

5. Environmental consequences

The island of Anguilla faces a number of critical environmental issues, some of which have been intensified as a result of Hurricane Luis. They include the degradation of soils considered poor for intensive agricultural production, the loss of woodlands, and the erosion of beaches and dunes, among others. ^{8/}

The strong winds of the hurricane contributed to the further loss of trees in the island, overturning and uprooting many palm and other large trees. The island's natural landscape after the hurricane shows more limestone and thorn-scrub vegetation than large trees.

The storm surge and sea waves negatively impacted on all shores of the island. The sea water reached well into the vegetation behind the beaches, flattened dunes and stripped the sand from the beaches, leaving barren rocks exposed. The sand from the beaches and dunes was deposited in the nearby seabed. In many cases, beach width has been reduced from more than 30 to less than 5 meters.

It is anticipated that natural rebuilding of sand beaches and dunes will slowly occur in a period of between 6 months to more than 2 years, depending on local conditions; however, there is considerable doubt that full recovery is possible. ^{9/} Artificial rebuilding of the beaches with sand recovered from the sea bed or imported from other sand deposits in the island are alternatives to aid or accelerate nature's actions. In fact, a tourism resort is already undertaking an expensive project of dredging the sea bottom near the beach and rebuilding the beach and dunes. Since these alternative solutions may have negative impacts on other variables of the environment, careful environmental impact analysis should precede them and continuous monitoring of their implementation should be conducted.

In other beach areas located in the eastern side of the island, the storm surge and sea waves brought and deposited many tree trunks, coral reef sections and debris. The damage thus imposed to coral reefs and the beaches have not been analyzed but may be extensive.

Several low-rise keys and small islands located in the west and north areas of Anguilla were washed over by the storm surge and waves, causing erosion and some sedimentation. This fact may also have a negative impact on animal life that has to be studied.

Further soil erosion has occurred as a result of the intensive rainfall that accompanied the hurricane, especially in those areas where the top soil depth was very limited. Agricultural production in these soils was thus further jeopardized.

^{8/} A comprehensive description of environmental issues can be found in *Anguilla: Environmental Profile, 1993*.

^{9/} See Gillian Cambers, *Report on the damage to the beaches of Anguilla following Hurricane Luis*, October 1995.

It has been reported that the officially designated sand mining site at Windward Point Bay has been subjected to extensive exploitation in recent years. The erosion caused by the hurricane at this site has further diminished sand availability to a few months' supply. ^{10/} Studies will have to be undertaken to identify other potential sites for sand mining to meet the future demand for beach and dune rebuilding and for infrastructure reconstruction aggregates. Due consideration will have to be made to the possibility of importing sand and to the need of ensuring its environmental compatibility. Possible damage to coral reef during transport of sand by boats should also be avoided.

In brief, the hurricane had a very negative impact on the tree cover of the island, caused erosion of beaches and the flattening of dunes, deposited sand in nearby sea beds, further eroded agricultural soils, and may have negatively affected animal life. Environmental impact assessments are still to be conducted before artificial restoration of beaches can be safely undertaken.

The damage to the environment of the island is thus enormous and cannot be measured in dollar terms. Indirect costs estimated in the tourism sector for the rehabilitation of beaches and dunes are only a minor reflection of the direct damage caused to the environment.

6. Other damages

Sports and recreation facilities were damaged by the action of the hurricane's winds and rainfall. They include several sports parks and courts that were eroded in their surface, damage to buildings and equipment of stadiums, and fencing of many other recreation facilities.

In addition 10 churches of different religious denominations suffered total or partial damage to their roofs and windows due to the strong winds, as well as damage to furniture and paintings by subsequent rains.

The direct cost of repairing these facilities has been estimated as US\$ 403,000.

7. Summary of damages

Despite the preliminary nature of the sectoral damages described in previous sections —since no completely reliable information was available at the time of the assessment— the magnitude of the total damage caused by Hurricane Luis on Anguilla can be quantified, and the sectors that have been affected the most and that will require preferential attention during reconstruction can be identified.

The total amount of damages and losses caused by the disaster is estimated at US\$ 55 million. This amount can be broken down in damages to infrastructure and natural resources of US\$ 47.4 million (86 per cent of the total) and losses in future production and lucro cessans of US\$ 7.6 million

^{10/} Gillian Cambers, *Report on the damage...*, *op. cit.*

(14 per cent). However, there are potential insurance reimbursements for physical damages and revenue losses of up to US\$ 21.5 million. (See Table 4.) ^{11/}

These figures acquire their right magnitude when comparing them to macro-economic variables. First, total damages and losses imposed by the disaster are equivalent to nearly 94 per cent of a year's gross domestic product in the island. Second, estimated physical damages amount to 2.3 times the annual amount of gross capital formation for the island as a whole. Were it not for the existence of insurance, replacement or repair of lost assets would be expected to require more than two years. Third, the estimated production and revenue losses are equivalent to about 12 per cent of GDP for the island. Since these losses will be spread out through the end of 1996, and there is partial insurance coverage on them, the annual setback in GDP will not be as acute for the present year and for 1996 as will be discussed in the following chapter. Nevertheless, the disaster will be a serious setback to previous years' trends in economic growth and performance.

