



UN-OHRLLS

**LATIN AMERICA REGIONAL REPORT ON
IMPROVING TRANSIT COOPERATION, TRADE
AND TRADE FACILITATION FOR THE BENEFIT
OF THE LANDLOCKED DEVELOPING COUNTRIES**

CURRENT STATUS AND POLICY IMPLICATIONS

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ACRONYMS

AAAA	Addis Ababa Action Agenda
AEO	Authorized Economic Operator
ALADI	Latin American Association for Integration
ANNP	Paraguay National Administration of Ports and Navigation
API	Agenda of Priority Integration Projects
ATIT	International Land Transport Agreement
APoA	Almaty Programme of Action
CAF	Andean Development Corporation
CAN	Community of Andean Nations
CARP	Administrative Commission of the River Plate Basin
CARU	Administrative Commission of the River Uruguay
CIH	International Committee of the Waterway
COMTRADE	UN Trade Statistics Database
CONDESUR	Business Counsel of Land Cargo
COSIPLAN	South American Counsel for Infrastructure and Planning
DTA	Customs Transit Declaration
DTAI	Declaration of International Customs Transit
DUA	Unified Customs Declarations
ECLAC	United Nations Economic Commission for Latin America and the Caribbean
GDP	Gross Domestic Product
IADB	Inter-American Development Bank
IIRSA	Initiative for the Integration of Regional Infrastructure in South America
INE	National Institute of Statistics of Bolivia
LLDCs	Landlocked Developing Countries
LPI	Logistics Performance Index
MERCOSUR	Common Market of the South
MIC	International Cargo Manifest
ODA	Official Development Assistance
PPP	Public-Private Partnerships
SAFE	Framework of Standards to Secure and Facilitate International Trade
SDGs	Sustainable Development Goals
SINTIA	Information System to Follow Transit in MERCOSUR and partner countries
TFA	Trade Facilitation Agreement
UN	United Nations

UNASUR	Union of South American Nations
UNDP	United Nations Development Program
UN-OHRLLS	United Nations Office of the High Representative for the Least Developed Countries, Landlocked Developing Countries, and Small Island Developing States
VPoA	Vienna Programme of Action For the LLDCs for the Decade 2014–2024
VUE	Paraguay’s Single Window for Exporters
VUI	Paraguay’s Single Window for Importers
WB	World Bank
WDI	World Development Indicators
WITS	World Integrated Trade Solution
WCO	World Custom Organization
WTO	World Trade Organization

EXECUTIVE SUMMARY

The Latin America Regional Report on Improving Transit Cooperation, Trade and Trade Facilitation for the Benefit of Landlocked Developing Countries: Current Status and Policy Implications presents a review of the transit related issues in the region, identifies key achievements and remaining challenges and points to future policy areas for action to realistically address transit, transport and trade facilitation related issues for the successful participation of the Latin American Landlocked Developing Countries (LLDCs) in international trade and for their overall development.

The two LLDCs in the region, Bolivia and Paraguay, show lower levels of economic performance compared with the neighbouring transit countries. Stemming from their landlockedness, the two countries face challenges to their development stemming from the distance and difficulties in accessing sea ports; costly and lengthy bureaucratic procedures on trade and transit transport; lack of reliability of transport systems; weak infrastructure; and limited capacities. These obstacles have resulted in higher logistics and transport costs for the LLDCs than for the transit countries. These challenges also reflect in increased time that it takes Bolivia and Paraguay to export and import.

The Vienna Programme of Action for the LLDCs for the decade 2014 to 2024 (VPoA) is the most important global platform for articulating and advancing the development aspirations of the LLDCs. The VPoA acknowledges the critical importance of creating efficient transit transport systems and calls for reducing trade transaction costs, improving international trade services through simplification and standardization of transit rules and regulations, developing transit transport infrastructure and timely implementation of all bilateral, regional and international legal instruments and conventions, amongst others. Addressing in particular those transit-related issues is key to improving the competitiveness of LLDCs' exports, their connectivity and improving their growth prospects.

In terms of their trade performance, both Bolivia's and Paraguay's exports have increased substantially in the last 25 years. At the same time, their intra-regional trade also experienced a significant increase. However, notwithstanding the achievements made in increasing their trade, the challenge remaining for Bolivia and Paraguay is to increase the value added of their exports, which at the moment are highly concentrated on commodities.

The LLDCs in Latin America have been slow in acceding to international agreements related to trade and transit transport. Paraguay, as the first amongst LLDC and transit countries in the region, has ratified the World Trade Organization (WTO) Trade Facilitation Agreement. Some of the transit countries, namely Brazil, Chile, Uruguay and Peru have notified the WTO of the provisions that they will implement once the Agreement comes into force. However, more countries need to ratify the Agreement as it can bring substantial benefits in terms of faster, cheaper and smoother trade. In practice, the region follows several regional transit, trade and infrastructure agreements which have been relatively successful in simplifying procedures and harmonizing policies and processes in the region. In particular, Bolivia and Paraguay are part of a sound transit agreement, the International

Land Transport Agreement (ATIT) as well as Mercosur. While the regional agreements are mostly complementary, overlapping of rules and frameworks persists in many of the countries.

Successful integration initiatives in Latin America have resulted in improved transit and trade facilitation for the LLDCs in the region. The ATIT-recognized single document for transit has brought gains in terms of simplification, and the standardized SINTIA electronic system, Authorized Economic Operators systems, single-windows, electronic seals and satellite monitoring for transit cargo have been introduced as ways towards eliminating paper documents and speeding up processes at the borders. Coordinated border posts are also in operation in many of the most important border posts. Countries have also shown interest in following the guidelines of the World Customs Organization (WCO) on effective customs operations. The role of private sector, in particular the Business Counsel of Land Cargo (CONDESUR), was important in proposing and implementing changes to weight and dimension regulations, as well as for improvement of guarantee options.

Despite these advancements, and even though total time to export and import has decreased over the years, Bolivia and Paraguay's time to import and export is still high compared to the transit countries and the number of documents required to import and export remains the same. Moreover, in Bolivia and Argentina for example there has been an increase in the number of border agencies clearing imports and exports, as well as a rise in physical inspections in Bolivia. The remaining challenges stem from lack of coordination of border agencies, inefficiencies related to customs processes, failures of the transport-logistics operators to have the documentation ready and lack of knowledge of transit regulations. Lack of enforcement of the existing agreements and regional coordination is also a problem.

Furthermore, to add to these issues, road maintenance and quality of transport infrastructure remain a challenge, even though transport has been increasing in recent years. Improvements in the road networks in transit countries have benefited the LLDCs, such as in the case of Highways 34 and 81 in Argentina and other successful stories include the plans for railway rehabilitation in Paraguay, the dredging efforts and improvements done on the Waterway and the case of railroad corridors in Bolivia. One of the conclusions from the analysis is the importance of multi-modal trade, in particular importance of railroads for Bolivia and the waterways from Paraguay. Yet, infrastructure still presents a barrier in the LLDCs, as well as in the transit countries and there is a significant infrastructure gap in the region.

Even though the Initiative for the Integration of Regional Infrastructure in South America (IIRSA) has a number of projects linking routes in South America, most of them are still at an initial level, with very few finalized. Furthermore, investments in Bolivia's and Paraguay's infrastructure are less than 13 per cent of the total portfolio of funds. While domestic financing remains limited, the participation of the private sector continues to be very low. Promoting other ways of financing, including public-private partnerships and enhancing the project preparation can foster new sources of financing. The support of development partners is critical in this regard.

Reducing both time of transit and cost to transit goods will benefit Bolivia and Paraguay trade and help them realize the gains of trade facilitation towards development. In order to achieve the ambitious goals of the Vienna Programme of Action, transit and landlocked countries have to work through a coordinated agenda. This agenda includes finding solutions to these outstanding challenges.

Policy recommendations to solve these challenges include:

- Training and capacity building on norms and regulations on customs requirements and transit agreements;
- Ratifying the WTO Trade Facilitation Agreement;
- Diversifying and upgrading of exports;
- Boosting multi-modal transportation;
- Investing in exclusive lanes for transit at the borders to provide with expedited border crossing;
- Improvement of guarantees system to complement regionally accepted single documents;
- Exploring alternative ways of financing to solve the infrastructure gap;
- Taking a regional and corridor approach to provide holistic planning, operation and problem solving;
- Fostering political will from all the countries for improving transit in the region.

1. INTRODUCTION

The landlocked developing countries (LLDCs) face development challenges, owing both to their geographical disadvantage of lacking direct territorial access to the sea and to their remoteness and isolation from world markets. Their international trade depends on transit through other countries. Additional border crossings and long distances from major markets, coupled with transit procedures and inadequate infrastructure substantially increase the total expenses for transport and other transaction costs. Reducing such high costs and improving the export competitiveness of the LLDCs requires addressing both the hard physical infrastructure, as well as the soft infrastructure that includes the legal framework and institutions, and the procedures serving trade corridors.

In 2013, UN-OHRLLS published a report that estimated the costs of being landlocked, from the standpoint of development¹. According to the findings, on average, LLDCs are 20 per cent less-developed than what they would be if they had direct access to the sea. Several factors contribute to this result: poor quality of infrastructure; concentrated dependency on primary resources; and higher costs and time to import and export than transit countries. Addressing in particular those transit-related issues is key to improving the competitiveness of LLDCs' exports, their connectivity and improving their growth prospects.

In a sign of increased awareness of the challenges and needs of the LLDCs, the international community gathered in Vienna, Austria for the Second UN Conference on LLDCs and adopted the Vienna Programme of Action for the LLDCs for the decade 2014 to 2024 (VPoA). The VPoA builds on and greatly expands on the Almaty Programme of Action: Addressing the Special Needs of Landlocked Developing Countries within a New Global Framework for Transit Transport Cooperation for Landlocked and Transit Developing Countries.²

The overarching goal of the new Programme of Action is to address the special development needs and challenges of landlocked developing countries arising from landlockedness, remoteness and geographical constraints in a more coherent manner and thus contribute to sustainable and inclusive growth, eradication of poverty and ending of extreme poverty. The VPoA underscores the importance of partnerships between LLDCs and transit countries, as well as partnerships with development partners. As a more comprehensive development agenda for the LLDCs, the VPoA specifically calls for the promotion of unfettered, efficient and cost-effective access to and from the sea by all means of transport and freedom of transit in accordance with applicable rules of international law. It also calls for reducing trade transaction costs and transport costs and improving international trade services through simplification and standardization of transit rules and regulations and developing transit transport infrastructure. Further, the VPoA attaches significant importance to the rapid and timely implementation of all bilateral, regional and international legal instruments and conventions.

¹ UN-OHRLLS (2013), The Development Economics of Landlockedness: Understanding the development costs of being landlocked.

² Report of the International Ministerial Conference of Landlocked and Transit Developing Countries and Donor Countries and International Financial and Development Institutions on Transit Transport Cooperation, Almaty, Kazakhstan, 28 and 29 August 2003 (A/CONF.202/3, annex I).

The VPoA is specifically designed to support national, regional and international action in six priority areas: 1. Fundamental transit policy issues, 2. Infrastructure development and maintenance, 3. International trade and trade facilitation, 4. Regional integration and cooperation; 5. Structural economic transformation, and 6. Means of implementation.

In September 2015, the international community, including the two Latin American LLDCs, committed to pursue sustainable and inclusive development, as enshrined in the adopted 2030 Agenda for Sustainable Development and its 17 Sustainable Development Goals (SDGs). To provide financial sustainability, the Addis Ababa Action Agenda (AAAA) provides a comprehensive set of policy actions to finance sustainable development and achieve the SDGs. Of particular relevance to the VPoA are Goals 7, 9, 10 and 17 of the SDGs which contain specific references to LLDCs and address, respectively, the issues of ensuring access to affordable, reliable, sustainable and modern energy for all; building resilient infrastructure, promoting inclusive industrialization and fostering innovation; reducing inequality within and among countries; and strengthening the means of implementation and revitalizing the global partnership for sustainable development. The timely and effective implementation of the Vienna Programme of Action can greatly contribute to the implementation of the global sustainable development agenda.

This report is intended to contribute to the discussion on the implementation of the VPoA, focusing specifically on transit cooperation, transport infrastructure and trade and trade facilitation issues. The report consists of eight broad sections. Following the introductory chapter, section 2 of the report discusses the constraints of being landlocked and provides evidence of the logistics, doing business and connectivity challenges of Bolivia and Paraguay compared to their transit partners: Argentina, Brazil, Chile and Peru. Section 3 presents the current status and evolution of external trade of the two landlocked countries. Section 4 examines the status of legal frameworks under which transit in the region is operated, encompassing the international, regional and bilateral agreements in place. Section 5 presents the status of infrastructure development and maintenance, major corridors and projects underway, with a focus on roads, railroads and waterways, and discusses the remaining challenges. Section 6 examines the current advancements in terms of trade facilitation, such as use of ICT systems, one stop borders and single windows, harmonization of policies, role of institutions and the role of private sector, amongst others. In particular this section emphasizes the linkages between international trade and trade facilitation and transit issues and how these can be addressed to enhance development of the LLDCs. Section 7 presents the status of financing investment in integration projects aimed at improving transport and transit for the benefit of the LLDCs and explores options for raising additional finance. The final section presents the conclusions based on the analysis in the previous sections and suggests areas for policy action.

2. SITUATION ANALYSIS

The condition of being landlocked refers to the geographical situation of a country without direct access to the sea.³ Applying the definition to Latin America, there are two such countries, Bolivia and Paraguay. Consequently, these countries depend on transit through other countries to make their international trade effective. Often, trade takes longer and is more costly. Because of these issues, harmonization of infrastructure development and administrative procedures are very important. In terms of development, the condition of not having direct access to the sea results in reduced connectivity, higher costs of access to markets and lower trade. UN-OHRLLS has estimated that, on average, the volume of international trade of a landlocked developing country is only 60 per cent of the trade volume of a comparable coastal country⁴. For Bolivia, it is estimated that the country is 16 per cent “less developed” than what it would be if it were not landlocked, while for Paraguay this figure is 11 per cent⁵.

As can be seen in Table 1, Bolivia’s and Paraguay’s socio-economic backgrounds show lower levels of performance compared with the transit countries. Both countries are far below the region’s GDP per capita average.

TABLE 1. GDP PER CAPITA, 2014 (CURRENT US\$)

Country	GDP per capita
Argentina	12,569
Bolivia	3,236
Chile	14,528
Brazil	11,385
Uruguay	16,807
Paraguay	4,729
Peru	6,551
Latin America & Caribbean average (all income levels)	10,057

Source: World Bank WDI indicators.

Table 2 shows that Bolivia and Paraguay also have a lower level of Human Development Index, which measures indications of long and healthy life, knowledge and decent standard of living. Bolivia and Paraguay also suffer from infrastructure gap and low educational quality. For example, Bolivia’s labour productivity has been reduced by 35 per cent due to the infrastructure gap,⁶ while it has been

³ Glassner, M.I (1970), *Access to the Sea for Land-locked Developing States*, Martinus Nijhoff, The Hague.

⁴ UN-OHRLLS (2013), *op. cit.*

⁵ Furthermore, ECLAC points out that international transport cost is higher, making inputs and consumption goods in LLDCs more expensive. This further hinders the foreign investment and thus results in less investment, less technology and lower economic growth (Bulletin FAL 262).

⁶ Calderon and Serven (2003), *The Output Cost of Latin America’s Infrastructure Gap*, in Easterly and Serven, *The Limits of Stabilization: infrastructure, public deficits and growth in Latin America*. Stanford University and World Bank.

found that the quality of education is the main difference between Latin America's and Asia's achievements in development⁷.

TABLE 2. HUMAN DEVELOPMENT INDEX 2014

Country	HDI
Argentina	0.836
Chile	0.832
Uruguay	0.793
Brazil	0.755
Peru	0.734
Paraguay	0.679
Bolivia	0.662

Source: UNDP Human Development Index.

In terms of difficulties for Latin American landlocked developing countries stemming from their landlockedness, there are several, including coordination problems; lack of reliability of transport systems; distance and difficulties of accessing the sea ports; costly bureaucratic procedures, especially referring to transport and trade facilitation; excessive logistics and transport costs; weak infrastructure, with growing bottlenecks; the dependency on the infrastructure of transit countries; and the lack of effective implementation of some regional agreements capable of improving the LLDCs conditions related to infrastructure and transport⁸.

In order to assess the situation of Bolivia and Paraguay, the World Bank indicators calculated by the Doing Business Report and the Logistics Performance Index (LPI)⁹ are the tools used to evaluate Bolivia's and Paraguay's trade facilitation and logistics performance. Overall, there is evidence that both Bolivia and Paraguay remain at a logistics disadvantage when compared to their transit countries.

Figure 1 clearly shows that Bolivia's components of the Logistics Performance Index score lower than in Paraguay and than for transit countries. In the region, Chile is the country with the best performance, followed by Argentina and Brazil. Bolivia and Paraguay scores are significantly lower in infrastructure, while for Bolivia timeliness remains a big challenge. Bolivia exports soya mainly by railroad, which entails multimodality complexity that is reflected in the indicator.¹⁰ The same occurs with the infrastructure that according to the LPI is lagging behind the region, despite investments in recent years.¹¹

⁷ Hanuseck and Woessmann (2012), Sholing, Educational Achievement, and the Latin America Growth Puzzle, *Journal of Development Economics*, 99 (2012) 497-512.

⁸ See for example ECLAC (2014), *The potential of Aid for Trade to improve the infrastructure and logistics performance of landlocked developing countries of Latin America*, United Nations, Santiago, Chile.

⁹ The Logistics Performance Index is a composite index based on performance of countries in six dimensions (indicators) of trade-related logistics performance. For further information, see Annex, Annex A.

¹⁰ Details of multimodality are covered in the Trade Facilitation section.

¹¹ Details of investments are covered in the Financing and Investment and Infrastructure sections.

FIGURE 1. LOGISTICS PERFORMANCE INDEX: COMPONENTS SCORE FOR 2014

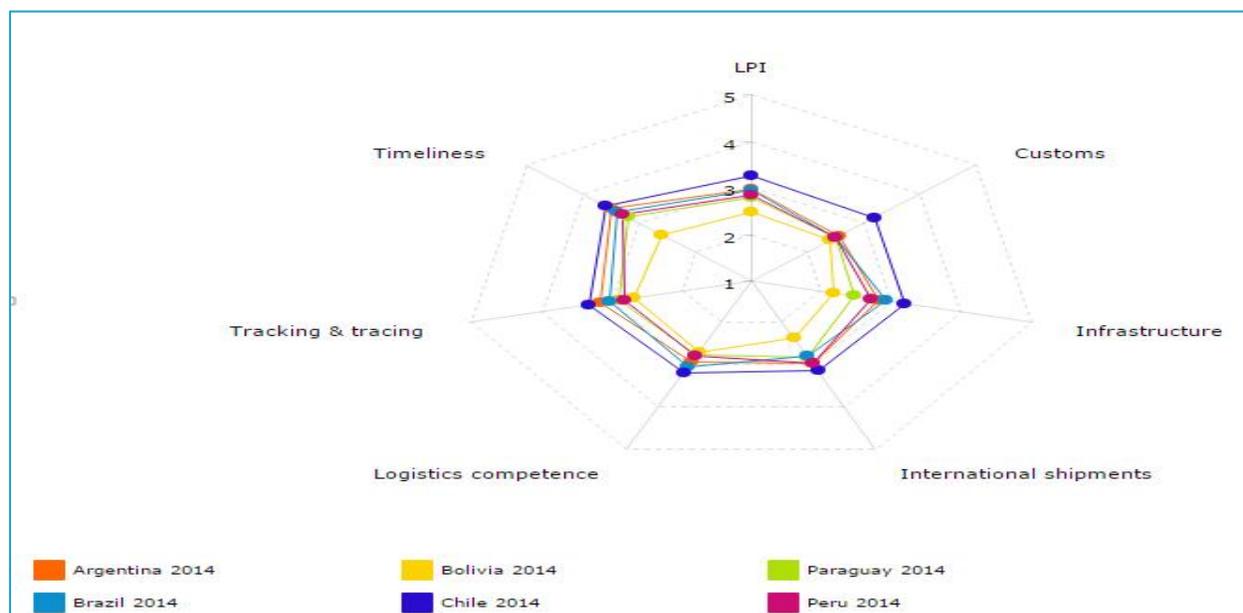


Table 3 shows that the landlocked countries are at a logistics disadvantage compared to the transit countries. When analyzing the rank and score across the years, it is easy to notice that Bolivia and Paraguay rank at the bottom of the group. For Bolivia, the performance measure by the index was improving across the years, with exception of 2014 when, due to increasing customs clearance times, the score was lowered. Paraguay's performance in 2014 is better than in 2007, with major improvement from 2012.

TABLE 3. LOGISTICS PERFORMANCE INDEX: RANK AND SCORE ACROSS YEARS

(1=low; 5=high)	2007		2010		2012		2014	
	Score	Rank	Score	Rank	Score	Rank	Score	Rank
Argentina	2.98	45	3.10	48	3.05	49	2.99	60
Bolivia	2.31	107	2.51	112	2.61	90	2.48	121
Brazil	2.75	61	3.20	41	3.13	45	2.94	65
Chile	3.25	32	3.09	49	3.17	39	3.26	42
Paraguay	2.57	71	2.75	76	2.48	113	2.78	78
Peru	2.77	59	2.80	67	2.94	60	2.84	71

Source: World Bank Logistics Performance Index.

Based on the Doing Business indicators,¹² it is mostly time and documentation that impose barriers to trade in the LLDCs. Even though the indicators are showing improvement, both countries still lag behind their transit neighbours. As shown in Table 4, Bolivia and Paraguay require at least one more

¹² World Bank Doing Business, <http://www.doingbusiness.org/data>.

document to export than the transit countries, and Paraguay requires at least one more document to import.

TABLE 4. DOCUMENTS REQUIRED TO EXPORT AND IMPORT

Country	Documents to export (number)			Documents to import (number)		
	2006	2012	2015	2006	2012	2015
Argentina	6	6	6	6	6	8
Bolivia	7	7	7	6	6	6
Brazil	6	6	6	8	8	8
Chile	5	5	5	5	5	5
Paraguay	7	7	7	9	9	9
Peru	5	5	5	7	7	7

Source: World Bank Doing Business “Trading Across Borders Indicators”¹³

As shown in Table 5, both time to import and time to export are higher in days than in the transit countries (with the exception of Argentina’s time to import which was the same as in Paraguay). While in Bolivia it takes on average 22 days to export, in Argentina and Peru it only takes 12 days. For importing, it takes 30 days in Paraguay, but only 12 days in Chile.¹⁴

The evidence shows that, since 2006, the days to export and import have decreased in all the countries (with exception of Argentina’s days to export). This is an indication that the actions taken towards integration and trade facilitation are creating positive effects. Important achievements in this case are the integrated border controls and the simplified customs documentation procedures produced through an electronic system, which will be discussed in section 6.

