



Port-centric Development: Strategic Logistics Investments

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After analyzing logistics links between the ports of Cartagena (Colombia), Veracruz (Mexico) and Panama (Balboa and Colon) and their hinterlands, this study describes infrastructure restrictions as well as operational and institutional challenges for logistics development in Latin America and the Caribbean, and proposes guidelines and policy recommendations.



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Think piece

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Transport Division,
Infrastructure and Environment Sector

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This document was edited by Pablo Guerrero and Julieta Abad from the Transport Division, Infrastructure and Environment Sector, on the basis of a document prepared by Jean-Paul Rodrigué.

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Executive summary

Latin American and Caribbean ports have seen a remarkable growth of the containerized traffic which was supported with the development and expansion of port infrastructure. The conventional role of a resource exporter, such as agricultural and mining products, is being expanded through an increasing sophistication of imports and exports products. However, Latin America and the Caribbean remains a paradox, as the potential from sustained economic and trade growth does not seem to be converted into developing the necessary supporting infrastructure, i.e. ports, nautical access and land transport systems, to overcome institutional weaknesses, to create leveled playing fields and improve the regulatory environment¹.

The current study is based on field survey of port/hinterland logistical relations in Cartagena (Colombia), Veracruz (Mexico) and Panama (Balboa and Colon) that underlined particular bottlenecks:

- **Capacity bottlenecks.** The lack of infrastructure investment in hinterlands in response to international trade growth (both for imports and exports) is a common issue. The recent focus on the development of road infrastructure is leading to more reliable inland accessibility, but this is only one component of a more comprehensive strategy. Rail transportation, particularly intermodal, will need to be developed where suitable. Where it exists, the rail network tends to be geographically fragmented and focusing on traditional sectors such as natural resources and export commodities. The lack of intermodal and/ co-modal vision in the development of infrastructure is likely to create capacity bottlenecks as trade volumes are expected to grow and as hinterland logistics becomes more sensitive to capacity and reliability issues.

¹ Wilmsmeier, G., Cullinane, K.P.B., Notteboom, T. & Sánchez, R.J. (2012) "IAME 2011 – contemporary studies on maritime transport in Latin America". Maritime Policy & Management. Volume 39, Issue 6.

- **Institutional bottlenecks.** The institutional mindset is often creating bottleneck in the development of logistics activities. Institutions are often ill-prepared to cope with the requirements of supply chain, global firms, private entrepreneurs and foreign investment. Institutional attention tends to focus on trade facilitation but usually overlook the logistical challenges they may create. Freight logistics are not much part of national strategy or policy, which is reflected in public sector visions that are generally unimodal (known as the silo effect).

- **Logistical bottlenecks.** A dichotomy (or gap) between the increasingly stringent logistical requirements of the private sector seeking the optimization and "leaning" of its supply chain and the capabilities of infrastructure, service providers (e.g. transport, warehousing, customs brokerage) and public policy to cope with these requirements. This is particularly the case in sectors that involve time sensitive planning of production and distribution such as the automotive industry and perishable products (cold chain).

- **Educational bottlenecks.** Lack of training and qualification of the labor force both public and private, the human factor in logistics, is a recurring issue. Logistics employment opportunities involve a wide range of function and skills. Although many firms provide on the job training, the possibility to tap a more qualified labor pool and establish partnerships with local educational institutions is a common strategy benefiting both the private and public sectors. Based upon the challenges these ports are facing, policy recommendations are provided.

Introduction

In many developing economies, including Latin America and the Caribbean, the development of transport infrastructure has been an enduring focus for economic development. The recent surge of international trade and its related freight distribution systems now requires the develop-

ment of logistics capabilities, which are supported by both physical (infrastructures) and managerial assets, particularly as the physical infrastructure gap in the region is posing an increasing challenge to sustain and enhance the competitiveness of the region². Globalization has imposed more complex, geographically dispersed, and flexible supply chains that require advanced logistics. Logistics investments include the allocation of capital to improve the efficiency of freight distribution through:

- Infrastructures, such as roads and railways, terminals, real estate, and telecommunications;
- Operations, including transport modes and equipment, and;
- Human resources related to labor, management, and governance, as well as research and development.