An analysis of damages and losses by sectors is also of interest to identify where the effects of the disaster were concentrated. In the case of damage and destruction to infrastructure and natural resources, most affected were the tourism sector (55 per cent of the total), housing (17 per cent), and communications (11 per cent). For the case of production and revenue losses, the most affected sectors were tourism —again— (45 per cent of the total), communications and electricity services (23 and 21 per cent respectively), and agriculture and livestock (13 per cent).

While the above figures and comparisons provide a sectoral view of where damages and losses were concentrated, it must be borne in mind that the main effects of the hurricane were on the natural resources of the island, on which its main activities are based, as well as on its social and physical infrastructure. This fact must be recognized for its potential negative effect on the reputation of Anguilla as a top tourism destination.

However negative those effects may be, the efforts of the people of the island —including its government and the private sector— seem to be channeled in the right direction as far as reconstruction and rehabilitation of the economy are concerned.

A special comment is due in regard to insurance in this particular disaster. Contrary to what occurs in most developing countries of Latin America and the Caribbean, Anguilla has extensive insurance coverage that will produce significant benefits. Potential reimbursements from insurance policies would amount to nearly 40 per cent of the estimated total damage and losses imposed by the hurricane; they refer to both damage to infrastructure and losses in revenue and production although no quantitative breakdown was provided. These reimbursements will be spread out in 1995 and 1996.

^{11/} It must be borne in mind that the above estimate of losses may vary with time. Indirect losses resulting from the possible acquisition and transport of suitable sand to accelerate and complete beach rebuilding may increase if the natural process is found to be slow or insufficient.

Table 4

**SUMMARY OF DAMAGES AND LOSSES CAUSED
BY HURRICANE LUIS IN ANGUILLA**

(Thousands of US Dollars)

Sector and subsector	Estimated damages and losses			Insurance recovery */
	Total	Direct	Indirect	
<u>Total for island</u>	<u>55,321</u>	<u>45,522</u>	<u>9,799</u>	<u>21,507</u>
<u>Social sectors</u>	<u>8,402</u>	<u>8,295</u>	<u>107</u>	...
Housing	7,571	7,571	-	
Health	308	218	90	
Education	523	506	17	
<u>Infrastructure</u>	<u>13,422</u>	<u>9,827</u>	<u>3,595</u>	<u>2,342</u>
Water Supply	41	41	-	
Electricity	3,426	1,817	1,609	987
Ports and airport	1,465	1,285	180	373
Communications	6,540	4,775	1,765	982
Roads	1,950	1,950	...	
<u>Production and services</u>	<u>33,094</u>	<u>26,997</u>	<u>6,097</u>	<u>19,165</u>
Agriculture/livestock	1,719	747	972	75
Fishery	1,260	775	485	30
Industry	165	125	40	50
Commerce	500	300	200	10
Tourism	29,450	25,050	4,400	19,000
<u>Other sectors</u>	<u>403</u>	<u>403</u>	-	
Sports & recreation	138	138	-	
Churches	265	265	-	

Source: ECLAC.

*/ When available.

III. IMPACT ON ECONOMIC PERFORMANCE

After determining the damage and losses sustained by the different social and economic sectors, described in the previous chapter of this report, it is possible to evaluate the effects of the disaster on the macro-economic position of the island. Such evaluation includes an analysis of the impact on overall production, the external sector, internal prices and employment, and government budget performance. The analysis is based on a comparison of anticipated economic performance before the disaster with the expected performance in view of the damage and losses sustained by the economy.

1. Economic position of the island before the disaster

a) Anguilla's economic position in 1994

In 1994 Anguilla's development objectives remained focused on raising the standard of living of its population through developing the island's productive potential and the provision of a wide range of employment opportunities. Tourism continued to be considered as the major vehicle for growth, notwithstanding the government's concern for diversification of the economy and the strategic importance of achieving a balanced sectoral growth. Joint ventures between the public and private sectors were envisaged as a means to attract foreign investment. Steps were taken to attract foreign offshore companies to assist in the diversification of economic activities, providing new employment opportunities, and raising income levels and government revenues.

Anguilla has recorded increasing numbers of tourist visitors for several years, bringing about a significant increase in gross domestic product (GDP). Although construction has been sluggish, some services such as communications, banking and insurance, and government have experienced high rates of growth over time.

Overall GDP growth in 1994 was over 8.3 per cent, a rate higher than that of the previous five years, largely dependent on the performance of the tourism sector as its lead engine.

In regard to productive sector evolution, industrial development continues to be centered on a narrow range of activities of small and medium scale. After abandoning the production of salt, construction of wooden boats, some traditional quarrying operations and the processing of concrete remain the main activities. Manufacturing grew by less than 3.5% in 1994, a slower pace than the previous three years.