Concerning costs, exporting a container from Bolivia or Paraguay is more expensive than in Chile and Peru, but less than in Brazil. For imports, Paraguay costs are high, just under Brazil and Argentina. Research has shown that landlocked developing countries’ trade costs are over 1.5 times those of the corresponding transit countries.¹⁵ This may be the trend when comparing Bolivia and Paraguay to Chile. However, when compared to either Argentina or Brazil, cost of export and import is less in Bolivia and Paraguay. World Bank research using LPI shows that decreasing logistics trade costs by half would raise trade by 15 per cent and production by 5 per cent globally.¹⁶

¹³ Doing Business measures the time and cost (excluding tariffs) associated with exporting and importing a standardized cargo of goods by ocean transport. The time and cost necessary to complete every official procedure for exporting and importing the goods—from the contractual agreement between the 2 parties to the delivery of goods—are recorded. All documents needed by the trader to export or import the goods across the border are also recorded. For exporting goods, procedures range from packing the goods into the container at the warehouse to their departure from the port of exit. For importing goods, procedures range from the vessel’s arrival at the port of entry to the cargo’s delivery at the warehouse. The time and cost for ocean transport are not included.

¹⁴ Time does not reflect the actual time to go through a particular corridor, but is a measure of bureaucracy and red tape at border crossings.

¹⁵ Based on ad valorem equivalent costs computed from trade and production data. See Jean-Francois Arvis, Ben Shepherd, Yann Duval, and Chorthip Utoktham, Trade Costs and Development: A New Data Set, World Bank, Economic Premise Number 104: January 2013, available at <http://bit.ly/1XNDGFL>.

¹⁶ World Bank, Connecting to Compete 2014, The International Bank for Reconstruction and Development/The World Bank: Washington, DC.

TABLE 5. TIME AND COST TO IMPORT AND EXPORT

Country	Time to export (days)			Cost to export (US\$ per container)			Time to import (days)			Cost to import (US\$ per container)		
	2006	2012	2015	2006	2012	2015	2006	2012	2015	2006	2012	2015
Argentina	16	13	12	1,325	1,480	1,770	20	16	30	1,825	1,810	2,320
Bolivia	24	19	22	1,425	1,425	1,440	36	23	28	1,452	1,747	1,745
Brazil	18	13	13	630	2,075	2,323	24	17	17	1,090	2,075	2,323
Chile	17	17	15	645	795	910	16	15	12	600	760	860
Paraguay	36	34	29	1,220	1,440	1,850	33	33	30	1,400	1,750	2,275
Peru	22	12	12	575	860	890	29	17	17	670	880	1,010

Source: World Bank Doing Business “Trading Across Borders Indicators”.

According to a review carried out to evaluate the progress of the Almaty Program of Action,¹⁷ operations involving document preparation, handling of customs formalities and obtaining certifications and permits for entry and exit of containerized cargo are the main factors contributing to the high costs of trade for a standardized shipment of goods. This signals that bureaucracy in Bolivia and Paraguay is dampening the benefits of trade.

ECLAC data shows landlocked countries face a higher freight cost burden on their import costs than the transit countries. As shown in Table 6, in 2010 the contribution of international freight to the total cost of imports was 7 per cent and in Paraguay 9.8 per cent. Transit countries, however, have a value that ranges between 4.2 and 6.3 per cent of international freight costs in relation to import cost.

TABLE 6. CONTRIBUTION OF INTERNATIONAL FREIGHT TO THE TOTAL COST OF IMPORTS (AS PERCENTAGE)

Country	2010	2000
Argentina	4.2	4.9
Brazil	5.0	5.0
Uruguay	5.2	5.0
Chile	6.3	7.1
Peru	6.3	7.3
Bolivia	7.0	7.8
Paraguay	9.8	8.4

Source: ECLAC, Status of Implementation of the Almaty Programme of Action in South America, September 2014.

ECLAC estimations in Table 7 also show that the burden of international transport costs for road transport (as a share of total import costs) were higher for Bolivia and Paraguay than for transit countries.

¹⁷ ECLAC, Status of Implementation of the Almaty Programme of Action in South America, September 2014.

**TABLE 7. BURDEN OF INTERNATIONAL TRANSPORT COSTS: ROAD TRANSPORT, 2008–2013
(AS PERCENTAGE OF IMPORT COSTS)**

Country	2008	2009	2010	2011	2012	2013
Bolivia	6.6	7.2	7.8	7.6	7.9	7.2
Paraguay	5.9	6.5	6.5	6.8	n.a.	n.a.
Peru	5.1	6.3	5.8	5.3	5.0	5.7
Uruguay	5.1	5.6	5.1	5.2	5.8	5.9
Argentina	5.0	5.0	5.1	4.7	4.8	4.6
Brazil	3.2	3.7	3.7	3.7	3.6	3.6

Source: ECLAC calculations based on International Transport Database.

According to ECLAC's Panel of regional experts on infrastructure,¹⁸ transport, logistics and transport facilitation, losses of competitiveness can be observed for LLDCs, mainly originating from:

- inadequacies in infrastructure due to lack of investment in new works and maintenance (e.g. insufficient dredging and deficiencies in road connections);
- problems with trade and transport facilitation, in LLDCs and in the transit countries;
- failure of the public and private sectors to comply with international standards; and
- regulatory and institutional coordination problems.

The experts notice that pending issues include:

- inconveniences related to transit rules;
- persistent red tape problems at border crossings;
- cargo restriction policies, such as the double taxation of freight, excessive administrative requirements, the practice of detaining containers in transit, cargo reservation policies, and especially the failure to execute the widening, signalling and installation of navigation aids in the Paraguay Parana river; and
- lack of infrastructure.

Furthermore, neither LLDCs nor transit countries display coherent planning and implementation of public policies for infrastructure, transport, logistics and facilitation, thus causing negative effects on the efficiency of the logistics chains within countries. A shift in the focus of transport policy in Latin America is imperative, from one that is modal to one that is integrated and multi-modal, in both LLDCs and the transit countries¹⁹.

¹⁸ ECLAC, The potential of Aid for Trade to improve the infrastructure and logistics performance of landlocked developing countries of Latin America, August 2014, available at http://repositorio.cepal.org/bitstream/handle/11362/36953/S1420408_en.pdf?sequence=1.

¹⁹ Idem.

3. INTERNATIONAL TRADE

3.1 State of Bolivian and Paraguayan Trade

Bolivia's and Paraguay's trade has spiked since the 90s. According to trade data (see Table 8), Bolivia's exports to the world increased dramatically from US\$1.3 billion to US\$12.8 billion in the period from 1998 to 2014. For Paraguay, total trade in the same period increased from US\$1.04 billion to US\$9.06 billion. Total increase during the period was 873 per cent for Bolivia and 852 per cent for Paraguay.

TABLE 8. TOTAL TRADE, 1998, 2005, 2014 (MILLIONS US\$ AND PERCENTAGES)

World	1998	2005	2014	Increase 98-14 (%)
Argentina	26,187,108	39,477,053	66,497,574	154
Bolivia	1,321,326	2,794,871	12,856,061	873
Brazil	50,491,372	116,349,761	220,298,108	336
Chile	14,573,002	41,972,988	76,639,248	426
Paraguay	1,014,103	1,655,111	9,654,999	852
Peru	5,671,804	17,114,272	38,459,211	578
Total	99,258,715	219,364,057	424,405,203	328

Source: WITS, World Bank, based on COMTRADE data HS 1996.

The top five exported products for Bolivia are natural gas, gold, zinc ore and concentrates, silver ore and concentrates, and oil cake and other solid residues of soya-bean. Top five exported products for Paraguay are soya beans, electrical energy, oil cake and other solid residues of soya-bean, frozen boneless bovine meat, and crude soya-bean oil. Thus, the LLDCs' exports are concentrated mainly in commodities while manufactured products represent a low share of trade. Exports of manufactured products as a percentage of merchandise exports decreased from 5.8 per cent to 3.7 per cent from 2008 to 2014 in the case of Bolivia, and from 16 per cent to 14.7 per cent for Paraguay. However, high-technology exports as a percentage share of manufactured product exports increased in both countries, from 4.4 per cent to 9.4 per cent in Bolivia, and from 2.7 per cent to 3.5 per cent in Paraguay.²⁰

In terms of concentration of the top five products in total goods exported, Bolivia has experienced an increase from 60 per cent in 2000 to 87 per cent in 2012. Increase in exports of mineral fuels and the commodity prices boom explain this situation. For Paraguay, its top five product

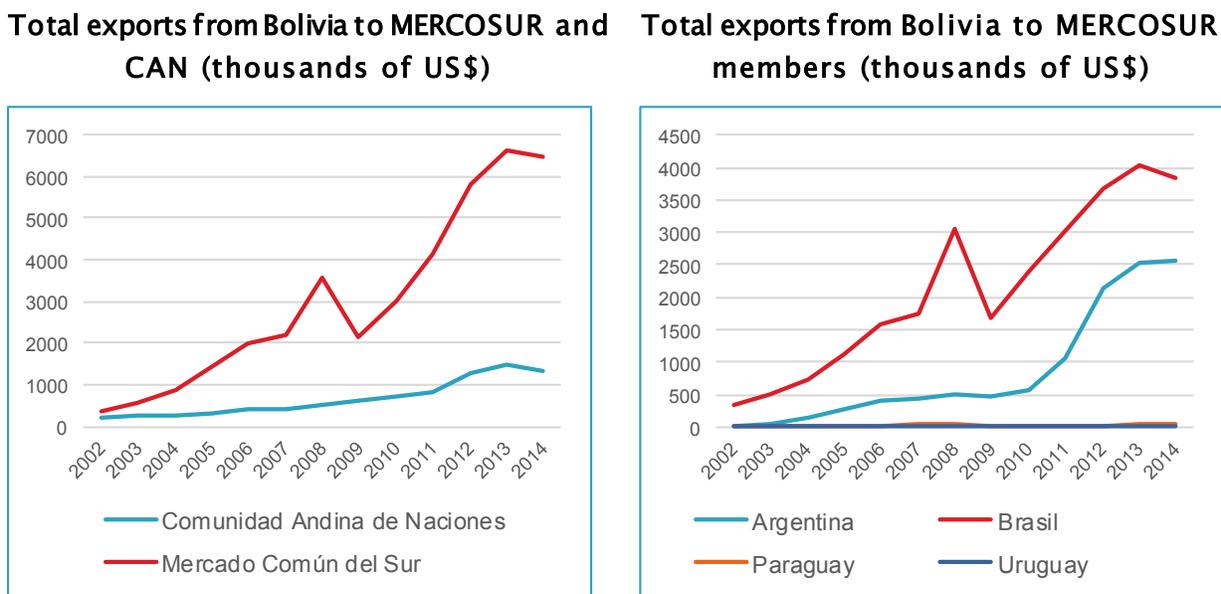
²⁰ World Development Indicators, World Bank.

concentration has increased from 70 per cent in 2000 to 82 per cent in 2012, with mineral fuels and oil seeds explaining this concentration.²¹

In terms of concentration of the markets that the countries export to, Bolivia’s Hirschman Herfindahl market concentration index²² in 2014 was 0.17 and the index of market penetration²³ is 2.9, while for Paraguay these are 0.13 and 1.97 respectively. This means that both countries display relatively high export market diversification. However, this data further indicates that exports of both Bolivia and Paraguay have difficulties in reaching already proven markets, as their exports only reach about 2 or 3 per cent of the markets that import that particular product. This suggests that they are exploiting very little of their export potential. According to World Bank estimates²⁴, in 2012, Paraguay was over-trading (actual trade was 5 per cent higher than trade predicted by their model), while Bolivia was under-trading (by approximately 10 per cent).

Along with rising trade, intra-regional trade also experienced a significant increase. Both Bolivia and Paraguay have greater trade with Mercosur than with the Andean Community of Nations (CAN, by its initials in Spanish) and, in particular, trade is greatest with the biggest economies of the customs union, Brazil and Argentina (see Figure 2 and 3).

FIGURE 2. BOLIVIA’S EXPORTS TO MERCOSUR, CAN AND MERCOSUR MEMBER COUNTRIES (THOUSANDS OF US\$)



Source: Latin American Association for Integration (ALADI).

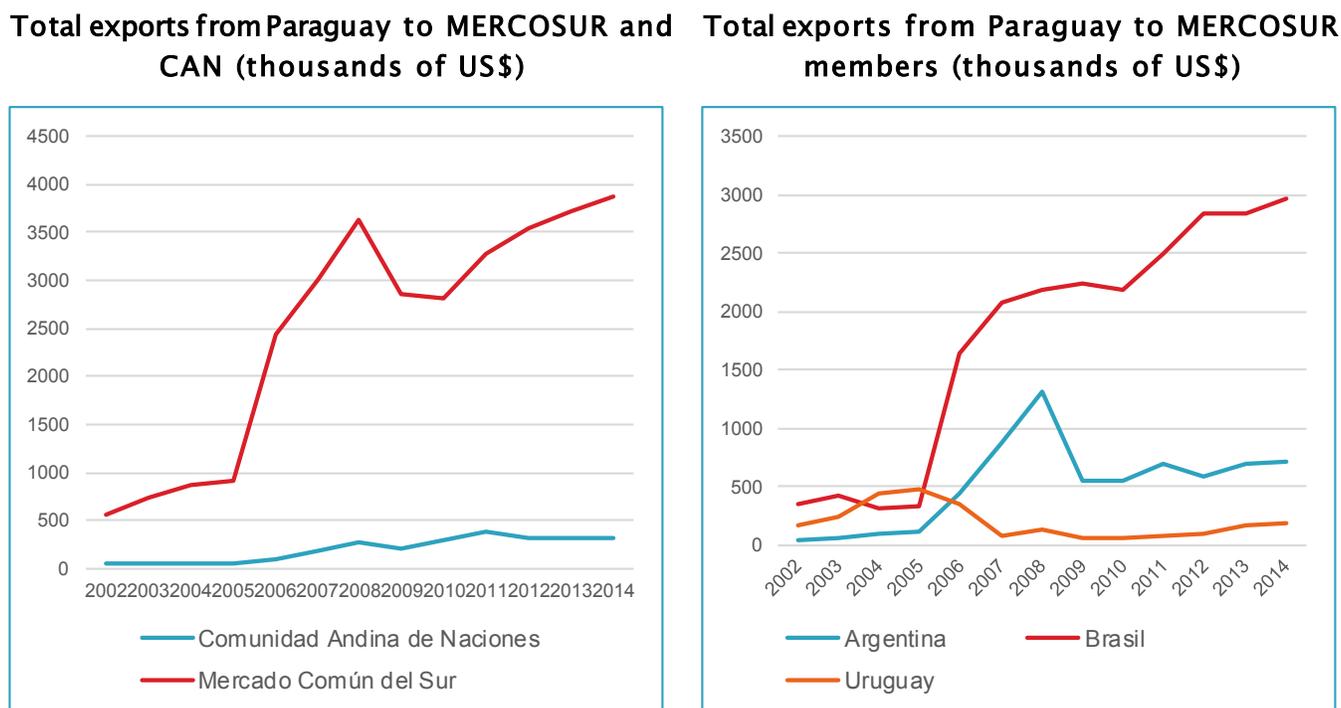
²¹ World Bank, *Improving Trade and Transport for Landlocked Developing Countries: A Ten-Year Review*: World Bank-United Nations report in preparation for the 2nd United Nations Conference on Landlocked Developing Countries (LLDCs), November 2014.

²² Hirschman Herfindahl index is a measure of the dispersion of trade value across an exporter’s partners. A country with trade (export or import) that is concentrated in a very few markets will have an index value close to 1. Similarly, a country with a perfectly diversified trade portfolio will have an index close to zero.

²³ The Index of Market Penetration is calculated as the number of countries to which the reporter exports a particular product, divided by the number of countries that report importing the product that year. It ranges 0 to 100.

²⁴ Reis and Farole, T (2012), *Trade Competitiveness Diagnostic Toolkit*, World Bank. Parametric analysis is made by regressing trade to GDP ratios on GDP per capita, population, remoteness and a measure for general cost of trading.

FIGURE 3. PARAGUAY'S EXPORTS TO MERCOSUR, CAN AND MERCOSUR MEMBER COUNTRIES (THOUSANDS OF US\$)



Source: Latin American Association for Integration (ALADI)

In 1998, Bolivia's intra-regional trade to transit countries started at US\$0.4 billion for exports to Argentina, Brazil, Paraguay, Uruguay, Chile and Peru. The value sharply increased to US\$1.4 billion in 2005 and US\$7.05 billion in 2014. For Paraguay, intra-regional trade to transit countries also had a significant expansion, going from US\$0.58 billion in 1998 to US\$1 billion in 2005 and US\$4.7 billion in 2014. In percentage terms, in the last nine years, Bolivia and Paraguay have experienced by far the greatest positive change, as seen in Table 9. Major trading partners in the region for Bolivia are Brazil, Argentina and Peru. For Paraguay, these have been Brazil, Argentina and Chile. In 2014, the three biggest partners represented 53 per cent of total trade for Bolivia and 45 per cent for Paraguay. Total intra-regional trade represented 55 per cent of total trade for Bolivia and 49 per cent for Paraguay in 2014. In contrast, in 1998, the share of intra-regional trade for Bolivia out of total trade was 30 per cent and for Paraguay 57 per cent. Therefore, Bolivia's intra-regional trade share has been increasing, while Paraguay's has been decreasing.

While intra-regional trade has been increasing for Bolivia, for Paraguay it has been decreasing since 2005, as can be seen in Table 10. This is explained by Brazil and Argentina being the top trading partners for Bolivia, with Peru in fourth place. In contrast, for Paraguay, Brazil is its first trading partner, followed by Russia, and only then Argentina and Chile²⁵.

²⁵ Based on WITS, World Bank data.

TABLE 9. INTRA-REGIONAL TRADE CHANGE, BASED ON VALUE (PERCENTAGE)

Reporter	Country	Change 98-05 (%)	Change 05-14 (%)
	Argentina	9	62
	Bolivia	270	379
	Brazil	54	71
	Chile	95	110
	Paraguay	72	375
	Peru	283	123

Source: WITS, World Bank based on COMTRADE data HS 1996.

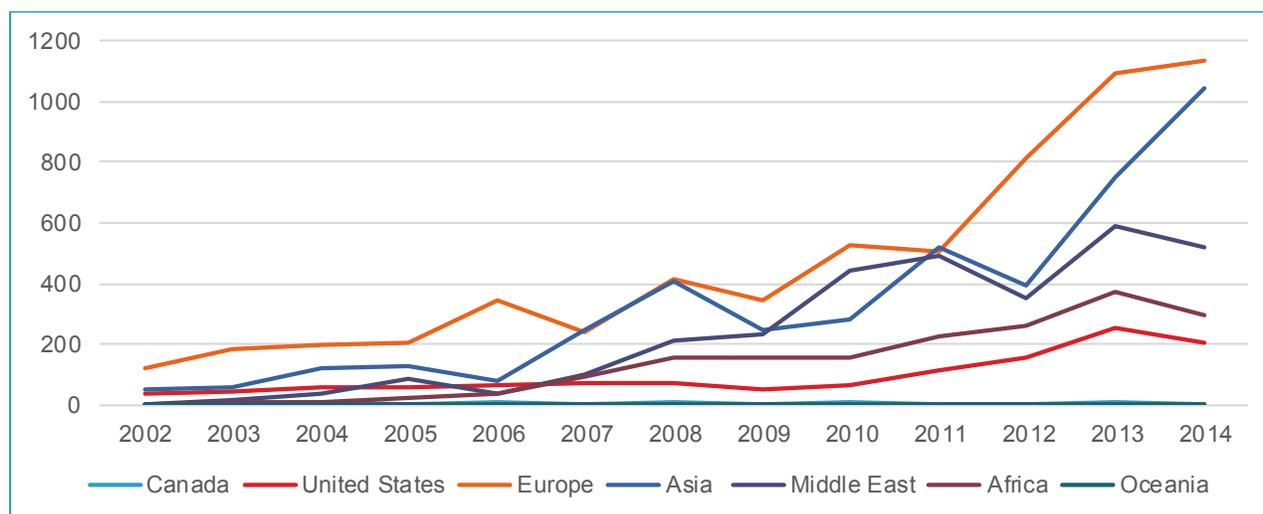
TABLE 10. INTRA-REGIONAL TRADE (AS PERCENTAGE OF TOTAL TRADE)

Country	1998	2005	2014
Bolivia	30	53	55
Paraguay	58	61	49

Source: WITS, World Bank based on COMTRADE data HS 1996.

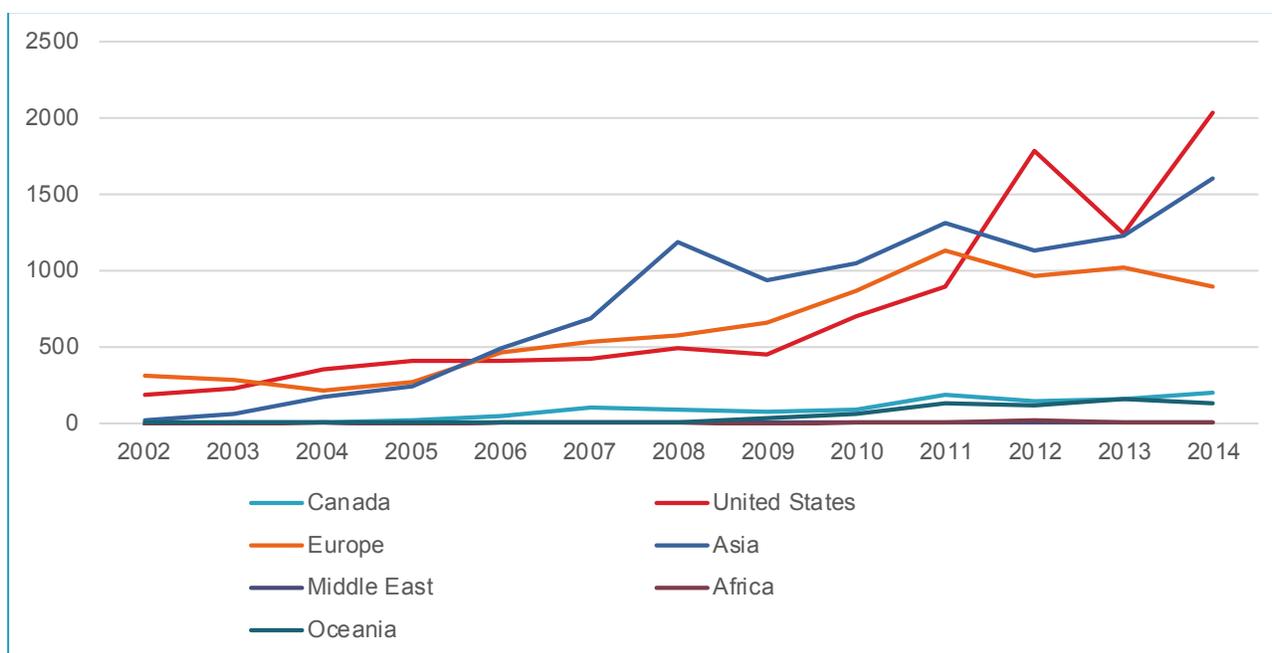
Both Bolivia and Paraguay have been increasing their exports to other regions outside of Latin America and the Caribbean. For Paraguay, Europe and Asia have been becoming new export destinations (see Figure 4). In recent years Bolivia has been increasing its share of exports to the United States and Asia (see Figure 5).

