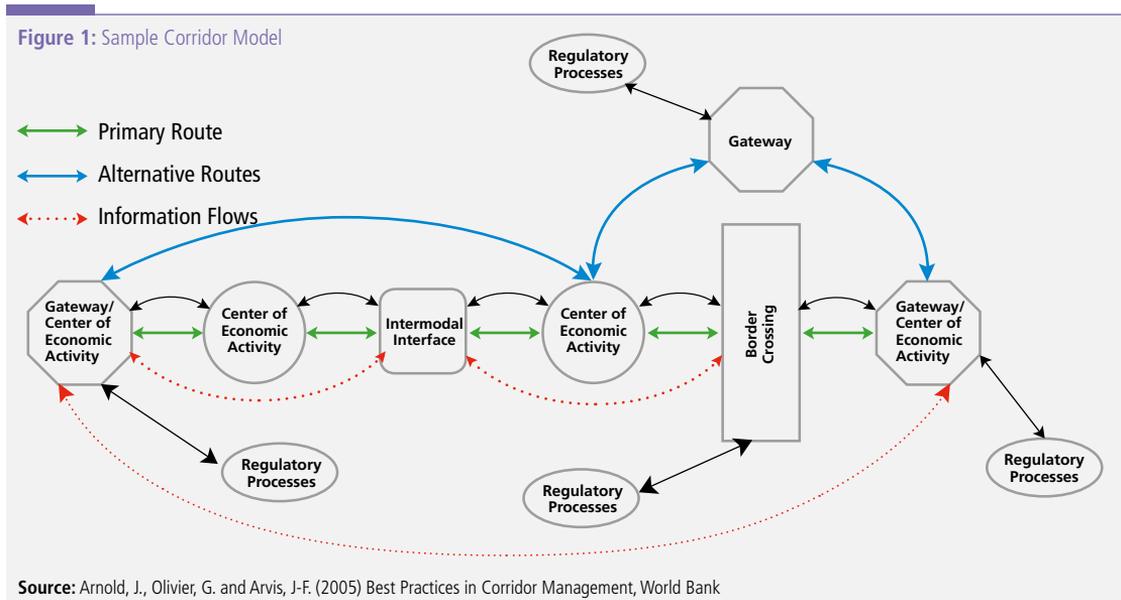
5 Arnold, J., Olivier, G. and Arvis, J-F, *Best Practices in Corridor Management*, World Bank, 2005.

- ii) *Foreign corridors*; it comprises a network of routes transporting imports and exports of a country, and is aimed at promoting economic growth of a country and mostly comprises of an end point at the border of another country or at an international gateway such as a seaport or an international airport. These corridors are administered by national authorities and internal regional authorities/ governments may have maintenance rights or responsibilities along the route.
- iii) *Transit corridors*; it is a network of routes used to transport goods and services of other countries. They mostly provide land locked countries with a much needed access to an international gateway such as a seaport. These corridors do not have physical limits due to border crossings or international gateways. They are aimed at promoting regional economic integration and growth of trade between countries. Their administration is thus multi-disciplinary and involves multilateral agreements between the associated countries. National governments have jurisdiction on the sections of the corridor in their country and provincial

governments may have provincial authorities maintain sections of the corridors in their territories.

The figure below illustrates a theoretical model of a corridor with centres of economic significance along its route, intermodal interchanges, border crossing and gateway facilities, with incorporated regulatory processes along the route.

Transport and transit corridors are emerging as new frontiers for urban and regional transport centered development. However, if not well planned and coordinated, it's bound to miss out on many socio-economic and ecological opportunities. These corridors are present opportunities at the urban and regional scale such as integrated market access, access to modern energy services and job creation. Urban conurbations (mega-regions), corridor systems and metropolitan regions have brought to the fore links between urban growth and new economic patterns by creating new hierarchies and scope, complexity of issues, ne urban challenge and governance requirements at the urban and rural scale. They show the link between urban prosperity and spatio-economic activities.⁷



Factors influencing Transport and Transit Corridor Development

In the development, administration and maintenance of transit and transport corridors, an analysis of decision making, management financing and financing of the corridors must be explored in regard to;

- a) planning and development of the corridor and its related projects and support services
- b) financial investment in corridor infrastructure and other related capital investments
- c) corridor management, coordination, maintenance, and related administrative functions

a) Corridor planning and development

Key in the planning, development and running of a corridor project is the participation and engagement of different stakeholders to coordinate the part or all the processes involved, this [participation of different stakeholders creates an enabling environment for seamless transactions that are key in promoting efficiency and enable inclusion of public and private partnerships. To achieve comprehensive participation and inclusion, various mechanisms must be in place to facilitate participation of various actors. The nature of the corridor will influence the type of stakeholders to be involved because national and transit corridors have different needs. In the regional corridor development scale, global and regional bodies play a key role in facilitating the planning, financing and development of the corridors; such as the African Development Bank, Asia Development Bank, UN Habitat and World Bank.