This Think Piece focuses on the lack of inland infrastructure development (as opposed to port-only development), lack of modal choice and integration of ports and hinterland traffic and the organizational and institutional challenges that pose significant constraints to logistics performances in Latin America and the Caribbean. Addressing these challenges requires commitment from the private sector, the development and strengthening of public sector institutional capacity, cooperation platforms between the public and private sector and the availability of data and benchmarking systems to effectively monitor performance.

Port Development for Latin American and Caribbean Logistics Challenges

The role of developing countries in international trade has increased recently. This change invigorates economic development in these countries, and is a result of a combination of factors such as improved trade facilitation measures³, the emergence of new industry clusters, foreign direct investment, increasing internal demand in emerging countries and a “catch up” effect in consumption. Still, logistics chains in Latin America and the Caribbean continue to encounter significant challenges. These can be categorized as follows⁴:

- Dispersion and inconsistencies of public sector development vision and strategies regarding infrastructure development;
- Absence of integrated and comprehensive policy development strategies;
- Physical infrastructure restrictions and lagging infrastructure development;
- Institutional and regulatory failures and impediments in terms of policy management, implementation and market organization.
- Failures in transport, trade and logistics facilitation, especially in the regards to technical regulations and bureaucratization of trade and logistics processes;
- Lack of access to funding, partly due to the quality and performance of PPP, regulatory institutions and the infrastructure markets.

Ports remain as the nexus providing continuity between national freight transport systems and

² ECLAC (2011) “The economic infrastructure gap in Latin America and the Caribbean”. Bulletin FAL No.293.

³ Guerrero, P., K. Lucenti, and S. Galarza (2010) Trade Logistics and Regional Integration in Latin America and the Caribbean. ADBI Working Paper 233. Tokyo: Asian Development Bank Institute.

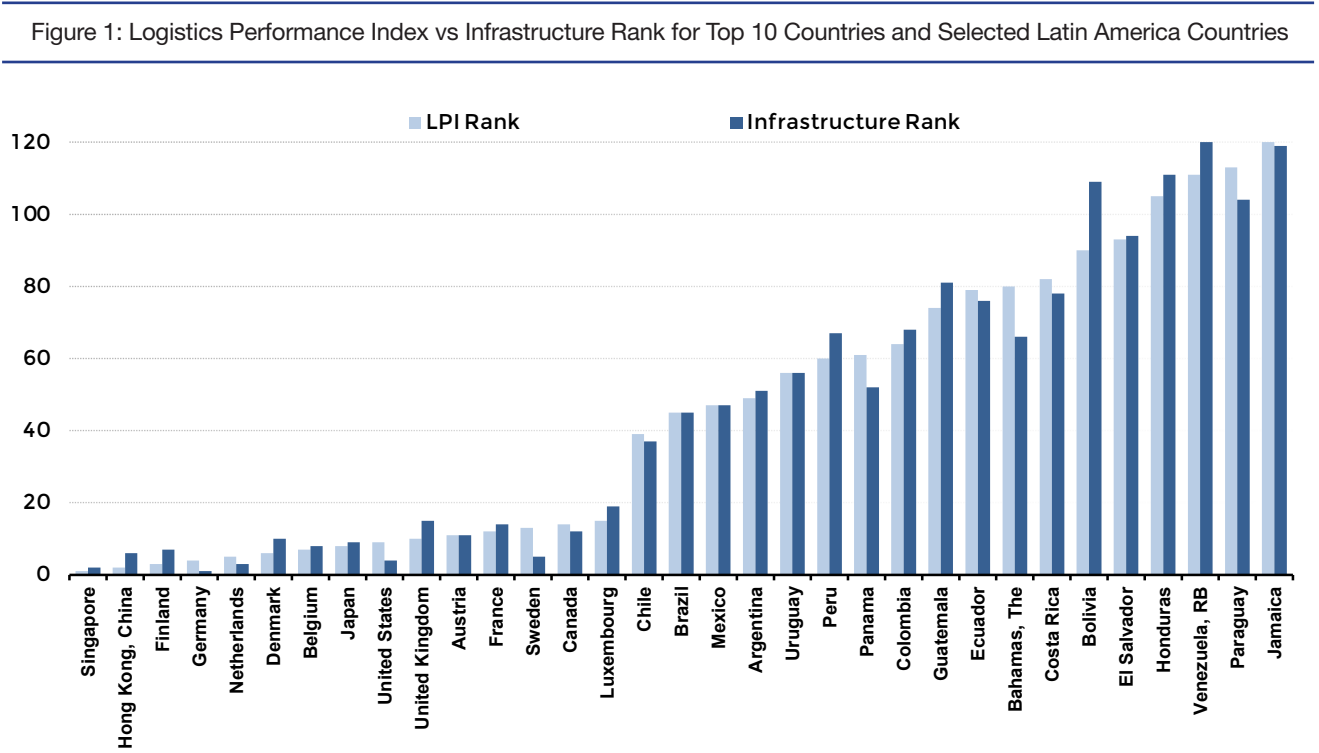
⁴ For detailed discussion see ECLAC (2010) “Aportes para un diagnóstico sobre las restricciones al desarrollo y a una integración económica más profunda”. Santiago, Chile.

