

## PHYSICAL INFRASTRUCTURE AND REGIONAL INTEGRATION

This *FAL Bulletin* issue addresses the contribution physical infrastructure makes to regional integration. It analyses the particular cases of the Initiative for the Integration of Regional Infrastructure in South America (IIRSA), the Mesoamerica Project and the Caribbean Community (CARICOM). The author is Georgina Cipoletta Tomassian, from the Unit of Infrastructure Services of the Economic Commission for Latin America and the Caribbean (ECLAC). For further information, email the author directly at [georgina.cipoletta@cepal.org](mailto:georgina.cipoletta@cepal.org).

### INTRODUCTION

Regional integration is the process by which diverse national economies seek mutual gains by complementing one another more. According to this premise, building regional integration blocks bestows a series of general benefits on the economies of member countries, chiefly: greater negotiating power; greater ability to attract international resources; better use of economies of scale in production; extension of the effective market; and less economic vulnerability in the face of external factors, among others. In this sense, regional or subregional integration areas have the potential to become launching grounds for taking advantage of the opportunities presented by the globalized world economy, while simultaneously buffering member countries from the fluctuations and risks of global markets.

In general, regional integration processes can be viewed from at least three angles:

1. Economic and trade integration, which includes different degrees or stages of integration (preferential trade agreements; free trade area; customs union; common market and economic and monetary union);
2. Political integration, which implies greater depth, coordination and harmonization of actions among members in the governmental and institutional sphere; and
3. Physical integration, featuring infrastructure and its services as the protagonists.

Latin America and the Caribbean are not strangers to these types of integration experiences, having taken the initial steps toward economic-trade integration in the 1950s and advancing along that path into the present day [Southern Common Market (MERCOSUR), the Andean Community (CAN), Central American Common Market, the Caribbean Community (CARICOM), etc.].

Integration processes in Latin America made considerable progress during the first half of the 1990s, especially where trade was concerned. However, integration efforts stalled during the second part of the decade, mainly due to the succession of international crises affecting the countries of the region and other factors, many of which were related essentially to politics and crises of confidence.

### I. REGIONAL INTEGRATION AND CRISES

This year the entire world's economies were affected by one of the most intense economic-financial crises since the 1930s. In this type of scenario, integration processes in Latin America could play a transcendental role in confronting vulnerability when facing such crisis phenomena, while presenting an opportunity to revisit the issue of consolidating more dynamic and cooperative regional ties. Along these lines, there was a noteworthy message transmitted by the prestigious French political scientist Alain Rouquié during his presentation "Latin America After the Crisis" —given this year at ECLAC headquarters— in which he stressed the importance of

regional integration during periods of crisis, emphasizing that the time has come to realize that "global is inefficient; the nation-State is insufficient and (...) regional is indispensable."

Although he acknowledged that regional integration is evolving slowly, Professor Rouquié put forward several reasons to believe that the current difficulties could give impetus to a new conception: "In building a new international economic architecture, Latin America needs to weigh in, to be present; but in order to do so as a region, it is necessary to create concrete institutions that strive to achieve that goal. There are a number of projects, but unfortunately they have a more nationalistic bent, so the question then becomes: where are the unifying institutions that draw groups together and that add a new dimension to integration, lending support to those who facilitate integration grounded in a sense of common destiny, so that Latin America might have a stronger voice in the world concert? Facing the crisis and the need to find regulations that work, it is necessary to act on a regional level. If not, Latin America won't have a chance when it comes to participating in redesigning global regulations."

As far as progress in regional integration processes in the trade realm is concerned, faced with the latest economic-financial crises, the majority of countries have assumed protectionist stances, taking backward steps in terms of integration. By way of example, in the wake of the most recent international crisis, the World Bank has detected the appearance of 89 new trade restrictions since October, 2008.

ECLAC has taken a particular position on this topic, which was made clear in the words of Executive Secretary Alicia Bárcena (Medellín, 30 March 2009): "This is not the time for isolation and protectionism, but rather for multilateralism and responsibility; it is an opportunity to strengthen international cooperation with a view to avoiding and resolving future crises. It is a time to focus on the fundamental principles of the Monterrey Consensus and to redouble our cooperative efforts in order to respect the timeframe for the Millennium Development Goals as per international agreement."

