



**General Assembly**

Distr.  
GENERAL

A/36/282  
10 November 1981

ORIGINAL: ENGLISH

Thirty-sixth session  
Agenda item 72 (b)

SPECIAL ECONOMIC AND DISASTER RELIEF ASSISTANCE

Special economic assistance to Dominica

Report of the Secretary-General

1. In its resolution 35/102 of 5 December 1980, the General Assembly, recalling its resolution 34/19 in which it expressed deep concern at the magnitude of the damage caused in Dominica by hurricanes "David" and "Frederic" and concerned that in 1980 Dominica had been struck by hurricane "Allen", which had aggravated an already serious situation in the country, urged Governments of Member States and international organizations to continue to provide, with the utmost urgency, assistance for the rehabilitation, reconstruction and development of Dominica. The Secretary-General was requested to continue to keep the Economic and Social Council and the Assembly informed of the results achieved in the implementation of resolution 35/102.
2. In implementation of the resolution, the text was brought to the attention of Member States, specialized agencies and other organizations within the United Nations system as well as regional and interregional organizations and international financial institutions, with an appeal for assistance. In addition, the Economic and Social Council was informed, at its second regular session in 1981, of the needs of Dominica and the steps which had been taken to implement resolution 35/102.
3. On 29 July 1981, the Economic and Social Council adopted resolution 1981/49 on international assistance for the rehabilitation, reconstruction and development of Dominica. In its resolution, the Council, recalling General Assembly resolutions 34/19 and 35/102, bearing in mind the oral report of the Secretary-General on assistance to Dominica and concerned with the continued gravity of the economic situation, urged Governments of Member States and international organizations to continue to provide, with the utmost urgency, assistance for the rehabilitation, reconstruction and development of Dominica. The Council also requested the

Secretary-General to continue to keep the Economic and Social Council and the General Assembly informed of the results achieved in the implementation of resolution 1981/49.

4. In consultation with the Government of Dominica, the Secretary-General arranged for a multi-agency mission to visit the country from 22 to 27 September 1981. The report of the mission, which is annexed hereto, describes the economic and financial position of the country and outlines a programme of assistance to meet the short-term reconstruction and development needs of the country, as well as assistance required to make good the damage caused by hurricanes "David", "Frederic" and "Allen".

ANNEX

Report of the mission to Dominica

(22-27 September 1981)

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## I. INTRODUCTION

1. In its resolution 34/19 of 9 November 1979, the General Assembly, expressing deep concern at the magnitude of the damage caused in Dominica by hurricanes "David" and "Frederic", endorsed the resolution adopted on 19 October 1979 by the Committee of the Whole of the Economic Commission for Latin America (ECLA) a/ and urged Governments of Member States and international organizations to provide with the utmost urgency the assistance envisaged in that resolution for the rehabilitation, reconstruction and development of Dominica.
2. On 5 December 1980, the General Assembly adopted resolution 35/102 in which, recalling its resolution 34/19, bearing in mind the report of the Secretary-General on assistance to Dominica b/ and concerned that in 1980 Dominica was struck by hurricane "Allen" which aggravated an already serious situation in the country, urged Governments of Member States and international organizations to provide, with the utmost urgency, the assistance called for in resolution 418 (PLEN.13) of the Committee of the Whole of ECLA for the rehabilitation, reconstruction and development of Dominica.
3. Further, the General Assembly requested the Secretary-General to continue to keep the Economic and Social Council and the Assembly informed of the results achieved in the implementation of resolution 35/102.
4. The text of resolution 35/102 was brought to the attention of Member States, specialized agencies and other organizations within the United Nations system, as well as regional and interregional organizations and international financial institutions, with an appeal for assistance.
5. On 20 July 1981, the Economic and Social Council, in resolution 1981/49, recalling General Assembly resolutions 34/19 and 35/102, bearing in mind the oral report of the Secretary-General on assistance to Dominica c/ and concerned with the continuing gravity of the economic situation in Dominica, urged Governments of Member States and international organizations to continue to provide, with the utmost urgency, assistance for the rehabilitation, reconstruction and development of Dominica. The Council further requested the Secretary-General to continue to keep the Economic and Social Council and the General Assembly informed of the results achieved in the implementation of resolution 1981/49.
6. In consultation with the Government of Dominica, the Secretary-General arranged for a multi-agency mission to visit the country from 22 to 27 September 1981. The mission was led by the Joint Co-ordinator for Special Economic Assistance Programmes

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a/ E/CEPAL/G.1105, sect. IV, resolution 418 (PLEN.13).

b/ A/35/445 and Corr.1.

c/ See E/81/SR.35.

in the Office for Special Political Questions of the Secretariat and included representatives of the World Health Organization (WHO), the Food and Agriculture Organization of the United Nations (FAO), the United Nations Educational, Scientific and Cultural Organization (UNESCO) and the United Nations Industrial Development Organization (UNIDO).

7. The mission was received by the Prime Minister and Minister for Finance and for External Affairs, the Honourable M. Eugenia Charles, who briefed the mission on the economic and financial situation in Dominica, the Government's priorities in the field of development and the need for additional international assistance. At a meeting with the full Cabinet, the mission was provided with a detailed assessment of the needs in each sector. In addition, members of the mission held regular meetings with senior officials from all of the Ministries. The programme was organized by the Development Co-ordinator, Economic Development Unit, Office of the Prime Minister.

8. In preparation for the mission's visit, the Government had prepared extensive documentation on each of the projects for which international assistance was required. In addition, information was provided on the economic and financial situation and the damage resulting from hurricanes "David", "Frederic" and "Allen".

9. The mission wishes to express its appreciation to the Government of Dominica for all of the arrangements made for its visit. Every effort was made to provide the mission with the information necessary for its work. The mission also wishes to acknowledge the valuable assistance provided by the office of the United Nations Development Programme (UNDP) in Barbados and by United Nations personnel serving in Dominica.