global trade. Under the current market conditions where uncertainty prevails it does not suffice to extrapolate present port traffic growth trends and assume that they will continue in the future. The success of a port depends on how well it supports and improves the competitiveness of the supply chains it services. The public sector represented by port authorities has to contribute by offering objective rules. As port and other logistics infrastructure projects are long-term endeavors, changes in concessions terms and conditions seriously hamper the possibility to attract private investment. Global terminal operators clearly underline that they are not attracted to countries that do not offer a clear and transparent tendering process to enter concessions that are at least 30 years in duration, which enables to amortize the substantial investments committed.

Key Weaknesses

While the priority in recent years for many agencies related to economic development focused on trade facilitation issues, Latin American and Caribbean countries have not yet fully grasped the importance of transport infrastructure and services as strategic assets to enhance regional development. The persistence of sectoral policies in the absence of integrated policy approaches does not al-

low the countries to exploit the benefits of logistics integration and related investments. The effects of the lack of policy integration particularly between infrastructure development, production and economic development and the geography of transport systems are reflected in the logistics performance of the countries in the region and thus the virtuous link to economic development is missing.



The current situation affects the competitiveness of Latin American and the Caribbean countries in world trade as the logistics performance increases prices of imports and exports to and from the region and as a direct effect reduces factor productivity in the region. Since the LPI is mostly the outcome of the perception of the surveyed manager, this perception is directly related to their assessment of the logistics prospects of a national economy.

Many Latin American and Caribbean countries are transitioning towards a higher level of openness to global trade. The success of such trade strategies underline the need of logistics-related projects, vis-à-vis the more traditionally “siloed” investments planning, in order to improve logistics performance and competitiveness. Logistics investment projects as they relate to port / hinterland relations, are fundamental to import and export trade dynamics, and therefore, key to competitiveness.

To better deal and be prepared with the logistics challenges and opportunities, public policy should particularly focus on:

- **Port characteristics and hinterland accessibility.** Understanding how the commercial environment is influencing port activities and how they can be expanded for imports and exports.
- **How hinterland transport can be accommodated and expanded.** It must be recognized that failure to effectively address port / hinterland logistics is one of the most important constraints in achieving trade (and transport) facilitations objectives.
- **The geographical and national territorial context** to service supply chains considering existing and developing transport systems.
- **Integrated infrastructure investments**, that consider the private sectors’ prospects aligned with public sector infrastructure development.

These challenges can only be addressed effectively if institutional weaknesses are overcome and when public policy is following an integrated approach. This is because transport and logistics are cross-sectoral issues, which development has direct linkages with the production, trade and business development, information and com-

munications technologies, goods control and the facilitation of transport and trade.