The planning, development and eventual maintenance of a corridor are a unilateral national or multinational development decisions that involve many stakeholders. National and international transport and transit corridors are developed with primary aims of promoting economic growth and development as well as improving connectivity between different areas and regions. Judicial instruments are developed to define the nature and scale of involvement of other stakeholders; defining corridor development and management institutions and mechanisms, transport mechanisms along the corridor, handling of goods, gateway and border processes and requirements and well as intermodal operations if any. They are developed to further exploit potentiality of existing corridors and related corridor dynamics. For instance in Africa, Africa, development corridors were informed by the Spatial Development Initiative Programme that was conceived in South Africa in 1995 to promote connectivity and economic growth and development within Africa; through massive private sectors investment on corridor infrastructure.⁸

b) Financing investment

Development of transport and transit corridor needs a vast and reliable source of money to initiate corridor development work and facilitate investment in the corridor and facilitate all associate services such as monitoring and evaluation. Funds

⁸ De Beer, GRM, Regional Development Corridors And Spatial Development Initiatives – Some Current Perspectives On Potentials And Progress, January 2009, available at : <http://repository.up.ac.za/bitstream/handle/2263/8129/3a11.pdf?sequence=1>

are required throughout the corridor development process to fund infrastructure development and development of management structures, maintenance and redistribution of wealth realized from the development of the corridor. In the normative sense, corridor infrastructure such as links, nodes along the corridor route, border crossing and international gateways are mostly public sector investment. In recent times however, the private sector is increasingly getting involved in such capital investment at a large scale. The Mundra Port is a privately operated port that is a gateway point in Western India.

The funding options vary depending on the structure of different corridors. They include:⁹

1. Secondment of secretariat and rotation of staff to operate the corridor
2. Membership contributions from countries that are part of the corridor management structure. This entail both public and private sector agencies
3. Benefit based contribution; a system where countries pay towards the transport corridor based on the benefits they derive from it.
4. Usage levies: stakeholders using the corridor pay towards the corridor management depending on the distance travelled along the corridor and the nature of cargo (weight) carried along the corridor.
5. Donor funding- some corridors are initially funded by donors. Though it is unsustainable in the long run, it may be necessary in the initial development stages of a corridor.

The figure below shows some of the corridors in Africa and the mode of funding;

Figure 2: Funding Arrangements for some corridors in Africa

Corridor	Funding arrangements
Northern	Tonnage levy on imports collected at the port and budget allocation from the government. Both public and private sectors work closely in implementing the funding regime
Dar es Salaam	Membership fees based on equal contributions by committee members The Tanzanian Harbours Authority is the key coordinator for the group
Walvis Bay	Membership fees by group members and equal contributions by the signatories to the TKC MoU. NamPort and the private sector initiated the group
Maputo	Membership fees. The private sector has established a non-profit company for the corridor. South Africa Department of Transport is providing most of the funding through a subsidy
Central	The African Development Bank grant for start up costs and equal state contributions thereafter. TRC seconded staff to get the corridor secretariat off the ground
Abidjan-Lagos	The World Bank grant as part of the funding for a project, given its health focus which would normally be a public sector responsibility

Source: SSATP, Second Development Plan 2008-2011. Fostering Sound Policies and Strategies for the Provision of Reliable, Safe, Efficient, and Affordable Transport, The World Bank, October 2007

⁹ SSATP, Second Development Plan 2008-2011. Fostering Sound Policies and Strategies for the Provision of Reliable, Safe, Efficient, and Affordable Transport, The World Bank, October 2007

c) Corridor management, coordination and maintenance

For cross border convenience, legal and policy coordination between countries sharing a transit and transport corridor is a major requirement. This is aimed at achieving minimal or absence of physical and non-physical barriers to promote use of transport corridors around the world. There are many difficulties inflicted on transporters and traders along transport corridors by physical and non-physical barriers, leading to bloated transportation costs and overhead costs that increase the cost of doing business and eventual rise in the price of goods and services using or associated with the given corridor.

Proper infrastructures and border crossing procedures needed to be institutionalized so as to reduce transactional costs and time at crossing points and define the management requirement if transit goods and services. This should be embedded in local and international legal documents to define all management, coordination and maintenance functions of stakeholders along the transit corridor. In the spirit of coordination, globalization and regional/international cooperation, these should be open and integrated to the countries involved and be informed by international norms and best practices in corridor management.

Governments and the local, regional and international level must make a deliberate effort to impede on any activity that will impair seamless

operation of the transit corridors. Instances of corruption affect the performance and efficiency of a transport corridor and affect normal operations. Proper maintenance and facilitation measures which could promote faster integration of national economies and transport systems into the corridor should be expedited to promote maximum utility of the corridor; ultimately resulting in financial sustainability. It must be noted that rehabilitation, management and maintenance of transit and transport corridors consist of colossal financial implications that large scale investors and government agencies can afford.

At the operation scale, many governments lack capacity to manage and maintain transport corridors. They therefore involve private sector players; under a public private partnership agreement, commonly known as concessions; to operate transport corridors. This injects private sector finance, eases cross border transactions and promotes efficiency that may lack from government operation.

The operator manages revenue collection, operates financial management, offers security with the support of the state actors responsible, receives customs support and enhances environmental sustainability with support structures spelled out by the government of a given country. Capacity building in the corridor is administered accordingly at the national, regional and international level; according to laid down procedures and terms of engagement of stakeholders in the corridor management system.



Highway in Abijan, Cote d'Ivoire © Flickr/Guillaume Mignot

Role of UN Habitat in Sustainable Transport and Transit Corridor Development

The United Nations system works towards promotion of international peace and security, by promoting human welfare through socio-economic development. The United Nations Human Settlements Programme (UN Habitat) works towards socially, economically and environmentally sustainable human settlements; at the urban and rural level; and for access of all people to affordable decent housing. The world is currently urbanizing rapidly. This is predisposing urban areas to be trend setters in social, political, economic and environmental dimensions of development. Sustainable urbanization is a pressing need currently, because management urban and rural development patterns, provision of adequate shelter and associated services in urban and rural settlements are needed more urgently and at a larger scale.