## II. GENERAL BACKGROUND

10. Dominica is the largest of the Windward Islands with an area of about 300 square miles and a population of 83,000. The country, which is one of the poorest of the Caribbean islands, is heavily dependent on agriculture and has been facing increasing economic difficulties in recent years.

11. Dominica is mountainous and heavily forested. As a consequence, most of the people reside in cities and villages around the country's coastline. The topography is marked by a central mountain massif which rises to nearly 5,000 feet above sea level in the south and which is heavily wooded and receives around 160 inches of rainfall a year. As a result of the heavy rainfall, numerous rivers flow from the mountains towards all the coastal areas. Most of the rivers fall rapidly but their high potential for erosion is reduced at high altitudes by the forest cover. However, most of the cultivated area occurs in low-lying areas around the coast in areas which are subject to erosion and damage. Dominica is of volcanic origin. The soils are not particularly fertile and are subject to rapid loss of nutrients when cultivated.

12. The rugged landscape creates many obstacles to development. Many of the better soils are in the alluvial river plains and valleys, extremely dependent on roads for the supply of inputs and for access to markets. The only deep-water harbour is at Roseau, the capital, on the south-east of the island, and the only significant airport is situated on the extreme north-east of the island.
13. As a small island developing economy, with small internal markets and heavily dependent on imports and with a limited resource base, Dominica is faced with severe constraints on its development. The country is highly dependent on bananas and suffers in comparison with many other Caribbean islands with respect to its tourist potential. In addition, the soils of Dominica are not particularly fertile and the country is particularly susceptible to erosion. It is necessary to import most construction materials.
14. For the past decade, the country has faced increasing economic and social difficulties. Between 1970 and 1975, the economy experienced generally declining real output as agricultural production fell. Economic and social infrastructure deteriorated and there was little private investment. In the three years prior to independence in November 1978, there was a moderate recovery but at independence real levels of income were not significantly different from what they had been 10 years earlier. Further, the increasing social and political instability hindered recovery and economic development. The economic contraction early in the decade had created high unemployment. The public finances of the country deteriorated steadily despite international assistance from abroad. Only minimal public services could be provided and no resources were available for the repair and maintenance of economic and social infrastructure. Although there was a recovery in export crops and a moderate expansion of the economy after 1975, the fiscal situation of the Government remained precarious. Late 1978 and early 1979 saw increased civil unrest and political turmoil. Further, an outbreak of leaf-spot disease late in 1978 threatened the banana industry and therefore Dominica's main source of foreign exchange.
15. The threat to exports was particularly serious since Dominica experienced a large negative trade balance throughout the 1970s, a deficit which was barely covered by inflows of international assistance and occasional inflows of private capital.
16. The country was therefore facing serious economic and social problems when struck by hurricane "David" on 29 August 1979. Although Dominica had frequently suffered from tropical storms, it is generally considered outside the main hurricane belt. As a result, houses, buildings and other economic and social infrastructure had not been designed to minimize damage in the event of hurricanes. The effect of hurricane "David", which attained wind speeds in excess of 150 m.p.h., with accompanying tornadoes and heavy rain circulating in and around the island for more than six hours, was catastrophic. The whole island suffered severe damage and was declared a disaster area. More than 40 people were killed and over 2,000 persons were treated for injuries. Seventy-eight per cent of the population was rendered homeless by destruction of housing and accommodation.

17. Almost every aspect of the economy was affected by the hurricane. Nineteen primary schools were destroyed and another 42 damaged, libraries and laboratories were destroyed with a total loss of equipment, furniture, books and teaching aids. Indeed, a mission from ELCA reported that the hurricane had left the country with no educational infrastructure. All hospitals lost their roofs or were completely destroyed. Forty-four health centres and clinics were severely damaged and almost all medicines and equipment were lost. Even the main administration building of the Government suffered severe damage and the Government had to relocate during the emergency.

18. The deep-water port near the capital, which had been completed only in 1978 with international assistance, suffered severe damage and jetties were destroyed at Portsmouth, the only other port on the island. The hurricane damaged the electricity generating facilities and blew down the transmission lines which not only affected electrical supplies to houses, offices and factories but cut off the water supply in a number of areas. The water supply itself, which is provided mainly by gravity flows, was contaminated by flooding of rivers and streams.

19. The most serious consequences, however, were the losses in agriculture, damage to roads and bridges, and widespread destruction of the heavy forest cover essential to protect against erosion.

20. In agriculture, the banana crop was completely destroyed, 60 per cent of the coconut trees were blown down, as were half of the trees on nearly 5,000 acres of citrus. It was estimated that nearly 6,000 acres of ground crops, food trees and fruits and vegetables were destroyed. Just prior to the hurricane, fertilizer had been applied to all the banana plantations and this was washed away together with stocks held by farmers and the Banana Growers' Association. Sixty per cent of the banana boxing plants were completely destroyed and nearly one third suffered extensive damage. The seed propagation station and plant nurseries were also destroyed.

21. Nearly 75 per cent of the boats used in the fishing industry, which usually provided a high percentage of the protein requirements of the population, were lost, as well as the boat-building and repair installations. Indeed, the long-term future of the fishing industry might well be affected by the severe damage to coral reefs and marine environment as a result of the rough seas.

22. The telecommunications system suffered extensive damage. Internal telephone communications are provided by a private company, Cable and Wireless Limited, and are dependent on land lines. Radio systems are only in operation for the ambulance, fire and police services. All of the lines were blown down as well as a large number of the poles. To date, only 20 per cent of the telephone connexions have been re-established and the northern and eastern districts still have no connexions with the other parts of the island. Although insurance was carried, it was insufficient to rebuild the system and the company was forced to utilize funds planned for the expansion of the telecommunications system.