Agricultural activities are also limited due to the scarcity of arable lands and irregular rainfall. Nevertheless, it is a government policy goal to increase the degree of self-sufficiency in basic foodstuff production. Overall growth in agriculture during 1994 was almost 13 % due to the recovery of livestock and fisheries.

Lobster and fish catches represent the most important activities, namely through the extraction by means of fish traps.

Crop production showed a persistent declination both in terms of physical production and value, in spite of very recent efforts at diversification and the introduction of some export-oriented activities —mangoes, cabbages and other vegetables and fruits such as egg plants, water melons and broad beans— as well as the promotion of corn and sorghum production. The most dramatic falls since 1989 occurred in the production traditional crops such as pigeon peas and sweet potatoes.

The construction sector remained stagnant in 1994, after an almost 15 % decline in 1993 and well below of its peak values of 1989-1990. This is noticeable not only in value added to the GDP but also in terms of building permits, which reached over 207 in 1990 and dropped to 133 in 1994. Total area under construction (according to the building permits) also peaked in 1990 (at 552 thousand square feet), dropping to 335,000 sq.ft. in 1994.

In connection with essential services sectors, in 1994 electricity and water supply generated a value added slightly below that of 1993 (almost 4 % less). Transport services also grew less than the overall GDP rate and only communications and banking services showed significant increases (17.3 and 12% respectively).

In regard to the financial sector (money and credit) during 1994 total deposits in the commercial banks grew at 11.8 %, mostly in the form of foreign currency deposits which traditionally represent over 68% of all deposits.

An easing of liquidity through the reduction of the ratio of loans and advances to deposits occurred —from 80 % in December of 1993 to 70 % in December 1994. The dynamism of deposits was accompanied by a decline of 1% in loans and advances. In fact domestic credit contracted by 2.3% in 1994, compared to a rise of 8.5% in 1993. Most that contraction was attributable to a decrease of 1.6% in credit granted to the private sector and a contraction of credit granted to the Central Government of over 48.4%.

The largest amount of loans were to individuals for housing and land purchases (over 25% of all loans in 1994). Commercial and distribution activities accounted for the remaining amount of which 10.7% went to tourism activities. Transport loans have dramatically declined over the last ten years (they represented over 32% of all loans in 1984 and accounted for less than 5% in 1994). Loans to the government and to statutory bodies amounted to less than 3.2% of total loans and advances of commercial banks for the period 1984-1994.

Interest rates remained fairly stable during 1994. Minimum and maximum prime lending rates increased by 1.5 and 2.5 percent respectively during 1994.

In the tourism sector hotel and restaurant services generated almost 40% of GDP in 1994, showing an increase of 16.1% over the previous year. Tourist and one-day visitor expenditure reached 51 million U.S. dollars (an increase of almost 18% over the previous year), and a far larger figure than the average of 35 million registered during the 1990-1992 period. The number of total visitor arrivals also showed a significant increase (almost 13%). The average expenditure per visitor rose to US\$ 405 in 1994, an increase of 3.8 per cent since the previous year.

The number of hotel accommodations peaked in 1993 at 978 available rooms, mostly in hotels (518) and apartment complexes (398). The number of guest house rooms has been slowly decreasing over the years, from almost 100 six years ago to 50 in 1994. Average annual occupancy rates fluctuate around 30 to 35%, seasonally peaking in the December to April winter season, exceeding 50% for the whole island and reaching over 65% in the hotels. The length of stay, however, has diminished since 1990 from 10.6 to 9.4 days on average.

In regards of the external sector, in 1994 —after achieving surpluses averaging around 2% in the 1992-1993 period— the overall balance of payments of Anguilla showed a deficit equivalent to 0.3% of GDP. This occurred despite a narrowing in the current account deficit, as net capital inflows fell substantially and were insufficient to offset net current outflows.

The current account deficit, as a ratio of GDP, moved from 16.2% in 1993 to 13.5% in 1994. During the year and reflecting the expansion in economic activity, imports rose by 11.4% while exports grew by more than 36.5%. The increase in imports was associated to a substantial increase in the number of motor vehicles. The net effect was a widening of the trade deficit by 10.5%. As a ratio of GDP, however, the trade deficit narrowed marginally from 51.7% in 1993 to 51.3% in 1994.

The services account continued to be the major recipient of inflows. Net inflows from services increased by over 29.5% (equivalent to 26.6% of GDP). Net receipts from travel —increases in visitor arrivals staying at paid accommodations— are the underlying factors that explain the rise of 15.2% of gross earnings from tourism.

As regards investment and capital flows in 1994, net investment income payments were 13.1% above the total for 1993, partly reflecting increased profits remitted as a result of the higher economic activity, while net receipts from international transfers declined by 1.2%. This latter evolution is associated with a reduction in official transfers of 5.1% as some projects came to completion and others were winding down.

In the capital account, net inflows are estimated to have contracted by 17.4%, falling as a ratio of GDP from 17.9% in 1993 to 13.2% in 1994. A net decline occurred despite an increase in long term capital of over 48.5% in 1994 given the substantial increase in private capital outflows. These were mainly capital movements by commercial banks.