### II. SILENT PHYSICAL INTEGRATION

The first two forms of integration mentioned above (economic/trade and political) have been widely analysed on an international level in diverse studies and academic works; therefore, without intending to detract from their due importance, they will not be addressed at length in this article. Insofar as physical integration is concerned, there has been a striking absence of analysis in reflections on regional integration.

We want to be very clear on this point. Physical integration is the least talked-about of the three, and yet it constitutes a true "silent" integration. It may be termed thus because when political and economic integration begin to falter or practically come to a standstill for the different reasons mentioned above, physical integration continues to work.

Before delving deeper into this concept with the existing cases in Latin America and the Caribbean, it is essential to emphasize the importance of physical integration for the economic and social development of our region.

### III. WHY IS PHYSICAL INTEGRATION IMPORTANT?

Latin America shows significant limitations in providing transport infrastructure services, which could seriously affect trade competitiveness and future development in the region: infrastructure and the provision of services are lacking; the relevant public policies are multiple and disjointed; and, in a majority of cases, there is an utter absence of sustainability criteria applied in the conception and design of projects, which has been analysed at length in earlier bulletins.

According to the studies that ECLAC is currently developing on this topic—which will be published in the near future— estimates for Latin America for the 1995-2010 period indicate a greater growth in the demand for transport infrastructure than in the supply, indicating a widening of the gap with respect to the base year 1995, which is true for the entire period analysed, especially during the most recent 2003-2007 expansionary phase. Although the gap narrowed in 2009 due to the contraction of World GDP and that of Latin American countries, beginning in 2010 it is once again increasing. In other words, to the extent that the region gets back on track with long-term expansion, and foreign demand recovers, the gap will continue to grow. This highlights the need for prioritizing on the agendas of the region's countries stronger investment and action to develop transport infrastructure.

Nevertheless, the problem in the region is not just the unavailability or slim supply of infrastructure services. There are also problems related to the organization of markets, regulatory frameworks and transport facilitation. This set of problems leads to net losses in competitiveness and productivity of factors, narrowing the possibilities for future growth and preventing the region's development policies from being effectively implemented.

The current infrastructure development requirements facing the countries of the region necessitate a more comprehensive approach, in which not only the regulatory or financing aspects have to be improved, but also the manner in which infrastructure and the transport services that make use of it are conceived and planned, by strengthening the State's performance and increasing coordination, improving integration and cooperation among the region's economies and improving coordination with the private sector by means of public-private partnerships.

Infrastructure has a major impact in both the economic and social spheres. As infrastructure development improves and the economy becomes more connected, the cost of selling products goes down, competitiveness increases, new investments are stimulated, foreign customers are more satisfied and new markets open. Infrastructure forms an integral part of the productive system, facilitating the distribution of goods and impacting in a major way the earnings of companies within the economy, the organization of territories and their economic and social progress.

The social impact of infrastructure is related precisely to its potential as a mechanism for territorial, economic and social cohesion, given its capacity for integrating and coordinating the territory, making it more accessible from abroad and increasing connectivity within its borders, and improving living conditions and quality of life for its people. For these reasons, infrastructure not only raises productivity and reduces production costs, thereby expanding trade activity, private investment and the accumulation of capital; it also facilitates social development, especially when combined with connectivity and social inclusion policies aimed at the most economically and socially vulnerable regions, while helping to reduce distributive imbalances.

Developing infrastructure projects within a framework of regional integration policies permits the internationalization of the infrastructure services provided, contributes to the countries' economic, political and social integration and helps make up for some of the shortfalls in certain natural resources that may affect some countries. The adequate availability of infrastructure of regional interest and the efficient provision of related services will allow the countries of the region to achieve a greater degree of productive specialization and develop competitive advantages in global markets.

In light of these considerations, infrastructure integration on a regional level becomes a key topic insofar as fostering growth and reaching higher levels of development in the region is concerned. This is why Latin America and the Caribbean need to develop and fortify the formulas that will allow them to function as an integrated space, and thus it becomes essential to connect the countries of the region through physical infrastructure, connecting communication channels by means of roads, rail, and river and sea transport, along with integrating the different types of energy and telecommunications.