The outcomes of investing in logistics capabilities are numerous, but the most relevant are increased integration with global trade and supply chains, better utilization of national transport assets, more competitive exports, and lower costs for imports, as well as increased employment opportunities. For freight distribution, the conventional approach of investing in infrastructure alone is now perceived to be insufficient. Rather, investment should be made in a wider framework that includes logistics’ supporting activities.

Case Studies

Veracruz: Regulatory challenges to strengthen port links with the hinterland

The port’s dominant function is to access a rich hinterland in terms of manufacturing and retail activities, particularly the Mexico City area and for the automotive industry in Puebla. In such a context, the port follows and outside-in development strategy that seeks to combine effective port-centric logistics with the development of corridors and intermodal inland facilities such as dry ports. Hinterland accessibility is the dominant strategy. Intensive growth since the 1990s has resulted in the container terminal reaching its operational capacity limits, with the port also having to respond to external pressures in its hinterland such as customer expectations for logistics services, supply chain security and infrastructure restrictions. Two strategies have been emerging to mitigate this situation and face significant challenges:

- **A port authority strategy** presented by the port expansion plan, including the development of a port centric logistics zone to attract new services and industry close to the port;
- **A private sector strategy** from the main terminal operator to develop its own intermodal inland terminal.

The port authority needs to address significant regulatory issues. It will have to solve whether to allow the current container terminal operator to switch to the new terminal and thus maintain its strong market position or concession the new terminal to

a second operator to introduce more competition in the market. The latter will raise the question if minimum scale efficiency can be reached with two container terminal operators in the port. The entry of a second operator might lead to over competition or result in no or very low interest from bidders. New rail access is of high importance to improve the intermodal accessibility to and from the port. However, applying the current rail service concession regime would create a monopoly access to the port. Thus, the current challenges in rail access are likely to endure. It seems advisable to grant equal access rights to the railroad infrastructure between Santa Fe and the port in order to facilitate competition in the rail transport market, which would require a revision of current railway concession and operating scheme.

Private sector efforts toward securing land for logistics at inland locations also face regulatory issues that require an integrated policy approach. From the private investor perspective, land acquisition process with the application of the “Ejido regime” presents barriers to effective inland terminal development. The regime does not allow selling Ejido land plots individually or in conjunction, unless a very specialized and time-consuming legal process is followed.

The increase of rail traffic to and from the port will be a prerequisite for hinterland integration at significant scale and thus is key to the development of dry ports in the hinterland. This would in turn alleviate competition for port area between customs and terminal operators. However, the initiative faces challenges as it is dependent on regionally monopolized rail services and currently it seems difficult to install a customs facility at the terminal given the current customs regulation and the relevant security issues in the transit from the port to the terminal and vice versa. It is interesting that the federal government is trying to strengthen the development of intermodal terminals and also to adjust current regulation, however it is not clear if the new regulation will also facilitate inland customs clearance and thus using the intermodal terminals as fully functional dry ports. Consequently, the national plan for location of logistics platforms, currently under development, will give possibility for further discussion

and to analyze if the public sector expectations are in line with those of the private sector.

Cartagena: Addressing challenges in the sea and land fronts to reap the benefits of the Panama Canal expansion

The port is combining a growing hinterland traffic as well as transshipment activities connecting different liner service networks within the Caribbean and Latin America and thus is facing the dual challenge of strengthening port-centric logistics as well as improving hinterland accessibility. The more effective Cartagena is in capturing national gateway cargo, the greater the potential to positively influence the strategy of shipping lines to move their transshipment through the port.

On the maritime front, the expansion of the Panama Canal raises concerns about the capacity of the port to handle effectively the larger ships that will enter the Caribbean. Although the existing channel draft is able to accommodate most post-Panamax ship classes, it will be insufficient to handle the new Panamax class. Additionally, only one ship can navigate through the channel at any given time, limiting port capacity. To cope with the issue, the dredging project of the Varadero channel would open a second 18 meters channel, able to accommodate the largest containerships, bulk carriers and tankers. This project is judged to be of strategic importance, as the expansion of the Panama Canal triggers expectation of increased transshipments, which require fast turnaround times at terminals, but also within the harbor.