23. One of the most severe blows for the long-term future of the island's economy was the destruction of the country's forests and the consequent loss of top soil and damage to hydrographic basins. High winds uprooted large trees and those which remained standing lost tops, bark and leaves. On most of the 75,000 acres under forest cover, commercial-sized trees were blown down.

24. All the roads and most of the bridges in the country were damaged by the hurricane and the post-hurricane flooding. Bridges were twisted and bridge foundations undermined by floods and by huge boulders brought down the mountain slopes by rapidly flooding rivers. Roads were blocked by landslides and fallen trees and in the north-eastern and southern sections of the island parts of the main roads were washed away. The main road connecting the airport to the capital was cut as was the road connecting Roseau and Portsmouth. Of the 230 miles of asphalt-surfaced road, 200 miles suffered direct damage from the hurricane and the floods. The remaining 240 miles of road, which had either laterite cover or were unsurfaced, were rendered largely unusable by landslides and erosion.

25. Even before immediate programmes to rehabilitate the country from hurricane "David", could be implemented, Dominica was visited by hurricane "Frederic" which caused extensive additional damage. Although hurricane "Frederic" did not have the destructive power of hurricane "David", it caused substantial erosion, further undermined roads and bridges and increased the damage done to water courses. Houses, schools, hospitals and other buildings which had lost their roofs with hurricane "David" suffered extensive damage and flooding during hurricane "Frederic".

26. Following hurricanes "David" and "Frederic" substantial relief was received. This assistance, together with private remittances from abroad and insurance claim payments, enabled reconstruction efforts to begin. However, the Government found it necessary to provide over \$EC 2.5 million d/ in hurricane relief. Further, parastatal organizations and private businesses had to utilize funds which had been earmarked for development purposes to repair damage caused by the hurricanes. Many of the structures were uninsured or underinsured and insurance payments were insufficient in most cases to allow buildings and other infrastructure to be rebuilt. The damaging effects of hurricanes "David" and "Frederic" continued well into 1980.

27. By the end of June 1980, recovery was under way in Dominica and crops and domestic agricultural goods were being harvested and banana exports had been resumed. However, early in August 1980, Dominica was again struck by a major hurricane - hurricane "Allen". Even though the damage to housing and infrastructure was not as serious as in the previous year, hurricane "Allen" had a severe impact on the country. Again, agriculture took the brunt of the storm and the banana crop again was entirely lost. Roads and bridges, not yet repaired from

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d/ The rate of exchange is \$EC 2.70 equals \$US 1.00.



the previous rains, were again washed out and foundations undermined. Because the rehabilitation programme had not been completed, there was extensive damage to buildings and facilities which were in the process of repair.

28. Table 1 gives some selective statistics for Dominica. It will be noted that the gross domestic product (GNP) at factor cost in current prices fell by nearly 10 per cent between 1978 and 1979. When it is recalled that the consumer price index increased by nearly 34 per cent in the same period, the real magnitude of the decline is apparent. Although GDP in current prices recovered somewhat in 1980, the increase barely kept pace with the rate of inflation. Provisional projections for 1981 present a similar picture. As a result, estimated real GDP in 1981 is not significantly different from the level in 1976.

29. The Government of Dominica has consistently faced a recurrent budget deficit. The disasters in 1979 and 1980 resulted in the deficit being substantially higher despite the inflow of hurricane relief. However, it should be noted that the large deficits in 1979 and 1980 are in part the result of paying off outstanding arrears which had accumulated in the earlier period when the current deficit was apparently lower. The projection for 1981 shows that the Government has now almost brought the current budget into balance. The deficit - some EC\$ 8.9 million - includes paying off EC\$ 5.4 million of outstanding arrears.

30. Since 1978, domestic savings have been negative in Dominica, implying that all investments had to be financed from external sources.

31. Equally serious has been the consistent adverse trade balance which increased significantly in 1979 and 1980, largely as a result of the destruction of export crops. In spite of the international assistance that was received, the current account deficit on international transactions in 1979 was more than double the 1978 figure and doubled again in 1980. Dominica therefore has a continuing need for substantial amounts of international assistance on grant terms.

32. The destruction from natural disasters in 1979 and 1980, combined with significant damage from extraordinary rains in 1981, has forced the Government to concentrate almost exclusively on relief and rehabilitation. As a result, there has been a diversion of resources from medium-term and long-term development. The Government priorities for the next two years will continue to focus on rehabilitation, special attention being paid to rehabilitating agriculture, particularly the banana industry on which Dominica depends for its foreign exchange earnings. The repair and reconstruction of the transport system, and the rehabilitation of housing and other essential economic and social infrastructure, are also being emphasized. In consultation with the Government, the mission was able to identify a number of projects directly related to these priority areas.

Table 1  
Selected statistics - Dominica  
 (Millions of EC dollars)

	1975	1976	1977	1978	1979	1980	1981
GDP at factor cost	63.7	72.9	89.8	110.6	101.0	126.0 <u>a/</u>	135.0 <u>b/</u>
Government current revenue <u>c/</u>	16.3	21.7	24.3	25.7	31.5	44.5	54.8
Government current expenditures <u>c/</u>	20.5	25.7	35.3	32.8	56.1 <u>d/</u>	58.1 <u>e/</u>	63.7 <u>f/</u>
Government current deficit <u>c/</u>	4.2	4.0	11.0	7.1	24.6	13.6	8.9
Trade balance	-25.4	-21.3	-24.3	-34.0	-81.0	-109.1	n/a
Balance on current account	-14.9	-10.8	-14.9	-16.7	-38.1	-78.6	n/a

a/ Provisional estimate.

b/ Projection.

c/ Fiscal year beginning on 1 July.

d/ Includes \$EC 2.5 million in hurricane relief.

e/ Includes \$EC 5.9 million payment of outstanding arrears.

f/ Includes \$EC 5.4 million payment of outstanding arrears.