FIGURE 4. PARAGUAYAN EXPORTS, MAIN PARTNERS (VALUE IN THOUSANDS OF US\$)



Source: ALADI.

FIGURE 5. BOLIVIAN EXPORTS (VALUE IN THOUSANDS OF US\$)



Source: ALADI.

Bolivia's and Paraguay's imports have also been increasing. As can be seen in Table 11, Bolivian imports went from US\$5.5 billion in 2010 to US\$7.8 billion in 2015. The same occurs in the case of Paraguay. While in 2010 Paraguay's imports totalled US\$10 billion, in 2014 that number rose to US\$12 billion (see Table 12).

TABLE 11. BOLIVIAN IMPORTS FROM TOP TEN TRADING PARTNERS 2015 AND 2010 (MILLIONS OF US\$)

Country (2015)	Value	% of Total	Country (2010)	Value	% of Total
China	1419083	18.01	Brazil	1010167	18.03
Brazil	1315249	16.69	United States	733166	13.08
United States	878751	11.15	Argentina	713518	12.73
Argentina	862898	10.95	China	652851	11.65
Peru	500904	6.36	Peru	389123	6.94
Japan	396541	5.03	Japan	328310	5.86
Chile	346950	4.4	Venezuela	321887	5.74
Mexico	218431	2.77	Chile	281202	5.02
Germany	171100	2.17	Mexico	128286	2.29
South Korea	166596	2.11	Colombia	118456	2.11
Rest	1565192	19.96	Rest	906250	16.2
Total	7,841,695	100	Total	5,583,216	100

Source: ALADI.

**TABLE 12. PARAGUAYAN IMPORTS FROM TOP TEN TRADING PARTNERS 2014 AND 2010
IN US\$ MILLION**

Country (2014)	Value	% of Total	Country (2010)	Value	% of Total
Brazil	3383175	27.8	China	3433299	34.22
China	3078332	25.3	Brazil	2419894	24.12
Argentina	1703795	14	Argentina	1578661	15.73
United States	962249	7.91	United States	441997	4.41
Germany	274982	2.26	Japan	356210	3.55
South Korea	271077	2.23	Venezuela	226448	2.26
Japan	262566	2.16	Germany	158294	1.58
Mexico	224566	1.85	Uruguay	154088	1.54
Chile	157300	1.29	South Korea	152117	1.52
Uruguay	136337	1.12	Chile	123262	1.23
Rest	1642605	13.58	Rest	961866	9.61
Total	12,096,984	100	Total	10,006,136	100

Source: ALADI.

3.2 Policy Implications

Notwithstanding the achievements made in increasing their trade, the challenge remaining for Bolivia and Paraguay on trade is to increase the value added of their exports, which at the moment are highly concentrated on commodities. A move to higher value added products, manufactured goods and services should be a priority for the LLDCs to reduce their commodity dependence, their vulnerability to external conditions and to aid their efforts to link up with regional and global value chains.

Furthermore, because major exports are commodities which are price-sensitive goods, improving transit issues could improve trade. Lowering costs and reducing times could bring competitiveness gains to export products and also to imported inputs and final consumption goods. Currently, Bolivia's transported exports are reliant on pipelines (natural gas), road transport as the second mode and railroads (soya and derivatives) as the third mode of transport. Currently, cargo from Bolivia needs to be changed to the cargo railroads to Argentina and Brazil railways, imposing more time delays and more cost on transport. Therefore, improving multi-modality and railroad connections with Argentina and Brazil could streamline soya exports. If a ton of soya bean could be exported at a competitive ton/km cost, Bolivia could increase the benefits from its available arable land. There are also no regional agreements on railroad transit. In the case of Paraguay, where the waterway is an important mode of transit, installing the necessary signalling and aids to navigation and enforcing the waterway agreements could also bring benefits in terms of increased trade. Such different aspects related to transit will be discussed in the following sections.

4. LEGAL FRAMEWORKS

4.1 International Agreements

Latin American countries have been slow in ratifying international agreements related to trade and transport. The costs and technical capabilities related to implementing such agreements are the causes, as well as the lack of awareness of the benefits of the agreements. To assist with this issue, both the World Trade Organization (WTO) and World Customs Organization (WCO) and some other organizations offer technical advice and training to countries to be create the skills needed in order to consider the ratification of the agreements.

4.1.1 WTO Trade Facilitation Agreement

During the Ministerial Conference held by the World Trade Organization in December of 2013 in Bali, Indonesia, the Ministers reached an Agreement on Trade Facilitation (the so-called Trade Facilitation Agreement (TFA)). The agreement contains provisions for faster and more efficient customs and border management procedures. The principles include for example operational standards by customs agencies in terms of risk management for clearance post-audit, guidelines for streamlining international transit procedures, improved cooperation between government agencies like single window systems and transparency measures. The spirit of the agreement is to bring the best practices and standards to the members of the WTO.

The WTO Director-General Roberto Azevêdo has stated that “The Agreement could deliver an annual boost to the global economy of up to \$1 trillion per year, creating 21 million jobs worldwide”²⁶. The TFA will make the movement of goods across borders faster, easier and cheaper. It is estimated that full implementation of this Agreement could reduce trade costs by up to 17.5 per cent in developing countries²⁷. The Agreement has the potential to help landlocked developing countries to ease cumbersome customs procedures, lower transit and transaction costs, expedite movement, release and clearance of goods, including goods in transit, across borders as well as enhance technical assistance and capacity building in these areas. Of particular importance to LLDCs are the guidelines and provisions for streamlining international transit procedures are mostly contained in Article 11: Freedom of Transit²⁸.

From the region, Paraguay, Brazil, Chile, Uruguay and Peru have notified the WTO of its Category A commitments that they will implement by the time the Agreement comes into force²⁹. On 1 March 2016, Paraguay has ratified the Trade Facilitation Agreement, the second South American member to do so, after Guyana.

Paraguay’s commitments under the notified Category A provisions include the following:

²⁶See for example Statement by the WTO Director-General dated 21 May 2015, https://www.wto.org/english/news_e/spra_e/spra58_e.htm.

²⁷OECD (2015), Implementation of the WTO Trade Facilitation Agreement: The Potential Impact on Trade Costs, June 2015.

²⁸https://www.wto.org/english/thewto_e/minist_e/mc9_e/desci36_e.htm#art10.

²⁹Category A are provisions of the Trade Facilitation Agreement that the member will implement by the time the Agreement enters into force (or in the case of a least-developed country member within one year after entering into force).

- Provide advance rulings in terms of imports;
- Provide the right to administrative appeal or review the customs decisions;
- Inform the carrier or importer of goods in case of detention of them;
- Provide electronic payment option for all the fees that trade may incur;
- Maintain a risk management system for custom control;
- Allow the movement of goods intended for import under custom control from one national customs post to another where the released or clearance will occur;
- Documentation will be accepted in copies (not only originals);
- Use international standards or parts thereof as a basis for their import, export, or transit formalities and procedures, except as otherwise provided for in the TFA;
- Enable and maintain single windows;
- Not require the use of pre-shipment inspections in relation to tariff classification and customs valuation;
- Not require the mandatory use of custom brokers;
- When the goods under inspection are rejected, allow the importer to re-consign or to return the goods to the exporter or designated exporter;
- Allow temporary admission of good, under the cases mentioned in article 9 of the TFA;
- Allow freedom of transit;
- Promote customs cooperation.

From the transit countries, Brazil designated all the provisions of the Agreement as category A commitments, with a few exceptions (time period to provide the advance ruling, and to provide treatment dependent on the origin of the good, pre-arrival processing, some trade facilitation measures for authorized operators, and the advance filing and processing of transit documentation and data prior to the arrival of goods). Chile designated all the provisions of the Agreement as category A, with exception of Article 7.7 on authorized operators. Peru has designated all the provisions of the Agreement under Category A, with the following exceptions: issuing of advance rulings, Article 5.1 on notifications for enhanced controls or inspections, Article 5.3 on test procedures, Article 6.3 on penalty disciplines, Article 8 on border agency cooperation, and Article 10.4 on single window and Article 12 on customs cooperation.

Thus, the take-away from this information is that even though some countries are willing to improve trade facilitation, they also have their own reservations. As could be seen in the case of Peru, the country is still not committed to key issues such as border agency cooperation, fostering of single windows and customs cooperation. Furthermore, for example, Brazil's exceptions do not yet allow for expedited pre-arrival processing and advance filing of documentation. These provisions are critical to improving transit through the region for LLDCs.

4.1.2 TIR Convention

The TIR Convention facilitates the international carriage of goods from one or more customs offices of departure to one or more customs offices of destination (up to a total of four customs offices departure and destination) and through as many countries as necessary. As a rule, the vehicle

remains sealed throughout the TIR transport and, thus, goods are generally not inspected at border crossings. However, customs authorities remain entitled to perform inspections whenever they suspect irregularities or randomly. The Convention applies to transports with road vehicles, combinations of vehicles as well as containers and allows for the use of the so-called TIR Carnet for all modes of transport, provided that some portion of the journey is made by road. This, of course, requires a number of precautionary measures, such as strict customs control and secure sealing at the customs office of departure. The TIR Convention also contains specific technical requirements for the construction of the load compartments of vehicles or containers, in order to avoid smuggling. In addition, only carriers authorized by customs are allowed to transport goods under the TIR procedure.

To cover the customs duties and taxes from risk throughout the journey, the Convention has established an international guaranteeing chain which is managed by the International Road Transport Union (IRU). IRU is also responsible for the printing and distribution of the TIR Carnet, which serves both as international customs document and proof of guarantee. The overall supervision of the TIR Convention and its application in all Contracting Parties falls under the responsibility of the TIR Administrative Committee, an inter-governmental body comprising all Contracting Parties and its TIR Executive Board, composed of nine elected members, each from a different Contracting Party.

For more than sixty years, the TIR Convention has significantly contributed to the facilitation of international transport and trade throughout the UNECE region. In addition, more and more countries from beyond the UNECE region (North Africa, Middle East, Asia), including Chile and Uruguay in South America have joined the TIR Convention in recent years or are considering acceding to it (such as Argentina). At present, the Convention consists of 69 Contracting Parties, including the European Union.

The Contracting Parties to the TIR Convention have launched the so-called “eTIR Project”, aimed at providing an exchange platform for all actors (customs authorities, holders and guarantee chains) involved in the TIR system, known as the “eTIR international system”. The eTIR international system aims to ensure the secure exchange of data between national customs systems related to the international transit of goods, vehicles or containers according to the provisions of the TIR Convention and to allow customs to manage the data on guarantees, issued by guarantee chains to holders authorized to use the TIR system. In 2015, the first eTIR transport was successfully conducted between Iran (Islamic Republic of) and Turkey in a joint UNECE-IRU Pilot Project.

The main reason why the TIR convention has not been adopted more extensively in the region is that the regional International Land Transport Agreement is similar in scope and is working for the region. Furthermore, local transporters see the advantage of not having to pay to a supra-national authority for a carnet issuing. The sector considers the International Land Transport Agreement

system as more advanced, since it works without such a carnet. Furthermore, the guarantee system has been improved³⁰.

4.1.3 Kyoto Convention on Customs

The International Convention on the Simplification and Harmonization of Customs procedures (Kyoto Convention) came into force in 1974, and was afterwards revised and updated. The Revised Kyoto Convention came into force on February 3, 2006. It promotes trade facilitation and effective controls through its legal provisions, which detail the application of efficient procedures. The Revised Kyoto Convention also contains new and obligatory rules for its application, which all Contracting Parties must accept without reservation³¹.

The World Customs Organization (WCO) Council adopted the Revised Kyoto Convention in June 1999 as the blueprint for modern and efficient customs procedures. The objective is that, once implemented widely, it will provide international commerce with the predictability and efficiency that modern trade requires. The Revised Kyoto Convention elaborates several key governing principles, the main ones related to transit being:

- transparency and predictability of customs actions;
- standardization and simplification of the goods declaration and supporting documents;
- simplified procedures for authorized persons;
- maximum use of information technology;
- minimum necessary customs control to ensure compliance with regulations;
- use of risk management and audit based controls; and
- coordinated interventions with other border agencies.

From the region, Argentina entered the convention in June 2015 and is the only country in South America that is a contracting party³². The WCO has a special programme to train members on the topics of this convention, as well as for the WTO Trade Facilitation Agreement.

4.1.4 International Convention on the Harmonization of Frontier Control of Goods

Harmonization of frontier control of goods is covered by the International Convention on the Harmonization of Frontier Control of Goods. The Convention provides norms on how to properly organize the movement of goods across borders, either in transit, exports or imports. On this issues also, UNECE has launched Handbook on Best Practices at Border Crossings, providing examples on all related topics ranging from legal instruments, inter-agency and international co-operation, balancing security and facilitation measures, processing of freight, risk management, design of border crossing points, use of ICT technologies, to human resource management and benchmarking. Up to date, there are 56 contracting parties, but none of them from Latin America.

³⁰ Now a country can take another country's guarantee, not only the trucks themselves.

³¹ For more information, see http://www.wcoomd.org/en/topics/facilitation/instrument-and-tools/conventions/pf_revised_kyoto_conv.aspx.

³² For a list of contracting parties, see <http://bit.ly/22GgIJG>.

4.2 Regional Agreements

4.2.1 International Land Transport Agreement (ATIT)

In the region of Latin America, the transit agreement in force is the International Land Transport Agreement (ATIT, by its initials in Spanish). It was declared under the auspices of Latin American Association for Integration (ALADI)³³ created in 1980. The treaty has been in force since 1990 and has been adopted by seven countries: Argentina, Bolivia, Brazil, Chile, Paraguay, Peru and Uruguay. The coverage of the ATIT is applicable only to the signatory countries.

This agreement sets out the rules for transit in the region and defines how a truck company can become an international transport agent, how the permits are provided, how the rules of technical revision for vehicles are determined, what documents are required, and which institutions are in charge of enforcement. The applicable authorities are the Ministries of Transport or Public Works in each of the countries³⁴.

The main characteristics of the agreement are:

- **Exclusivity:** transport services between the parties are to be exclusively performed by means of transport registered by one of the Contracting Parties that need to have original and supplementary permits.
- **Restrictions:** cabotage (local transport) among the signatory countries is prohibited. There are neither quota limitations, nor queuing systems. There are routes prescribed for transit, as well as exit and entry points.
- **Technical requirements:** for transit vehicles as well as definitions on weight and dimensions. There are no provisions related to the mutual recognition of weighing certificates of vehicles, and the provisions related to the mutual recognition of technical inspection certificates are included in the MERCOSUR agreement.
- **Facilitation measures:** explicit provisions regarding minimizing boxing and checking time, and priority for perishable goods and live animals. There is also a provision on harmonizing boxing opening hours.
- **Risk:** there are civil liability levels fixed in the agreement.
- **Non-discriminatory treatment:** stated as an obligation of the agreement regarding reciprocity of tax policy and infringement sanctions (revocation of permits).

4.2.2 MERCOSUR

At the regional level, the existence of the Common Market of the South (MERCOSUR) governs the transit issues between the member countries. MERCOSUR, established in 1991, is a custom union

³³ALADI consists of thirteen member states: Bolivia, Paraguay, Argentina, Brazil, Chile, Colombia, Cuba, Ecuador, Mexico, Panama, Peru, Uruguay, Venezuela, and the last one coming in, Nicaragua.

³⁴Argentina: Secretary of Transport, part of the Ministry of Interior and Transport; Bolivia: Ministry of Transport and Communications; Brazil: Ministry of Transport; Chile: Ministry of Transport and Telecommunications; Paraguay: Ministry of Public Works and Communications; Peru: Ministry of Transport and Communications; Uruguay: Ministry of Transport and Public Works.

that has, as its goal, the free movement of goods and services, productive factors, and a common external tariff.³⁵ MERCOSUR is composed of Argentina, Brazil, Paraguay, Uruguay, Bolivia and Venezuela. Chile is an “Associate State” of the Common Market and the rules of transit apply for it also. The same applies for Peru³⁶.

Under the MERCOSUR organizational structure, transport is an issue of the so-called Working Subgroup 5. The rules determine the requisites for being a trucker and a trucking company, including in terms of psychophysics examination of the drivers and the transport of dangerous goods.

The most important MERCOSUR rules related to transit are:

- Technical vehicular inspection;
- Fluvial and maritime transit;
- Agreement on weight and dimension of trucks (4.30 m maximum);
- Requirement of sleeper cabin on international transport trucks;
- Transit guarantees (the vehicle or formal guarantees³⁷);
- Regime of sanctions in case of not meeting the weight limits;
- Minimum amount of liability insurance for the international road transporter; and
- Driver immigration requirements.

The International Manifest of Cargo and Transit Customs Document (MIC/DTA) and the Declaration of International Customs Transit and Unified Customs Declarations (DUA/DTAI) are the unified customs documents within the trading blocks of MERCOSUR and CAN, intended to simplify clearance processing at the border and transit trade (see Table 13). Both of these documents are required to be submitted electronically, allowing the customs officials at the border to review them in advance, thus expediting the process.

Furthermore, MERCOSUR also has agreements on the weight and dimensions of trucks that transit through the roads of the signature members, with a regime of sanctions in the case weight limits, the driver’s immigration requirements and the transit guarantees are not met.

4.2.3 Andean Community

The transit regime in the Andean Community (CAN)³⁸ is regulated by Decision 399 on international surface transport adopted by the Community’s Commission in 1997 and Decision 617 approved in 2005, which describes the Transit Regime in detail. The principles, as well as the provisions of this transit regime, are very similar to those in ATIT.

³⁵ In 1996, Chile and Bolivia became associate states of MERCOSUR, with Peru, Ecuador, Colombia, Guyana and Surinam following later one. Associate states sign agreements of Economic Complementarity. In 2006, Venezuela joined the area as a member and its full membership became effective in 2012.

³⁶ According to Sudol and Rotaondo, Los Caminos de la Integración, Peru is a special case, since it also implements the transit agreements of CAN.

³⁷ The guarantee issue is a process of internalization, which means that each of the countries has to give formal procedures after the President of each country has approved the topic for MERCOSUR.

³⁸ CAN’s members are Bolivia, Colombia, Ecuador, and Peru. Venezuela was a full member until 2006; Chile is an prior and Transporthil

Similar to the previous legal agreements reviewed above, the Andean Community of Nations (CAN) transit regime has regulations related to the authorizations and permits that trucking companies need to obtain to be able to operate in international transport operations. These include compliance with national regulations related to the inscription of the trucking company and its vehicles in the records of the relevant public agency (usually, the Secretary of Transport or its equivalent). Furthermore, the special permit to operate as an international transport carrier is issued by CAN and needs an *apostille* from the respective of national internal revenue agency.

For vehicles to be used in international transport operations, the norms spell out the requirements for: compliance with regulations related to maximum weights and dimensions; observance of regulations on the maximum weight per axle; presenting a valid certificate of technical inspection.

As in ATIT, CAN decisions specifically rule that operator and vehicle permits and certificates issued by a member country should be accepted as valid by the Customs and other public authorities involved in transit operations controls of the other members.

The required documents for freight under the transit regime are as follows: DTAI (Declaration of International Customs Transit) which is incorporated into the DUA (Unified Customs Declaration), the common customs document accepted by all members of the Andean Community, plus truck's bill of lading, certificate of origin of freight, freight insurance, civil responsibility insurance to circulate in neighbour country (extendable to other countries), other documents such as packing lists and sanitary certificates, depending on the type of freight.³⁹

Regarding the guarantee, the regime provides that the vehicles and cargo units constitute a guarantee for the payment of duties, taxes or other taxes applicable in international transport operation. This guarantee may be replaced by another form approved by the customs authority, and it may be applicable to several transport operations or individual for a single operation.⁴⁰

TABLE 13. CHARACTERISTICS OF MERCOSUR AND CAN TRANSIT REGIMES

	Mercosur	CAN
Trucking companies	Compliance with national regulations on company and fleet inscription in the relevant public agency	
	Permit to operate as an international transport carrier, issued by national customs or internal revenue agency	Permit to operate as an international carrier issued by CAN and sealed by national customs or internal revenue agency
Vehicles	Compliance with maximum weight and dimensions regulations	
	Compliance with regulations related to maximum weight per axle	
	Presentation of valid certificate of technical inspection	

³⁹ Section based on Barbero and Abad (2008), Trade and Transit Facilitation: Overview of Existing Regimes in Mercosur and Andean Countries.

⁴⁰ Customs Transit, General Secretariat of the Andean Community. Peru, 2007.

http://www.comunidadandina.org/public/libro_atrc_transito.pdf

Freight	MIC/DTA ⁴¹	DUA/DTAI ⁴²
	Truck's bill of lading	
	Freight's Certificate of Origin	
	Freight Insurance	
	Civil responsibility insurance for circulation in neighbour country (extendable to others)	
	Other documents (packing list, sanitary certificates, etc.)	

Source: Barbero and Abad (2008), Trade and Transit Facilitation: Overview of Existing Regimes in Mercosur and Andean Countries.

4.2.4 Legal frameworks governing the Waterway

4.2.4.a Treaty of the River Plate Basin

The legal framework governing the Waterway includes regional treaties with multilateral obligations⁴³. In 1969, five countries signed the Treaty of the River Plate Basin, whereby they pledged to "promote harmonious development and physical integration of the River Plate Basin and its areas of direct and measurable influence". In 1989, the International Committee of the Waterway (CIH) was formed, with specific functions and a permanent secretariat in Buenos Aires. The agreements in the treaty are implemented through a series of protocols, but in practice, no country has signed all of them, which often leads to problems for navigation or docking of vessels of any nationality.

Signed by Argentina, Bolivia, Brazil, Paraguay and Uruguay, the treaty establishes the general principles that these countries will promote for the identification of common interest areas, the realization of studies, programs and works, and the formulation of operational instruments from legal documents necessary to foster:

- The facilitation of and assistance to navigation;
- The rational use of water resources, especially through the regulation of waterways passages and their multiple and equitable use;
- Plant life preservation and development of animal and plant life;
- The improvement of road, rail, river, air, electrical and telecommunications inter-connections;
- The promotion and establishment of industries of interest for the complementary regional development of the basin;
- The economic complementation of neighbouring areas;
- Mutual cooperation on education, health and combating diseases;
- Promotion of other common interest projects, especially those related to leveraging the area's natural resources; and,
- Increase of comprehensive knowledge of the River Plate Basin.

⁴¹MIC/DTA are the acronyms for International Manifest of Cargo and Transit Customs Document.

⁴²DUA/DTAI are the acronyms for Declaration of International Customs Transit and Unified Customs Declarations.

⁴³ World Bank, Infrastructure and transport in Paraguay, Volume 2, main report, N. 47064-PY.