The development of hinterland logistics concerns the port-centric segments as well as the access to the Colombian interior market. Interviews have underlined that the key issues in this front are: 1) capacity of road infrastructure and quality of trucking services, 2) land availability, and 3) training of human resources. Infrastructure is perceived to be the most important issue for port-hinterland development since the connectivity of Cartagena to the national highway system is limited, impairing capacity and reliability. Privately held logistics zones in the area are emerging, with many specializing in specific industries (e.g. agribusiness or medical services). However, there is a scarcity of logistics space in the vicinity of the city, which challenges the development of logistics zones and boosts land

prices. The issue of high land prices around Cartagena is further compounded by land use policy which defined zoning about 20 years ago.

Based on interviews carried out for this study, institutional and regulatory capabilities of public agencies underpin Cartagena's potential to address the above challenges. Excessive red tape and delays, limited development of project finance instruments tailored the particularities of large infrastructure projects, and overlapping and lack of coordination among jurisdictions build a regulatory environment that deters private investment. The technical capacity of public agencies needs to be strengthened to ensure a stronger link between policy objectives and the framework in which actual projects are designed and executed.

Panama: Strengthening the position of a pure transshipment hub port

With limited hinterland traffic, but being a strategic location within the global shipping networks, the ports are under pressure to develop a more logistics driven expansion to capture transshipment cargo after the Canal expansion, which will trigger competition with other transshipment ports in the region. Thus the development of port centric logistics zones could be a strategy to offer value added services to transshipment cargoes and thus to increase the economy's benefits from its strategic location.

The transition of Panama towards a logistics cluster is a crucial issue in its insertion within global and regional logistics. The transshipment business developed through competition between terminal operators and shipping lines, particularly on the Caribbean range, to attract transit cargo and shaped container shipping networks. This business model was very successful and has triggered externalities such as congestion in the vicinity of terminals. The development of logistics activities will require a more comprehensive approach with the emergence of a Panama logistics system; a competitive package that includes not just first rate port infrastructure but the immediate hinterland.

Inland infrastructure capacity issues, particularly near port facilities and across the isthmus will

need to be addressed. To such an end, Panama requires a national logistics strategy for a new-Panamax context, to continue the expansion of the port terminal facilities, to provide land for logistics, to mitigate growing levels of truck congestion, but also to provide a comprehensive regulatory framework going beyond trade facilitation. Similar to major ports around the world, the expansion of port facilities is at start a governmental decision, since it controls land ownership. It is particularly crucial for Panama because the most strategically accessible land is along the Panama Canal Zone, and thus under direct oversight from the Government of Panama. Currently, there are no development plans for the Canal Zone, which leads to missed opportunities. Firms in the logistics sector may consider Panama as an attractive location but can be deterred by basic issues such as the lack of suitable land for development. The setting of port centric and port accessible logistics zones becomes a national priority in such a context as it would reinforce the privileged position of Panama in the regional distribution system and mitigate the strong infrastructure pressures that a growth of "domestic" cargo would entail.

A very important factor in the locational decisions of firms is the availability of land, particularly "shovel ready" land. Considering the strong international function of distribution taking place in Panama, accessibility to port terminal facilities is a constraint that matters even more. Many firms expect to move in quickly once a decision is made. Outside cost and infrastructure considerations, the regulatory framework in a significant incentive for in logistics investments. It requires a long term logistics zoning strategy that considers intermodal and logistics development concomitantly. The main interest of government agencies concerning land is more from a real estate asset perspective where land can be sold for various development projects.

The government defined logistics as a high priority and one of the four major national growth engines in the Strategy Plan 2009-14. In order to strengthen these efforts in 2012 a Logistics Cabinet composed of key ministers was formed as a step in the right direction for shifting the stance of public policy in a proactive fashion. Among its objective is the setting of Master Plan and the coordination a National Logistics

Development Strategy. Strong leadership and close coordination among Cabinet key ministers are a cornerstone for the initiative to yield effective results.