In connection with prices and employment, the evolution of the Anguilla Consumer Price Index shows single digit figures of 3.5 per cent for 1993 and 1994. On a November to November basis inflation in 1994 reached 4%; the highest increases were in clothing and footwear and in services.

The most recent rate of unemployment —dating back to 1992, when the latest population census was conducted— is of 7.2% of the labour force. The ratio of participation of the population of 15 years and over total population was estimated as 71.4% at that time, while the economically

active population was estimated at 60.7%. ^{12/} By sector of activity in 1992, the largest source of employment were retail and wholesale activities (35% of the employed), followed by community and social services (which includes government employees (23.5%) and the construction sector (18.3%)). More recent data refer only to the employees registered by the Social Security Board. ^{13/} The number of registered workers was 1054 in 1994, out of a total work force that would be in the vicinity of 4,790.

In connection with government income and expenditures, during 1994 the overall operation of the Central Government in Anguilla showed a surplus equivalent to 6.9% of its total revenues or 2.1% of GDP in current value terms. This surplus shows an increase of 3.3 times over that which occurred in 1993; it is associated with an 11.4% increase in current revenue and a 20.3% reduction in capital expenditure.

The main source of tax revenues were import duties, which grew by more than 25.6% in 1994, mainly due to a significant 25.7% increase in the number of vehicles imported. Revenue collected from the importation of vehicles —the island's largest import item— rose by 65.4 in 1994. Revenues from the duty on gas and fuel rose by more than 53.5%, associated with the increase in duties levied on gasoline, which grew from fifty cents to one EC dollar. Other significant sources of tax revenue, as the embarkation and accommodation tax levied on travellers and the import duty on alcohol registered minor increases.

Current expenditures grew by more than 11.1% in 1994, the largest item of expenditure being the general public service (which accounts for 33.5%). The combined expenditures on education and health represent over 30.2%; public order and safety amounted to 9.3%.

b) Prospects for 1995 before Hurricane Luis

Prior to the advent of Hurricane Luis, continued economic growth was expected in Anguilla for 1995. Tourist arrivals were expected to increase in spite of the continued weakening of the U.S. dollar. During 1995 it was expected that Anguilla would be promoted as a tourist destination in new not yet tapped markets such as Germany, Italy, Canada and selected portions of United States (like Florida, California and Illinois).

Additionally, the offshore sector was expected to expand during 1995, starting work on a new on-line computerized company registration system. Possible links between tourism and offshore sectors were to be explored. New banking and foreign investment legislation had been recently adopted.

^{12/} The remaining 39.3% is classified as inactive, and includes homemakers, students, retired persons and the sick. In 1992 the labor force was estimated at 6,224, out of a total population of 9,660 inhabitants

^{13/} Its coverage in 1992 stood at 22%: 906 workers registered by the employers out of an estimated total employed labor force of 4,121.

Government borrowing activities was not expected to increase substantially as a result of these activities since it was intended to use portions of the surplus to finance a capital expenditure programme.

GDP growth was expected to be over 4.5% in 1995, reflecting the fact that activity in the tourism sector during the first quarter was less buoyant than in the corresponding period in 1994. Nevertheless, until end August the trend for total visitors in 1995 was leading to an increase of over 4%.

Construction, the other major contributor to economic activity, also showed a slower growth, continuing its four year trend of deceleration. Building permits showed a decline of nearly 10% by September. In the case of agriculture, although an overall decline was expected, poultry production was reaching levels sufficient to guarantee reaching self-sufficiency in eggs in the short term.

In the financial sector, the dynamism of total deposits continued in 1995, growing almost 9% in the one year period ending in May. More recently, loans from the commercial banks, although slightly reduced in 1994, showed an increase of 1.7 % in the one year period to May 1995.

On the basis of quarterly data, the external sector was performing satisfactorily and prices and employment were stable. preliminary available data.

The central government budget, as programmed and in comparison to 1994, showed an increase in current revenue, associated with an increase in the accommodation tax as well as on the foreign exchange and embarkation taxes that are contributed by visitors and tourists. Non-tax revenue was also expected to grown significantly, generating a marginal surplus in the current balance. A further decline in capital expenditure was foreseen in the budget.

Notwithstanding the declining dynamism of some elements of the national economy in the first three quarters of 1995, the finances of the Central Government showed some improvement (current revenue increased by 3.7% in the period January-September 1995 in respect of the same nine months of 1994. Meanwhile, prices increased marginally during the period under review (less than 2% for the 12 months ending in August.

2. Impact of the disaster on economic performance

a) Economic activity

Table 5 shows overall and sectoral economic activity for Anguilla in 1994, the projections of economic activity based on performance measured prior to the occurrence of the disaster, and the projections of same taking into consideration the estimated figures for damages and losses indicated in the preceding chapter of this report.