4.2.4.b Agreement on fluvial transportation⁴⁴

This agreement, also called “Santa Cruz de la Sierra”, has the objectives of facilitation of navigation and commercial transport on the Waterway under the River Basin treaty, through the establishment of a common regulatory framework conducive to the development, efficiency and modernization of the Waterway operations to provide competitive access to the external markets.

The signatory countries are Argentina, Brazil, Bolivia, Paraguay and Uruguay. The Agreement establishes the following principles:

1. Freedom of navigation
2. Equal treatment
3. Freedom of transit
4. Reservation of national and regional cargo
5. Ship-owner of the waterway
6. Trade and transport facilitation
7. Port and auxiliary services for navigation
8. Bodies for the application of the agreement
9. Dispute resolution mechanisms.
10. Evaluation and adjustments

Under this agreement, there are a series of regulations that were mostly internalized by Bolivia, Brazil and Uruguay, but only two by Paraguay and none by Argentina. These regulations are the following:

- Common regulations for freeboard assignation;
- Common regulations for beacon;
- Common regulations on minimum dimensions for the convoys;
- Regulations for technical inspections for security;
- Regulations for transportation of dangerous goods;
- Regulations for transporting goods on deck;
- Regulations for preventing collisions;
- Regulations for determining vessel tonnage;
- Regulations for vessel inscription and matriculation;
- A common regime for offenses and sanctions;
- Uniform rules on pilotage on the Waterway;
- Education and training for onboard personnel;
- Communication plans for the security of the Waterway navigation; and
- A uniform glossary on the port services of the Waterway.

4.2.4.c Other entities

Other entities related to the waterway’s legal framework are:

⁴⁴ Caceres Port-Nueva Palmira Port, Las LeLas, June of 1992.

- The Permanent Commission on the River Plate Basin Transportation, a civil organization of international character that represents the ship-owners, which has a voice on the Executive Committee of the Waterway.
- The Argentinean-Paraguayan Mixed Commission for the Parana River. Its objective is to improve navigation between Confluencia and Ciudad del Este-Iguazu.
- Statute of the Rio Uruguay, which was established by the Administrative Commission of the River Uruguay (CARU). This is an Argentine-Uruguayan binational agency that regulates the use and administration of the Rio Uruguay. Even though the port of Nueva Palmira is located on the Uruguay River, it is governed exclusively by the Agreement of Transportation of the Paraguay-Parana Waterway.
- The Administrative Commission of the River Plate Basin (CARP), which is a binational organization (Argentinean-Uruguayan) whose mission is to set standards and regulations for effective compliance with the Treaty of River Plate and its Maritime Front, signed by both countries in Montevideo, on 19 November, 1973. This body governs concession dredging and marking of the Canal Martin Garcia.

4.3 Bilateral Agreements

4.3.1 The case of Bolivia

Bolivia and Chile have a bilateral agreement on integrated border control, signed in 2004 and operating since 2006. The new border crossing of Chungará is an example of the investment projects underway in order to facilitate trade. Under this agreement, there are three integrated border controls.

In 2004, Bolivia and Peru signed a general agreement for Integration, Economic and Social Cooperation to establish a common market between the two countries.

Bolivia and Argentina also signed in 2004 a bilateral agreement for a new bridge at the Salvador Mazza-Yacuiba border, which has not yet been constructed⁴⁵. The agreement sets out the financing and infrastructure details and also includes integrated border and trade facilitation measures. Even though the bridge was not yet constructed, the one-stop border control post was already implemented. The cost for the Initiative for the Integration of Regional Infrastructure in South America (IIRSA) at the pre-execution level for the construction of the bridge was set at US\$ 45 million. The construction of the new bridge seeks to be a solution to the existing serious difficulties at the border crossing between both countries and to ensure the smooth flow of international freight and passenger traffic, as well as of pedestrians. The current bridge is an urban road used for both local border traffic and international traffic. The purpose of the project is to solve such traffic congestion, by coordinating traffic flows between the border cities, taking into account territorial planning and the promotion of production and social activities in the region. This border crossing is

⁴⁵ For more information, see <http://www.aladi.org/nsfaladi/textacdos.nsf/5e800d33de11b31203256a65006bcdd4/ae986d75c505d94003256f4e00488052?OpenDocument>

part of the main road corridor between Argentina and Bolivia, which consists of Argentine National Route No. 34 and Route No. 9 of the Bolivian Fundamental Road Network.

Using the framework of Generalized System of Preferences, Bolivia has signed agreements with Japan, Turkey, Switzerland, the Russian Federation, Canada, New Zealand and Norway.

Furthermore, Bolivia is part of several trade agreements that have provisions on transport facilitation⁴⁶:

- The Andean Community
- Bolivia and MERCOSUR
- Bolivia and Chile
- Bolivia and Mexico
- Bolivia, Brazil and Argentina
- Bolivia and Venezuela
- Bolivia and Panama

4.3.2 The case of Paraguay

Paraguay has signed bilateral agreements regarding the dredging of the Paraná–Paraguay waterway. Paraguay also has bilateral agreements with Brazil and Argentina for the areas of the rivers that extend over the riverbanks of the neighbouring countries. Furthermore, Paraguay and Argentina signed in 1999 a bilateral agreement to avoid double taxation for river, air and land transport.⁴⁷

Paraguay's other trade agreements arise from its participation in MERCOSUR. In this context, agreements were signed with Chile, Bolivia, Mexico, Peru, Ecuador, Venezuela, Colombia and Cuba, as well as Israel and India.⁴⁸

4.4 Implementation, Remaining Challenges and Policy Implications

4.4.1 Complementarity of international, regional and bilateral agreements

In concluding this section, it is worth mentioning that the regional agreements are mostly complementary, since the main negotiation basis adopted among the countries of the MERCOSUR is the ATIT. The work of the MERCOSUR working subgroup 5 and its continued collaboration with the private sector has demonstrated its benefits in providing solutions to new topics on transit issues, as mentioned above. However, overlapping of rules and frameworks persists in many of the countries. This is evident in the delay in internalization of MERCOSUR rules.

⁴⁶ECLAC, Status of Implementation of Almaty Programme of Actions, September 2014; and information available on http://www.sice.oas.org/ctyindex/BOL/BOLagreements_s.asp.

⁴⁷Available at <http://www.infoleg.gov.ar/infolegInternet/anexos/60000-64999/60815/norma.htm>.

⁴⁸ More information, see the MERCOSUR website at www.mercosur.org or <http://www.mic.gov.py/v1/node/599> and http://www.sice.oas.org/ctyindex/PRY/PRYagreements_s.asp.

In many cases bilateral agreements also overlap with the regional agreements. This is the second most important issue for the region in terms of transit, after the lack of infrastructure. However, the lack of political will and decision on integration creates delays in implementing MERCOSUR rules and leads to bilateral overlapping. Following years of moving from the ATIT to MERCOSUR agreements, it is evident that there is a need to reorganize the legal framework in the region and systematize the reforms. In this regard, ALADI could take an active role. Furthermore, it is worth highlighting the high degree of non-compliance in the region with existing agreements.

In addition, as discussed above, one of the main reasons for the low ratification and usage of international conventions such as the TIR convention in the region is that the regional agreements are relatively similar and are working.

4.4.2 Experience and Challenges

The effective implementation of multilateral and bilateral agreements is constrained by the political will to do so. The rules exist, but there is a failure in the enforcement of the provisions. In addition to political will, the need for supra-national coordination and investment may be explaining why even though the agreements are in place, there are still many aspects in terms of trade facilitation and transit that need to be improved. Despite this fact, the implementation of the ATIT and MERCOSUR rules and procedures has been beneficial in many aspects for the region, and in particular for the LLDCs.

Before the existence of the ATIT agreement, under ALADI the goods carried by one country had to change vehicles at the frontier to continue transit with a local carrier. Thanks to the agreement, from 1990 onwards transit is carried out by the same vehicle. The truck brings, as documentation, the international cargo manifest and the custom transit declaration (MIC/DTA) from origin to destination, within the contracting parties of the agreement. The documentation is now in electronic format, with the exception of Brazil where it was scheduled to be operable by the end of 2015; however as of April 2016 it was still not in operation. In terms of border controls, these forms imply the acceptance (by destination and transit country authorities) of the customs control measures carried out at the customs facility of origin. As a result, the transit country and destination customs officials only review numbers, codes and conditions of the customs seals, making sure that these, as well as the vehicle, do not show signs of having been forced open. Finally, transit and destination customs authorities also check that the itinerary and schedule for the transit operation is being carried out as stated in the document. While the transit operation takes place, the payment of export and import taxes and other duties are suspended to avoid double taxation. At the same time, there are transit regime provisions for guarantee systems to ensure the payment of the suspended dues if freight does not leave the transit country as planned.

The ATIT is an advanced transit system and the advantage in relation to TIR is that it does not require payment for a carnet. In its place, there are the MIC/DTA documents recognized and accepted in all the seven member countries. Even though the ATIT system does not have a common guarantee managed by a single institution, the truck guarantee or the customs-accepted guarantee are enough to serve as such.

However, many challenges remain in fully implementing and enforcing the agreements. For example, there are several factors affecting the circulation of trucks in transit. Some of them take place at the border crossings and others during travel, particularly over roads of a country other than the one of origin. These factors include inadequate infrastructure, excessive bureaucracy, over-lapping rules and excessive controls because of ignorance of the treaty rules by the contracting parties.⁴⁹

Even though the ATIT agreement has shown the benefits of a single document and the use of single truck to transit through regional roads, there is still a lot of work to do in terms of enforcement of the rules of the agreement (not stopping trucks for unnecessary checks), improving border procedures (such as expedited lines for transit trucks) despite the use of electronic system SINTIA, and further and better integrated border controls, coordination of opening hours and training of personnel. This issue will be discussed in more detail in the trade facilitation section of this report.

4.4.3 Policy Implications

To meet these challenges, several policy areas for action can be proposed. First is a focus on capacity building on norms and regulations related to the processes at the border and also on transit for the Contracting Parties' agents at custom borders and control posts. Second, there is further need to improve the “soft infrastructure” processes at borders to simplify and speed up processes for exclusive transit lanes, in line with full implementation of the transit agreements, in order to fully deliver the benefits of trade. This will require the political will of the contracting parties to fully comply with the agreements.

5. TRANSIT INFRASTRUCTURE DEVELOPMENT

5.1 Context

The Latin American region has a significant infrastructure gap compared to other emerging regions. Section 7 will explore this issue in more detail, including the low level of infrastructure investment which has been a major factor explaining the existing shortage of the infrastructure availability and its low quality. According to the measurement of the component of the Trade Enabling Index shown in Table 14 and 15, infrastructure pillar⁵⁰, all the countries in the region have a relatively low rank and score. This is consistent with the infrastructure investment and maintenance gap persistent in the region. While the availability and quality of transport infrastructure and transport services and availability and use of ICTs have improved in score in both Bolivia and Paraguay, as well as the transit countries, in general they have dropped in the rankings, with the exception of the use of ICT.

⁴⁹ Sudol, Silvia and Rotondo, Sonia (2015), The Integration Paths, South America Transport, Trade and Regional Integration.

⁵⁰ The Infrastructure pillar takes into account the availability and quality of transport infrastructure (7 indicators), availability and quality of transport services (6 indicators), and availability and use of ICTs (7 indicators). The index ranges from 1 to 7.

TABLE 14. TRADE ENABLING INDEX: INFRASTRUCTURE COMPONENT, 2008 AND 2014

Year	2008		2014	
Country	Rank	Score	Rank	Score
Argentina	58	3.46	76	3.7
Bolivia	96	2.70	105	3.0
Brazil	62	3.31	66	3.9
Chile	42	3.93	43	4.6
Paraguay	99	2.59	108	3.5
Peru	82	2.96	77	3.9

Source: World Economic Forum, The Global Enabling Trade Report 2008 and 2014.

TABLE 15. TRADE ENABLING INDEX: INFRASTRUCTURE, TRANSPORT AND ICTS PILLARS, 2008 AND 2014

Indicator	Availability and quality of transport infrastructure				Availability and quality of transport services				Availability and use of ICTs			
	2008		2014		2008		2014		2008		2014	
Year	Rank	Score	Rank	Score	Rank	Score	Rank	Score	Rank	Score	Rank	Score
Argentina	80	3.36	95	2.71	51	3.80	73	3.96	49	3.21	55	4.39
Bolivia	93	3.07	110	2.50	85	3.15	114	3.43	101	1.87	94	3.15
Brazil	91	3.12	102	2.65	42	3.94	60	4.20	56	2.88	48	4.72
Chile	45	4.14	63	3.53	38	4.16	43	4.60	45	3.48	36	5.02
Paraguay	101	2.80	111	2.49	100	2.94	108	3.53	94	2.03	92	3.37
Peru	92	3.08	101	2.67	69	3.36	77	3.88	77	2.43	89	3.62

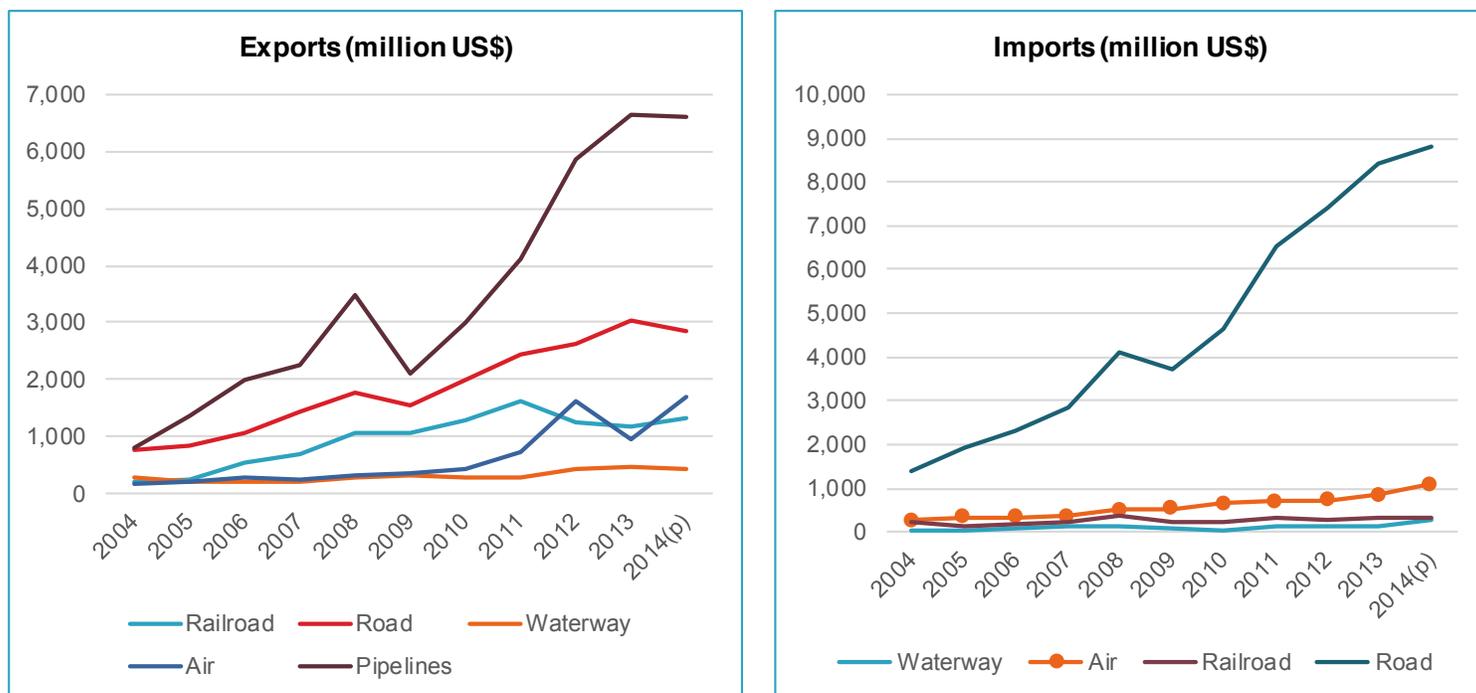
Source: World Economic Forum, The Global Enabling Trade Report 2008 and 2014.

In terms of modal share, Bolivian exports are dominated by the exports of natural gas by pipeline, which represented 54 per cent in 2013, measured by value of exported goods. This is followed by roads, with 25 per cent, and railroads with 10 per cent. The Waterway represents 4 per cent and air transport 8 per cent.⁵¹ Imports are transported to Bolivia mainly by road, with 87 per cent of the modal share in 2013. Air transport represented 9 per cent, with railroads at 3 per cent and fluvial mode of transport at 1 per cent. The evolution of the modes of transport in Bolivia over the last ten years depicted in Figure 6 shows that road transport has gained significant importance for imports. For exports, transport by pipelines has increased dramatically, in addition to increases in transport by roads, air and rails, when measured based on exports and imports value. When looking at quantities of transport by mode (all transport, not only imports and exports) the data shows that roads and pipelines are the main modes of transport.⁵²

⁵¹ Own calculations based on data from National Statistics Institute of Bolivia INE.

⁵² Own calculations based on data from National Statistics Institute of Bolivia INE.

FIGURE 6. BOLIVIAN EXPORTS AND IMPORTS BY TRANSPORT MODE, 2004–2014^a (MILLIONS OF US\$)



^a Data for year 2014 is preliminary.

Source: Author's own elaboration based on data from National Institute of Statistics of Bolivia.

Modal share in Paraguay depicts the importance of the Waterway, with 32 per cent of imports and 70 per cent of exports using a combination of waterways and sea transport, measured by value.⁵³ The most important ports on the Parana River are Salto, Algesa and Ciudad del Este, while on the Paraguay River the major ports are Chaco, Falcon and Alberdi. These ports account for somewhat more than 88 per cent of the cargo transported by inland waterways⁵⁴. Roads are the second-ranked modal use, with road transport accounting for about 30 per cent of export value and 47 per cent of import value (27 per cent and 45 per cent based on volume of exports and imports, respectively). Air transport accounts for a small share of volume, but an important 15 per cent in terms of total value.⁵⁵

Table 19 shows that the quantities of good exported and imported by fluvial mode of transport by Paraguay have increased between 2003 and 2013. Even if private ports are excluded, roads still account for most of the import and export volumes; however their share in overall transport has grown at a lower pace than for fluvial transport.

⁵³ECLAC. Status of implementation of the Almaty Program of Action, September 2014. These figures were calculated using the FOB value of goods in 2010 provided by ECLAC.

⁵⁴ECLAC. Status of implementation of the Almaty Program of Action. September 2014.

⁵⁵These figures are from ECLAC, based on the International Transport Database 2010, in Status of implementation of the Almaty Program of Action, ECLAC. September 2014.

According to a diagnostic study that CAF published in 2013⁵⁶, the challenges in the Latin American transport sector in the short-term were following:

- Increasing the efficiency of the expenditure on roads and working on strengthening the maintenance of the existing infrastructure, by assigning more funds, better practices and control of results for the operators (public or private);
- Making maintenance provisions for the medium-term (taking into account more than one year);
- Convening private sector participation in the contribution of funds or management, to improve the capacity of the public sector in the definition of projects, contracts and control.

5.2 Roads

The status of the road infrastructure in Latin America is presented in Table 16. Bolivia⁵⁷ has a total of 81 thousand km of roads, of which only 8 per cent are paved. It has a low density in terms of km/km² and an estimated average tariff for transport of a standardized cargo (40 ft. container) of US\$ 13 cents. Paraguay has a total road network of 32 thousand km, and even though it is much less than the total road network of Bolivia, 16 per cent are paved (50 per cent more than in Bolivia). The average tariff for cargo is US\$12 cents. In the region, Argentina is the country with the highest share of paved roads, while Peru is the country with the highest tariff per road of cargo.

According to official data from Paraguay, 48 per cent of the roads are regular or bad⁵⁸. About 40 thousand km have no maintenance program. Multilateral organizations have services contracts for 2,000 km (World Bank) and 900 km (IADB), while another 1,800 km are maintained by municipality or state, and 1,570 km by third parties.

For Bolivia, maintenance represents 2.7 per cent of the km/1000 km², compared to 7.8 per cent for Peru.⁵⁹ This represents about the 37 per cent of the total.

Bolivia has 5 corridors that integrate the country to regional transit with neighbouring countries⁶⁰:

- West East: Tambo Quemado–Puerto Suarez, integrating Bolivia, Brazil and Chile;
- West North: integrating the north of Brazil with the ports of Peru and Chile, through Guayamerin to Desaguadero;
- West South: from Desaguadero to Bermejo, connecting Bolivia with Argentina;
- North South: connecting Puerto Suarez with Trinidad–Yacuiba, linking the northwest of Bolivia with Argentina and Paraguay;
- Central South: connecting Hito LX, Villamontes, south of Bolivia with Paraguay, Argentina and Chile⁶¹.

⁵⁶ CAF (2013), Infrastructure on the Integral Development of Latin America, Strategic Diagnostic and Agenda.

⁵⁷ IADB Logistics Observatory <http://pentaho.devgw.org/kmpfl/>.

⁵⁸ Data from Ministry of Public Works and Communications.

⁵⁹ CAF Ideal (2003), Bolivia Transport Sector.

⁶⁰ Ministry of Public Works and Communications, Transport Plan 2009.

⁶¹ Ministry of Public Works, Services and Housing, Transport Development Sectorial Planning.

TABLE 16. ROAD TRANSPORT INDICATORS

Road Transport		Paved net		Density			Vehicles (Trucks)	Density (Trucks)	Average fleet age	Average Tariff road cargo	
Country	Year	Total net (km)	km	%	Area (km ²)	(km/km ²)	Paved km/km ²	Thousands of vehicles	(Trucks over 1000 Inhabitants)	years	US\$/t-km (40" containers)
Argentina	2012	628,693	216,270	34	2,780,400	0.23	0.078	540	10.54	13	0.10
Bolivia	2012	81,022	6,482	8	1,098,581	0.07	0.006	99	9.80	n/a	0.13
Brazil	2012	1,691,164	202,940	12	8,514,880	0.20	0.024	7,619,436	26.41	13	0.19
Chile	2012	77,442	18,818	24	756,090	0.10	0.025	201,531	11.58	10	0.13
Paraguay	2012	32,059	5,129	16	406,750	0.08	0.013	242,257	28.12	17	0.12*
Peru	2012	149,660	19,950	13	1,285,220	0.12	0,016	106	2.37	13	0.47

*Own calculation based on Data from Ministry of Public Works and Communications.

Source: IADB Logistics Observatory, <http://pentaho.devgw.org/kmpfl/>.

Paraguay's transit corridors are:

- Paraguay–Parana Waterway: a fluvial corridor, linking Bolivia, Brazil, Paraguay, Argentina and Uruguay;
- Clorinda–Puerto Falcón, Asunción–Ciudad del Este: linking West to East, Argentina, Paraguay and Brazil;
- Infante Rivarola–Cañada Oruro: linking Bolivia with Paraguay;
- Peralta– Porto Murtinho: linking Paraguay and Brazil in the north of Paraguay.