The reasons why it is important to address physical integration on a regional level are related to the characteristics inherent to this type of integration, which are summarized below:

- (i) It leads to effective economic, trade and political integration (without infrastructure, none of these would be possible);

- (ii) It is crucial if greater social equity is to be achieved and asymmetries among countries are to be reduced;
- (iii) It has ample potential to foster unity, peace, and development, in the broadest sense;
- (iv) It allows the problems that countries share to be solved in a joint manner, such as physical bottlenecks, missing communications segments, trade obstacles, etc., while at the same time stimulating the creation or reorganization of productive chains, facilitating more competitive insertion in the world's major markets, favouring the harmonization of public policy and regulatory frameworks among countries and sectors, fostering the development of geographically isolated areas, bringing about decentralized development, and reducing trade and distribution costs, etc.;
- (v) It promotes decision-making based on mutual gain for participating countries, allowing them to move beyond any political or diplomatic differences that may exist between them in order to make progress in concrete matters (although there are some more complex exceptions, this is indeed what has occurred in the majority of cases, both in projects carried out by the Initiative for the Integration of Regional Infrastructure in South America (IIRSA) and the Mesoamerica Project);
- (vi) It has a medium- and long-term role, which is unique to infrastructure investments, and which allows its implementation to be steadier and often prevents it from stopping during critical periods;
- (vii) It more actively incorporates the participation and input of local governments and the private sector, through the process of developing, financing, building or operating physical integration projects.

The last point is important because in the first two spheres of integration mentioned above, the most active participation is generally limited to the public sector (and in most cases on a very high level), which can allow the agenda to be more easily "taken over" by nationalist interests or allow emergencies (such as those brought about by economic crises) to change policy priorities, making it difficult to apply effective integration measures. In the case of infrastructure, on the other hand, participation on the part of the private sector and local governments, whether developing or building projects, can—within the proper framework— catalyse the process, causing interests and resources to be mobilized so that projects are completed. Once the physical connection has been made, there will be interested parties who will use it to expand markets and increase interregional trade among subregions that did not previously trade, or did so only on a small scale.

### IV. HOW DOES PHYSICAL INTEGRATION OPERATE IN LATIN AMERICA AND THE CARIBBEAN?

There are at least three existing initiatives in Latin American and the Caribbean that incorporate a regional integration scheme on the physical level: IIRSA in South America, the Mesoamerica Project (MP) in Central America and CARICOM in the Caribbean. ECLAC, and in particular the Unit of Infrastructure Services, is working closely and in a coordinated manner with all of them.

The strategic goals proclaimed by these initiatives are noble, which should not imply that the initiatives are free of problems and conflict. Like all regional cooperation projects, infrastructure projects must also struggle with the challenges posed by the diverse priorities and interests of the different countries involved. As Beato, Benavides and Vives (2002) argue, conflicts stem from three factors: (i) poor information spreading through the countries related to the costs and benefits of projects, (ii) the political and economic limitations of sustaining the costs of infrastructure constructed in another country, and (iii) the lack of systems for distributing the costs and benefits through the countries. Clearly, projects are often of greater interest to one country than another. A project that connects a relatively isolated country to a country that has relatively strong connections with the rest of the region can often be of greater interest to the isolated country. This is so because the well-connected country is already enjoying many of the benefits of interregional trade and perhaps has less to gain from the project. There is no doubt that such differences in priorities, interests and resources can make these sorts of agreements among countries challenging to reach.

Moreover, conflicting opinions may exist as to the appropriateness of certain infrastructure projects. Indeed, among the different players involved in these integration processes, one perceives distinct views that tend to reflect contrasting interests and preferences when it comes to supporting or opposing projects. In any case, the point can also be made that there have been many more advances than setbacks.

**(a) Initiative for the Integration of Regional Infrastructure in South America (IIRSA)**

Established in 2000, IIRSA is one of the processes that has made the most progress in our region in recent years. Its strategic role consists of addressing the most obvious obstacles to physical integration (bottlenecks, missing segments, etc.); promoting intraregional trade in South America; stimulating the reorganization of productive chains; aiding in building a more integrated, competitive and dynamic South American economy within a framework of social and environmental sustainability; encouraging the participation of the private sector; supporting the harmonization of public policies and regulatory frameworks among countries and sectors and reducing the costs of trade and distribution by developing infrastructure in the transport, energy and telecommunications sectors.

In the particular case of IIRSA, in recent years this initiative made progress in carrying out physical integration infrastructure projects, through a consensus portfolio approved by the 12 countries of South America (514 projects, for 69 billion dollars, in transport, energy and communications, although the first category is the main category, representing almost 60%). At the beginning of 2009, 68% of IIRSA projects had made concrete advances: 10% were concluded, 38% were being implemented and 20% were being effectively prepared.