Instead of achieving a figure of US\$ 60.2 million in 1995 and a growth of 3 % with respect to 1994, GDP will now only reach an estimated US\$ 51.5 million which represents nearly a 12%

decrease in comparison to last year's. Furthermore, since production and revenue losses in the most affected sectors are expected to continue well into 1996, GDP will continue to be affected next year.

Table 5
EFFECTS OF THE DISASTER ON GROSS DOMESTIC PRODUCT

(Thousands of US Dollars)

	Projections for 1995		
	1994	Without disaster	After the disaster
<u>Gross domestic product</u> (factor cost, constant prices)	<u>58,474</u>	<u>60,251</u>	<u>51,620</u>
Agriculture	2,464	2,254	1,630
Fisheries	1,626	1,351	1,026
Manufacturing	445	461	421
Mining and quarrying	351	344	344
Construction	6,785	6,785	8,142
Wholesale and retail	3,585	3,743	3,585
Hotels and restaurants	21,570	24,413	19,530
Electricity and water	1,404	1,350	1,080
Transport	3,509	4,074	3,258
Communications	5,732	6,724	5,379
Banks and insurance	5,777	6,524	5,220
Real estate and housing	2,174	2,228	2,005
Government services	7,709	8,102	9,722
Other services	898	925	185
Less, imputed service charge	-5,555	-7,104	-6,100

Source: ECLAC, based on available information and on its own projections.

In the productive and services sectors, the major effects will be felt in the tourism area, where the loss of assets, the increased maintenance, repair and reconstruction costs and the diminished installed room capacity will result in a net fall in the sector's activity.

Of the goods producing sectors, fisheries was the most affected due the number of fishermen that have been inactive for more than two months and need financial assistance to obtain boats and materials for the reparation or building of new traps.

On the other hand, the construction sector will experience an increase in activity as it undertakes all the repairs, renovations and reconstruction. This positive evolution will have a carry-over effect on economic activity for 1996.

For the purpose of assessing the total impact of the disaster on economic performance, the following is the estimated breakdown of production losses per sector for 1995 and 1996 (in Thousands of US Dollars):

Sector	1995	1996
Water supply	41	-
Electricity	1,126	483
Communications	1,009	758
Agriculture	194	778
Fishery	485	-
Industry	40	-
Commerce	60	140
Tourism	750	1,650

b) Effect on Government finances

An analysis was made of the anticipated effects of the disaster on Government finances. It is expected that instead of nearly reaching a balance of its finances as was expected from initial projections for 1995, as a result of facing the consequences of the hurricane, the overall balance will reach a negative value of five times the figure for the preceding year of 1994. The current account balance is expected to fall into negative values of the order of 11,775 US Dollars. (See Table 6.)

An increase in government revenue, through higher import tax collection, will—at least partially—offset the increased outlays caused by the emergency and immediate hurricane-related actions.

Major increases in Government expenditure were associated with relief and emergency actions in the first few days after the hurricane and—specially in the following weeks and months—with the repair of social services and the restoration of public utilities. In addition, the government

provided special funding to some home owners whose houses had been completely destroyed, drawing from a special Emergency Relief Fund.

Based on the above figures, it can be stated that the government will not be in a position to finance on its own whatever reconstruction outlays are not covered by insurance reimbursements and domestic private sector contributions. International cooperation will have to be sought for that purpose.

c) The external sector

The overall balance of trade in goods will be very negatively affected by the disaster. It will show a deficit higher than what it had in 1994 or than what was anticipated in 1995 before the hurricane struck, due both to a partial decline in exports of goods (mainly some agricultural and fishing products) and to a substantial increase in almost all imports, mostly associated with building and repair material for reconstruction and increased need of foreign supplies in the tourism service's sector. An increase in fuel imports will also occur as house and small electricity generating units were operating for several weeks until electrical distribution lines were reestablished along the territory.

The loss of transportation equipment will result in a further increase in vehicle imports, even though this will be minor. More importantly, vessels —both for fishing and cargo— will be imported to replace losses. At least four cargo vessels were beached and will almost certainly will not be salvageable. Import of materials for the construction of small fishing units and fishing utensils (fishing traps and buoys) will increase.

d) Price levels and employment

In spite of the decline of the catch of fish and lobster, the steep drop in their demand has brought a sharp reduction in prices. On the other hand, the loss of almost 3/4 of the local production of poultry and eggs has resulted in a shift to imported supplies, thus causing a small increase in prices for local consumption. In the case of construction materials, even though imports have dramatically increased, no major price variations have been detected since these goods would be always purchased externally.

Some of the services prices, particularly in the smaller restaurants and hotels, have been somewhat reduced in order to attract the return of business levels. The major providers, nevertheless, have kept their rates at the international levels that had been reached previous to the hurricane's occurrence.

Employment evolved in different direction for the various sectors. Activities associated mostly to tourism evolved negatively on relative terms. Most services to day visitors have been severely affected from the outset. According to data from the Customs and Immigration Services, the flow of visitors entering the country by ferry from St. Martin/Sint Maarten stopped almost completely immediately after the hurricane and has been slow in regaining momentum; until the end

of November it was still very much below its normal levels. This has had negative consequences for small businesses, restaurants, bars and coffee shops along the most popular beaches. Also severely reduced were the business activities of taxi drivers.