5.3 Railroads

The utilization of the railroad sector in the region has increased as a share of transport between 1999 and 2008. However, only Brazil has participation higher than 5 per cent (accounts for about the 20 per cent of cargo transport). In Paraguay, the railroads are not operating, even though there are two construction and rehabilitation projects underway. Railway development needs an active role of the state due to the magnitude of the infrastructure investments needs. Even though privatization has been good in certain cases, the concessionaires have only done the basic investment to be able to operate at a commercial level. Furthermore, the tariffs do not cover infrastructure investments, and sometimes, not even maintenance.

TABLE 17. RAILROAD TRAFFIC OF CARGO MAIN OPERATORS IN LATIN AMERICA 2012

Country	Freight - tons	Network- kms	Productivity million tons-km	Average Tariff US\$ Tons-km
Bolivia	2,407,959	3,216	1,123	0.04
Argentina	22,032,833	18,181	10,583	0.04
Brazil	464,568,000	27,217	297,800	0.07
Chile	27,536,726	2,133	4,090	0.05
Uruguay	941,874	1,640	162	0.05

Source: IADB Logistics Observatory, <http://logisticsportal.iadb.org/countryprofiles/#cat=view69&ctr=BO>

The sector remains as a potential one, not only for bulk cargo, but, with multimodal planning, for general cargo transportation as well. At the same time, challenges exist with financing and operations. From Kohon's research,⁶² more than 50 per cent of operators have income around US\$100 million, which makes it impossible for them to invest in structural infrastructure. They have invested, though, in the day-to-day operational aspects, such as rehabilitation and maintenance of road areas of good traffic, access to new clients and improved terminals. However, the roles of the public sector and public-private partnerships are key to this sector, in order to set the stage for integration projects. Investments are needed in city-logistics interaction, access to ports and storage facilities.

5.4 Waterways

With an area of more than three million square kilometers, the Rio de la Plata basin extends over the territories of Bolivia, Brazil, Paraguay, Argentina and Uruguay. The Parana-Paraguay system forms a transport path with a high capacity for goods of the five countries of the Plata Basin and in the case of Paraguay and Bolivia is the only natural outlet to the Atlantic Ocean. It is precisely the international character of the waterway that requires close cooperation among the five countries, with the aim of sharing the responsibilities and benefits of its exploitation.

The load transported through the Waterway has increased significantly in the recent years, as can be seen in Table 18, from transporting 13.2 million tons in 2008 to 20 million tons in 2013. This represents a 52 per cent increase in six years. While the major products transported are soya and iron ore, their values have increased in some years, but decreased in others. Other grains and miscellaneous loads have been increasing each year.

⁶² Kohon, Jorge, "More and better trains. Changing the transport matrix in Latin America". Interamerican Development Bank.

TABLE 18. TOTAL TONS OF CARGO TRANSPORTED ON THE WATERWAY (2008–2013)

Product	Total Cargo (Tons)					
	2008	2009	2010	2011	2012	2013
Soya and derivatives	6,202,400	4,497,016	6,517,544	6,966,184	4,225,150	7,978,427
Other Grains	809	1,275,889	1,462,169	1,449,211	2,230,112	2,327,078
Iron Ore	4,003,024	2,665,482	3,850,348	5,269,551	4,273,014	5,313,151
Liquid Cargo	3,002,600	2,734,503	2,940,419	2,833,960	2,314,998	3,047,732
Miscellaneous Loads	297	446,634	608,384	1,052,533	777,521	1,423,752
Totals	13,209,129	11,619,524	15,378,864	17,571,439	13,820,795	20,090,140

Source: Hidrovia Dredging Company.

The investments made on the Waterway in terms of dredging and improving of navigation impacted directly on Bolivian and Paraguayan trade. In Figure 6, it can be seen that the exports by fluvial mode from Bolivia increased from US\$273.6 million to US\$419.2 million between 2011 and 2014⁶³. For Paraguay, the use of the Waterway is key. As shown in Table 19, the tons of cargo exported by the Waterway increased by 128 per cent from 2003 to 2013.

TABLE 19. IMPORTS AND EXPORTS (TONS) THROUGH PORTS UNDER ANNP CONTROL* BY MODE

Trade Flows	Fluvial	Road
<i>Imports</i>		
2013	458,321	1,690,627
2003	112,724	1,015,323
<i>Exports</i>		
2013	363,022	2,266,066
2003	248,224	2,119,278
Totals 2013	821,343	3,956,693
Totals 2003	360,947	3,134,602
% Change	128%	26%

* Excludes private ports.

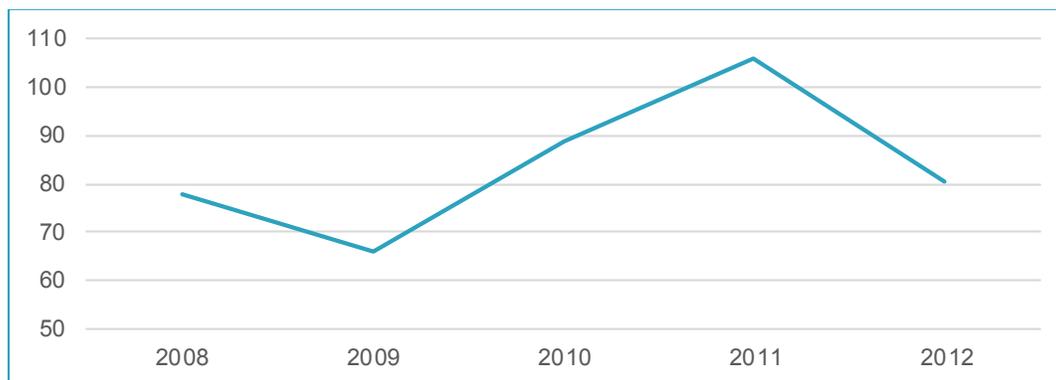
Source: Statistical Office of Paraguay, Annual Reports 2003 and 2013.

⁶³ Data from National Statistics Office of Bolivia, INE.

5.5 Air Transport

Bolivia's air transport has grown over the last few years, even though in 2012 and 2009 there were significant falls in terms of quantities (see Figure 7). When analyzing available data in terms of the value of imports and exports by air, Figure 8 shows a steady increase of both imports and exports value.

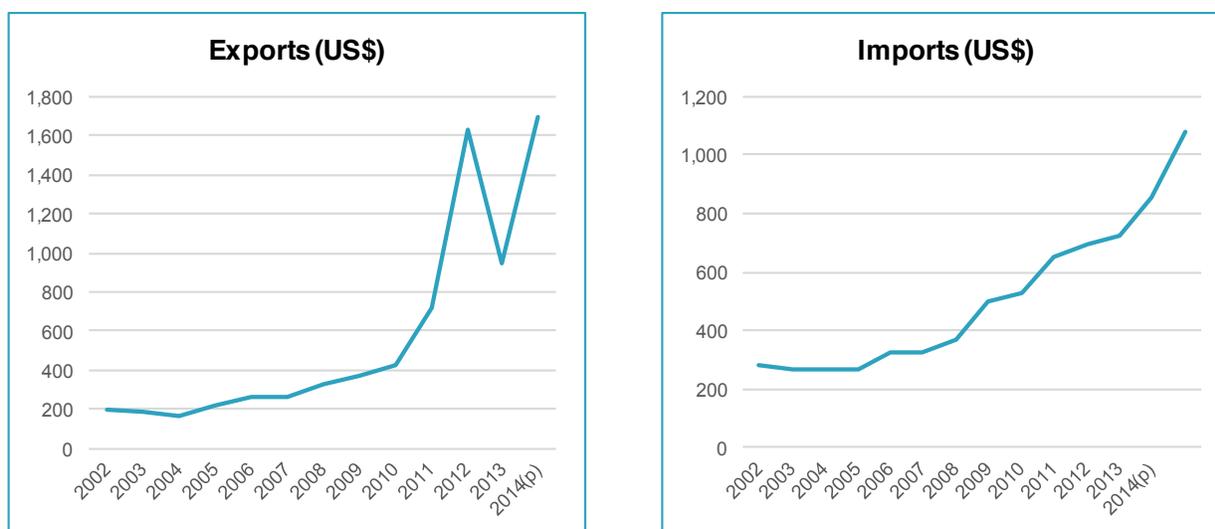
FIGURE 7. BOLIVIA AIR TRANSPORT INDEX OF QUANTITY (1990=100)



Source: Author's own elaboration based on data from National Institute of Statistics of Bolivia.

Paraguay's air transport has also been increasing. Between 2002 and 2013, the total air cargo transported by air rose from 10,780 to 18,821 tons⁶⁴. Main products transported by air were pharmaceuticals, make up, car components and industrial products, as well as perishable products and electronics⁶⁵.

FIGURE 8. BOLIVIAN EXPORTS AND IMPORTS BY AIR MODE, 2002–2014^a (THOUSANDS OF US\$)



^a Data for 2014 is preliminary.

Source: Author's own elaboration based on data from National Institute of Statistics of Bolivia.

⁶⁴ Paraguay National Institute of Statistics.

⁶⁵ CAF Ideal 2011.

5.6 Experiences and Remaining Challenges

5.6.1 Roads

There are success cases of road transit corridors and border crossings in the region, including improvement of National Highways in transit countries (especially Argentina), for the benefit of Paraguay and Bolivia. Several investments carried out by the Argentinean Government for updating and maintenance of roads benefit both Bolivia and Paraguay. A good example is the case of National Highway 34 in Argentina, which links the border crossing of Yacuiba (Bolivia) with the major grain port of Rosario (Argentina).

A similar case is the one for National Road 81 in the north of Argentina, which allows connection between the port of Iquique and Asunción in Paraguay. Iquique is an important entry port for cars, minerals and food imports for Paraguay and exit port for exports of meat from Paraguay to Chile. The investments in modernizing and maintenance of this road have benefited the Paraguayan–Chilean exports and imports as well. Paraguayan exports to Chile sharply rose from US\$ 63,821 thousand in 2005 to US\$ 669,556 thousand in 2014⁶⁶. Data from the National Statistics Office of Paraguay shows that the entry points of Jose Falcon and Chacoí (under the National Administration of Ports and Navigation (ANNP)) have increased the tons traded over the last few years, as seen in Table 20. The entry point of Jose Falcon has increased the tons imported by 73 per cent, and total imports including through Chacoí by 79 per cent in ten years (from Public Ports). Exports from Paraguay with exit on the west points that connect to Chile rose dramatically by 1,333 per cent from 29 thousand tons to 409 thousand tons. The entry point to Chile is Jama, which connects to the port of Iquique in Argentina. Both the Jose Falcón–Clorinda and Jama border–crossings have integrated border control processes. Furthermore, both Argentina and Paraguay have implemented the electronic monitoring of transit merchandise and informing of processes. The investment on this highway involved funds from the National Budget of Argentina and from multilateral organizations (CAF)⁶⁷. At the same time, maintenance and updating continues to be the major challenge for roads in Latin America.

TABLE 20. IMPORTS AND EXPORTS (TONS) THROUGH PORTS UNDER ANNP CONTROL*

Trade Flows	2003	2013
<i>Imports</i>	<i>175,205.6</i>	<i>31,495.1</i>
Jose Falcon	175,205.6	303,240.3
Chacoí	–	11,717.8
<i>Exports</i>	<i>2,516.2</i>	<i>408,719.8</i>
Jose Falcon	28,516.2	–
Chacoí	–	408,719.8

* Excludes private ports.

Source: National Statistics Office of Paraguay, Annual Reports 2003 and 2013.

⁶⁶ UN COMTRADE.

⁶⁷ For more information, see http://www.mecon.gov.ar/peconomica/basehome/dnpoic/2966_caf.pdf

5.6.2 Railroads

In terms of railroads in the region, there are two interesting cases to mention. The first one is the case of the railroad that transports agricultural products from Bolivia to the fluvial ports of the waterway in the Tamengo channel that ends in the Parana–Paraguay waterway, and also links to the railroads in Argentina and Brazil. The company Ferrovial Oriental owns and operates Continental Port in the Tamengo channel. In particular for agricultural products the service continues with trains to the transfer terminal in Salvador Mazza in Argentina, where the cargo is transferred into Argentinean trains⁶⁸ transiting down to the deep water port of Rosario. Ferrovial Oriental has a diverse infrastructure consisting of warehouses, containers and bulk cargo transport capacity hoppers, with more than 40 tons per wagon. Export clients are oilseed companies⁶⁹ and the main import client is a fuel company. In 2013, the company moved more than 1.5 million tons of general cargo. Of the total transported, 59 per cent are export products, 33 per cent are imports and the remaining 8 per cent are regional loads. The main product transported is soy and derivatives, which represents 58 per cent of the total transported, followed by construction materials and hydrocarbons (imported), especially diesel.

The private sector is having a role in terms of multi-modality between rails and ports, in the sense that they have invested in their own facilities and are providing services to third parties. This is the case for Nutrioil, which produces oilseed, as it has its own port and has dredged 3.2 km of the Tamengo channel to be able to link the cargo with the waterway. The company is now initializing operations for third parties⁷⁰. Ferrovial Oriental also owns a port, as mentioned, in the Tamengo Channel and has bought land in the vicinity of Rosario Port in Argentina.

The second case to mention is for Paraguay. While railroads are not operating at the moment, there is a project at pre-concession stage for railway rehabilitation. The National Plan for Transportation identified an existing rail line as a valid option to carry grains from the new production areas in the east of the country to the river ports in the west. In this way, not only will precarious routes be less congested, but also seen as less costly and environmentally friendly, the rail link could realize the benefits of improved logistics. The route of this railway links the port of Villeta with the city of Santa Rita in Alto Paraná Department, and its goal is to transport bulk cargo, mainly of soy and cereals, in an East–West direction and general cargo and fuels in the opposite direction.

The Government Planning agency, with assisting efforts from the private sector, has come up with a detailed study of the situation and a plan to tender the rail line, in a PPP scheme, under the Train Authority. The project is at a stage where it requires financing. Most of the rail line is existing, but needs to be updated (350 km), and there are two areas that need to be built from zero (about 40 km). The expected results are cost reduction, reduction in time of dispatch and reduction of congestion by trucks on Routes 2, 7 and 6. This would provide better export competitiveness and lesser carbon footprint. The train would be able to carry 5 million tons of grain per year (from a total

⁶⁸ State-owned BelgranoCargas.

⁶⁹ For more information, see <http://www.fo.com.bo/SERVICIOS/Carga/Exportaciones/default.aspx>

⁷⁰ http://www.nutrioil.com.bo/central_portuaria.php

of 7.3 million tons of grain in circulation) and about 2 million tons of general cargo. Currently, in Paraguay, to transport one ton of soy from Caazapa (major production area) to the maritime port costs US\$ 9.9 cents per km, using trucks to Villeta and fluvial transportation to Rosario, while the same tonnage in the USA for a similar length of transportation has a cost of US\$ 1.9 cents per km (using truck and fluvial transportation, from Davenport to New Orleans). This means that Paraguayan soy has 5 times the cost of transport of US soy. Having the train in operation is expected to reduce the cost of inland transportation by 70 per cent.

The challenge of this project is to connect it with the Argentinean network, which could bring cargo to the ports of Rosario, Nueva Palmira and Montevideo, with connection to the Uruguayan railroad. However, there is a gauge difference, as the Paraguayan gauge is at 1.00 meters, and the Argentinean is at 1.435 meters on the bridge linking Encarnacion and Posadas.

Major successes of the Bolivian railroad corridors are the abilities to provide services for soya producers and import cargo. Not only do they provide an option to truck transport, but they also are combined with passenger services. The challenges may be both how to streamline the processes and how to lower costs. This is also amongst the aspects that the Paraguayan project is looking at.

The efforts of neighbouring transit countries to invest in the regional corridors are also beneficial for the LLDCs. For example, a recent loan from the Government of China to Belgrano Cargas, the newly state-owned Train Company, will rehabilitate rails that would benefit the Ferrovial Occidental company from Bolivia, since the transfer terminal in Salvador Mazza in Bolivia links to the Belgrano Cargas rails. In the case of Brazil, a similar process is occurring to in terms of investment to put trains into operation.

5.6.3 Waterways

For waterways, the most important problems are the stoppages in navigation because of traffic backup, lack of signalling in some sections and low draft that forces less cargo per barge. North of Asuncion, the Paraguay River lacks signalling, which precludes night navigation, thus prolonging the total time of transport. In addition, according to the data from Hidrovia S.A., including for the Apa River and Asuncion, the Paraguay River has nine critical steps that need to be improved to allow better navigation of the Paraguayan, Bolivian and Brazilian barges. The current situation limits the number of barges in convoys.

On the other hand, degradation of the environment in recent years has resulted in a pronounced cyclical downturn in the level of the Paraguay River between October and mid-February and, consequently, lower flow. Meanwhile, the flow of the Parana River is regulated by large dams in its path, Itaipu and especially Yaciretá, whose locks currently only allow the passage of two trains. To effectively promote even greater river traffic, the steps of St. Paul and Three Sisters, Yaciretá downstream, would need to be dredged to allow the passage of more convoys.

As a result of the different sailing conditions and depths, the number of barges which could join a convoy and with what draft to sail them, vary in different sections along the waterway. Table 21 shows the differences in all sections of the waterway.

TABLE 21. BARGES IN A CONVOY AND THE DRAFT FOR DIFFERENT AREAS OF THE WATERWAY

Area	Barges in a Convoy	Draft (feet)
Norte – Río Apa	16	8
Río Apa– Asunción	16	10
Asunción – Corrientes	20	12
Corrientes – Nueva Palmira	40	15

Source: Hidrovia Dredging Company.

Some of the increase in the use of the waterways is explained by the significant transportation of the two commodities, soya and iron ore. However, the dredging efforts and improvements done on the waterway may also be showing their effects. Under the IIRSA integration initiative, there are projects being executed: US\$ 15 million is being invested in improvement of the navigation conditions of the Alto Parana River (upstream of Saltos del Guaira), with US\$ 800 million to improve the navigation of the Tiete River in Brazil and US\$ 45 million to improve navigation conditions in the Paraguay River from Confluencia to Asuncion; Dredging from Confluencia to La Plata River, set at US\$ 110 million; US\$ 40 million to improve the navigation conditions of the Uruguay River⁷¹ is being provided. Finally, the navigation improvements between Apa–Corumbá and Asunción–Apa are in pre–execution stage, estimated at US\$ 149 million.

The remaining challenge for the Waterway is the enforcement of the multilateral agreements that are on paper, but not implemented much in practice. A study by the World Bank some years ago mentioned that the strategy that each country follows, in the end, was bilateral which explained in part why the multilateral rules were not put into practice⁷². It further stated that the analysis of the evolution of institutional negotiations indicates that progress with a fragmented strategy is inevitable, country by country, since the regionally–coordinated and integrated strategy has reached its apex of development and has not prospered.

⁷¹ Information from www.iirsa.org.

⁷² The World Bank, Southern Cone Inland Waterways Transportation Study. The Paraguay -ParanWorld Bank: Its Role in the Regional Economy and Impact on Climate Change, 2010.

6. TRADE FACILITATION

6.1 How Trade Facilitation Can Boost Development

As was presented in section 2, there have been improvements in the region in terms of the total time to import and export⁷³, while the number of documents to do so have remained the same. It takes between 12 and 29 days to clear exports (on average 22 days for Bolivia and 29 days for Paraguay) and between 12 and 30 to clear imports (on average 28 days for Bolivia and 30 days for Paraguay) between the landlocked and transit countries⁷⁴. Thus, Bolivia and Paraguay's time to import and export is still high compared to the transit countries. According to transport experts of the region, each day of delay on the border costs, on average, US\$600 per truck per day.⁷⁵

In 2008, a World Bank study identified the flow and time at major border crossings. The study found that in Paraguay, for connections with Brazil and Argentina, the average elapsed time was between 12 hours and two days. Most of the reasons for the delays came from the public sector organization at the borders, such as short hours of operation, lack of adequate computer systems (frequently out of service), insufficient infrastructure or lack of trained personnel. Private operators frequently contribute to the delays when they do not carry the adequate documentation. Another source of delay was the stop checks of trucks on the roadway by authorities, particularly when the trucks come from another country. In South America, the most relevant case is probably the circulation of Paraguayan trucks over Argentinean roads where truck operators complaint about excessive controls from national and provincial police and at weigh stations⁷⁶.

To understand more deeply the situation today, Table 22 shows time, cost and number of border agencies necessary to comply with export and import procedures, for the selected group of countries, income group and region. As noted, Bolivia's times to export and import (median cases) are above the income group and region averages. Furthermore, the cost of transport of a 40' container is the highest in the region (only surpassed by Argentinean import-transport cost). Unfortunately, there is no data available for Paraguay.

From a supply-chain approach, evidence shows that soya cake exports from Bolivia have between 20 and 23 per cent cost overruns due to logistics inefficiencies⁷⁷. Inland transport represents about 5.9 per cent and waterway transportation 11.4 per cent of the extra costs due to longer times and export charges. Poor road conditions (rural and secondary), dredging and navigation conditions of the Waterway (imposing lower tons/barge and breaking up cargo to pass beyond certain points) explain these overruns. For Paraguay, the soya cake export chain analysis gave a 17 per cent cost overruns, when shipping by the Waterway to Rosario Port and then to the destination port. A truck supply-chain case from the production area in Paraguay to Cascavel in Brazil is studied. The

⁷³ With exception of import days in Argentina, due to local trade policy.

⁷⁴ World Bank, Doing Business Report 2015.

⁷⁵ Sudol et. al. (2015) op.cit.

⁷⁶ Barbero and Abad (2008), Trade and Transit Facilitation: Overview of Existing Regimes in Mercosur and Andean Countries, prepared for World Bank.

⁷⁷ ECLAC, Status of Implementation of the Almaty Program of Action, 2014.

reported inefficiencies led to increased total logistics costs by 27.5 per cent. In this case, ground transport represents 15.6 per cent of the inefficiencies, due to delays at the Paraguay–Brazil border crossing.

TABLE 22. DOMESTIC LOGISTICS PERFORMANCE INDEX FOR SELECTED COUNTRIES, INCOME GROUP AND REGION, 2014

Domestic LPI Indicators 2014	Argentina	Bolivia	Brazil	Chile	Paraguay	Peru	Income: Lower middle income	Region: Latin America & Caribbean
Number of border agencies imports	5	3	4	3	N/A	3	4.2	4.1
Number of border agencies exports	4	4	4	2	N/A	3	4	4.1
Percentage of physical inspection	11.77%	30%	7.5%	1.26%	N/A	11.18%	33.34%	31.3%
Lead time export median case	4 days	5 days	3.4 days	5 days	N/A	N/A	4.2 days	3.97 days
Lead time import median case	4 days	7 days	3 days	4 days	N/A	N/A	4.6 days	3.5 days
Typical charge for a 40' dry box export container or a semi-trailer (i.e. total cost/charges to transport and port services)	1,842US\$	2,739US\$	1,000US\$	1,145US\$	N/A	N/A	1,780US\$	1,652US\$
Typical charge for a 40' import dry box container or a semi-trailer (i.e. total cost/charges to transport and port services)	2,943US\$	2,828US\$	1,191US\$	1,500US\$	N/A	N/A	2,003US\$	1,566US\$

Source: World Bank, Connecting to Compete 2014.