Table 1  
**ADVANCES IN THE IIRSA PROJECT PORTFOLIO - 2009**

State of projects	Percentage of projects	Number of projects	Estimated investment (billions of US\$)
Concluded	10%	51	7.506
In process of implementation	38%	196	30.728
In process of preparation	20%	103	17.383
<b>TOTAL</b>	<b>68%</b>	<b>350</b>	<b>55.617</b>

**Source:** Based on IIRSA ([www.iirsa.org](http://www.iirsa.org)), 2009.

In addition to advances in the project portfolio, other tools are being developed that are worth mentioning and that were designed to support the Initiative's goals.

One of these tools is the "IIRSA Methodology for Analysing the Productive Integration and Development Potential of Value-Added Logistics Services," which will be used to identify the contribution of IIRSA projects to productive integration in its sphere of influence and ensure the delivery of an adequate supply of logistics services to the productive sector, as user of that infrastructure.

Another tool is the "IIRSA Methodology for Strategic Environmental and Social Evaluation (EASE)," a new environmental and social planning instrument for the Initiative that will gauge the combined impact of Portfolio projects, identifying socio-environmental development opportunities for IIRSA project groups, establishing guidelines for management and related investments capable of generating options for sustainable development.

The IIRSA work plan for Sectoral Integration Processes (SIPs, which work on sea, air and multimodal transport, border crossings, energy integration, financing instruments and information technology and communications) for identifying regulatory and institutional obstacles impeding the development of basic infrastructure in the region has assembled a significant series of studies and assessments on aspects related to the rules and regulations governing the provision of infrastructure services.

**(b) The Mesoamerica Integration and Development Project (MP)**

Also known as the Mesoamerica Project, or the former Puebla Panama Plan (PPP), it was officially launched mid-2008 (although work actually began in 2001, with the PPP), for the purpose of promoting regional integration between south-south-east Mexico and Central America (plus Colombia and the Dominican Republic, which joined later) by developing infrastructure projects and those with a social focus aimed at generating development, making the region more competitive and thus positively impacting its population. Within the framework of the Mesoamerica Project, governments make progress toward solving regional challenges with a view to the long term, fueling the Tuxtla Mechanism for Dialogue and Agreement and coordinating its components with the Central American Integration System (SICA) and its different Councils of Ministers, to promote cooperation among the member countries. A detailed analysis of the functioning of the Mesoamerica Project and the cooperation

between this initiative and ECLAC, was thoroughly addressed in FAL Bulletin 273: "ECLAC – Mesoamerica Project Cooperation: Contributing to Facilitate Trade and Transport in Mesoamerica." The following comments are limited to the main milestones in each of the MP areas of action: transport, energy, telecommunications, trade facilitation and competitiveness, health, environment, natural disasters and housing.

One of the Mesoamerica Project's most important advances was the development of the International Network of Mesoamerican Highways (RICAM, in Spanish), to increase the national and international connectivity of the region's economies by constructing, rehabilitating and maintaining 13,132 km of roads, distributed along five regional roadway corridors.

Estimated investment as of June, 2009, reached a total of US\$ 7.192 billion, with 50% progress in concluding the construction and modernization works, equaling 6,629 km of roads. Recent noteworthy works include the October, 2009, inauguration of the highway between Guatemala and the State of Tabasco, Mexico, along with the modernization of the border crossing post between the two countries. Other important works have also been concluded in 2009, such as the Río Hondo International Bridge (Mexico-Belize); La Amistad Border Bridge (El Salvador-Honduras); the International Bridge over the Río Sixaola (Costa Rica-Panama) and a new international bridge between El Salvador and Guatemala.

In terms of energy integration, the Central American Electrical Interconnection System (SIEPAC, in Spanish) consists of the construction of approximately 1,790 km of electricity transmission lines from Guatemala to Panama and their connection to 15 transformation substations, at a cost exceeding 500 million dollars, facilitating the exchange of up to 300MW of energy and the creation of a Regional Electricity Market (MER, in Spanish). The project reports 69% progress; worth note is the electrical interconnection between Guatemala and Mexico that took place in October, 2009, allowing energy to be exchanged between the two countries.

In addition to these projects, there are telecommunications plans to construct a Mesoamerican Information Highway (AMI, in Spanish) that will reduce the digital gap; and in the energy realm, implementation has begun of a Mesoamerican Network for Science and Technology Exchange, with a focus on biofuels, and progress includes the recent inaugurations in El Salvador and Honduras of two biodiesel production pilot plants using Colombian technology, as well as the construction being undertaken of similar plants in Chiapas, Mexico, and Guatemala.