### III. DEVELOPMENT OBJECTIVES AND ASSISTANCE REQUIRED

33. The development needs and the assistance required for projects and programmes designed to meet these needs have been grouped together under agriculture, transport, housing and industry, health and sanitation and education and training. In view of the critical need for reconstruction, the programmes of assistance suggested by the Government emphasized immediate rather than longer term requirement.

#### A. Agriculture

34. More than any of the other Windward Islands, Dominica has suffered from the ravages of weather and hurricanes. Its recovery from recent hurricanes has not met expectations, especially in the agricultural sector which is characterized by low levels of productivity, low levels of farm income, low employment rates and poverty. Further, erosion and bad managerial practices are common. However, agriculture continues to be the mainstay of the economy. In 1977, for example, employment in agriculture amounted to 36 per cent of total employment and accounted for 36 per cent of GDP.

35. There is a good deal of uncertainty about land use in Dominica. Of the approximate 172,000 acres in the country, 67,000 were in holdings, 31,000 were earmarked for Government Forest Reserves and a national park, leaving approximately 74,000 acres unaccounted for. Of the 67,000 acres in holdings, 32,000 were under cultivation and 35,000 acres were uncultivated. The arable acreage in the uncultivated area is unknown. The distribution of land holdings favours larger land owners. For example, holdings of five acres or less account for more than 69 per cent of total holdings but include less than 10 per cent of total land under cultivation. On the other hand, 9 per cent of farmers held 200 or more acres and accounted for approximately 45 per cent of all land cultivated.

36. The small farmer suffers from a number of disadvantages. He farms the less fertile soils often located on the steeper slopes and thus subject to leaching and erosion. Further, many of them have little or no access to market. In 1975, a study by the Caribbean Development Bank (CDB) revealed that some 32 per cent of farmers with five acres or less were more than 5 miles away from the closest sales outlet and that most of this distance had to be travelled by foot.

37. The banana industry, in addition to providing the major export item, is by far the largest user of agricultural land (59 per cent of total crop area). Second is the coconut industry (25 per cent), followed by the citrus industry - grapefruit and lime (8 per cent equally divided between the two). Cocoa and vegetable crop production each account for 3 per cent.

38. Coconuts and citrus are primarily cultivated on large and medium farms, while vegetable crop production is mainly by small farmers. Bananas are cultivated on all sizes of farms. Statistics compiled in 1978 indicate that, although the smaller farmers constitute the majority of growers, the large farmer group

contributed most of the total output, the reverse of what is generally found in the other Windward Islands. Only 17 per cent of banana output came from the 60 per cent of the growers producing no more than five tons each, while 30 per cent of total banana output came from 3 per cent of growers producing 30 tons or more each. Yet bananas provide the major source of income to the small farming sector.

39. Although incomes earned from the smaller and more labour-intensive farming operations are low, the sector continues to be the foundation upon which development is based. The country suffers from high rates of unemployments, and it is generally accepted that there is no viable alternative in the urban centres. Hurricanes "David" and "Allen", which caused widespread damage and hardship, also demonstrated vividly the structural weakness of the agricultural sector.

40. In consultation with the Government, the mission identified a number of projects in the agricultural sector for which international assistance is required. These are designed to deal with the most urgent problems and to strengthen the role of agriculture in the future.

#### 1. Support to the Dominica Banana Growers Association

41. The banana industry is by far the largest user of agricultural land in Dominica. The Dominica Banana Growers' Association is responsible for providing services and inputs to members. The Association also markets the fruit and holds a contract with Messrs. Geest Industries (W.I.) Limited for all marketable fruit produced. The provision of services and inputs by the Association is met from a cess deducted from growers' sales.

42. In 1978, some 37,200 tons of bananas were exported, i.e. an average of 700 tons per week. In August 1979, banana cultivations were completely destroyed by hurricane "David". Assistance was provided from various donor countries, primarily in the form of the inputs required. In 1980, the Government also provided \$EC 3.8 million to be distributed in cash to farmers on an acreage basis. A rehabilitation programme was successfully implemented and production recovered to an average of 500 tons per week by June/July 1980. The industry began to show signs of revitalization when it was again ravaged in August 1980 by hurricane "Allen", which destroyed 90 per cent of banana cultivations.

43. These various cycles of destruction/rehabilitation had adverse effects on the financial position of the Association, which had to provide services and maintain staff with no grower contribution. The Association was forced to borrow substantial sums from private lending institutions. The Government is extremely concerned about the operations of the Dominica Banana Growers' Association and the level of the services it provides to its members and realizes that the Association is functioning under very trying circumstances.

44. In 1981, the rehabilitation programme was continued with distribution of inputs to farmers backed by a cash subsidy. The rehabilitation inputs were provided through the United States Agency for International Development (USAID), the United Kingdom of Great Britain and Northern Ireland and the Association. The Government also provided \$EC 1 million.

45. The resumption of banana shipments to the United Kingdom in October 1980 faced strong competition from central American fruits. One difficulty was the relatively lower quality of bananas coming from Dominica.

46. While urging the farmers to continue with a diversification programme, the Government wishes to safeguard the banana industry and to improve the quality of Dominica's bananas. The industry cannot be allowed to collapse and the Association must be assisted to overcome its financial difficulties. The Association, however, at the present level of cess collected, is unable to meet its outstanding commitments and provide the necessary services to the industry. To do so, the Association requires some \$US 8.8 million to allow it to meet its outstanding commitments to creditors, to provide production inputs for the industry for six months, to cover operating expenses for a six-month period, and to make needed capital improvements in administrative facilities and field packing and boxing operations.