Mobility flows created by transportation lead to dynamism in the urbanization process and its associated infrastructure. Dynamism leads to various urban forms. Transport systems are bound to promote dependence on the private car on Transit Oriented Development models. These lead to urban sprawl, pollution in the air, water and soil, climate change related impacts, social disintegration, accidents and transport associated hazards.

To mitigate on negative potential impacts of corridor development, UN Habitat has advocated for reform in the transportation sector to focus on the following;

1. Ensure access is the primary objective of transport and transit corridors at any scale of development

2. The access should ensure all people have equitable access to desired destinations and all opportunities available in a given area.
3. Strengthening the role of transportation as a tool for development in urban areas and a rural areas; as well as the associated linkages between urban transport and rural transport
4. Reviewing of the relationship between urban form and mobility due to transportation mechanisms employed in an urban, peri-urban or rural setting.
5. Supporting sustainable transportation models in urban and rural areas in all modes of transportation. This includes adoption of Non-Motorised Transport (NMT), clean energy vehicles and clean energy sources to drive vehicles across various transport modes.
7. Promoted the adoption and development of reliable and efficient mass public transport means of travel between places to promote sustainable mobility of people in urban areas.
8. Adoption of urban and regional planning measures, as well as transport demand and fiscal measures that promote a shift in transportation from small capacity to high capacity transport systems.

This has led to better design and development of better integrated and more efficient transport and transit corridors in various parts of the world. Examples of corridors from various regions around the world where UN Habitat has played a role are mentioned below;

a) Africa

SUSTAINABLE TRANSPORT SOLUTIONS IN EAST AFRICA

The 'Sustainable Transport Solutions in East African Cities' project (SUSTRAN) aimed at reducing growth in private motorized vehicles, thus reducing traffic congestion and greenhouse gas emissions in the cities of Addis Ababa (Ethiopia), Kampala (Uganda) and Nairobi (Kenya); by building sustainable transport networks and establishing sustainable transportation demonstration corridors in each city.

The project – which that was implemented by UN-Habitat in collaboration with UNEP with financial support from the Global Environment Facility (GEF) – included support for the design and implementation of transport corridors featuring BRT, non-motorized transport and travel demand management measures.

It also supported regional capacity building, including city-to-city learning. While collaborating with local metropolitan and transport authorities in Nairobi, Kampala and Addis Ababa, the project sought to promote the active participation of current transport sector operators and other stakeholders. By 2035, it projected that this initiative will have led to a reduction in greenhouse gas emissions amounting to more than 2.5 million tons.

Source: <http://mirror.unhabitat.org/content.asp?cid=9492&catid=%20666&typeid=24&subMenuId=0> and <http://mirror.unhabitat.org/content.asp?cid=9341&catid=%20666&typeid=6&subMenuId=0>, last accessed 14/05/2015.

THE IBADAN-ACCRA ENERGY CORRIDOR IN WEST AFRICA

This is a 650 km long corridor developed along settlements between Ibadan Nigeria and Accra, Ghana; passing through Lome (TOGO), Cotonou (Benin), and Lagos (Nigeria). With partnerships with international development actors, the corridor has developed major power lines, railways and roads linking major towns along the corridor route. UN Habitat has developed a framework for enhancing this corridor's energy access for the people along the route and encouraging industrialization as a means of job creation and poverty eradication.

UN Habitat intends to introduce a territorial planning perspective to this corridor to improve decision making by coordinating a common approach of the four countries. This framework will introduce socio-economic values along the route by determining agglomerations of human settlements, energy infrastructure, land use and economic activities.

