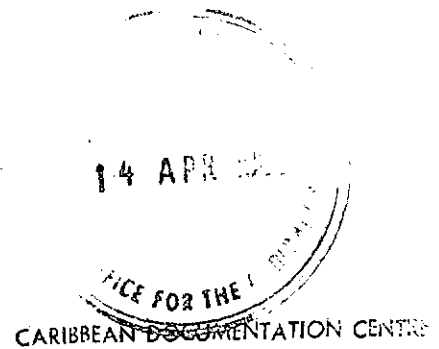


ECLA/CARIB 77/7

Date: 25 August 1977

ECONOMIC COMMISSION FOR LATIN AMERICA
Office for the Caribbean



INTER-ISLAND COMMUNICATIONS IN THE CDCC AREA
SOME PROBLEMS AND PROSPECTS



Prepared by
Peter F. Wickenden
Economic Affairs Officer - Transport

For presentation to
UNCTAD Group of Experts on Feeder and Inter-Island
Transport services for Island Developing Countries
(Geneva, 13 to 21 October 1977)

INTER-ISLAND COMMUNICATIONS IN THE CDCC AREA^{1/}

SOME PROBLEMS AND PROSPECTS

The CDCC countries with the exception of Belize, Guyana and Suriname are all island communities in the Greater and Lesser Antilles. Even the three mainland countries have little or no surface communication with neighbouring states. While typical problems in inter-island communications can be found in the area, for a number of reasons the states can demonstrate some of the pitfalls that should be avoided when seeking to improve transport links in other similar areas.

The region was colonised by four powers: Spain, France, the Netherlands and Britain and currently the political situation ranges from full independence to colonial status. In particular Britain retains both Colonies and Associated States which remain dependent on budgetary support. The region's heritage still clearly influences transport patterns especially in air services. The former Dutch and British territories^{2/} maintain strong transport links among themselves but have weak links with territories with a different heritage. Jamaica, Belize, Haiti and the Dominican Republic all have much stronger links to North America than to the region, while Cuba, with the exception of four flights a month to Jamaica and Barbados and two flights a month to Trinidad and Guyana, has no links with the region at all. One has normally to fly Kingston-Miami-Mexico City-Havana to travel between Jamaica and Cuba despite the fact they are neighbouring islands. Mention should also be made of the importance of Puerto Rico as an interchange point especially for Hispaniola. This further complicates the picture

^{1/} Defined as CARICOM - Guyana, Trinidad & Tobago, Barbados, Grenada, St. Vincent, St. Lucia, Dominica, Antigua, Montserrat, St. Kitts, Jamaica, Belize, plus Suriname, Dominican Republic, Haiti, Cuba and the Dutch Antilles. Although the Bahamas is a CDCC member, it has been excluded for the purposes of this paper.

^{2/} The French territories are departments of France and are not members of CDCC but show the same situation.

as for civil aviation purposes this island is integrated with the continental USA.

Generally aid funds have not been difficult to obtain and this applies equally to the transport sector. Sources have been British budgetary support, Canadian aid, while France and the Netherlands have spent a great deal on former colonies. The United States have provided funds on a similar scale for the Dominican Republic and Haiti as well as contributing aid to the rest of the region. These funds have been made available and spent on a country-by-country basis, and as a result the regional transport system has "grown like topsy" instead of being planned. Perhaps this has been the natural outcome of the existence of small political units and the resultant diseconomies are part of the price to pay for this system.

This problem was recognised by the British, Americans and Canadians who initiated the Tripartite Study of 1966 to determine how aid funds might best be spent. One result from that study was the establishment of the Caribbean Development Bank (CDB), through which aid was intended to be channelled. In practice, the three donors divided the aid programme between them and continued on an ad hoc bilateral basis as before, while also contributing to the CDB. In fairness to the donors it should be pointed out that this happened in large part on the insistence of the individual governments.

As a result, the donors failed to indicate how much aid was to be provided for each sector in the region and so the opportunity was lost for system planning on a rational basis. In the 1966-1976 period large amounts were spent on transportation, but today there still remain a number of deficiencies in the system that could have been rectified with proper planning in a regional perspective.

AIR TRANSPORT

Aviation Infrastructure Deficiencies

The region is characterised by the close proximity of airports capable of handling the largest commercial aircraft; these are frequently less than an hour's flying time apart. However, there are three airports that are clearly inadequate under current conditions

to handle present and projected traffic because of operational restrictions. Climate and topography impose severe constraints on the use of Arnos Vale Airport, St. Vincent. Landing is into the wind from the sea while take-off is down-wind towards the sea. Wind velocity can close the airport and in any case causes weight restrictions for take-off.^{3/} Night flying is prohibited. The runway is 4,850 feet long, surrounded by hills on three sides, rises from the sea end and is crossed by the main road near the terminal building. Studies have rejected both an extension into the sea and an alternative site on prime agricultural land as being too expensive.