47. Details of the requirements are as follows:

(Thousands of United States dollars)

(a) Refinancing provisions		4,066
- Loans - commercial banks	2,621	
- Overdraft facilities	778	
- Creditors, input supplies	<u>667</u>	
(b) Operating expenses over a 6-month period		778
(c) Input supply for a 6-month period		2,739
- Fertilizer, 4,500 tons	1,500	
- Weedicide, 7,500 gal.	195	
- Spray oil, 270,000 gal.	613	
- Sleaving material, 5000 5,000 rolls	176	
- 225,000 banana cartons for 4 shipments	222	
- Nematicide, 15 tons	<u>33</u>	
(d) Capital requirements		1,139
- Office/storage building	370	
- 15,000 plastic filled boxes	250	
- 20 single-line boxing plants	<u>519</u>	

2. Expansion of the livestock programme and relocation of the livestock farm

48. The Ministry of Agriculture is presently responsible for the operation and maintenance of a stock farm near Roseau. However, the Government now wishes to relocate and expand the activities of the farm. The existing land will be required for a major housing scheme. The stock farm will be designed to support various aspects of the livestock sector by making available improved quality stock, demonstrating good animal husbandry practices, providing the facilities for the proper training of extension service personnel, as well as providing a centre for various livestock support services. Livestock in Dominica is owned and managed in small numbers, which tends to militate against improvement in the quality of stock. Thus, the Government must assume the important role of providing the large number of small producers with improved quality stock - either through supplies of females or improved stud services.

49. The project involves some 60 acres of land on the Government-owned Geneva Estate for a dairy cattle production unit and settling four or five dairy producers on the remaining 40 acres. The unit would provide stud services as well as a small artificial insemination service. Lastly, the unit would form one of the main suppliers of milk for a collection-processing facility for Roseau. The estimated cost is \$77,500.

50. The Government wishes to establish sheep rearing in the eastern parishes, where production of these animals is concentrated. The unit would be located on six acres of land at an agricultural experiment station at La Plaine together with an additional 15 acres to be leased from a nearby estate. Such a unit would permit the rearing of a flock of about 60 to 80 ewes, from which about 15 to 20 rams of good quality could be supplied annually to sheep producers. The unit would initially be stocked with two rams and 10 ewes that have recently been imported. Total capital costs for such an enterprise, including housing, stock facilities and pasture improvement, would amount to \$14,200.

51. It is also proposed to locate a breeding unit for swine on about five acres of rented land near Roseau within easy access to the main source of feed. It is proposed that 20 sows at the stock farm be used to form the initial stock at the new unit. The herd would be progressively increased to 40 sows. The progeny from this unit would be used to improve stock at the existing agricultural sub-stations at Portsmouth and La Plaine and would also be sold directly to consumers. Estimated capital costs for establishing this unit would amount to \$61,100.

52. It is further proposed to establish a cattle stud unit to provide cattle rearers in the Roseau area with that service. These people have traditionally relied on stud services being provided by the existing stock farm, thus its removal would create a hardship for them. Total capital costs for the unit would amount to \$8,100 and would include two or three bulls.

53. The last proposal in the project is for the establishment of a rabbit multiplication unit near the facilities of the Ministry of Agriculture in the Botanic Gardens. The unit would make rabbits available to interested producers. The estimated capital cost of this unit is \$6,100.

54. This project is considered the initial phase in a national livestock production strategy. In summary, the total capital cost of the project, including a 10 per cent contingency factor, is \$167,000.

### 3. A land-use and conservation pilot project

55. In general, the fertility of Dominican soils is fairly low. In addition, the soil is highly susceptible to losing nutrients and is easily eroded. The better soils are in the few fertile valleys and alluvial areas which are mainly held by the larger farmers. Such areas are less prone to erosion; damage occurs mainly from sediment and debris washed down from the upper watersheds where the soil resource is being improperly managed. Thus, it is primarily in the mountainous areas (i.e., the upper watersheds) with their steep slopes that long-term damage from erosion occurs.

56. In such areas erosion is caused by several factors, including road building (in which the cuts have not been properly treated), improper logging practices and poor agricultural practices. The project will focus on improved farming practices, although consideration will also be given to improved forest practices. It has been estimated that, in the case of bananas, the yields on the steeper and depleted soils can fall to 50 per cent or less of those found in the more level and stable soils. Although accurate data are not available, it has been estimated that, in some of the more seriously affected areas, the loss of topsoil has amounted to more than 22 tons per acre per year. To prevent the encroachment on the steeper forested lands will not be an easy task. A pilot project is proposed with a duration of three years, designed to demonstrate the techniques and benefits of improved cultural practices and proper soil management mainly to the farming community, but also to the logging community.

57. A possible site has already been selected consisting of 35 acres of Government-owned land in the Black Bay area in the south-east corner of the country. With the exception of logging activities, the area comes close to being a microcosm of the country as a whole. The works carried out would serve as prototypes and their benefits would encourage farmers to take similar measures. In order to demonstrate improved cultural practices to the logging industry, additional sites may be necessary. The activities carried out would include returning the steeper lands to forestry and the construction of bench and conservation terraces, contour drains and grass strips.

58. The total cost of the three-year project, including both capital and recurrent expenditures, would be \$569,000. Capital costs, including equipment and vehicles (as well as D.6 Caterpillar or equivalent), buildings, establishment of the conservation measures and trials, would amount to \$225,000. At the end of the three-year period, the programme would be taken over by the Government.

### 4. Rehabilitation and extension of feeder roads

59. Of all the islands in the Windward group, Dominica is the least endowed with feeder roads, with only 72 miles of major feeder roads in 1977. Owing to the hurricanes, rains, heavy traffic, soil conditions and inadequate maintenance,

all the feeder roads require substantial repairs. On most of the more important feeder roads, travel is difficult, expensive and hazardous. The effect on the quality of agricultural produce, primarily bananas, citrus and avocados, which are very susceptible to bruising in transit, can be readily perceived. The Government has received assistance from the Caribbean Development Bank (CDB) and the United States Agency for International Development (USAID) for some 44.25 miles of feeder roads, but many more roads are needed.

60. Consequently, the Government is seeking assistance to improve some 22 existing feeder roads, totalling 51.5 miles, to make major repairs to 54 miles of existing roads and to construct 61 miles of new feeder roads.