Figure 3: The Ibadan to Accra Corridor route



Source: UN Habitat (2013) UN Habitat Catalogue of Model Projects 2012/2013

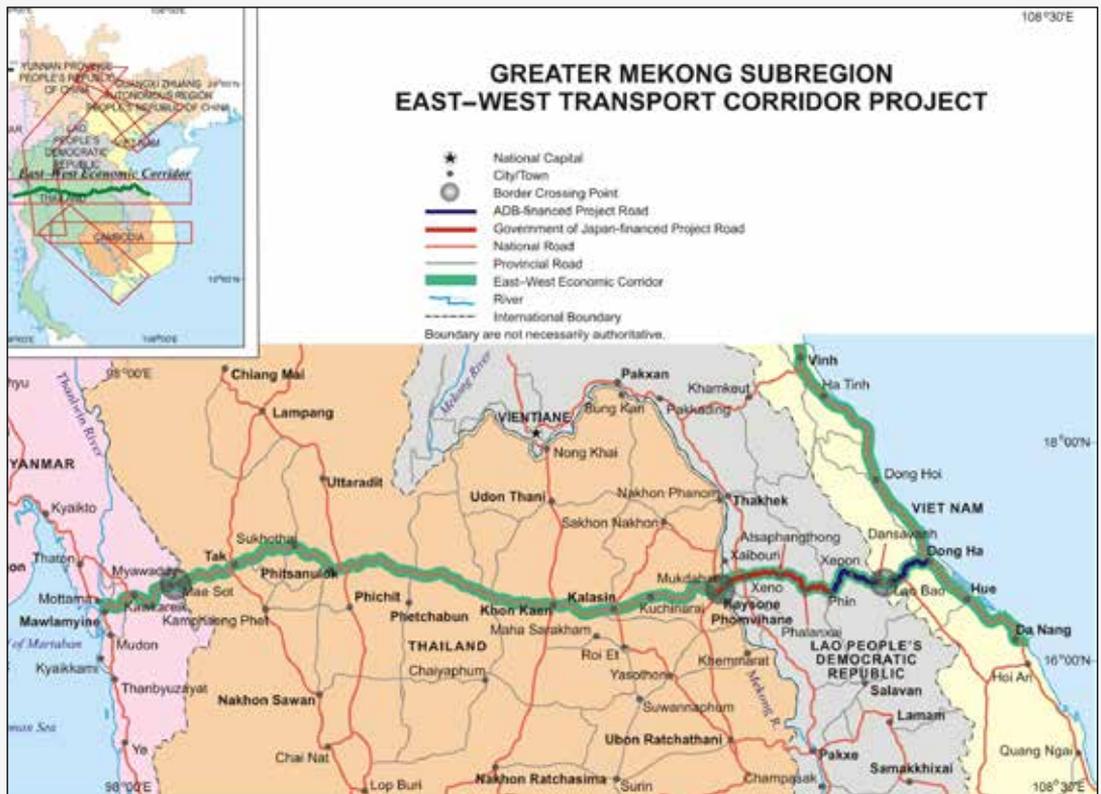
b) Asia

Greater Mekong Region Economic Corridor

The Greater Mekong economic corridor traverses four countries (Myanmar, Thailand, Lao People’s Democratic Republic and Vietnam): to make the Asia Highway Routes. The region has undergone rapid urbanization, leading to inadequate water and sanitation services. Upto 72% of residents along this corridor lacked water or sanitation services. In 2005, the Mekong Region Water and Sanitation Programme was initiated to assist deliver water and sanitation related needs and attain MDGs. Completed in 2015, upto 1.08 million people benefitted.

UN Habitat conducted assessment of water sector policies and frameworks in each programme country and undertook surveys in many urban and rural hinterlands along the corridor. From the assessments, some towns were selected to fast track implementation of recommendations; using funds from UN Habitat’s Water Supply and Sanitation Trust Fund.it further made partnership agreement with water suppliers in the region to get additional funding. The projects demonstrated that using participatory and community based approaches to development can deliver incredible results using limited resources in a short time. With further demands to attain MDGs, UN Habitat is looking forward to up scaling the programme along the corridor (to 23 towns) to reach a further 400,000 people.

Figure 4: Greater Mekong Region Corridor



Source: UN Habitat (2013) UN Habitat Catalogue of Model Projects 2012/2013

c) Middle East and North Africa (MENA)

Cairo - Alexandria Corridor in North Africa

Found in Egypt, it's one of the oldest development corridors established along River Nile and serves around 20 million people. It serves over 40% of Egypt's industries and connects the hinterland to the Suez Canal, Port Said and the Mediterranean coast. Stretching 225km long, it's the largest among the Arab countries and an important mega-region in the MENA region. Its challenges include urban sprawl, rising contamination of ground water, depletion of aquifers, disposal of untreated sewage to waterways, rapid inflation of land prices and increasing traffic congestion

UN Habitat has worked with the General Organization for physical Planning to prepare a strategic development plan for the Greater Cairo Region that included slum upgrading plans, relocation of government functions to a convenient location, relocation of polluting land uses from the inner city, restoration of historic centres, preparation of new transportation plans and infrastructure plans, and facilitating development of links between the Cairo ring road and the Cairo Alexandria

Figure 5: Cairo-Alexandria Corridor



Source: UN-Habitat (2012), *The State of Arab Cities 2012: Challenges of Urban Transition*, UN-Habitat

Role of Transit and Transport Corridors in International Cooperation

a) Acceleration of Economic Development

Functionally, corridors are designed and developed to provide physical support to regional economic growth; in a bid to provide reliable cost-effective transportation and spur growth and development of towns and cities along its path of development. UN Habitat's *State of the World Cities Report (2010-2011)*, asserts that corridors help to improve interconnectivity of places and help to create new forms of dependence and interdependence on cities and towns along and near the transportation corridors¹⁰. The centres that develop along the corridor thus create numerous new economic opportunities and enhance initial opportunities, leading to more returns from economic investments such as in the housing and agricultural sector.

The Maputo corridor in Southern Africa for instance was developed after the Spatial Development Initiative as an inlet/outlet of imports and exports through Johannesburg. Due to civil war, the route was closed redirected to Durban and Richards; leading to a decline in economic progress along the initial route. Its redevelopment after the war achieved the economic robustness of the route that had been lost.

Other corridors are developed to increase activities at the gateway point or provide an international gateway to a land locked country. The Trans

Kalahari corridor in Namibia was aimed at increasing economic activities and opportunities at Walvis Bay for the customs union of South Africa, Botswana and Namibia. The access to gateways on the sea allows importers and exporters to deal directly with a land locked country and reduce transaction costs. This is the main reason the Northern Corridor in Eastern Africa, the West Bengal Corridor in India and the network of corridors leading into and out of Laos in South East Asia.

Some countries are primarily designed to facilitate bilateral and multilateral trade which is controlled using trade agreements, and not necessarily promote regional trade routes. They comprise of national routes that are interconnected with other neighbouring countries to facilitate bilateral and transit trade. This is exemplified by land routes in the Middle East; from the Mediterranean to Iraq, from Iran to Central Asia Republics and from Jordan to Iraq through Syria. The Pan-American Highway from Alaska to the southern tip of South America

However, the same report indicates that concentration of economic activities along the transport corridor can lead to unbalanced regional growth because of linear development patterns or nodal point development, which act as an impediment to spatially diffused development. Connections between the centres along the corridor become stronger and the economic connections with the hinterland may be reduced, resulting in reduced economic activity in the hinterland.