Key Bottlenecks

The current study is based on field survey of port / hinterland logistical relations in Cartagena (Colombia), Veracruz (Mexico) and Panama (Balboa and Colon), presented further below. The case studies have underlined particular bottlenecks:

- **Capacity bottlenecks.** The lack of infrastructure investment in hinterlands in response to international trade growth (both for imports and exports) is a common issue. The recent focus on the development of road infrastructure is leading to more reliable inland accessibility, but this is only one component of a more comprehensive strategy. Rail transportation, particularly inter-modal, will need to be developed where suitable. In Latin America and the Caribbean, rail network tends to be geographically fragmented and focusing on traditional sectors such as natural resources and export commodities. The lack of intermodal and/ co-modal vision in the development of infrastructure is likely to create capacity bottlenecks as trade volumes are expected to grow and as hinterland logistics becomes more sensitive to capacity and reliability issues.
- **Institutional bottlenecks.** The institutional mindset is often creating bottlenecks in the development of logistics activities. Institutions are often ill-prepared to cope with the requirements of global firms, private entrepreneurs and foreign investment. Institutional set-up tends to focus on trade facilitation but usually overlooks the freight logistics and physical aspect of transport challenges they may create. Logistics are not much part of national strategy or policy, which is reflected in public sector visions that are generally unimodal (known as the “silo” effect). Governments focus on compliance with standards (as it is the case in customs) but not on the facilitation of logistics performance. This is also reflected in the lack of training and expertise of government officials (in spite of being the actors involved in critical policy decisions), the short-rate of duration public officials stay in office and in the high

fluctuation levels in the qualifications of policy-making branches.

- **Logistical bottlenecks.** A dichotomy (or gap) between the increasingly stringent logistical requirements of the private sector and the capabilities of infrastructure, service providers (e.g. transport, warehousing, customs brokerage) and public policy to cope with these requirements. This is particularly the case in sectors that involve time sensitive planning of production and distribution such as the automotive industry and perishable products (cold chain). Evidence underlines that each additional day of delay in trade effectively account for a tariff of 1 to 2%⁵.
- **Educational bottlenecks.** Lack of training and qualification of the labor force, the human factor in logistics, is a recurring issue. Logistics employment opportunities involve a wide range of function and skills. Although many firms provide on the job training, to possibility to tap a more qualified labor pool and establish partnerships with local educational institutions is a common strategy benefiting both the private and public sectors. Basic skills in international transactions, such as knowledge of English, are lacking at all levels, particularly in lower and mid-range administrative functions that offer entry level opportunities.

Key Areas for Improvement

Port Reforms and Policy

National governments need develop updated approaches to port reforms, whether these involve the public or the private sector, or a public-private partnership. These reforms are fundamental and have far reaching consequences on trade, port traffic and hinterland logistics.

- Develop assessment criteria and implementation strategies for port investments such as the implementation of performance measures in the maritime sector development strategy.

⁵ Hummels, D. and G. Schaur (2012) “Time as a Trade Barrier”, NBER Working Paper 17758, National Bureau of Economic Research, Cambridge, MA.

- Assess the importance of including the development of hinterland logistics in concession agreements. For instance, some European ports have modal shift clauses in their concessions. In the region terminal operators are committing substantial efforts and investments to improve the hinterland logistics, even if it is not part of their concession agreements.
- Controls, inspections, and paperwork requirements for many international transactions taking place at ports are often in excess of real needs and act as a logistics bottleneck. Support customs reforms focused on streamlining procedures promoting the capability to clear cargo at inland locations (inland ports or free trade zones).
- Support reforms so that port authorities have the tools enabling them to be the main drivers and coordinators of infrastructure development projects. Port authorities should be agents representing local or regional stakeholders, enabling them to compete (or cooperate) with other national ports and particularly to develop strategies adequately servicing their respective hinterlands. Although terminal operators have assumed such a role, national economies would be better serviced by a clearer involvement of port authorities.