In the framework of the Modernization of Customs and Border Crossings, progress has been made in applying the Mesoamerican Procedure for the International Transit of Merchandise (TIM) at the El Amatillo border crossing, between El Salvador and Honduras, reducing transit time up to 75%.

**(c) Caribbean Community (CARICOM)**

The Caribbean Community (CARICOM), created in 1973, currently has 15 full members, 5 associate members and 7 observer members. Its purpose is to strengthen ties and integrate a common market in the Caribbean region. This type of integration is focused on the first category of integration mentioned earlier: regional economic-trade integration. Nevertheless, we want to point out the advances relative to physical integration within the framework of this process.

In the Treaty of Chaguaramas, which established CARICOM, —and in its subsequent revised version— one of the main community objectives set forth was to achieve effective, functional cooperation among its members, stating that one of the specific areas where this cooperation should be sought was sea and air transport.

CARICOM has attempted to broaden the scope of the Treaty to also include road and river transport. Along these lines, the progress that has been made is the establishment of a Community Transport Policy, the bases of which have been incorporated in Chapter VI (Transport Policy) of the revised version of the Treaty.

Following a regional consultation process, the document in question was approved and signed by all member States (except Montserrat); implying both rights and obligations on the part of member States and community organs. This Transport Policy is a vital instrument for the development of regional transport. It is being used to shape the establishment of standards and the harmonization of practices and procedures on a regional level in the transport sector, in order to support the development of the Common Market. This support consists of creating an environment that facilitates the provision of transport services both for goods and for the tourists and citizens of CARICOM member countries. Moreover, it facilitates the movement of expert aviation personnel and attempts to achieve smoother operations for transport companies throughout the entire Community.

In 2009, progress was made in establishing an Infrastructure Fund for the purpose of financing projects related to infrastructure for transport, energy, information technology and communications. Currently work is being done on structuring the fund and attracting the resources necessary to ensure that its area of action is significant for the region's population.

A study has begun to examine the market demand for and the viability of establishing a rapid ferry service in the Southern Caribbean to support intraregional transport demand, especially for non-traditional agricultural products, as well as for the movement of people.

Another important transport project for the regional integration of the Caribbean is related to a study on the Intraregional Costs of Air Transport, given the importance of this mode for revitalizing relations among member states and for the tourism that is a fundamental source of income for the region. The study ended at the beginning of 2009 and showed that the average ticket price before taxes and fees is generally lower in the Caribbean region than in other geographically comparable regions; however, the average cost of taxes and fees (between 20-40% of the total ticket price) is significantly higher in the Caribbean region than in other geographical regions. Based on the conclusions and recommendations of the report resulting from the aforementioned study, a common air transport policy is being developed for CARICOM.

Within this same subsector, and in the framework of the goals established in the Community Transport Policy, in February, 2009, progress was made in establishing the Caribbean Aviation Safety and Security Oversight System (CASSOS). The main intentions of the system are to harmonize civil aviation security regulations and to provide technical advice to member States on civil aviation matters, among others. Along these lines, a Revision of the Multilateral Air Services Agreement is currently being prepared. It will replace the previous

Agreement, being more compatible with the community goals set forth in the Revised Treaty of Chaguaramas.

In terms of advances in maritime projects, in 2010 CARICOM aims to provide more financial assistance and technical training to small vessels operating in the eastern region of the Caribbean that provide essential transport service for the region's small producers.

Considering the main modes operating in the region, a community air and sea transport policy that will be compatible with the Revised Treaty of Chaguaramas is also being developed. In 2010 work will be done in conjunction with the Republic of South Africa related to air service, and the feasibility of establishing a common air space for managing air services among some member States of the integration block will be studied.

## V. CONCLUSIONS

Taking into account just the region's physical integration initiatives mentioned herein, the point we wish to emphasize is the following: physical integration projects exist now, whereas they were practically non-existent in the region a few years ago, and for most of the projects being implemented, implementation continued even during periods of crisis.

The results described in this Bulletin reflect the main advances made in the framework of different physical integration initiatives covering the regions of Latin America and the Caribbean. Regional physical integration is making progress; it is gaining momentum and extending, turning projects into concrete works, which, along with strengthening regional integration processes, make economic and social development for the countries of Latin America and the Caribbean possible.



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