¹⁰ UN-Habitat, *State of the World's Cities 2010/2011: Cities for all: Bridging the Urban Divide*, UN-Habitat, 2010.

b) Improved Mobility

Historically, transport and transit corridors have improved mobility and accessibility of different areas. When work was centrally located, many people walked; and later left the core city to stay in suburbs. This shift in settlement led to settlements along railway corridors and other transport modes.

The transformation of production and development structure along the transport corridor coupled with a new demand for goods and services along the corridor route trigger a new dimension in human settlement patterns. Areas around the new centres are converted from agricultural into residential, commercial, industrial and other urban uses. The new uses create push and pull effects for the population living in and around the emerging centres. By so doing, transport corridors help to disperse people from the primate cities to other urban areas, thus mitigating effects of primate cities.

Due to economic opportunities realised due to the corridor, workers move into the new urban areas to explore the opportunities created by the new centres and transport corridor infrastructure establishment. These workers consist of formal sector workers and informal workers, unskilled and low skilled workers attracted by perceived income opportunities. This leads to a regional shift of people, especially youth. This abnegates rural areas of labour that is needed to promote their development. At the end of corridor infrastructure development, there is a large workforce that is left unemployed because only a few are absorbed into the management and maintenance phase of corridor development. Rural-Urban migration results in a situation referred to as '*jobless growth*'¹¹. For instance, during the construction of Maputo Development Corridor, 9,000 workers were employed during the construction phase but only 743 workers were retained as permanent employees to oversee corridor management and maintenance.



Thika super-highway, Kenya © UN-Habitat

11 Söderbaum, F. and Taylor, I.: Transmission Belt for Transnational Capital or Facilitator for Development? Problematizing The Role of the State in the Maputo Development Corridor, in The Journal of Modern African Studies, vol 39/4, Dec 2001, pp. 675-695

The potential labour force attracted exceeds the number of jobs realized.

The African Cities Report, 2010 asserts that land markets and land prices are major drivers of urban growth and geographical social patterns¹². Economic opportunities along the transport corridor result in a rise in land cost and rent rise. The corridor impedes on opportunities for poor households to work and earn a livelihood along the corridor, pushing them away as other workers come in to occupy their land. The urban land market forces begin to be seen; locking out many initial dwellers of the city unable to own land. Informal land markets forces fill the gap, making the prices of land too high. Without remedial measures, this forces some urban dwellers to shift to dangerous unproductive land in or near the urban centres, such as flood plains and other reserves¹³. To get affordable housing thereby requires the intervention of the public sector to regulate land and housing values within the new urban development matrix.

Population growth along the transport corridors happens extremely fast and if not accompanied by appropriate urban planning practices, it will lead to sprawl and laissez faire development. Rapid growth is facilitated by improved mobility of people, goods and services along the corridor. This growth is however limited because beyond a certain distance from the transport corridor, profitability reduces.

With the growth in the nodal centre along the corridor come many urban challenges such as congesting, pollution and many other vices. With continued growth, these challenges generate diseconomies of agglomeration. Planning interventions are thus aimed at reversing the negative externalities that arise, attract new industries and realize redistribution of functions to other centres along or outside of the corridor region. This could lead to development of other transport links from the corridor to the hinterland to connect centres in the hinterland and spread economic opportunities.

c) Social Development

Development of transit and transport corridors leads to economic growth over time, but this has not reflected in social development. In corridor projects such as the Spatial Development Initiative in Southern Africa, there has not been evident improvement in social aspects such as poverty levels, balanced territorial growth and poverty reduction. This is due to the premise of most corridor developers that social development will arise due to corridor development because of more economic opportunities realized¹⁴. This is, however, not always the case.

12 UN-Habitat, *The State of African Cities 2010: Governance, Inequalities and Urban Land Markets*, UN-Habitat, 2010

13 More information from Davis, M., *Le pire des mondes possible: de l'explosion urbaine au bidonville global*, ed. La Découverte, 2006.

14 Söderbaum, F. and Taylor, I. : *Transmission Belt for Transnational Capital or Facilitator for Development? Problematising The rôle of the State in the Maputo Development Corridor*, in *The Journal of Modern African Studies*, vol 39/4, Dec 2001, pp. 675-695



International Cooperation and Sustainable Development

The Chilean Agency for International Cooperation (AGCI) defines international cooperation as;

... the relationship between partners who try to develop a group of actions, coordinate policies or unify criteria, in order to achieve common goals in the international arena. It is an essential component of contemporary international relations, an excellent way to promote solidarity between societies and to generate knowledge and mutual understanding. It is an efficient instrument to support local efforts and to provide solutions in the areas of weakness and deficiencies¹⁵.

International cooperation entails the totality of all collaboration actions between countries, individuals and organizations of one country or region, with another. It defines the interactions to achieve common objectives when the actors involved have neither identical nor irreconcilable preferences. All actors adjust their behaviour to accommodate the actual and anticipated preferences of others. Intergovernmental and transnational actors come together under a bilateral, multilateral, regional or international scale to promote structures and processes of policy to promote common engagement terms.

To achieve its mandate, UN Habitat has developed partnerships with a wide range of partners at the

international, national and local level; including the civil society, private sector, parliamentarians, national governments, local authorities, multinational development actors and multi-stakeholder processes actors such as gender mainstreaming activities, training and capacity building, urban management programme, cities alliance and the global campaign for secure tenure. These partnerships have aided in the ensuring sustainable economic development, social and environmental development, promoting democracy, upholding of the rule of law, good governance, adoption of best practices, respect for human rights and good governance systems among partners¹⁶.