Major hotels —some of which were closed at the time of the hurricane and their major occupancy season begins in the first or second week in December— have had time to partially or completely refurbish in order to be ready for the main tourism season. Some delays have occurred in reconstruction and some cancellations have occurred; a lower hotel occupancy for the season —compared to that of previous years— is anticipated. Due to partial closure of some of the facilities, employees have been laid off or not rehired at the anticipated levels.

Table 6

ESTIMATED EFFECTS OF THE HURRICANE ON GOVERNMENT FINANCES

(Thousands of US Dollars)

	Projections for 1995		
	1994	Without disaster	After the disaster
OVERALL BALANCE	<u>-2,521</u>	<u>-970</u>	<u>-13,170</u>
Current balance	1,287	162	-11,775
<u>Current revenue</u>	15,808	16,969	17,633
Tax revenue	10,653	10,900	10,957
On property	49	123	37
On domestic goods/services	2,332	2,681	1,993
Accommodation tax	1,849	2,264	1,572
Bank deposit levy	355	302	297
Other	128	115	124
On international trade and transactions	8,272	8,096	8,927
Import duty	6,921	6,604	7,595
Foreign exchange tax	475	566	532
Embarkation tax	604	642	544
Other	272	284	256
Non-tax revenue	5,155	6,069	6,676
<u>Current expenditure</u>	14,521	16,807	18,488
<u>Capital expenditure</u>	3,808	1,132	1,358

Source: ECLAC.

IV. REQUIREMENTS FOR RECONSTRUCTION

1. General comments

A programme of reconstruction is to be implemented in order to overcome the consequences of the disaster caused by Hurricane Luis. Concerted action by the Anguillan Government and the private sector is essential for the plans to succeed.

Reconstruction projects should respond to the priority demands that were identified in Chapter II as a result of the damage assessment. They include many subjects that can be grouped under the following major headings: rehabilitation and conservation of natural resources and the environment, reconstruction of housing and other social infrastructure, restoration and diversification of productive sector capacity, rehabilitation of essential services and infrastructure, and reinforcement of disaster prevention and mitigation capacities.

2. Reconstruction programme

A preliminary description of the reconstruction programme and projects to overcome the effects of Hurricane Luis is presented in the following sections.

The reconstruction programme must comply with two requirements. First, it must not jeopardize in any way the on-going governmental efforts of social and economic development for the people of Anguilla. Second, its execution must be oriented exclusively towards the prompt and effective solution to the problems caused by the disaster. In that respect, reconstruction programme activities and those of normal development are to reinforce each other; resources assigned to reconstruction should be additional to those of normal development activities.

Funding for the reconstruction programme is expected to come from a number of sources. First, from direct insurance reimbursements to policy holders; second, special appropriation from the Government's budget; third, banking loans under adequate terms to finance reconstruction of productive activities that can generate future income; and fourth, donations to fund reconstruction activities in some of the social sectors where investment returns are not possible.

The following sections describe the main activities to be included in the reconstruction programme of Anguilla following the natural disaster caused by Hurricane Luis.

a) Natural resources and the environment

In view of the lack of sufficient knowledge and understanding of the negative impact of the hurricane on the environment and natural resources of Anguilla, and to ensure that no man-made actions are implemented that may further complicate matters, a number of studies and surveys must be carried out at the earliest possible time.

These should include an environmental impact analysis of alternatives for artificial rebuilding of sand beaches and dunes; a field survey for the identification of domestic sources of sand for rebuilding of beaches and for utilization in the preparation of construction aggregates; an analysis of alternatives to import sand that will be compatible with the environment in eroded beaches and dunes and study of ways to avoid damaging coral reefs during transportation by boat to Anguilla beaches; field studies and preparation of guidelines to define adequate location for beach-side buildings to conform with the new position of the high water lines; a comprehensive survey of coral reefs to determine their damage and propose appropriate corrective and preventive measures; and a study to determine possible negative impacts of the hurricane on fish life and future catch.

In addition, projects for clearing and rehabilitation of those beaches where tree trunks and debris have been deposited, and sand dredging and beach reconstruction in selected locations, should be undertaken.

b) Social infrastructure

In order to ensure that the restoration and reconstruction of housing and other social infrastructure in the island is made according to disaster-related conditions, it is essential to undertake the definition of wind-resistant standards for house and building construction and reconstruction, and to reformulate the technology for the design of low- and intermediate-cost housing.

In addition, many investment projects are to be undertaken in order to repair and reconstruct housing, government buildings, school infrastructure (including the replacement of furniture and supplies) and sports and recreational facilities; relocate a health clinic; and restore and repair the roofs and other infrastructure of 10 churches.

c) Essential services and infrastructure

A number of projects —some of which are already underway— are to be implemented in the most immediate future in order to re-establish essential services for the functioning of the island's economic activities.