61. The 22 feeder roads to be improved serve 16,415 acres of land, much of it good farm land, and 3,433 farmers. Thus, on an average, each mile services 313 acres and 65 farmers and their families. The estimated cost of rehabilitating these roads is approximately \$3.9 million.

62. The 54 miles of feeder roads that require major repairs and the 61 miles of new roads have been specifically designed to serve relatively isolated agricultural areas and communities and provide them with ready access to market. The roads will serve the needs of 2,478 farmers and their families. Owing to the very rough terrain characteristic of the country, it has been estimated that the cost would be \$21 million.

63. Detailed information on each of the roads is available from the Governments, and portions of the programme would be taken up as separate projects for financing by individual donors.

##### 5. Lime replanting

64. In line with the Tree Crop Diversification Programme of the Government, the Ministry of Agriculture has prepared a lime replanting project to re-establish 800 acres of West Indian limes over four years. The production of limes in Dominica has fallen from a peak of some 30,000 tons per year before World War I to around 5,000 tons in the 1960s. At present, the average tonnage is just under 3,000 tons per year.

65. At present the major lime-growing area in Dominica is one of the least developed areas in the dry southern part of the island, where over 80 per cent of the limes are grown on around 1,000 acres. The lime trees in this area are old and, at current prices and costs, are not considered worth rehabilitating. Increases in the price of limes and new market opportunities suggest that replanting should be carried out. A recent survey indicates average net income per year to be around \$85 per acre. After project implementation, this level should be increased to around \$295 per acre per year.

66. The project will include the distribution of tree planting material, fertilizer and pesticides up to the fifth year after planting. A cess will be levied by the marketing organization which will be increased to a level sufficient to allow each farmer \$110 of fertilizer and \$20 of other inputs per acre per year. Only in this way will the necessary long-term investment in the project be



justified. The Government is seeking some \$860,000 over seven years to implement the project.

6. Cadastral survey - Phase I

67. The uncertainty relating to land ownership and use presents a most formidable obstacle to the further development of the country, including the preparation of land-use plans and zoning ordinances. The existing system of keeping records consisting of tenuous deeds, isolated surveys and sporadic title registration is, to put it mildly, inadequate.

68. A study of current land records has recently been prepared with assistance from the Department of Technical Co-operation for Development of the Secretariat. The resulting report is expected to propose that a cadastral survey project be implemented. An essential preparatory phase would provide basic data required for the subsequent and substantive phases of the project. The estimated cost is \$135,000 over 18 months for Phase I.

69. Details will be available in the final study prepared by the Department of Technical Co-operation for Development. Thereafter, the Government will formulate proposals for the remaining two phases.

B. Transport

70. Dominica is a mountainous country of volcanic origin which rises in places sheer out of the sea, with the main ridges occupying the entire central portion of the island. The only deep-water port is at Roseau, the capital, in the south-west of the island, and the only significant airport is situated in the north-east.

71. The short-term development strategy of the Government involves the rehabilitation and development of the banana industry by assisting farmers through input subsidies and training in field practices as well as loan financing. The infrastructure for the banana industry, such as boxing plants, is being restored. It should also be noted that the major export crops - bananas, citrus and avocado - require careful handling during transport as they are subject to high rates of wastage through bruising. Other important developments planned include tree crop diversification, essential oils, livestock, forestry and boat building with related fisheries activities. The Government is also attempting to stimulate manufacturing and industry and is pursuing programmes designed to provide health and education throughout the countryside. Rural transformation programmes, which include settlement on Government-held land, small farm development, home industry, electricity and various building projects, are being pursued. To be effective, however, all these efforts require an efficient transportation system. From this brief description, it is clear that Dominica is heavily dependent on a good road system which must be relatively lengthy in relation to the size of the country and its population.

Roads and bridges

72. Dominica has approximately 496 miles of roads, of which 231 miles are main roads and 265 secondary roads. For many years, the road system suffered from inadequate maintenance and poor drainage. Pavement deformations were widespread, many drainage facilities did not work, and the pavements and foundations were structurally inadequate for normal axle loadings. The road surface itself was fragile, resulting in many broken areas and pot-holes. For many years, vehicle damage has been excessive and the average time for any journey within the country is unacceptably long. The poor road system contributes to high transport costs.
73. The three recent hurricanes ("David", "Frederic" and "Allen"), in 1979 and 1980, have completely disrupted all of the country's communication system, both directly and indirectly. Road surfaces and foundations, in a bad state before 1979, were completely destroyed by the hurricanes and the post-hurricane rains. Given the type of soil and the topography, the destruction of vegetation - which was providing some protection on the steep slopes - has resulted in landslides and erosion almost everywhere. The inadequate drainage was blocked, resulting in foundations being washed out or weakened. At the time of the mission's visit, six months after the unprecedented heavy rains in early 1981, almost all of the road connexions within the country still showed damage from the hurricanes and post-hurricane rains, and in many cases even the main roads were almost impassable.
74. The Government is seeking international assistance for a phased programme for the restoration and rehabilitation of the road system. Funds are needed to restore sections of roads washed out during hurricanes "David" and "Allen" and by the heavy rains in April and May 1981, and to reconstruct road sections which have deteriorated beyond repair. The Government is also anxious to resurface some sections of roads where only minor reconstruction work is required, as otherwise these sections, too, will deteriorate during periods of heavy rain.
75. Some of the present roads have been surfaced but require additional surfacing with hot rolled asphalt in order to prevent the road surface from deteriorating. However, this will necessarily involve strengthening the road base in certain areas. There is also a need to replace bridges which collapsed during the recent floods as well as some whose foundations were undermined and whose continued use is dangerous to human life, to clear river beds and streams and to construct river control works. Heavy flooding over the past three years has significantly changed water courses, some of which are blocked by huge boulders.
76. The Government also wishes to establish an improved ongoing programme for sustained and routine maintenance. Lack of proper maintenance has been a major contributor to the deterioration of Dominica's roads. Drains are inadequate and remain blocked for most of the year. Water saturates the sub-base, reducing its strength and causing collapse of the road base. During heavy rains, many roads become water courses and erosion of the deteriorated road base occurs, resulting in total loss of the road surface.