International cooperation is choreographed to achieve policy co-operation, and adaptation of partners to the evolving needs of one another. Transport and transit corridors are a constant component that brings parties of a corridor system together; to engage in matters of development and conflict resolution; the band that binds all parties together. It gives all players a common platform to exercise their views concerning development related to the corridor infrastructure. This common platform is likely to give way to more channels of common engagement such as resource access and utilization, sharing of other infrastructure establishments and other economic opportunities.

In the context of the UN Habitat mandate, sustainable development can be referred to as

15 Rodríguez Vázquez, Horacio (2010), "La cooperación internacional para el desarrollo desde una perspectiva latinoamericana" en Pollack, Aaron (coord.), Temas de cooperación internacional para el desarrollo: criticar, proponer, sistematizar, México, Instituto Mora, pp. 9-34

16 http://www.un-ngls.org/spip.php?page=article_s&id_article=819

the spatial manifestation of urban and rural development processes that create a built environment with norms, institutions, and governance systems that enable individuals, households and societies to maximize their potential, optimize a wide range of services so that homes, neighbourhoods, cities and towns are planned, built, renewed and consolidated in a manner that limits adverse impacts on the environment; and at the same time safeguarding the quality of life, needs and livelihoods of the present and future population¹⁷.

International cooperation is designed to create an enabling environment for operation of all stakeholders, financial resources and economic instruments aimed at benefiting all partners as agreed, technology transfer and information sharing between all the partners, technical cooperation and institutional cooperation. In the framework of international cooperation practices and framework of engagement, activities that promote sustainable use of resources should be adopted at the policy level and be implemented to the operation level of intended activities.



Rail transport, Chile © Flickr/Rafael de Fronet

17 Obtained from UN Habitat Input on Post 2015 UN Development Agenda; Working Group B; Accessible on http://www.un.org/en/development/desa/policy/untaskteam_undf/groupb_unhabitat_suscities.pdf

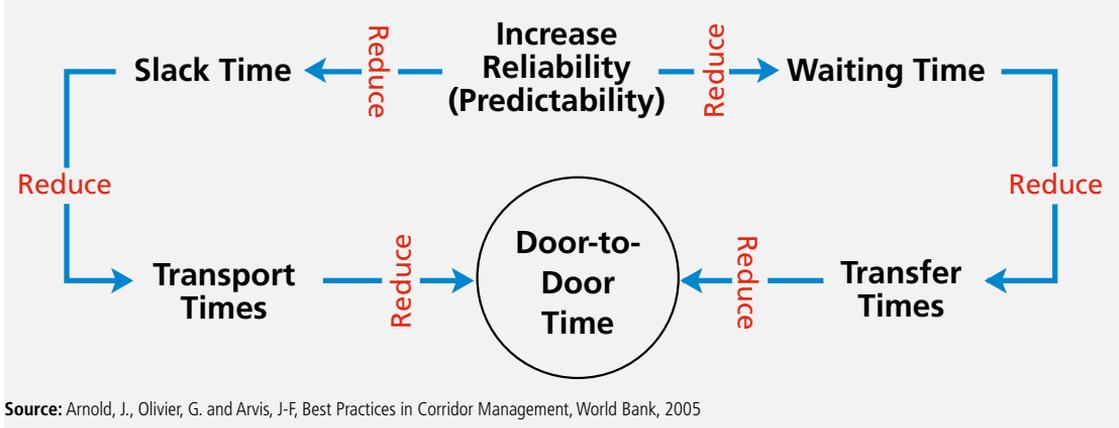
Enhancing Sustainability through Sustainable Corridor Operations

Corridor performance is influenced by time, cost, reliability and flexibility¹⁸. In a transit corridor, people, goods and services should be able to travel the route in the least time possible using the least amount of money in terms of direct out of pocket costs and losses incurred on transit cargo. Because transit corridors comprise of several alternative routes, a transit corridor should offer the best alternative to other available options. Delays, frequency of stops due to services on the route and congestion at the nodes should be at a minimum. Only discretionary stops at the nodes should be necessary, such as storage services, intermediate processing, labelling, and packaging/ repackaging, consolidation and deconsolidation.

Time spent can be improved by reducing time taken on a transport corridor link and node. This can be improved by improved infrastructure, better traffic management and changing regulations that restrict flow of carriers within the corridor. Less time at nodes along transport corridor can be improved though introduction of new technology and equipment to boost management and processes.

Corridor reliability is the variation in transit time for a given form of shipment in comparison to origin and destination. The variation occurs due to controllable factors such as availability and condition of equipment, coordination of sequential activities and labour productivity, and uncontrollable factors such as demand fluctuation, background traffic and weather conditions. Greater variation in transit time means more uncertainty on transportation of goods and services along a given corridor.

Figure 6: Corridor Reliability and Transit Time



Source: Arnold, J., Olivier, G. and Arvis, J-F, Best Practices in Corridor Management, World Bank, 2005

¹⁸ Arnold, J., Olivier, G. and Arvis, J-F, Best Practices in Corridor Management, World Bank, 2005.

Transit corridors should have when possible multiple routes and modes of travel. Offering different types and qualities of transport services enables freighters to have a variety of methods to transport goods and services, depending on market demand and nature of goods. This is because of a dynamic and changing market environment all over the world where consumer preferences are changing.

During urbanization, urban growth, urban settlements continue to expand through natural population growth and immigration. Urbanization leads to the rapid expansion of urban corridors to vulnerable areas such as seafronts and flood plains. Eventually, this elevates vulnerability of such places to disasters and risks posed by dangerous cargo¹⁹.