For both Bolivia and Paraguay, the way documents have to be presented at customs are also major source of delay. Not only are they presented in paper format, but several copies must be presented⁷⁸. Delays at the borders come largely from inefficiencies related to customs processes: certificates of origin, port charges, trans-shipment and delays in the release of goods, cargo reservations and photocopies; as well as infrastructure problems due to bad hinterland connections, quality of roads and bridges; lack of logistics planning (due to scarce use of ICTs, lack of trained professionals);

⁷⁸ Ibid., page 74 and 77.

overcosts to prevent theft and terrorism;⁷⁹ lack of coordination of border agencies, frequent stop-checks and controls of in-transit cargo;⁸⁰ lack of knowledge of transit regulations, out-of-order electronic systems and lack of enforcement of the existing agreements.

Trade facilitation is widely recognized as one of the main ways to reduce transit and transport costs and bring the benefits of globalization to landlocked countries. According to the World Economic Forum Enabling Trade Index 2014 report, reducing trade barriers could bring a 5 per cent increase in global GDP, with developing regions and smaller companies accounting for the benefits⁸¹. To achieve the gains, governments would need to take a supply-chain approach domestically and in coordination at the regional and international level. Supply-chain involves the reliable performance in the delivery of goods based not only on the transport route, but also on the logistics environment, at the national or regional level. Connectivity of the supply-chain depends not only on the infrastructure, but also on the quality and sophistication of services, including local agencies (such as customs), border control, trade or transportation policies and coordination at the regional level, particularly for landlocked countries.

An assessment of the trade facilitation agreement used the time that imports and exports require to clear the border as an Ad Valorem Tariff and calculated the benefits of their reduction⁸². It was found that Latin America's exports could increase by 16 per cent by 2020 through improving trade facilitation. The study demonstrated that halving trade facilitation costs could deliver ten times the benefits as halving trade tariffs. Furthermore, another study demonstrated that the gains benefit all actors across the value chain, regardless of the size of the firm⁸³.

The WTO Trade Facilitation Agreement (TFA), if properly implemented, will make the movement of goods across borders faster, easier and cheaper. The OECD has estimated that full implementation of this Agreement could reduce trade costs by up to 17.5 per cent in developing countries⁸⁴. The areas that bring the largest overall impact on trade as i) improving information availability; ii) expediting border formalities in terms of necessary documents, process automation and simplification of procedures; and iii) enhancing the transparency and the governance of customs authorities⁸⁵.

The question remains: is Latin America, and in particular Bolivia and Paraguay, seeing the benefits of improved trade facilitation? To answer this, the following sections describe the trade facilitation efforts in the region.

⁷⁹ Ibid and ECLAC presentation during the UN-OHRLLS Expert Group Meeting on Improving Transit Cooperation, Trade and Trade Facilitation for the Benefit of the LLDCs in New York, December 2015, <http://unohrlls.org/expert-group-meeting-on-trade/>.

⁸⁰ Delays on roads are the result of excessive controls when a truck crosses a territory different than the one of origin. The active role of sub-national authorities (provincial police or sanitary agencies), controlling without an adequate training in international agreements, seems to be a relevant obstacle.

⁸¹ World Economic Forum, Global Enabling Trade Index 2014 report.

⁸² Zaki, C. "An empirical assessment of the trade facilitation initiative: econometric evidence and global economic effects", in *World Trade Review*, 2014, 13: 103–130.

⁸³ Hoekman and Shepherd (2013) in World Economic Forum, Global Enabling Trade Index 2014 report.

⁸⁴ OECD (2015), *Implementation of the WTO Trade Facilitation Agreement: The Potential Impact on Trade Costs*, June 2015.

⁸⁵ Moisé, E. and S. Sorescu (2013) "Trade Facilitation Indicators: The Potential Impact of Trade Facilitation on Developing Countries' Trade", OECD Trade Policy Papers, No. 144. Paris: OECD.

6.2. Trade Facilitation Efforts and Initiatives

6.2.1 Customs and border crossing procedures

Indicators show that total time to export and import has been reduced. However, lead time to import and export for border procedures has increased over the years. This fact is probably reflecting an improvement in transit, but lack of improvement in border-crossing procedures. For example, the cost of inland transportation of a standard container for Bolivia is the lowest in the region. Unfortunately, most of the exports are bulk and thus this indicator does not reflect the real costs for major exported goods. Furthermore, Bolivia's cost to export and import, when accounting also for port services, are the highest of the comparable group (see Table 22)⁸⁶. At the same time, availability and quality of transport services and ICT infrastructure has improved. Thus, as a result of the trade facilitation initiatives, it seems that transit time has been reduced, while border procedures delays continue to be an issue.

The MERCOSUR Working Subgroup 5 has in its agenda the “streamlining of border processes”. Since the creation of the customs union, there have been a number of advancements on this issue. The integrated customs control is one of them. It was born out of the Recife Protocol and the Additional Protocol of MERCOSUR. It means that the custom control is done in only one of the two customs posts at the border, so the truck only has to stop once.

Furthermore, the MERCOSUR sub-region is now using the computerized tracking system called SINTIA (Sistema Informático de Seguimiento de los Tránsitos en el MERCOSUR), which is now operational in Argentina, Chile, Paraguay, Bolivia, and was estimated to be fully working in Brazil by the end of 2015.⁸⁷ However, as of April 2016, it is not yet operational. The system is in place at several of the more important border posts of the transit countries and Bolivia and Paraguay. It allows customs officials to check information before the cargo arrives at the border. The SINTIA system uses the single document MIC/DTA to recognize transit cargo in MERCOSUR member countries and its associates. Furthermore, MERCOSUR is working on a model of a single customs document to integrate common data from customs declarations and procedures for trade. It will allow for having analysis and data on performance, supervision and risk for the goods in transit within the customs union.

Customs in the region have also adopted the Authorized Economic Operator (AEO) system. This applies to fluvial operators who have demonstrated their fulfillment of rules, so that after going through a process of certification for the special status, they go through the customs at the border controls quicker.

The region is also advancing on the gradual implementation of the Framework of Standards to Secure and Facilitate International Trade (SAFE) of the World Customs Organization. The main standards relate to how to provide supply-chain reliability by making efforts to:

⁸⁶ Doing Business Trading across Borders shows the reduction in total time to export or import, from the purchase order to the port. Domestic LPI shows the increase in border time procedures. Difference between Doing Business and LPI cost to import and export reflects the high cost of port charges in Bolivia and Paraguay. Finally, US\$-ton/km tariff data are from IADB Logistics Observatory.

⁸⁷ Brazil is expecting to have SINTIA working first to then establish the Authorized Economic Operator (AEO).

- improve security;
- enable integrated supply chain management systems for all modes of transport;
- promote seamless movement of goods;
- strengthen customs–business cooperation; and,
- strengthen customs administration cooperation across countries of the international supply–chains to improve the capability to detect high–risk consignments.

Bolivian customs are using SIDUNEA, the computerized system that allows processing of the customs declaration, information of the national regulations, selectivity of risk assessment and electronic clearance of goods (between others).⁸⁸ Paraguay is using a system called SOFIA (System for the fiscal organization of customs levies), which is a computerized custom clearance system that allows operators to prepare the import/export manifests at their own offices. This is useful both for customs agents and transports agents. The system already assigns a channel so that the agent will go to the customs office knowing already where to present for its operations and at which selective channel (presentation of the clearance, documentary and/or physical verification, and subsequent removal of goods). The system allows for tax payments at joint accounts of importers and customs, so that revenue is collected electronically. In addition, Paraguay is utilizing satellite monitoring systems.

As an example of a transit country, Argentina Customs has an initiative called Customs Transit Initiative of Security (Iniciativa de Seguridaden Tránsito Aduanero (I.S.T.A)). The initiative includes an electronic monitoring system by seal, which allows for real time information regarding any deviation from the route, detentions, contingencies or alarms in the course of operations. The objective is to adopt the necessary measures to protect the traded merchandise. Through this initiative, foreign trade operators have the ability to access important benefits in terms of streamlining their operations and reducing their costs. This initiative incorporates technological innovations that ensure the smooth and safe movement of goods, preserving the integrity of the load, optimizing safety and facilitating the international supply–chain, in line with the goals of the World Customs Organization. This allows the movement of goods imported into the general customs territory without previous payment of customs duties (transit merchandise with destination in neighbouring countries or the interior of Argentina). The benefits of the system include simplified customs declaration, constant monitoring, reduction of operation costs, agility of the supply–chain, assuring a maximum operation time and security of cargo.

6.2.2 Harmonization of policies and procedures

In terms of harmonization of policies and procedures, MERCOSUR approved the Recife Agreement for coordinating border controls in 1993 and the Additional Protocol in 1994. They define a set of measures and simplified procedures to regulate the functioning of integrated border controls between the MERCOSUR member countries, allowing for greater efficiency. Customs borders where this is in operations are:

⁸⁸ECLAC, Status of Implementation of the Almaty Programme of Action, 2014.

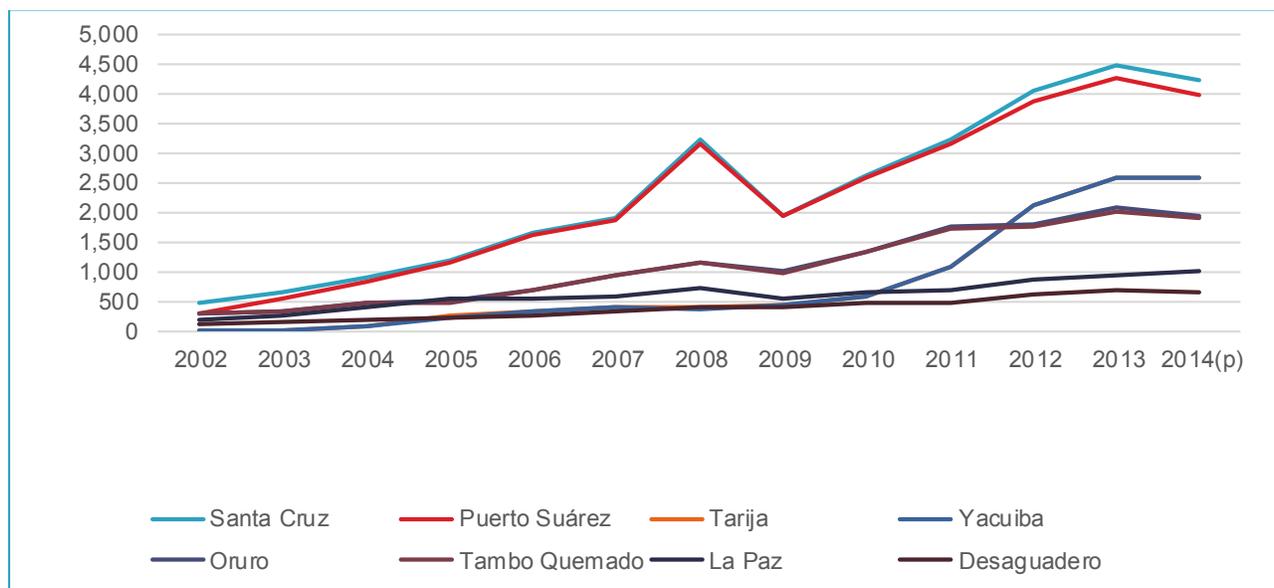
- Posadas–Encarnación and Clorinda Puerto Falcón, between Argentina and Paraguay;
- Corumbá–Puerto Suárez between Brazil and Bolivia;
- Paso de los Libres–Uruguayana, Santo Tomé–San Borja between Argentina and Brazil;
- Concordia–Salto, Colón–Paysandú and Gualeguaychú–Fray Bentos between Argentina and Uruguay; and
- Jama, Cristo Redentor and Integración Austral between Argentina and Chile.

Besides this, another achievement has been the computerization of traditional procedures. Yet, in practice at the borders the computer systems are often found out of service.

6.2.3 A tale of one-stop borders

The region has made important efforts in implementing one-stop border posts. In several of the key border-crossings linking trade corridors from Bolivia and Paraguay, the one-stop border posts are already working. The West-East, Tambo Quemado–Puerto Suarez corridor that integrates Chile with Bolivia and Brazil west to east has seen investments in the integrated border control of Puerto Suarez–Corumba, on the border of Bolivia and Brazil. This advancement was signed by both countries in 2005, and has been operating since 2013. According to official data from Bolivia⁸⁹, trade has spiked at that point of exit, as well as at Tambo Quemado, as shown in Figure 9.

FIGURE 9. BOLIVIAN EXPORTS BY PORT OF EXIT (THOUSANDS OF US\$)



Source: Writer’s own elaboration based on data from National Institute of Statistics.

For the West North Bolivian corridor, integrating the North of Brazil with the ports of Peru and Chile, through Guayamerin to Desaguadero, IIRSA has an ongoing project (at execution stage) worth US\$ 40.2 million that provides for the construction of adequate facilities and the implementation of integrated border control systems agreed upon by the member countries of the CAN. This project is located at the Peru–Bolivia border, 1.8 km from where the Ilo–Desaguadero and Puno–Desaguadero

⁸⁹ National Institute of Statistics (INE).

roads, on the Peruvian side, and the La Paz–Desaguadero road, on the Bolivian side, converge (International Bridge). The purpose is to facilitate the flow of people, vehicles and goods, fostering bilateral, as well as regional trade. In addition, complementary actions, associated with the regulatory frameworks and with binationally–integrated border control operations, have been identified. The project also entails the construction of an international bridge. Currently, border controls are performed in the area of Carancas, in Peruvian territory, in provisional facilities which poses obstacles to smooth bilateral trade and tourism. It is worth mentioning that the Desaguadero border–crossing is the most important one for trade between Peru and Bolivia⁹⁰.

Both the Jose Falcón–Clorinda and Jama border–crossings in the corridor that links Paraguay with Chile also have integrated border control processes.

6.2.4 Authorized Economic Operators

Another trade facilitation effort in the region has been the implementation of the Authorized Economic Operator (AEO) programs⁹¹, whereby operators meeting a set of security requirements receive a certification that facilitates trade operations through faster clearance processes and priority attention by customs agencies. To date, eleven countries in LAC—Argentina, Bolivia⁹², Brazil, Colombia, Costa Rica, the Dominican Republic, Guatemala, Jamaica, Mexico, Peru, and Uruguay—have AEO programs in place and are certifying companies as secure trade operators⁹³. Paraguay⁹⁴ is yet to introduce such program.

The benefits that the AEO brings to the private sector are following:

- Ability to benefit from simplified customs procedures, and submit brief statements of entry and exit of goods;
- Reduction of physical and documentary checks;
- Easy-to-carry-out checks on the premises of the operator;
- Priority in the customs office and enabling fast lanes;
- Financial advantages upon payment of taxes and tariffs;
- Reduction of time and costs;
- Obtaining a seal that attests to safe and reliable operators.

For the public sector, AEO benefits are:

- Creating capacity in public institutions for the management of the program, contributing to its efficiency and transparency;
- Promoting synergies with the private sector for the introduction of trade facilitation mechanisms;

⁹⁰ IIRSA 2014 Advance Report.

⁹¹ Both AEO and risk management systems has standards set by the WTO under the Trade Facilitation Agreement. Under the agreement, there are recommendations and assistance on how to efficiently implement these two measures.

⁹² <http://www.aduana.gob.bo/oea/>

⁹³ IADB (2015), Bringing Down the Barriers: A Review of IDB Research on Trade Costs in Latin America and the Caribbean.

⁹⁴ <http://www.wcoomd.org/en/media/newsroom/2015/december/aeo-design-and-implementation-support-for-paraguay.aspx>

- Generating an increased flow of information on the operation of the supply-chain to use in risk analysis systems.

A recent study in progress conducted by the IADB has found that in the case of Mexico the AEO program has benefited 7 per cent of the exports at aggregated level, with less time to clear customs and less occasions of red tape inspections.⁹⁵

6.2.5 Single Windows for Trade

Besides the efforts of Paraguayan single windows for exports and imports, the IADB is investing its efforts in a tool called VUCE Network, which connects officials involved in single-window systems from 21 countries in LAC. The IADB is also an observer member of the AEO Regional Strategy for the Americas, sponsoring meetings and initiatives across the LAC region, as well as negotiations for AEO mutual recognition agreements with LAC's trading partners. Both of these initiatives have been supported by an extensive capacity-building program, including virtual courses on AEO and Single Window that have certified, respectively, 170 and 456 trade officials through online tutored courses⁹⁶. Currently, the countries that are active on Single Windows initiatives are Brazil, Chile, Colombia, Ecuador, Peru and Uruguay.⁹⁷

The IADB is conducting an impact evaluation study for single windows. With a sample of 70 single windows from Latin America, they found that at the aggregate level, 5 per cent of total exports benefitted. The positive results are due to less interaction with agents, therefore more time savings⁹⁸.

Box: Simplification of trade procedures and availability of information in Paraguay

Paraguay introduced the Single Window for Exporters in 2006 (VUE, by its acronyms in Spanish) and later the Single Window for Importers (VUI, by its acronyms in Spanish). This was an initiative of the Ministry of Industry and Trade in coordination and cooperation with the National Customs Administration. The VUE is an integrated management system that enables users (traders and institutions) to operate in an interactive way, thereby facilitating export procedures. The VUE has produced positive results. The formalities to be on the National Registry of Exports were reduced by 99 per cent on average; the number of steps to get the Certificate of Origin has been reduced by 95 per cent and the time needed to process it was cut by 98 per cent¹. On the other hand, the VUI is a tool intended to ease and simplify the flow of information between importers and government authorities, and the idea is to provide simple, rapid, and transparent import processes¹.

The National Information and Notification System for Regulations, Rules and Procedures (SNIN) project was undertaken with financing from the European Union, under a program to strengthen the

⁹⁵ Preliminary results from study under progress: "Out of the Border Labyrinth: Trade Facilitation under Impact Evaluation". For more details contact Christian Volpe at IADB.

⁹⁶ IADB (2015), *Bringing Down the Barriers*, op.cit.

⁹⁷ <http://www.redvuce.org/integrantes.html>

⁹⁸ Preliminary results from study under progress: "Out of the Border Labyrinth: Trade Facilitation under Impact Evaluation". For more details contact Christian Volpe at IADB.

competitiveness of the export sector. Working since 2008, the system provides information on barriers, technical regulations and provides alerts to facilitate trade. The information comes from the notifications of WTO members².

¹ More information available at www.mic.gov.py and www.vue.org.py

² More information available at www.snin.gov.py.

Source: ECLAC, Status of Implementation of the Almaty Programme of Action.

6.2.6 Postal Trade

The use of postal trade is a successful case of streamlining the export procedures for small traders. This project was born as an IIRSA initiative proposed by Brazil. It has been implemented in Brazil, Peru, Colombia, Ecuador and Uruguay, while Bolivia, Chile and Venezuela have concluded the pre-implementation stage and Argentina is at implementation phase. The program permits small and medium companies to export using the postal services. Each of these countries has adapted the regulations to allow for up to a certain value amount of exports with this service. Exporting and importing with the postal service permits small traders to reduce costs and outsource logistics. To strengthen the program and identify best practices within the countries where the program is in operation, the IADB funded related technical cooperation in 2012.⁹⁹

The impact evaluation study from IADB found that this program is a good start for small traders to learn how to export. When their operations grow, they have already some experience on the topic of trade, benefitting them in terms of growth compared to exporters that had not use Postal Trade.¹⁰⁰

6.3 The Role of National Facilitation Bodies

WTO members have committed to creating or maintaining a national trade facilitation committee, as stated in section III, article 23.2 of the Agreement on Trade Facilitation. UNCTAD conducted an analysis of 50 Trade Facilitation Bodies and identified main lessons learned.¹⁰¹ From the study, the conclusion raised about the bodies is that they work as an efficient instrument to establish and maintain a communications channel between the Government and the private sector and to maintain coordination among all public agencies. It is important to highlight that the committees contributed to raising awareness of the importance of trade facilitation. They worked as a learning platform and many of them (44 per cent) were WTO negotiation support groups. Furthermore, having a trade facilitation body in a country is a good preparation for the implementation of the WTO Trade Facilitation Agreement. The bodies have identified that standardization is essential. Furthermore, having such a body helps in implementing specific projects.

⁹⁹ For more information, see <http://www.iirsa.org/Page/PageDetail?id=77&menuItem=79>.

¹⁰⁰ Preliminary results from study under progress: “Out of the Border Labyrinth: Trade Facilitation under Impact Evaluation”. For more details contact Christian Volpe at IADB.

¹⁰¹ UNCTAD (2014), National Trade Facilitation Bodies in the World, available at http://unctad.org/en/PublicationsLibrary/dt11b2014d1_en.pdf.

The study found that “most of the key success factors indicated were in relation to the members of the trade facilitation body and their behaviour towards the group. Elements that may be provided by donors, such as training and capacity-building, appropriate work plans and financial resources, are important, but not as significant as being able to count on the relevant members to support the trade facilitation body and work towards its goals. However, donor support and technical assistance may be determining factors for LDCs”.¹⁰²

Out of the LLDCs, only Paraguay has an operational National Trade Facilitation Committee.¹⁰³

6.4 The Role of Institutions

Institutions in charge of integration initiatives are under the agreements of MERCOSUR and also the IIRSA initiative, in which the Ministries of Public Works, Infrastructure or Transport of each country participate in. The institutions in charge of integration are called Integration Committees, which are official organs integrated by public officials dedicated to areas that have to do with integration and cooperation. They have been operating since the 1980s. However, their decisions are not binding, as they are advisory and involve private sector participation as well. One success of these Committees has been the work of the border-crossing coordinators, who solve day-to-day transit issues at the border. In particular, they have worked well in Cristo Redentor–Los Libertadores (Argentina–Chile); Paso de los Libres–Uruguayana (Argentina–Uruguay), and Iguazú (Brazil–Argentina) border crossings.

6.5 The Role of the Private Sector

The private sector has had an active role during the creation of the MERCOSUR agreement, with roots dating back even before that. Several ideas from the private sector were transmitted to public sector officials and taken into account in Protocol 14 and at several meetings that preceded MERCOSUR and ATIT.¹⁰⁴ The most important institutionalized participation is through the Working Subgroup 5 of MERCOSUR.

There is also the denominated Business Counsel of Land Cargo (CONDESUR). This group is formed by the private sector and institutions of MERCOSUR countries, Chile and Bolivia (to a lesser extent). CONDESUR started working in December 1996, meeting annually before the national coordinator meetings of Subgroup 5. Based on their meetings, they produce documents that are presented to the Subgroup 5, so that the private sector concerns can be taken into account by the public sector.

CONDESUR is made up of the Brazilian Association of International Transport, International Transport Business Union of Chile, International Cargo Transportation Association of Argentina, Paraguayan Chamber of International Road Transport, Uruguayan Chamber of International Transport, National Confederation of Truck Owners of Chile, Argentine Federation of Cargo

¹⁰² Ibid.