They include repairs to the electrical system, port facilities and warehouses; the dredging of the main port's docking area to facilitate operations and the removal of destroyed boats from beaches adjacent to the jetty; the restoration of the telecommunications system and to cable television facilities, as well as repairs to radio broadcasting stations' equipment and infrastructure; the re-paving of 15 kilometers of main roads and the acquisition of road building machinery to repair unpaved roads; and, finally, the re-paving of the airport's runway, the repair to the airport building and the reconstruction and equipping of the night lighting system for the airport.

d) Productive sector capacity

In order to reactivate the tourism demand, it is proposed to design and implement promptly an aggressive promotion campaign to inform the main potential users about Anguilla's readiness to resume tourism activities, and to enter into special agreements between the Governments of Anguilla and St. Martin/Sint Maarten to organize jointly an expansion of day-tours.

Direct rehabilitation of tourism capacity requires that several projects be undertaken for the rehabilitation and reconstruction of large hotel infrastructure, the reconstruction of medium-size hotel infrastructure and facilities, and the relocation and reconstruction of beach-side restaurant and other businesses.

In connection with the agriculture and livestock sector, projects must be started for reconstruction of buildings of the Ministry of Agriculture; the rehabilitation of livestock production, stock and infrastructure; the design and implementation of a programme for vegetable production to supply domestic consumption demands; the local manufacturing of fish traps and buoys and the repair and acquisition of fishing boats and apparel. Projects for the reconstruction of infrastructure for livestock and small animal raising —including poultry, pigs, rabbits, etc.— as well as for recovering the corresponding animal stock, are also to be undertaken.

Finally, a project to establish a small capacity for local production of construction blocks using domestic aggregate materials is required to increase the value added in the construction industry sector.

e) Disaster prevention and mitigation

In view of the vulnerability of the island to the future occurrence of tropical storms and hurricanes, several activities and projects related to disaster prevention and mitigation are to be implemented.

On the one hand, training of officials on disaster management techniques to increase and improve the island's capacities in this respect would be essential. On the other, projects should be undertaken for the reinforcement of the existing meteorological station at airport through provision of equipment for storm/hurricane tracking and forecasting, as well as for establishing a network of self-contained hurricane shelters that include wind-resistant buildings, individual power generators and independent water supply and sanitation facilities.

3. International cooperation required

Partial funding for the reconstruction is available in the form of insurance reimbursements. In addition, the Government of Anguilla has made special appropriations of current and capital resources to meet both the emergency and relief stage and parts of the reconstruction requirements; its capacity to finance the remainder of reconstruction, however, is severely compromised by other development and normal operation requirements, as indicated in the preceding chapter. Additional

funds have been received or pledged from international and bilateral sources either as donations for emergency operations or as financing for reconstruction. The combined resources and pledges—whether public, private, domestic or international—are still insufficient to meet the total demands of reconstruction.

This is an opportunity for the international community to assist the efforts already underway in Anguilla and ensure that on-going development efforts are not placed in jeopardy for the need to concentrate on reconstruction activities alone.

As indicated before, international cooperation for reconstruction should be provided in addition to—and not instead of—whatever commitments have been already made to support normal development efforts in the island. Also essential is that reconstruction cooperation be provided at the earliest possible date so that activities can be started immediately. Cooperation funds should be made available in the way of donations to finance non-productive activities, and in loans under suitable conditions to finance projects that will produce economic returns.

When considering the possibility of providing such cooperation, the international community should give due consideration to the effective manner in which Anguillan officials and entrepreneurs have been facing previous activities of initial rehabilitation and reconstruction.

The following table presents in summarized form the list of projects for reconstruction and their estimated funding requirements, the corresponding Anguillan counterpart organizations that would execute them, and possible donor entities. The latter information is shown as a potential source of cooperation only, since no commitment of any kind has been made beforehand.

The information included in the following table is expected to be used by the Government of Anguilla in its search for cooperation partners in the execution of the reconstruction programme following the disaster. There exists the possibility that the Government might request the assistance of the United Nations Development Programme (UNDP) to convene a donors' conference to inform the world of the cooperation needs of the reconstruction programme.

Table 7

ANGUILLA. LIST OF RECONSTRUCTION PROJECTS FOLLOWING
NATURAL DISASTER CAUSED BY HURRICANE LUIS

Programme	Proposed activities	National executing agency	Possible cooperation sources	Amount required, (Thousands of US\$)
1. Environment and natural resources	Environmental impact analysis of alternatives for artificial rebuilding of sand beaches and dunes	Ministry of Home Affairs, Tourism and Lands	UNDP UNEP Bilateral donors	25
	Field survey for the identification of domestic sources of sand for rebuilding of beaches and for utilization in the preparation of construction aggregates	Ministry of Communications, Public Utilities and Works	UNDP HABITAT Bilateral donors	10
	Analysis of alternatives to import sand that will be compatible with the environment in eroded beaches and dunes and study of ways to avoid damaging coral reefs during transportation by boat to Anguilla beaches	Ministries of Home Affairs and Public Utilities and Works	UNDP UNEP Bilateral donors	15
	Field studies and preparation of guidelines to define adequate location for beach-side buildings to conform with the new position of the high water lines	Idem	UNDP HABITAT Bilateral donors	20
	Comprehensive survey of coral reefs to determine their damage and propose appropriate corrective and preventive measures	Idem	UNDP UNEP Bilateral donors	50
	Study to determine possible negative impacts of the hurricane on fish life and future catch	Department of Fisheries	UNDP UNEP Bilateral donors	40
	Clearing and rehabilitation of Eastern beaches where tree trunks and debris have been deposited		Bilateral sources	...