77. Another major factor in rapid road deterioration has been the inadequacy of design specifications, especially in respect of the road surfaces and drainage structures, which do not sufficiently allow for the damaging impact of heavy rainfall, rugged terrain and unstable ground conditions. For example, many of the existing culverts are too small; they become blocked easily and remain blocked for long periods. Furthermore, there are numerous areas where the spacing of the culverts is too wide. Intermediate culverts will have to be constructed.

#### 1. Road rehabilitation

78. The present state of the road system in Dominica is almost indescribable. In total, 245 miles of main roads need repair and reconstruction and the Government has estimated that the cost of such a programme would amount to some \$32.5 million in 1981 prices, excluding such items as improving protective works, major realignments, diversions, contractor's fees, consultant's costs and mobilization expenses. The total programme for road repair is shown in table 2.

79. At the present time, international assistance has been pledged for only a few of the roads listed in table 2. These include item 5, for which the International Labour Organisation (ILO) is implementing a labour-intensive project amounting to \$150,000; item 20, where the European Economic Community (EEC) has agreed to provide \$400,000 for part of the West Coast Road; items 23 and 24, which EEC has agreed to fund; and item 25, for which funding has been pledged by the Canadian International Development Agency.

80. The Government is aware that such a major road repair and reconstruction programme will have to be phased over a number of years. The highest priority is given to the following main road projects:

Table 2

Road rehabilitation and reconstruction

	<u>Road</u>	<u>Mileage</u>	<u>US dollars</u>
1.	Roseau Pond Casse	19	3 300 000
2.	Loubiere-Scotts Head	7.5	1 000 000
3.	Canefield-Springfield, Pond Casse	8.7	1 500 000
4.	Bois Diable-Delices-Pointe Mulatre <u>a/</u>	18	2 200 000
5.	Castle Bruce-Petite Soufrière <u>a/</u>	5	710 000
6.	Warner	4	600 000
7.	Mahaut-Campbell	3	450 000
8.	River Estate-Cockrane	3	470 000
9.	Blenheim-Vieille Case-Delaford	6.5	800 000
10.	Roseau-Laudat <u>a/</u>	7	850 000
11.	Geneva-Petite Savanne <u>a/</u>	8.0	1 200 000
12.	Roseau-Grand Bay <u>a/</u>	10	1 450 000
13.	Copthall-Wotten Waven	3	450 000
14.	Copthall-Morne Prosper	3	450 000
15.	Trafalgar	3	450 000
16.	Roseau-Reigate-Kings Hill	4	540 000
17.	Roseau Streets	15	1 500 000
18.	Portsmouth Streets	4	400 000

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a/ Includes cost of recent storm damage.

Table 2 (continued)

<u>Road</u>	<u>Mileage</u>	<u>US dollars</u>
19. Existing housing estates (6 only)	15	1 950 000
20. West Coast Road	21	1 900 000
21. Pond Casse-Hatton Garden <u>a/</u>	15	2 500 000
22. Rosalie-Grand Fond	4	540 000
23. Pond Casse-Bois Diable-Castle Bruce <u>a/</u>	7	800 000
24. Castle Bruce-Carib Reserve-Hatton Garden <u>a/</u>	13	1 140 000
25. Portsmouth-Melville Hall-Hatton Garden <u>a/</u>	24	3 820 000
26. La Source-Paix Bouche-Providence Moore Park	3	400 000
27. Grand Bay-Tete Morne	3	450 000
28. Castle Comfort-Giraudel-Newtown	10	1 100 000
TOTAL	<u>245</u>	<u>32 920 000</u>

(a) West Coast Road

81. The existing road travels along the foot of the cliffs near the sea. It connects the capital, Roseau, with Portsmouth and passes through a number of important villages. Financing is required for 12.8 miles at an estimated cost of \$4 million, as much of the road needs almost complete reconstruction. The 10-mile section of the road from Portsmouth to Salisbury is being financed by EEC.

(b) Central Road

82. This road, connecting the capital and the airport at Hatton Garden, was almost completely destroyed in several places following recent heavy rains and the consequential landslides. In spite of its poor condition it remains the main link not only to the airport but the north-eastern area. Assistance amounting to \$6 million is needed to repair some 22.4 miles.

83. Because of the importance of the connexions and the continuing danger of landslides as a result of the destruction of the forest cover, the Government is anxious that an alternative be available, even at a lower standard. The alternative route would follow an existing road, part of which is being funded by EEC. There is, however, some 7.8 miles which needs to be reconstructed at an estimated cost of \$1.5 million.

(c) South roads

84. Another priority need is to improve the roads from the capital to the agriculturally rich regions in the south of the island. The present roads are practically impassable and need substantial reconstruction. The estimated cost of the road from the capital to Grand Bay is \$2.6 million, and the road through the fishing villages to Scotts Head is estimated to cost \$1.4 million. This road, which is in extremely poor condition, was severely damaged by hurricane "David" and standards could be somewhat downgraded because of the low level of traffic.

2. Bridges

85. In addition to these priority roads, international assistance is urgently needed to repair 11 bridges. International assistance has so far been pledged for the repair of five bridges (the Caribbean Development Bank (CDB) has agreed to meet the costs of repairing Roseau East Bridge and the Canadian International Development Agency has agreed to fund four other bridges). The remaining bridges for which assistance is required and the approximate costs are shown in table 3.