Integrated compact urban land use on leads to mixed land use developments, where there are less mobility needs from one zone to another. Good planning of corridors in urban areas is a good opportunity for corridor planners to reduce congestion as traffic will be balanced and not unidirectional in exclusively zoned urban areas. Well planned transport corridors achieve the best results.

Transit and transport corridors give a good avenue for all involved stakeholders to promote sustainable practices because of the scale of operating of corridor activities and large scale nature of corridor infrastructure. Without sustainability, there are bound to be destructive impacts on the environment in its physical, social, biological and economic aspects. They may lead to urban sprawl and diffused urban development, against the integrated compact city model that is desirable in sustainable urban management. Adoption of clean energy options along the corridor, incorporation of non- motorized transport channels, efficiency of processes and adoption of measures meant to mitigate or cope to climate change will boost sustainability of corridor development. In the short and long run, the benefits accruing from sustainable development and operation of the corridors will improve returns from investment in the corridors, reduce impacts on the environment and provide a platform for national, regional and international engagement of partners in furtherance of gains made.



Traffic in Cairo, Egypt © Flickr/Marwa Morgan

19 UN Habitat (2007) Enhancing Urban Safety and Security: Global Report on Human Settlements. United Nations Human Settlements Programme

Ten Recommendations from UN-HABITAT

Cities are currently merging together to form large urban agglomerations whose configuration takes the form of mega-regions, urban corridors, and city regions in various parts of the world need to create an efficient, safe and secure, fully integrated, multimodal transport system to connect these areas that are territorially and functionally bound by economic, political, socio-cultural and ecological systems.

Spatially clustered cities, regions and the corridors that interconnect them are becoming new frontiers for global and regional economic considerations that reflect the current linkages between urbanization and new economic growth patterns. With new opportunities to boost mobility, economic growth, social integration and improved connectivity between places, sufficient care must be engaged while developing transit corridors to guard against imbalanced regional growth and development, and overall distribution of urban growth and associated functions and services.

To promote sustainability in corridor development through regional co-operation, the following measures should be carried out;

1. The Global Report on Human Settlements 2013 notes that provision of cost-effective transportation options remains a daunting challenge for urban managers because present design forms continue to influence travel habits and settlement patterns. Any neglect of the link between land use and mobility results in sprawl and eventually makes it difficult to offer urban services. Planning of any transport facility (normal transport links or corridor

infrastructure) thus needs proper informed land use planning. Areas that are well planned Singapore and Stockholm with visionary transportation systems always achieve best outcomes.

Stakeholders in the planning, development and management of transport corridors thereby, must address all foreseen and unforeseen challenges that affect the transport corridors to improve efficiency and prevent or reduce negative externalities.

Prudent planning at the local, national and regional scale should be carried out to adequately address any issues that may arise. Congestion, pollution and environmental degradation and other challenges will be addressed and boost sustainability of any corridor project²⁰.

2. From experiences across the world, UN Habitat has identified that metro systems, light rail and Bus Rapid Transit systems are the most suitable in corridor operations of cities and urban settlements. These should only form part of a larger public transport system and the system should be integrated. They have a potential of handling high capacity carriers along corridor routes, provide fast mobility, and offer comfortable and cost effective means of moving several people within urban and peri-urban transport corridors.

3. Interoperations of a transit or transport corridor could be enhanced by harmonizing technical standards for infrastructure, rules and regulations applied to transport service providers along a given transport corridor. The standards, rules and regulations should be binding for all

²⁰ UN Habitat (2013) Global Report on Human Settlements: Planning and Design for Sustainable Mobility

parties to enforce and ensure they realize the full potential of the transport corridor. Aspects like transit regulating, border procedures, clearance procedures, gateway operations and maintenance responsibilities should be clearly spelt out to realize streamlined services and infrastructure conditions of any transit corridor. This is achievable by using ICT systems, Single Administration Document (SAD) for countries in a given corridor, clear channeling of risk management, one time seals and reduced border inspections, better inspection facilities and equipment, one stop services (at gateways or border points) and co-location of clearance facilities.

4. Interconnections between national corridor networks that have been designed to meet domestic transport needs should happen to ensure continuous linkages between corridors and maximization of the impacts suitable development and regional co operation

5. Proactive planning for all corridors is crucial to realize more informed growth, expansion requirements, diversification of modes available in a corridor and improvement of efficiency along a corridor route. This is because development is bound to muzzle the mobility function of transport and transit corridors over time but informed planning (at the urban, metropolitan and regional scale) can help to avert possible negative impacts of corridors²¹. UN Habitat has developed several support tools and guidelines that can aid the planning stage such as various national urban policies, documented international best practices and case studies, international guidelines on urban and territorial planning and urban rural linkages.

6. Management of corridor infrastructure should meet the following requirements;

a) designed to ensure maximum efficiency in the movement of people, goods and services along the corridor infrastructure and its facilities

- b) it should be constructed and maintained to meet international standards and requirements
- c) it must have sufficient capacity to meet a projected demand within a given timeline
- d) it is efficiently used
- e) It is fully utilized to achieve optimum performance and returns from investment.

7. Development of multi modal transit and transport corridors insures flexibility in modes of transport. Being a preferable mode of corridor development, to insure its success requires efficient intermodal transfer mechanisms and stations that promote efficiency and reduce time lags.

8. Speed and reliability of transit and transportation corridors should be improved to reduce cost of doing business and improve use of given transit and transport corridors. Efficient logistics will give a competitive advantage; improving prospects of full utility and increased achievement of corridor objectives.