¹⁰³ <http://www.tfafacility.org/paraguay>

¹⁰⁴ See Sudol and Rotondo op.cit. For example, the meeting of Ministries of Transport and Public Goods from South America and XVI meeting in Santiago, Chile 1989, when ATIT was agreed.

Transport Business, and National Association of Transport and Logistics from Brazil. On some occasions, there is representation from the Bolivian business sector.

CONDESUR proposed and was able to implement, two main features on transit issues:

- A change from 4.10m to 4.30m for truck height. In addition, the new dimensions were incorporated in the transit rules.
- Customs-recognized guarantees as another option to truck and merchandise guarantees expected by ATIT.

6.6 Policy Implications

There have been many improvements in the region in terms of trade facilitation. The integrated border crossing and customs controls are some of the major achievements, together with integrating several countries in the electronic documentation system SINTIA and common recognition of transit documents. For Argentina and Paraguay, the electronic seal monitoring system is also a critical advancement.

At the same time, challenges to expediting transit still persist. Even though the regulations exist, in practice the implementation is limited due to lack of binational border development plans; insufficient coordination between the agencies present at the border (customs, police, immigration, transit, and phytosanitary controls); little progress on simplification; and further need for more standardization of documents at the border.¹⁰⁵ Although the countries prioritize the transit simplification process for border infrastructure and despite the increase in trade within the MERCOSUR and associated countries, the number of customs and border officials remains the same.¹⁰⁶ Moreover, in Bolivia and Argentina, there has been an increase in the number of border agencies to clear imports and exports, as well as a rise in physical inspections in Bolivia.¹⁰⁷ As mentioned in the Legal Framework section, lack of trained personnel, hours of operations, proper knowledge and enforcement of regional rules, and control of merchandise in transit also continue to be a problem.

Consequently, for the benefit of Bolivia and Paraguay, the challenge remains to streamline the processes, reduce the number of documents and speed up the time to import and export at border-crossings. Despite the advancement of SINTIA electronic system, integrated border controls, electronic monitoring seals, Authorized Economic Operators and improvement in infrastructure delays at border-crossing points, this remains a problem in the region. Controls are at a same physical infrastructure, but in a sequential way, creating delays and commonly electronic systems are not integrated. In addition, costs of trade remain a challenge and working on a supply-chain approach to identify key bottlenecks and how to solve them should also be taken into account. If the region wants to boost development resulting from trade facilitation and realize the gains of trade, integration efforts at the border should be emphasized.

¹⁰⁵ IIRSA, Notes on Infrastructure and Integration in South America, March 2010.

¹⁰⁶ Sudol and Rotondo op.cit.

¹⁰⁷ Data for Bolivia shows that in 2007 on average 6 % of cargo was subject to physical inspection, while in 2014 this number rose to 30%.

7. FINANCING AND INVESTMENTS

7.1 National Level

ECLAC has estimated the infrastructure investment needs in the region to be 6.2 per cent of GDP.¹⁰⁸ However, the actual infrastructure investment was 2.3 per cent of GDP on average between 2003 and 2013. Financing of infrastructure typically presents a challenge in developing countries. In Latin America, historically public investment has been the major source of finance, with the exception of 1996–2001 when private investment exceeded public financing. However, average public sector investment of 2.3 per cent of GDP is far from the real need of 6.2 per cent.

ECLAC estimates of transport infrastructure investment in the region in Figure 10 show that Bolivia has been the country that invested most in the period 2008–2013, followed by Peru and Paraguay. Bolivia invested 6 per cent of GDP on infrastructure projects,¹⁰⁹ while Paraguay invested about 2.8 per cent of GDP.¹¹⁰ Argentina and Uruguay had the lowest levels of investment. Private investment is practically absent in the region.

Therefore, new sources, including private investment should be explored and mobilized and innovative ways of financing should start to play a greater role in the region. While some countries are advancing such forms of financing, such as Chile, Peru, Colombia and Mexico (using pension funds), Mexico and Brazil (using local development banks) and Colombia (extended PPPs with a new law passed in 2013), Bolivia and Paraguay lag behind. For example, Mexico has an initiative called Fibras E, which allows private sector, such as pension funds to invest in cash-generating infrastructure projects. Mexico also used securitization to raise funds to construct a national highway going from Puebla to Atlixco. The securitization of the road consisted of the issuance of a backed by future cash flows from the collection of contributions of the road bonus.¹¹¹

Another challenge in the region in terms of infrastructure finance is the lack of skills to properly construct a prioritized portfolio of bankable projects. The Ministries of Public Works have in general set of infrastructure projects that needs to be finance, but there is a lack of the capacity to properly plan, prioritize and prepare the selected projects in a way that a bank will be able to consider them for financing. Multilateral development organizations such as the World Bank and the IADB are providing capacity-building services, technical advice and training to assist national governments in this regard.¹¹²

¹⁰⁸ ECLAC presentation during the UN-OHRLLS Expert Group Meeting on Improving Transit Cooperation, Trade and Trade Facilitation for the Benefit of the LLDCs in New York, December 2015, <http://unohrlls.org/expert-group-meeting-on-trade/>.

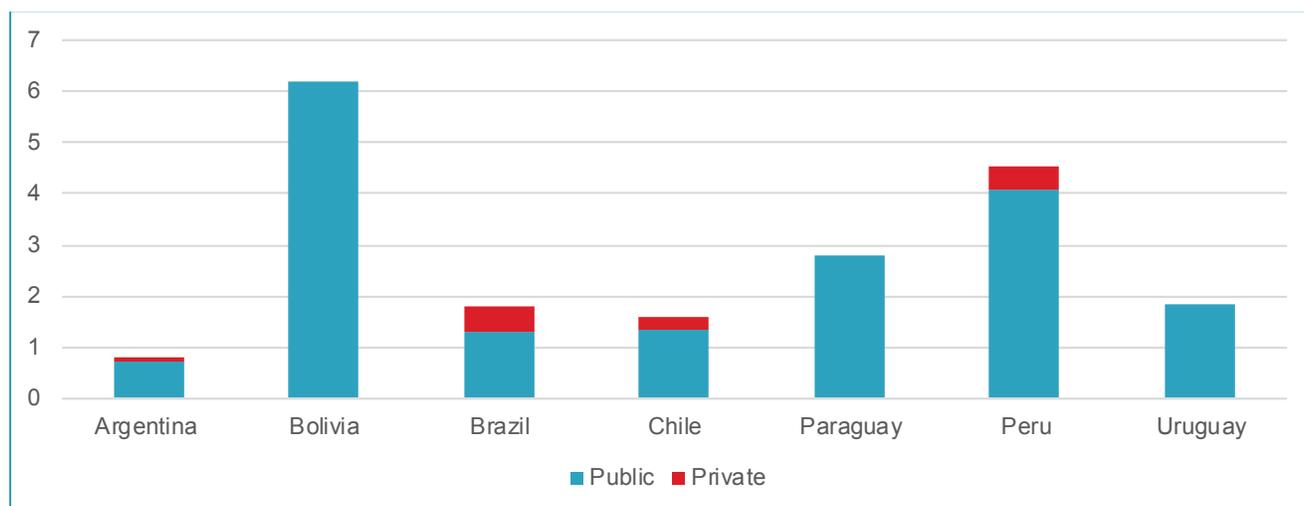
¹⁰⁹ Including energy, transport, telecommunications, water and sanitation.

¹¹⁰ ECLAC based on IADB/CAF/ECLAC initiative. 2008-2013 are preliminary data.

¹¹¹ Data from ECLAC presentation at an expert group meeting on Improving Transit Cooperation, Trade and Trade Facilitation for the Benefit of the LLDCs, organized by UN-OHRLLS in New York in December 2015, <http://unohrlls.org/expert-group-meeting-on-trade/>.

¹¹² In the region, both World Bank and IADB work hand in hand with the teams that need to prepare projects for financing.

**FIGURE 10. TRANSPORT INFRASTRUCTURE INVESTMENT, SIMPLE AVERAGE 2008–2013^a
(PERCENTAGE OF GDP)^{bc}**



^a 2008–2013 are preliminary data.

^b Figures include investments in transport, energy, telecommunications and water and sanitation.

^c Data from Uruguay are from 2008–2012.

Source: ECLAC data based on BID/CAF/CEPAL.

7.2 MERCOSUR

MERCOSUR has established a Fund for Structural Convergence of MERCOSUR (FOCEM), designed to finance projects that contribute to reducing the infrastructure asymmetries among the member countries. The main objectives of the fund are to promote structural convergence and social cohesion, to support the institutional structures and to strengthen the integration process.¹¹³ FOCEM is the first solidarity financing mechanism. It is made up of contributions from State Parties and is intended to finance projects to improve infrastructure, business competitiveness and social development in the MERCOSUR countries. It also finances projects to strengthen the institutional structure of MERCOSUR itself. Created in late 2004 and operational from 2006, the Fund is based on a system of inputs and resource allocations whereby the bloc with the highest relative economic development makes greater contributions and countries with lesser economic development receive greater resources to finance their projects. The funds are distributed on a non-refundable grant basis. The Fund was launched with total of contributions that reached US\$ 100 million annually, and since 2013, with the entry of the Bolivarian Republic of Venezuela, it has increased to a total of US \$127 million annually.

The presentation, approval and monitoring of projects considered of interest to the States of MERCOSUR is made based on the FOCEM Regulations, whose current version dates to 2010. Of the 46 projects approved to date, 39 are in implementation stage and 6 have been completed. Amongst the realized projects, sanitation, drinking water, rehabilitation and construction of roads, laying of

¹¹³ ECLAC, Status of Implementation of the Almaty of Action. September 2014.

electrical networks and installation of high-voltage stations, improvement and expansion of school buildings, and rehabilitation of railways are among the highlights.¹¹⁴

Particularly in Paraguay, the projects include urban storm water runoff works to replace drainage works on rural roads aimed to enable secure traffic even in times of intense rain; in rural construction projects, paved shoulders made at sections of peak traffic; in one of the sections, a reinforced concrete bridge replacing a very similar old one with structural problems in its foundation is planned; finally, a new fully adequate signage system is planned for newly conditioned roads so that they can be useful in their new capacity as ring roads and access roads to the city of Asuncion. The latter is at execution stage for US\$ 27 million, with funds from FOCEM and Paraguay.

Another project is the rehabilitation of roads and a bridge in Guaira and Presidente Hayes regions of Paraguay which would allow reduction of transit times within the Paraguayan agro-production zone. Today, due to bad road conditions, trucks need between 3.5 to 4 hours to transit just 146 km. The objective of the project is to reduce that time significantly. It is at its execution stage worth US\$ 17 million, with 85 per cent financed by FOCEM and 15 per cent by the Government of Paraguay. There are further projects to pave and maintain several sections of Highways 1, 2, 6, 7 and 8, worth a total of US\$ 118 million.

7.3 IIRSA

During August–September of 2000, the Presidents of South America decided to establish the South American Infrastructure Integration Initiative (IIRSA, Iniciativa para la Integración de Infraestructura Regional Sudamericana) in Brasilia. The countries that form the initiative are Argentina, Bolivia, Brazil, Chile, Colombia, Ecuador, Guyana, Paraguay, Peru, Surinam, Venezuela and Uruguay.

The IIRSA activities are based on coordination of planning and investments, harmonization of regulations and institutional aspects and creation of innovative ways of financing of integration projects. There are nine basic action lines:

- Integral design of the infrastructure;
- Based on the identified integration and regional development hubs, strategic planning of projects;
- Modernizing and updating regulatory systems and national institutions that regulate infrastructure;
- Harmonizing policies, plans and regulatory and institutional frameworks among states;
- Evaluating environmental and social aspects of projects;
- Improving quality of life and opportunities for local populations in the regional integration hubs;
- Incorporating mechanism of participation and consultation;

¹¹⁴ For more information, see http://www.mercosur.int/innovaportal/v/385/2/innova.front/fondo_para_la_convergencia_estructural_del_mercosur_focem

- Developing new regional mechanism for the programing, execution and project management;
- Developing financial schemes adapted to the specific risk level of each project.

With the creation of the Union of South American Nations (UNASUR) in 2008, the integration objective received a new framework. Under UNASUR, there is the South American Counsel for Infrastructure and Planning (COSIPLAN) that has become the technical forum for IIRSA and has been adopting the priority projects. The objective of the Counsel is to get the political support and financing conditions to achieve the integration agenda.

There was a total of 579 IIRSA projects in 2014, worth US\$ 163,324 million¹¹⁵. The focus of the Action Plan¹¹⁶ agreed by the Ministries of Transport, Energy and Telecommunications was the development of infrastructure integration, based on the prioritization of projects that support Integration and Development Hubs. In order to achieve the action plan objectives, there is an Agenda of Priority Integration Projects (denominated “API”). These are investment projects that have a regional impact and that promote connectivity and regional socio-economic development. These projects amount to US\$ 21.1 billions¹¹⁷. From the total number of API projects, 48 per cent were under execution by the end of 2014, 45 per cent at pre-execution stage and 6 per cent under profiling (2 projects).¹¹⁸ The estimate is to have 75 per cent completed by 2020.¹¹⁹

For the case of the LLDCs, in 2014 only 9 per cent of total IIRSA/COSIPLAN portfolio was devoted to Paraguay and 6 per cent to Bolivia. Provisions for cross-border issues represent only 0.8 per cent of total investments, while 50 per cent is investments in roads and the remained in railways. In the transport sector, 3.8 per cent of total investments go to projects in Bolivia, and 7.2 per cent to projects in Paraguay. One problem in the region, as will be noted is that a minority of transport projects have been completed (21 per cent), with most of them under execution (36 per cent) and at pre-execution level (28 per cent)¹²⁰.

7.3.1 Integration Hubs

In the following sections, the report explores the state of advancement, financing sources and benefits of each of the integration hubs sponsored by the IIRSA.¹²¹ From the total number of API projects already completed, 58.8 per cent of the financing came from public sources and 41.2 per cent from private sources. However, when looking at the percentage by number of projects, 45.5 per cent were public (5 projects), 27.3 per cent private (3 projects) and 27.3 per cent public-private (3 projects).

¹¹⁵ <http://iirsa.org/Document/Detail?Id=4252>

¹¹⁶ Done in Montevideo in December of 2000.

¹¹⁷ <http://www.iirsa.org/Document/Detail?Id=3994>

¹¹⁸ IIRSA, Advance Report 2014, available from www.iirsa.org.

¹¹⁹ For a complete list of projects go to Annex C of IIRSA, Advance Report 2014, page 24.

¹²⁰ Data based on IIRSA information of projects up to December 2015.

¹²¹ All the information in this section is from IIRSA, Advance Report 2014.

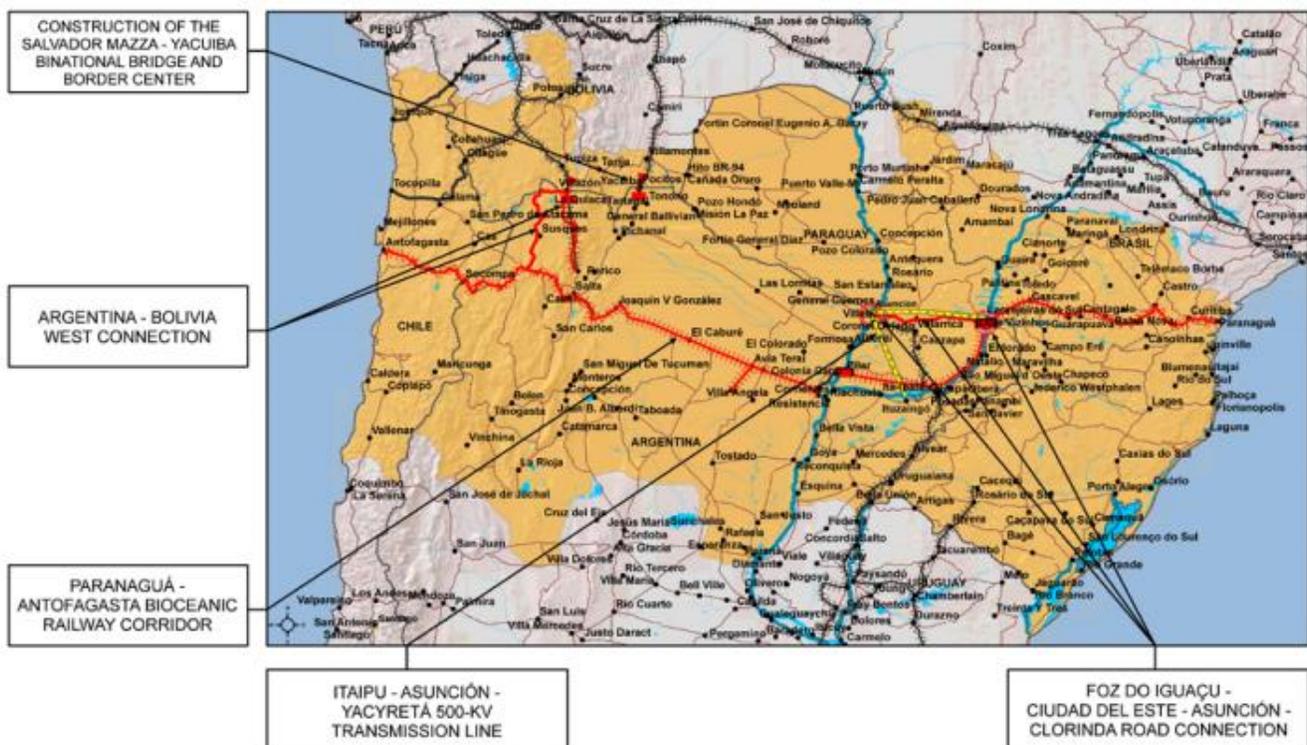
CAPRICORN HUB (ARGENTINA, BOLIVIA, BRAZIL, CHILE AND PARAGUAY)

The estimated investments involved amount to US\$ 7,250 million. The projects (see Figure 11) are aimed at:

- improving the bridges and border crossings in two important areas connecting Argentina and Bolivia;
- creating a bioceanic railway corridor between Paranaguá and Antofagasta;
- improving the connection of the Atlantic and Pacific oceans through Foz do Iguaçu for the benefit of Argentina, Brazil and Paraguay; and,
- strengthening trade in energy among Argentina, Brazil and Paraguay through two transmission lines carrying 500–kV each.

The major source of financing is public, representing 91.7 per cent, with 6.9 per cent through private sources and 1.4 per cent through public–private sources. Of the total amount of investment, 70.4 per cent is allocated for railway–related projects, 15.6 per cent for roads, 11.8 per cent for energy interconnection and 2.2 per cent for border–crossings. Most of the projects are at pre–execution stage (80.6 per cent). At the completed stage there are two projects, namely the Bioceanic railway corridor on the Chilean section and the 500 kV transmission line in Paraguay.

FIGURE 11. MAP OF PROJECTS ON THE CAPRICORN HUB



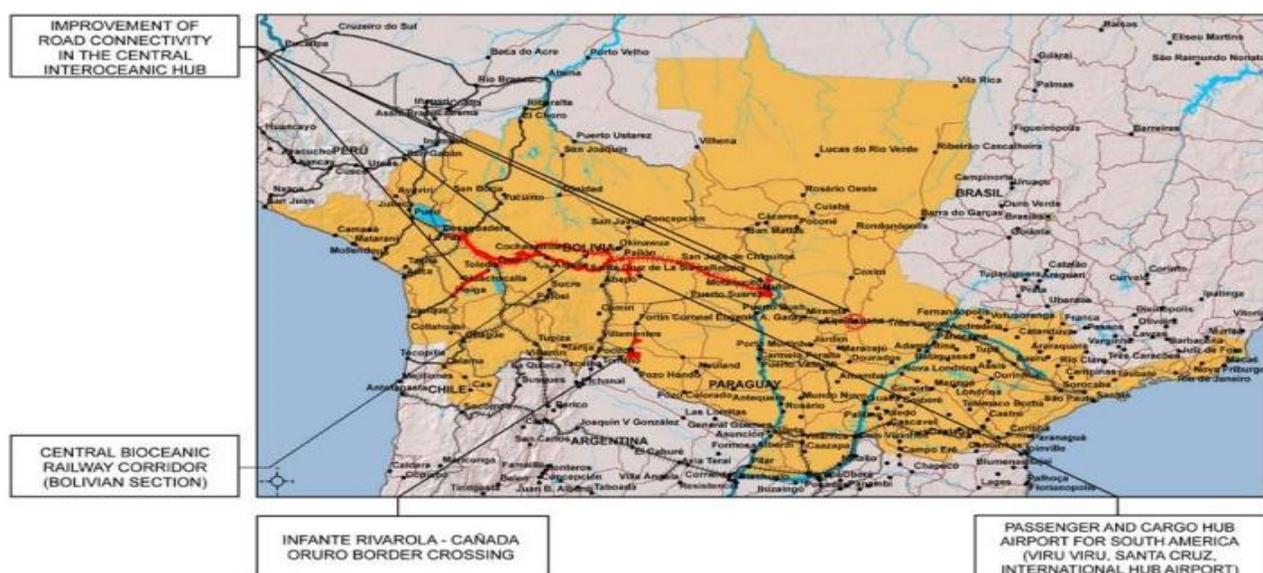
Source: IIRSA.

CENTRAL INTER-OCEANIC HUB (BOLIVIA, BRAZIL, CHILE, PERU AND PARAGUAY)

The estimated investments involved amount to US\$ 460 million, with the financing 100 per cent public. There are a number of API projects for this Hub (see Figure 12): i) Chile – Bolivia – Paraguay – Brazil Connection; ii) Optimization of the Corumbá – São Paulo – Santos – Rio de Janeiro Corridor; iii) Santa Cruz – Puerto Suárez – Corumbá Connection; and iv) Connections of the Hub to the Pacific: Ilo / Matarani – Desaguadero – La Paz – Arica – La Paz – Iquique – Oruro – Cochabamba – Santa Cruz. The projects are aimed at improving road, rail and air connections among Bolivia, Brazil, Paraguay and Peru, all of them revolving around Bolivia. Four of the individual projects have been grouped together in the so-called *Improvement of Road Connectivity in the Central Interoceanic Hub*, a structured project for the purpose of enhancing Brazil-Bolivia road connection within the Hub. The other API projects for this Hub are intended to raise freight capacity at the ViruViru Airport (Santa Cruz de la Sierra, Bolivia), improve the InfanteRivarola-Cañada Oruro border crossing between Bolivia and Paraguay; and develop a central bioceanic rail corridor in Bolivia. These investments contribute to the needs of Bolivia and Paraguay for improving border-crossing infrastructure. Furthermore, they led to improvements of the La Paz-Santa Cruz route, an important link in the corridor to Brazil.

The investment amounts by subsector are: 93.3 per cent roads, 4.3 per cent air, 1.5 per cent rail and 0.8 per cent border-crossing. Of the total amount, 94.2 per cent has been invested, representing 71 per cent of the projects. The projects under execution include the Campo Grande Bypass, the Puerto Suarez-Corumbá integrated border crossing, the InfanteRivarola-Cañada Oruro Border Crossing, and the upgrading of the La Paz-Santa Cruz and the Toledo-Pisaga routes.