Pearls Airport, Grenada, also has severe operating restrictions which limit flying to daylight hours only. A very tight turn is required in order to avoid the peaks of adjacent hills on approach to the 5,255 feet long runway. Both landing and take-off are towards the sea. The approach is considered too dangerous to attempt after dark even with the most sophisticated automatic landing systems now available.

The British first studied the problem in 1955 and since then five or six major studies have also been completed. An alternative site was identified in the original examination but this is close to the recent hotel developments on Grand Anse Beach and would involve cut and fill. A cross-wind runway on the existing site has also been evaluated.

The Government wants better air communications the lack of which is blamed, rightly or wrongly, for the slow growth of tourism. As it is over 20 years since the first study, perhaps this is the prime example of studying studies instead of solving problems and all should share the concern of the Government of Grenada that nothing has happened.

The 5,000 feet long runway at Melville Hall, Dominica, has a difficult approach over a mountain range which precludes night landing. Take-off into the sea is permitted after dark because of the proximity of an alternate runway on nearby Martinique.

^{3/} This results in empty seats and occasionally baggage being left behind.

A fourth runway at Blackburne, Montserrat has a difficult approach which limits commercial flying to daylight hours only. However foreseeable traffic demands do not appear to justify improvement and an adequate shuttle service can be provided from Antigua, only 15 minutes flying time away.

The only other infrastructure deficiency occurs at Port-au-Prince, Haiti, where lack of lower air space traffic control has limited the development of services, although the airport is physically capable of handling more traffic.

Aviation Service Deficiencies

Mention has been made above of limitations on night flying. It should be borne in mind that in the region the sun always sets between 6 PM and 7 PM. Thus a 30 minute in-flight delay by a jet from Europe or North America to Barbados can cause passengers bound for Grenada to miss the connecting flight and force them to overnight in Barbados.

An examination of route structures shows that the region does not form a single system; it is often physically impossible to travel from one island to another on the same day. Despite the lack of links, the services that do exist are with one notable exception, reliable. That exception is LIAT which serves the Eastern Caribbean. While it must be conceded that LIAT operates the most intensively used equipment in the world, it is also without a doubt the airline with the worst reputation.

Its performance is in stark contrast to PRINAIR based in Puerto Rico. LIAT operates two distinct types of service. Main routes served by Hawker Siddeley 748's carrying 48 passengers and feeder routes served by Islanders carrying 8 or 9 passengers. While LIAT serves 19 stations, 5 of these are only served by the smaller planes. Ground support facilities at these are therefore minimal. PRINAIR operates one type of aircraft only, the 19 seat De Haviland Heron, which has been converted to US engines. Services operated by PRINAIR are more regular to its 10 stations; PRINAIR operates as a commuter airline and has some high density routes. In the 1974-1975 fiscal year LIAT carried fewer passengers but obtained over \$4 more per passenger in

revenues. However LIAT's costs were almost \$10 per passenger higher. Therefore LIAT lost \$2.56 per passenger while PRINAIR received about the same profit. LIAT made a net loss of \$3.08 for every passenger carried while PRINAIR made a net profit of \$1.38 and held \$5.50 as retained earnings. All the above figures are in US dollars.

LIAT is owned by CARICOM Governments and cannot be allowed to go out of business as the carrier forms the only means of passenger service to many of the islands.

Passengers even with confirmed reservations cannot guarantee they will travel because of chronic overbooking made necessary by a high rate of "no-shows", according to LIAT; schedules are sometimes not kept and delays caused by equipment breakdown are frequent. Coupled with the operational limitations, these combine to make it difficult to offer the published service, and overflying of airports is fairly common.^{4/} Ground staff appear to lack commitment and are generally unhelpful to the travelling public. North American Travel Agents are most reluctant to book clients on the carrier for fear that they will lose future business because of problems, and this limits tourism development on LIAT monopoly routes.

Until recently there was no alternative method of reaching some destinations because no passenger ships now operate between the islands.

However, other scheduled carriers have initiated service on routes formerly the monopoly of LIAT, and small plane charter traffic has increased significantly. Businessmen and heads of diplomatic missions now charter instead of risking the possibility of being stranded.