9. In the execution of its mandate, UN Habitat has identified that in many areas of the developing world have inadequate dedicated NMT corridors in urban and peri urban areas. Where they exist, they are under encroachment from commercial operations or are utilized for road expansion activities. This should be discouraged and more NMT channels incorporated in corridor design and development, through a deliberate effort of all stakeholders. NMT is a large boost to sustainability and should be promoted at all levels.

10. In management of transit and transport corridors, accountability and efficiency of the public sector are determinants in attracting private sector players and possible formation of an autonomous body to manage transport and transit corridors improves efficiency.

21 Ferrell, C., M. Carroll, B. Appleyard, D. Reinke, S. Ashiabor, R. Dowling, H. Levinson, E. Deakin and R. Cervero (2012) Reinventing the Interstate: A 'New Paradigm' for Multi-modal Transportation Corridors, Transit Cooperative Research Report 145, Transportation Research Board, Washington, DC

Conclusion

Transportation and transit corridors primarily improve connectivity between places and essentially act as a trigger to economic growth and other opportunities for development in various sectors. As a result of the flows and mobility benefits that result, the corridors have over time emerged to be key drivers in promoting international cooperation through regional and local flows of goods, services and people from one place to another. They have aided the advancement of globalization around the world by opening up places using different access routes. Corridors have provided options in carrying out trade in different regions of the world and provided flexibility in the delivery of goods and services to various markets.

UN Habitat has furthered the benefits of transport and transit corridors by providing a leadership role through technical and advisory services in matters affecting corridor planning, development and operation to various local authorities, governments, regional and global development agencies and partners throughout the world.

In the proposed Sustainable Development Agenda, development of transport and transit corridors directly will lead to the attainment of the following goals²²;

Goal 1: End Poverty in all its forms everywhere; Corridors spur economic growth that can work towards ending the poverty levels of people in the regions or countries they pass through.

Goal 2: End hunger, achieve food security and improve nutrition and promote sustainable agriculture; corridors will ease access of farm inputs to farmers and open access to markets, thus easing the 'farm to fork' cycle.

Goal 8: Promote sustained inclusive and sustainable economic growth, full and productive employment and decent work for all; development corridors attract new investment and open up opportunities that lead creation of jobs. With improved accessibility and mobility, more resources can be tapped into and new markets can be accessed. In this processes, labour force will be required to enable the market processes function, thus more jobs will be created.

Goal 9: Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation; development corridors will lead to the actual development of infrastructure along the transport and transit system, and other associated infrastructure along the corridor.

Goal 10: Reduce inequalities amongst communities; corridor infrastructure is a direct tool that leads to redistribution of resources if well managed and spreads opportunities spatially.

Goal 11: Make cities and human settlements inclusive, safe, resilient and sustainable; this goal aims at having cities that are environmentally sustainable, socially inclusive and economically productive. Transportation and transit corridors are

²² More details on <https://sustainabledevelopment.un.org/sdgsproposal>

mentioned in target 7 (urban energy and mobility) which seeks to increase by 2030, a 30% increase in the number of countries coordinating urban growth with planned national energy plans and transport corridors, guaranteeing access to energy at urban areas and the number of cities with sustainable urban mobility plans.

UN Habitat has scheduled the Habitat III conference in Quito, Ecuador, where critical decisions will be made to strengthen local, regional and international cooperation, consolidating partnership engagements and implementation tools in the sustainable development agenda of human settlements.

Ultimately, UN Habitat has been a willing partner to engage all stakeholders in the development of transport and transit corridors. Its participation in corridor matters has made the Programme a strong partner in terms of its accrued experience building stronger communities in urban and rural areas of the developing and developed world, a wide experience of best practices from around the world, its participation in community engagement activities around the world to build sustainable solutions in the urban and rural space, its pro-poor development approach for the urban and rural poor and a holistic approach to urban mobility. It has been engaged in joint drafting teams to influence planning and urban management legislation and enhanced collaboration between different partners in the development arena.



Mekong ferry at Neak Loeung, Cambodia © Wikipedia

Summary of observations

- a) Transit and transport corridors can serve multiple jurisdictions; domestic, foreign and transit traffic. In domestic routes, urban corridors play a key role in movement of people within a city, its peri urban areas and rural hinterlands
- b) Transport and transit corridors play a key role in regional integration international cooperation and promotion of local, national, regional and international trade.
- c) A corridor is less of the physical infrastructural outlay and more of the collection of transport nodes and modes and other logistical aspects that support the flow of people, goods and services along a given transport route.
- d) The public sector is mainly involved in providing infrastructure and regulation functions along the corridor and private sector players can be engaged in financing and aiding operations of transport and transit corridors such as providing carriers and transfer facilities. Public-private-partnership is therefore key for a well-functioning transport corridor.
- e) Transit time, flexibility if a transport corridor and reliable schedules along a corridor define the quality of services provided and level of competitive advantage over other corridors
- f) Availability of multi-modal transport along a transit corridor improve its options and price ranges to be used in delivering goods and services, depending on the demand and market trends.
- g) Poor connectivity, inadequate or absence of interoperations and limited market access by market providers lead to inefficiencies in international corridors
- h) Customs reforms and facilitation of trade at the regional and international level are key components in improving corridor performance
- i) Change is needed in the management of corridor infrastructure; gateways, internal nodes, transfer points and border points, to improve efficiency of corridors and its entire support infrastructure.
- j) Stakeholder inclusion in corridor development allows for project adoption by various stakeholders, sharing of indigenous knowledge regarding the development and proposed routes, easy formulation of project policies goals and proposal, ease of implementation of projects and overall, an integrated approach will be approached in the whole process. This has a higher change of success of any corridor investment.



Cranes at Dalian Port, China © Wikipedia/Axe

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