FIGURE 12. MAP OF PROJECTS IN THE CENTRAL INTEROCEANIC HUB

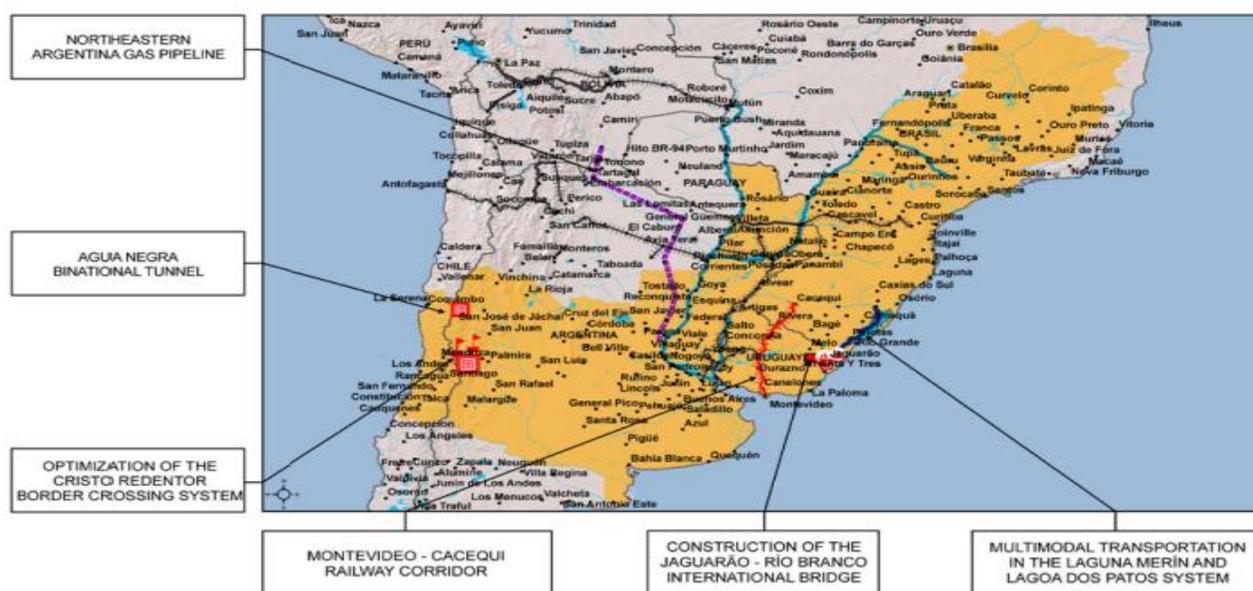


Source: IIRSA.

MERCOSUR-CHILE HUB (ARGENTINA, BRAZIL, CHILE, PARAGUAY AND URUGUAY)

The investments involved amount to US\$ 3,131 million. The API projects have an impact on the development of the five countries within the Hub (Argentina, Bolivia, Brazil, Chile and Uruguay) (see Figure 13). The hub includes 9 projects with public financing, 4 with private and 2 with combination financing. The largest project in size is the Northeastern Argentina Gas Pipeline. Three of the other projects are intended to have a positive effect on the Brazilian and Uruguayan cross-border development, via a rail corridor, construction of an international bridge, and the improvement of multimodal transport between Merín and Lagoa dos Patos lakes. Finally, two projects are contributing to the connectivity between Argentina and Chile through Agua Negra Binational Tunnel and Optimization of the Cristo Redentor Border Crossing System.

FIGURE 13. MAP OF PROJECTS ON THE MERCOSUR-CHILE HUB



Source: IIRSA.

The projects under execution in this hub represent only 4.6 per cent of all projects, while 95.3 per cent are at pre-execution stage with one project finalized. 54.2 per cent of the investment is allocated for roads, 31.9 per cent for energy interconnection, 8.1 per cent for border crossings, 4.5 per cent for rail and 1.3 per cent for rivers. The sources of financing provided come from public sources (60.9 per cent), combination of public and private (36.2 per cent) and private (2.8 per cent).

PERU-BRAZIL-BOLIVIA HUB (BOLIVIA, BRAZIL AND PERU)

Rio Branco – Cobija – Riberalta – Yucumo – La Paz Corridor is included in the API (see Figure 14). The estimated investment amount involved is US\$ 85.4 million. In this case, the project is at 100 per cent pre-execution stage. It will include construction of a 1-km long bridge.

FIGURE 14. MAP OF PROJECTS ON PERU–BRAZIL–BOLIVIA HUB



Source: IIRSA.

7.3.2 Corridors with infrastructure finance projects under execution

To complement the above, there are projects in execution as part of the integration initiative on major border crossing points between Paraguay, Bolivia and transit countries.

BETWEEN BOLIVIA AND ARGENTINA

Salvador Mazza–Yacuiba is a major border–crossing point between these two countries, with a flow of 400 cargo trucks per day.¹²² The infrastructure and processes are both still basic. However, an IIRSA initiative includes this border–crossing as one of the projects for improvement. At the moment, the project is worth US\$ 45 million and is at pre–execution stage, with public financing. The construction of a new bridge seeks to come up with a solution to the existing serious difficulties at the border–crossing between both countries and to ensure the smooth flow of international freight and passenger traffic, as well as of pedestrians. The current bridge is an urban road used for both local border traffic and international traffic. The purpose is to solve such traffic congestion by directing traffic flows between the border cities, taking into account territorial planning and the promotion of production and social activities in the region. This border crossing is part of the main road corridor between Argentina and Bolivia, which consists of Argentine National Route No. 34 and Route No. 9 of the Bolivian Fundamental Road Network. These highways link the province of Salta in Argentina, with the southeastern departments of Bolivia, particularly Santa Cruz de la Sierra, where the only improved transport corridor of Bolivia running to Cochabamba and La Paz begins. The

¹²² Based on field visits of experts.

project forms part of the COSIPLAN and is included in the Argentine Strategic Territorial Plan and the Bolivian Development Plan.

Alternative border-crossings are La Quiaca–Villazón and Aguas Blancas–Bermejo, with less international cargo flow and more local transit. For the border-crossing of La Quiaca–Villazón, IIRSA has a project to rehabilitate the railroad linking Argentina and Bolivia, paving the route and constructing a bridge and a border center. However, the execution levels are very low. The rail rehabilitation project has only completed its pre-feasibility study, the paving of National Route No. 40 project is at the pre-execution stage, while the alignment and bridge with border center project is at the profiling stage.

BETWEEN BOLIVIA AND BRAZIL

Corumba–Puerto Suárez has had an integrated border control since 2013.¹²³ As can be seen in Figure 9 above, this border has experienced an increase in trade and is one of the most important for Bolivia. The project cost US\$ 2 million.

BETWEEN PARAGUAY AND ARGENTINA

The main border crossings are:

- Puerto Iguazu–Ciudad del Este, with about 350 trucks a day. It provides connectivity to Brazil, city of Foz de Iguazu (Argentina–Brazil). IIRSA has a project at pre-execution stage to connect this border with Asunción and Clorinda by road, with an estimated investment of US\$ 774.2 millions.¹²⁴
- Posadas–Encarnación, which has an integrated border control.
- Clorinda–Puerto Falcón, with about 400 cargo vehicles per day.¹²⁵ At the moment, it has an integrated border crossing control. Furthermore, both customs have the SINTIA electronic system working and the MARIA system (a previous version). The infrastructure, nonetheless, needs improvement. This border crossing is being updated with a new bridge and there is already working integrated control, under execution by IIRSA with an estimated investment of US\$173millions.¹²⁶

BETWEEN PARAGUAY AND BRAZIL

At the Puerto Presidente Franco–Porto Meira border crossing, there is an IIRSA project for the construction of a new bridge and integrated border control. The New Puerto Presidente Franco – Porto Meira Bridge project is included in the Brazilian Growth Acceleration Program and a bilateral agreement concerning its implementation, which came into force on 1 October 2008, has been signed and approved by the Brazilian and Paraguayan congresses. Studies started in September

¹²³ <http://www.aduana.gob.bo/archivos/circular2742009.pdf>

¹²⁴ IIRSA advancement report 2014.

¹²⁵ Based on data from field visits of experts.

¹²⁶ IIRSA advancement report 2014.

2007 and the works were scheduled to be completed by April 2015, however, they are now only 30 per cent complete.

BETWEEN PARAGUAY AND BOLIVIA

At the Infante Rivarola–Cañada Oruro Border crossing, IIRSA has a project at execution stage worth US\$ 1.9 million in improvements.

In terms of corridor improvement, the projects under pre-execution or execution level from the IIRSA integration initiative are:

- Argentina Bolivia West Connection (Pre-execution, US\$ 477 million).
- Paranaguá–Antofagasta Bioceanic Railway Connection (Pre-execution, US \$5,102 million).
- Foz de Iguazú–Ciudad del Este–Asunción–Clorinda road connection (Pre-execution, US\$ 774.2 million).
- Improvement of the navigation condition of the Paraná–Paraguay waterway (At different levels of execution, US\$ 1,170 million).
- Paraguay–Argentina–Uruguay railway inter-connection (At pre-execution stage, US\$ 577.3 million).
- Bolivia–Brazil improvement of road connectivity in the central inter-oceanic hub (At execution stage, US\$ 431.5 million): Exports from Bolivia to Brazil rose 276 per cent from 2005 to 2015.

7.4 Paraguay’s Corridor Paving Initiative

Under the umbrella of the InterAmerican Development Bank (IADB), the Paraguay corridor paving program has as an objective to contribute to improving both the competitiveness of the productive sector and the economic and social integration of Paraguay, through the paving, rehabilitation and maintenance of several major corridors of the primary road network in the Oriental area of the country. The specific objectives seek to reduce costs for generalized transport, as well as improving the conditions of availability, transit and road safety in their respective areas of influence, while the country’s road assets are preserved. The financing stands at US\$ 122 million financed by IADB and US\$ 78.8 million by the Ministry of Public Works and Communications of Paraguay. The project is in its second phase, with the first phase in the amount of US\$ 134 million already executed.¹²⁷

7.5 Official Development Assistance (ODA)

Both Paraguay and Bolivia receive ODA assistance. Figures from OECD show that, in 2014, Bolivia received 9.7 per cent of its Gross National Income (GNI) in ODA assistance, while Paraguay received 1.2 per cent. Net ODA disbursements to Bolivia were approximately US\$ 672 million and US\$ 60

¹²⁷IADB Project Profile, Programme of paving of integration corridors and road maintenance. PR-L1075. <http://idbdocs.iadb.org/wsdocs/getdocument.aspx?docnum=37376393>.

million in Paraguay. This means US\$ 64 per capita in Bolivia and US \$9 per capita in Paraguay.¹²⁸ Aid for trade disbursements in 2013 amounted to US\$ 0.02 million in Bolivia and US\$ 1.10 in Paraguay.¹²⁹

Top donors in the region are the United States, European Union, Spain, Japan, the Netherlands, Korea, Germany, DFID and IFAD (Paraguay), IDA (Bolivia), Sweden and Canada¹³⁰.

7.6 Other Programs

The European Union has invested 233 million Euros to improve road infrastructure between Santa Cruz de la Sierra and Puerto Suárez in Bolivia, an important trade corridor. The disbursements were done between the years 2002–2006. There is a second phase proposed to create economic opportunities, fight trafficking and integrate watershed management. The amount proposed for the second phase was 234 million Euros for the period 2007–2013.¹³¹

Paraguay and Argentina there are two projects on international connectivity optimization, currently at profiling stage. Two private consulting firms have done preliminary studies and have discussed them with the National Authorities of both countries in July 2014. The projects' objectives are to improve connectivity between Clorinda (Argentina) and Asunción metropolitan area (Paraguay).¹³² Financing for these projects would come from FONPLATA.¹³³

7.7 Foreign Direct Investment

Foreign Direct Investment (FDI) inflows to Bolivia and Paraguay are low compared to the region average and the income group. While Bolivia received FDI inflows of 1.89% of its GDP in 2014, for a total of US\$ 648 million, Paraguay received FDI of 0.77% of GDP, for a total of US\$ 236 millions.

The average for the Latin American and Caribbean Region was 3.5% of GDP, and 4.4% of GDP for the low income group.¹³⁴

7.8 Policy Implications

In conclusion, there are a number of initiatives to fund infrastructure in the region and in particular integration efforts. IIRSA leads the multi-country planning efforts while each country also has its

¹²⁸ OECD, <http://www.oecd.org/dac/stats/idsonline.htm>.

¹²⁹ OECD, <http://www.oecd.org/dac/stats/idsonline.htm>.

¹³⁰ ECLAC, Status of Implementation of the Almaty Program of Action, September 2014, based on OECD data.

¹³¹ ECLAC, Status of Implementation of the Almaty Programme of Action, September 2014.

¹³² Program of Territorial Connectivity Optimization between Argentina and Paraguay. Workshop minutes on the advance of feasibility projects. Ministry of Public Works and Communications. Paraguay.

¹³³ FONPLATA is a multilateral body comprising five countries: Argentina, Bolivia, Brazil, Paraguay and Uruguay, whose main mission is to support the integration of member countries to achieve a harmonious and inclusive development within and between geographic areas of influence of the Basin of Plata River through credit operations and grants from the public sector.

¹³⁴ International Monetary Fund, Balance of Payments database, supplemented by data from the United Nations Conference on Trade and Development and official national sources, provided by the World Bank Data Bank.

own infrastructure budgets and other sources of donor funds to implement road, maintenance and trade related investments. Even though some of the projects of IIRSA initiative have public-private partnership financing provisions, the bulk of the financing on the region comes from the national budgets. Private sources remain very low as share of total financing. The private sector does invest in some infrastructure related aspects such as renewal of truck fleet. However, the increase in intra-regional trade shown on this report and decrease in total time to import and export may signalling the benefits of the financing and investment efforts.

New sources of financing, including private investment should be promoted and mobilized. In addition, some of the innovative financing efforts seen in the other countries in the region should be explored further. Innovative ways financing should play a greater role in the region. At the same time, Governments of the LLDC in particular should be given assistance in designing bankable infrastructure projects.

8. CONCLUSION AND POLICY RECOMMENDATIONS

During the last 25 years, the South America region has undertaken important integration efforts. As a result of both ALADI and then MERCOSUR, transit agreements in place have improved the flow of trade in the region. The volume of intra-regional trade rose substantially, while total time to import and export has been reduced as well.¹³⁵ Even though inland transport costs for a containerized cargo in Bolivia and Paraguay are within the average of the region, they are relatively higher than for transit countries and in addition when measured based on ton per kilometre the costs are still high since major exports are bulky commodities. Furthermore, the cost burden of international freight in total costs of imports is higher for the LLDCs than for transit countries. Even though the total time to export and import has decreased over the years, time to cross borders have increased.

Trade analysis showed that both Bolivia and Paraguay have in recent years substantially increased their trade, along with rising intra-regional trade. Furthermore, new markets are becoming important, such as is the case of Europe and Asia for Paraguay and USA and Asia for Bolivia. At the same time, their exports continue to rely mainly on commodities.

The analysis on the legal framework suggests that the region has been slow in ratifying and acceding to international conventions and frameworks related to trade and transport. Some of the countries in the region have notified the WTO of their willingness to implement some of the provisions of the WTO TFA as soon as the Agreement comes into force, even if limited in scope. Paraguay is the only country amongst the LLDCs and transit countries to ratify the WTO Trade Facilitation Agreement. Regional agreements are the main form of harmonization in the region. However, overlapping rules and lack of compliance with existing regional and bilateral agreements suggest that there is a lack of commitment on integration in the region and more action and political will is needed to achieve the goals of regional integration.

Some important advances have been made in terms of trade facilitation. The use of ATIT-recognized single document for MIC/DTA transit has led to benefits in terms of simplification. In addition, the SINTIA electronic system, Authorized Economic Operators systems, single-windows, electronic seals and integrated border controls have been ways to eliminate paper documents and speed up the processes. Despite these advancements, the number of documents to import and export remain the same. The challenges in capturing the benefits of trade facilitation stem from issues such as failures in the border-crossing organization, lack of coordination of border agencies, inefficiencies related to customs processes, failures of the transport-logistics operators to have the documentation ready, frequent stop-checks and controls of in-transit cargo, lack of knowledge of transit regulations and lack of enforcement of the existing agreements.

In terms of infrastructure development and maintenance, Bolivia and Paraguay use various modes of transports for their exports and imports. In general, the level of infrastructure is quite low in the region. Despite increases in availability and quality of transport services and ICT use in the region,

¹³⁵ With the exception of import days in Argentina, due to local trade policy.

infrastructure indicators are worsening over the years. Even though the region invests, on average, 2.3 per cent of GDP in infrastructure, evidence is showing an important gap. There are a number of infrastructure integration projects comprising trade corridors (for road, rails, waterways and border-crossings). However, most of the projects are at execution or pre-execution stage, with very few projects finalized. In addition, the share of financing from the private sector is still very low.

The analysis in this report suggests that there are still many challenges to reaching the objectives of the Vienna Programme of Action. In order to achieve the ambitious goals of for example movement of transit by 300 to 400 km in 24 hours, significantly reducing time spent at the land borders, improving intermodal connectivity and reducing port and border delays to name a few, transit and landlocked countries have to work in a coordinated regional agenda, where political will of the countries is a pre-requisite to realizing the gains of integration. There is need to also focus integration efforts beyond just the border-crossings and transit corridor, but also to provide efficiency and harmonization in the regulatory framework, institutions and planning. Such an agenda includes solving the outstanding challenges described above, which guide the following suggested policy areas for action.

TRAINING AND CAPACITY BUILDING TOWARDS FULL IMPLEMENTATION AND ENFORCEMENT OF LEGAL AGREEMENTS:

Capacity building on transit regulations, in particular in the Contracting Parties of the ATIT agreement is necessary to improve enforcement and implementation of existing agreements. The ultimate goal is to enforce the ATIT agreement and avoid overlap in regulations. Not only should customs and border post officials receive training, but so should the national and provincial authorities in charge of checks and controls. The private sector in inland freight should also be trained on document preparation, since delays at the border are a consequence of wrong document preparation. LLDCs, together with the transit countries have to work on enforcing the effective application of transit agreements, ensuring effective knowledge of the rules and avoiding overlapping regulations, in order to improve efficiency in terms of time and costs of transit transport.

RATIFICATION OF THE WTO TFA: LLDCs and transit countries should take advantage of the available technical assistance provided by WTO and other international organizations on the benefits of the TFA and ensuring its ratification. Paraguay is the only LLDC or transit country in the region to ratify the Agreement and should lead other countries by example. In this regard, the creation and maintenance of trade facilitation bodies also helps to achieve the goals of trade facilitation. Paraguay has done some advancement with the national trade facilitation committee.

DIVERSIFYING AND UPGRADING OF EXPORTS: Bolivia and Paraguay are major commodities exporters and exploring good alternatives for bulk transportation would allow them to reduce total costs of exports, become more competitive and move up regional and global value chains. A move to higher value added products, manufactured goods and services and transforming commodities with agro-industrial and industrial activities should be a priority for the LLDCs to reduce their commodity dependence and their vulnerability to external conditions. Such upgrading of exports, including for example increasing of high technology exports which has been observed in both Bolivia and Paraguay, is an important step for development.

BOOSTING INTER-MODAL TRANSPORTATION: A shift in the focus of transport, infrastructure and logistics policy in Latin America is imperative, from one that is modal to one that is integrated and multi-modal, in both LLDCs and the transit countries. Given the different modes of transport used by Bolivia and Paraguay, boosting multi-modal transportation is critical, in particular in view of the primary role of bulky commodities in exports. For this purpose, not only providing proper road maintenance and access to ports, but also looking to advance the waterway navigation conditions would realize the potential of these important outlets of exports for Bolivia and Paraguay. Additionally, advancing on railroad integration in the region would also benefit both Bolivia and Paraguay. Port services and logistics facilities are also key in the inter-modal options, as well as ensuring appropriate silos and loading facilities.

EXCLUSIVE LANES AND ANCILLARY INFRASTRUCTURE: Notwithstanding the integrated border controls, exclusive lanes for transit cargo should be implemented on high-truck-flow border posts. This means that a truck in transit would go in a special lane to comply with customs procedures in a speedy way. There are some efforts underway for transit trucks to have an expedited channel. Furthermore, there is a need for ancillary infrastructure not only in border posts but also on roads.

IMPROVING THE GUARANTEES SYSTEM: There is a need to improve the guarantee system in the region in a systematic way. Currently, international transit guarantees, in cases of accidents, disappearance or partial or total loss on the load, are not provided by the ATIT. The agreement does not establish a system of guarantees except for the truck itself (which is immediately subject to capture by the Customs when an incident occurs). In a step forward, thanks to the work and advice of CONDESUR, customs now accept surety guarantees. But more needs to be done in this regard.

EXPLORING ALTERNATIVE SOURCES OF FINANCING: Currently, the main source of infrastructure finance is public, whether at national or regional level. Both Bolivia and Paraguay should aim to mobilize new forms of resources to finance infrastructure investments. An option to be explored to mobilize greater volumes of domestic resources is public-private partnerships (PPPs), while private funds need to be promoted. Support from donors in this regard is fundamental and there are several organizations in the region, such as the InterAmerican Development Bank, Andean Cooperation (CAF), World Bank and others that should work in coordination to assist LLDCs with capacity building, design, monitoring and implementation of programs. Prioritization of need of investment and infrastructure (soft and hard) as well as appropriate project preparation will help catalyse other sources of financing. Last but not least, programme investment should take into account the importance of ensuring sustainable and resilient investment.

REGIONAL AND CORRIDOR APPROACH: LLDCs and transit countries should make effort to move towards coherent planning and implementation of road, railway and waterway and logistics policies based on regional considerations and international corridor approach. This involves taking into account the other countries' investments in connecting infrastructure and planning maintenance and administration of corridors in a coordinated way. In this regard, border-crossing coordinators (the authorities at the borders that have the responsibility for solving operational issues at the border)

can have a greater role to play, in terms of solving issues at the border and helping the authorities in charge of corridor issues.

COORDINATING WITH OTHER COUNTRIES IN THE REGION AND SHOWING POLITICAL WILL:

Political will is needed in order to enforce and fully implement the existent agreements on transit and to accede to relevant international conventions, as part of the implementation of the VPoA. LLDCs and transit countries need to work together to simplify transit across the region.

Table 23 concludes with presenting a matrix of policy options, by their short-term or medium-term priority.

TABLE 23. MATRIX OF POLICY OPTIONS

Short-Term Policy Options	Medium-Term Policy Options
Strengthen public sector capacity to effectively apply the agreed transit regulations	Develop road, rail and waterway infrastructure, as strategically planned by IIRSA initiatives
Show political will/Avoid overlapping of regulations	Develop infrastructure maintenance options
Improve customs efficiency and border-crossing procedures by implementing the agreements	Scale up on the value chain of export goods
Avoid excessive border controls and transit controls when unnecessary	Seek new innovative ways to mobilize resources
Study supply chain bottlenecks and propose solutions	Implement solutions that streamline supply chains

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