Port Centric Logistics and Inland Ports

Port centric and inland port policies are not specifically developed and/or implemented in individual countries. A number of ports and particularly terminal operators are currently working on specific projects of their own initiative. Again, it should be clearly understood that the development of port-centric logistics and inland ports in Latin America and the Caribbean is a fundamental element of any trade facilitation strategy.

- Underline that port-centric logistics and inland ports are a fundamental stage in trade facilitation that enables goods to enter or exit more effectively the port area and help improve hinterland transportation. They are a support structure to port activities and hinterland accessibility both for inbound and outbound supply chains.
- Support integrated land use policy development, such as zoning reforms allocating logistics activities with transport terminals and infrastructure. Particularly, port accessible land is highly

valuable and should be allocated to logistics as a priority. Each new terminal development project should be considered as an opportunity to develop port-centric logistics systems.

- Develop integrated port-centric master plans that take care of port expansion land requirements but harmonize with urban activities and services that had grown around key port-development areas.
- Any port development and investment plans must include a strategy about how the new infrastructure is integrated with local (or regional) logistics activities and when possible the development of logistics zones adjacent to the port or inland port should be promoted.
- Impose conditions when investment in port-centric logistics project is provided insuring that the logistics zones are physically and logistically well connected to the port terminals as well as to the hinterland. Logistics zone development projects that do not meet these basic criteria should be perceived as riskier and subject to more stringent financing conditions.

Logistics Integration

Regional infrastructure strategies should have the ambition to establish efficient and adequate port-hinterland facilities and systems, which are enhanced with the general development of the logistics and transport sector. The importance of establishing port hinterland logistics integrations needs to be recognized by different levels of government and by the public.

- Develop public-to-public and public-to-private stakeholders coordination mechanisms to identify the key logistical bottlenecks and assess which investment or policy could mitigate them the most effectively.
- Cooperate with other regional institutions in the areas of policy development to promote the implementation of integrated and sustainable policies.
- Engage the national transport sector entities, regional organizations and customs authority officials in a dialogue on customs facilitation, particularly its impacts on transport infrastructure and freight distribution.

- Identify bottlenecks in customs processes that prevent the timely arrival of goods to markets.
- Identify existing technology with the aim of creating a common dialogue on paperless customs transactions and highlight financial means that would support an integrated regional approach to customs that includes logistics zones and inland ports as clearance facilities.
- Develop regional training frameworks.
- Engage the private & public sector leadership in dialogue on efficient means of movement of goods at the global, regional and local levels.

Information and Knowledge Development

Last, in a context of a rapidly changing commercial environment public awareness of the strategic importance of port and logistics insures that investments in infrastructure are better accepted and lead to less conflicts between promoters, the transport and distribution industry, retailers, customs, the port administration and public interests. This is a necessary condition to bring projects to fruition and consequently diversify the economy, create jobs and improve the efficiency of freight distribution. Even in locations that are critically dependent on trade and logistics (such as Panama), the general public are not well aware of this importance and sometimes even the relation between transport, logistics, trade and national development are not seen as a single national competitive priority. This is potentially the source of future conflicts between what the public sector perceives to be its interests and private (and often public) investment strategies.

An educational strategy should be privileged. Although the emphasis is often made towards higher education, such as developing and expanding engineering and supply chain management programs, there is also the need of a wider and at time simpler approach. Current IADB activities in the region focus on the improvement of statistics and data availability. While the lack of data is a definite impediment to developments in the sector, it is only one step. Concise and adequate data collection can only be assured if the administrative and operating bodies in ports have the skill how to collect and administer data and the knowledge why data management improves development prospects.

Further, it seems necessary to create the knowledge within the private and public sectors about how data and information can be used to support future policy development. Thus guidance is needed for actors to understand information and data as a decision support tool.

Training, especially for small ports, is necessary to bring personnel up to date in the collection and management of data and is a first step to inform about what are key figures in maritime and hinterland transport besides throughput.