Programme	Proposed activities	National executing agency	Possible cooperation sources	Amount required, (Thousands of US\$)
2. Social infrastructure	Sand dredging and beach reconstruction in selected locations	Lands and Surveys Department	Private banks Insurance reimbursements	2,000
	Formulation of wind-resistant standards for house and building construction and reconstruction	Private individuals		
	Repair and reconstruction of housing	Lands and Surveys Department	UNDP HABITAT Bilateral donors	25
	Repair of government buildings	Individual home owners	Insurance reimbursements Private banks	7,600
	Repairs to sports and recreational facilities	Various ministries	Insurance reimbursements	240
	Relocation of a health clinic	Ministry of Social Services	Bilateral sources	150
	Replacement of mobile dental unit	Ministry of Social Services	Bilateral sources	40
	Restoration of 10 churches	Ministry of Social Services	Insurance reimbursement	50
3. Basic services	Repairs to school infrastructure, replacement of furniture and supplies	Churches		265
	Repairs to the electrical system	Ministry of Social Services	GOA, Insurance reimbursements Bilateral sources	500
	Repairs to port facilities and warehouses	ANGLEC	Insurance reimbursements	1,800
	Dredging of docking area to facilitate port operations	Ministry of Public Utilities and Works	CDB Bilateral sources	250
	Removal of destroyed boats from beach adjacent to jetty	Idem	CDB Bilateral sources	250
	Restoration of telecommunications system	Idem	Bilateral sources	120
		Cable and Wireless	Insurance reimbursements	3,600

Programme	Proposed activities	National executing agency	Possible cooperation sources	Amount required, (Thousands of US\$)
4. Productive sectors	Repairs to radio broadcasting stations' equipment	Radio Anguilla, Caribbean Beacon	GOA, Insurance reimbursement	150
	Restoration of cable television service	Cable TV company	Insurance reimbursements	1,500
	Re-paving of 15 kilometers of main roads	Ministry of Public Utilities and Works	CDB	1,400
	Acquisition of road building machinery to repair unpaved roads	Idem	CDB	600
	Reconstruction of airport lighting system, and re-paving of runway	Idem	CDB	400
	Design and implement promptly an aggressive promotion campaign to inform the main potential users about Anguilla's readiness to resume tourism activities	Chief Minister, Ministry of Tourism and Lands, Tourism Board, Hotel Owners Association	GOA, Tourism Board Hotel Owners Association	20
	Negotiate agreements between the Governments of Anguilla and St. Martin/Sint Maarten to organize jointly an expansion of day-tours	Chief Minister	GOA, Governments of St. Martin and Sint Maarten	...
	Rehabilitation and reconstruction of large hotel infrastructure	Individual hotel owners	Insurance reimbursements Private banks	12,000
	Reconstruction of medium-size hotel infrastructure and facilities	Individual hotel owners	Insurance reimbursements CDB	8,000
	Relocation and reconstruction of beach-side restaurants and other business	Individual entrepreneurs	Insurance reimbursements CDB	5,000
Reconstruction of buildings of the Ministry of Agriculture	Ministry of Agriculture	Bilateral donors CDB	200	

Programme	Proposed activities	National executing agency	Possible cooperation sources	Amount required, (Thousands of US\$)
5. Disaster prevention and mitigation	Rehabilitation of livestock production, stock and infrastructure	Individual producers	Private banks Insurance reimbursements	1,000
	Design and implementation of programme for vegetable production to supply domestic consumption demands	Ministry of Agriculture, Individual producers	Private banks	500
	Establish a small capacity for local production of construction blocks using domestic aggregate materials	Ministry of Works, Private sector	Private banks	50
	Manufacturing of fish traps and buoys	Individuals	Private banks	100
	Repair and acquisition of fishing boats and apparel	Individual fishermen	Insurance reimbursements	800
	Training of Anguillian officials on disaster management techniques	Ministry of Social Services	CDERA UNDHA PAHO/WHO	10
	Reinforcement of existing meteorological station at airport through provision of equipment for storm/hurricane tracking and forecasting	UN-WMO Bilateral sources	60
	Establish network of self-contained hurricane shelters that include wind-resistant buildings, individual power generators and independent water supply and sanitation facilities	Ministry of Social Services	Bilateral sources	250