There is very little air freight traffic between the islands although there are some small non-scheduled air freight operators using DC3's. LIAT also handles some freight. There is evidence that the inability of the smaller islands to have reliable air freight

^{4/} Two examples illustrate the difficulties. A recent St. Vincent-Trinidad flight arrived 26 hours late on a one hour flight, and a passenger with a confirmed reservation from Grenada to Trinidad on a Sunday was not able to fly until the following Thursday.

service restricts the marketing of exotic fruit, vegetable and plant exports to North America and Europe.

Aviation Summary

Due to the way investment occurred there has been an over-investment in infrastructure coupled with a neglect of serious deficiencies. Runways were constructed for medium and large aircraft that could operate only on a restricted basis in some cases, instead of building facilities for small aircraft that could be used continuously. The lack of a regional approach has resulted in no consideration being given to the solution of physical deficiencies by altering aircraft types and the pattern of air services. For example instead of LIAT operating an all-island service, consideration could be given to having feeder links from Antigua to the northern islands and from Barbados to the southern islands, leaving the through route to existing large jet services. This could obviate the need for any further substantial infrastructure investment.

CDCC Programme

In order to approach a resolution of the problems facing the region, CDCC and ICAO are carrying out a joint study of Civil Aviation. The initial part now underway calls for the collection of data from which a preliminary evaluation will be made and a range of options established.

At this point a group of regional experts will examine the data and options, and CDCC and ICAO will carry out further economic analysis as required. From this work the experts will select the preferred option which will be submitted to a future CDCC meeting as a policy proposal for ratification. This study will also examine the future role of LIAT and the type of equipment best suited for the carrier.

This method has two main advantages. The region is not presented with a report from experts, however competent, from outside the region; and the region plays an active part in the resolution of its own problem.

MARITIME TRANSPORT

Maritime Transport Infrastructure Deficiencies

Most islands have or are planned to have deep water port facilities capable of handling ocean vessels. However, as in aviation, there has been over-investment in this sector. The World Bank Mission to CARICOM in 1973 found that all islands had port development plans based on the assumption that they would handle transshipment as well as domestic traffic. While airport investment was largely complete by 1972, port development occurred from that date and is likely to be completed by 1980. Up to April 1977, loans from CDB amounting to US\$20.5 million had been approved for this purpose which totalled to 17.6% of all loan disbursements made by CDB.

It can be accepted that the CDB had to yield to demands made by members in its formative years, and it is a fact that strenuous efforts were made to scale down the proposals and restrict the amount lent. It can also be accepted that there was a need to eliminate lighterage in the region. But when the programme is complete, deep water facilities are available and the loans have to be repaid, it may be questioned on grounds of under-utilization if it was necessary to provide facilities for ocean going vessels at all ports.

As is known the trend in ocean transportation is towards larger ships making fewer port calls. Already cellular container ships serve the region from Europe and North America. Furthermore 65% of intra-regional trade is carried in small vessels. One of the regional shipping lines, WISCO, plans to operate shallow draft vessels to serve these ports with intra-regional break bulk and container traffic as well as offering transshipment service to ocean lines. Some ocean lines have themselves announced feeder services to the smaller islands. In the light of these developments, the provision of deep water berths in excess of 20 feet at each port would appear to be unnecessary as most if not all of the vessels calling at the ports will not require this depth.

In Dominica's case for example, while it was necessary to eliminate lighterage, a deep water port has been built at a cost of US\$5.4 million. This facility is only likely to be used regularly by the Geest banana boats which usually call every ten days. Geest, with its vertical

integration of operations will gain the main benefits while the Government of Dominica foots the bill.

Maritime Transport Service Deficiencies

Apart from Ocean Lines that operate in intra-regional trade, there are two shipping lines owned by regional governments. These are NAMUCAR^{5/} and WISCO.^{6/}

In many respects there is a close parallel between WISCO and LIAT. The shipping line has always operated under subsidy, has a history of poor management and survives from crisis to crisis. Canada has spent large amounts of money over the years both for ships and technical assistance, yet the Regional Governments while expressing a desire to see the line operate efficiently, have been unable to take the necessary steps to ensure that it can do so. This is symptomatic of the level of development in the region.

Inter-island small vessels carry most of the regional trade and there is a heavy concentration of services in the Eastern Caribbean.

While these vessels do not operate regular scheduled services, they tend to remain on the same route. Half of the fleet operates between Trinidad, Guyana and Barbados, while there are regular sailings between these ports and St. Lucia, St. Vincent and Grenada. The traditional small, wooden hulled vessels with sails and an auxiliary engine are gradually being replaced with single or twin screw steel hulled vessels carrying up to 500 tons of cargo. More recently, barges either self-propelled or pulled by tugs have also appeared.