It is only by looking at the whole transport chain linked to port / hinterland logistics, from the port to the customer's door with all the intermediate stages involved, that logistics investments can provide the expected multiplying effects such as trade facilitation, economic development, job creation, and environmental mitigation.

Expected Benefits

The outcomes of investing in logistics capabilities are numerous, but are mainly increased integration with global trade and supply chains, better utilization of national transport assets, more competitive exports, and lower costs for imports, as well as increased employment opportunities. For freight distribution, the conventional approach of investing in infrastructure alone is now perceived to be insufficient; rather investment should be made in a wider framework that includes the supporting activities of logistics.

Table 1: Expected Benefits of Logistics Projects by Category

Project	Expected Benefits
Gateways, corridors, and hinterland accessibility	
National gateways and corridors initiative	Consider the national transport systems in a comprehensive manner.
	Recognize gateways as locations of national strategic interest.
	Identify and coordinate transport infrastructure investment.
	Facilitate modal shift and effective inland freight distribution.
Corridor coalitions	Coordinate the operations and investments of various stakeholders.
	Create an innovative planning framework (the corridor).
	Improve hinterland transport capacity, efficiency, and reliability.
	Facilitate better asset utilization (trucks) or modal shift (rail).
Expanded port authorities	Improve port productivity (e.g. concessioning).
	Reduce congestion near port facilities.
	Use and coordinate regional transportation more effectively.
Logistics zones and inland ports	
Port-centric logistics zone	Uses port real estate more effectively.
	Facilitates imports and exports (direct access to port terminal).
	Reduces local congestion.
	Receives support from satellite terminals.
Inland port	Promotes modal shift (if connected by rail).
	Reduces port congestion (relocation of some port activities; e.g. container depots).
	Facilitates economies of scale in inland distribution (corridors).
	Lowers last mile transport costs (co-location).
Logistics park	Achieves economies of agglomeration for freight activities.
	Lowers operational costs (e.g. joint infrastructures and utilities).
Freight village	Promotes the setting of logistics services firms.
Employment and logistical services	
Labor training	Advertises logistics as a career path.
	Increases labor productivity.
	Develops diversified skills.
	Attracts logistics firms.
Research centers	Create brain trust to address supply chain challenges.
	Identify trends and opportunities.
	Train managers.
	Collaborate with logistics firms.
Logistics firms incubator	Supports the development of small and medium-sized firms.
	Develops specialized logistics services, such as 3PLs and 4PLs.
Freight portals / Port community systems	
Port Community System	Promotes a better usage of transport assets and facilities.
	Improves the tracking of freight.
	Links existing databases and management systems.
	Promotes competitiveness in port-related services.
	Promotes interactions and coordination between freight actors.
Communication systems (WiFi / 3G)	Supports communication between management systems, operators and truck drivers.
	Synchronize drivers with work flow (fewer delays and errors).
	Reduce operators' time spent collecting information.
Container assets management and containerized niche markets	
Empty container depot	Ensures availability of containers for exporters.
	Reduces port congestion.
	Lowers drayage costs.

Project	Expected Benefits
Transloading facility	Rotates containers more quickly. Promotes specialized commodity exports (small and medium-sized producers).
Cold chain logistics	Promotes high-value exports of perishables (fish, meat, fruits, vegetables, flowers, etc.) on global markets in reefers. Ensures higher quality exports and less waste.
Green logistics	
Certification programs to green logistics standards	Achieves international recognition and improve supplying opportunities. Certified carriers (less emissions; energy efficiency). Certified distribution facilities (energy efficiency; lower footprint). Reduces material losses.
Reverse logistics	Improves efficient recovery of recycled materials. Develops and expand the national recycling industry.
City logistics	
Rationalization of deliveries	Improves use of existing transport assets. Matches trip sequences (deliveries and pickups). Reduces congestion.
Freight facilities	Help facilities adapt to urban freight distribution. Improve efficiency (time and energy) of urban deliveries.
Modal adaptation	Uses vehicles suited for urban deliveries. Reduces congestion and energy consumption.