The small vessels have traditionally provided the cheapest form of sea transport and this is made possible by low standards of service. There are frequent transit delays; damage and pilferage of cargo is prevalent. In an area where fresh fruit and vegetables form a signifi-

^{5/} NAMUCAR serves Tampico, Veracruz, Havana, Kingston, La Guaira, Puerta Cabello, Barranguilla, Cartagena, Cristobal, Puerto Limon, Bluefields, Houston, New Orleans, Curacao and Port-of-Spain.

^{6/} WISCO serves Guyana, Trinidad, Barbados, Grenada, St. Vincent, St. Lucia, Dominica, Antigua, Montserrat, St. Kitts and Jamaica.

cant part of the total traffic, there is an almost complete lack of reefer or chilled space. Insurance of cargo is difficult to obtain mainly due to the poor physical condition of the ships. Where it can be obtained, it costs roughly double that for larger vessels and generally applies only to total loss. The newer steel hulled vessels can obtain more favourable rates. Individual vessel owners seldom entertain claims for cargo damage even when this is attributable to poor cargo handling or pilferage. Finally, it is almost impossible to obtain finance for the purchase of replacement vessels.

The problems associated with this type of operation between Eastern Caribbean islands are almost identical to those found in internal cabotage in Haiti, where a lack of roads make outlying communities dependent on small vessels in coastal service.

The inter-island small vessel services do not demonstrate the same pattern as air services and cut across heritage¹ and language boundaries. However, there has been no scheduled passenger sea services since WISCO ceased to operate a joint cargo/passenger vessel in 1975. This makes the movement of passengers difficult especially in the light of the problems encountered with LIAT.

CDCC Programme

Assistance has been provided to the CDB in evaluating investment for WISCO by carrying out a survey of customs clearance documents. For the first time the size of the total market is known and the results are given in the Inter-island Shipping Survey Report.

Further analysis of the data has been made to determine the volume of traffic being carried by each small vessel and the route patterns. This is part of a comprehensive evaluation of the role of small vessel shipping being carried out by CARICOM. It is already apparent that at a later stage of this study, external technical assistance will be needed to determine future vessel design if they are to be built in the region, and for the drafting of maritime law and the improvement of safety standards. Of course it might prove more economic to continue the practice of purchasing second-hand vessels from outside the region.

CONCLUSIONS

Experience in the Caribbean area can perhaps be applied to other similar island systems.

Until recently at least, there was a general feeling in the region that aid funds were easy to obtain, perhaps as a result of budgetary support from parent metropolitan countries or the former Canadian method of financing aid projects where funds not spent in the year of allocation were retained instead of the more normal practice of reverting to the treasury. As a result CIDA always seemed to be able to find money for new projects.

In examining the present system of both infrastructure and services, the impression remains that if the total amount spent on transportation in the ten years between 1966-1976 had been known in advance, investment would have been planned differently and some attempt would have been made to ameliorate the remaining severe constraints.

There appears to have been over-investment in infrastructure for both aviation and maritime transport. For example, St. Kitts has a 7,600 feet long runway that in over two years has had only two jet freighters on it. There are no scheduled services for large aircraft, the Hawker Siddeley 748 is the largest scheduled user and that needs only 4,000 feet of runway. The deep water ports appear to have been built on over-optimistic traffic forecasts and insufficient attention to ocean shipping trends. Of course it can be argued that facilities must be provided if it is hoped to generate traffic, but it would appear that some of the facilities will not be fully utilized.

On the other hand, due to the lack of regional planning there has been no attempt made to vary equipment or services to overcome deficiencies and thus obviate the need for further infrastructure development.

In short, there is a need for a comprehensive approach to regional transport rather than an ad hoc country-by-country (or island-by-island) approach. The fact that one island has an 8,000 feet runway or a deep water port does not mean automatically that a neighbouring island should have them or even needs similar facilities.

In order to evaluate the options facing the region there is a need for a comprehensive knowledge of other regions and technological developments in transport. Generally this knowledge can be obtained by the use of external technical assistance. However the region must come to grips with its own problems and not be presented with a plan from outside. In short, the region must be encouraged and assisted, but in the final analysis has to resolve its own problems.

Finally, the transportation system must be kept as simple and therefore as cheap as possible. New technology is often complex requiring skills not found in the developing world. At all times it should be remembered that the region has to both operate and pay for the equipment provided.