3. Mobile rock crusher

86. There is also a need for international assistance to improve water courses and to construct flood defence works. The heavy flooding over more than two years resulted in many river beds being modified and in many cases blocked with large boulders. The Government is anxious to obtain a mobile rock crusher (estimated cost \$200,000) in order to begin improving the water courses. In this connexion, the highest priority is given to improving the Geneva river where heavy rains threaten flooding of a major development project and a banana estate.

4. Road maintenance

87. It is clear that the present condition of the roads in Dominica resulted in large measure from inadequate road maintenance programmes in the past. In order to avoid the recurrence of massive damage and to ensure that investments in roads are protected, the Government proposes to implement a comprehensive and realistic road maintenance policy. In future, road maintenance operations will be undertaken on a contract basis as far as this is feasible and all contracts will be awarded, after calling for tenders.

Table 3

Bridge repairs and replacements

<u>Bridge</u>	<u>Span (ft.)</u>	<u>Estimated cost (US dollars)</u>
1. Penton	90	300 000
2. Geneva	120	400 000
3. Canefield	80	260 000
4. Hillsborough	200	930 000
5. Copthall	85	280 000
6. Mahaut	20	66 000
7. Tarrou	25	67 000
8. Pichelin	30	100 000
9. Castle Comfort	30	100 000
10. Loubiere	30	100 000
11. Laronde river	100	<u>330 000</u>
Total cost		<u><u>3 533 000</u></u>

88. The Government will initially determine a three-year road maintenance programme which will specify the roads to be maintained, the extent of the works to be undertaken on each road, the estimated costs, the time period over which maintenance is to be carried out, and which aspects of road maintenance are to be undertaken by contract and which by direct labour under the Government's management and supervision.

89. To ensure that those maintenance works which are to be undertaken by direct labour under the Government's management and supervision are carried out effectively, the Government will establish and operate a road maintenance unit with the necessary supervisory staff, machinery and equipment. The road maintenance unit will be so structured as to operate at minimum cost and, where contractors are involved, will provide necessary special equipment and machinery on a rental basis.

90. The plant and equipment needed for the road maintenance unit are given in table 4. In addition, the Government will require, for the first three years, international assistance to meet the ongoing costs, which are estimated at \$1.6 million per year.

5. Communications

91. The Government has received a proposal for a nation-wide programme to improve telecommunications, the estimated costs of which would be nearly \$1 million over a five-year period. The Government is seeking technical assistance from the International Telecommunication Union to evaluate the proposal.

92. Bearing in mind the potential weaknesses of overhead cable systems in Dominica and the specific advantage of two-way radio systems, the Government wishes to expand the national radio network. In particular, the installation of a radio transmitter for the meteorological service (\$8,000) as well as navigational aids, among other things, in order to improve the national air control system for Melville Hall Airport at a cost of \$52,300 are requested.

Table 4

Plant and equipment for road maintenance unit

	<u>Estimated cost</u> (US dollars)
(a) Garage tools	30,000
(b) Mechanic tool kits	10,000
(c) One bitumen batch plant 30-50t	550,000
(d) One stone crusher	220,000
(e) Paver	150,000
(f) Two personnel carriers	55,000
(g) Twelve tippers	665,000
(h) Ten pedestrian rollers	75,000
(i) Five light vehicles	55,000
(j) New garage building, 3,500 sq. ft.	1,300,000
(k) One D.6 caterpillar	220,000
(l) Three front-end loaders	440,000
(m) Two compressors	45,000
(n) Two concrete mixers	30,000
(o) Two heavy rollers (8-10t) (one with steel wheel)	92,000
Total	3,937,000

93. In the Ministry of Communications, Works and Tourism, testing equipment for the Electrical Inspectorate Section is needed (\$10,000).

6. Port

94. Prior to hurricane "David", port activities had increased moderately with a total throughput reaching 111,542 tons (65,280 tons cargo discharged and

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46,262 tons cargo loaded). It is estimated that hurricanes "David" in 1979 and "Allen" in 1980 destroyed about 65 per cent of the Port Authority's fixed assets. The rehabilitation of the port is already in progress with financial assistance provided by CDB, Canada, the United Kingdom and the United States.

95. However, the Government is seeking some \$1 million in order to develop infrastructure and to procure equipment to ensure a commercially viable port operation:

	<u>US dollars</u>
1. Additional funds to rehabilitate the deep-water port	471,000
2. Road diversion and expansion of the container port (pre-investment study already prepared)	200,000
3. Purchase of a rubber-tyred mobile gantry	100,000
4. Installation of navigational lights for Port Roseau	27,000
5. Procurement of two forklifts as replacements	8,960
6. Procurement of two cranes (5-ton capacity) to replace 17-year-old cranes	160,000
7. Re-establishment of the old jetty for proper handling of inter-island trade and traffic	80,000

### C. Housing and industry

#### Housing

96. From 1968 to 1978 only about 200 houses per annum were added to the country's housing stock. It is estimated that in mid-1979 the total housing stock was some 16,000. Thus, in 1979, most of the houses were 25 years of age or older and a large number were sub-standard and inadequate in terms of space and facilities. Most of the houses were badly maintained: very few householders carried insurance.

97. Hurricane "David", which struck the island in August 1979, was the first major hurricane in the area in more than 50 years and was of exceptional severity. A survey of houses was conducted by parish within one week of the hurricane. All told, 8,000 houses, or 50 per cent of the stock, had been destroyed or severely damaged; of them 2,000 were classed as totally destroyed. Included in the dwellings destroyed was over 90 per cent of the low-cost housing which had been erected in Dominica since 1974. In Roseau, 75 per cent of the dwellings were damaged, many beyond repair. For the island as a whole, 78 per cent of the population was rendered homeless and the estimated damage was some EC\$100 million.

98. Much of the low-cost housing and some houses occupied by middle-income groups were the property of the Housing Development Corporation. At the time of the hurricane the Corporation owned 500 houses. Almost all suffered some damage and 74 need to be reconstructed. Only half of the houses owned by the Corporation were insured and the insurance cover was insufficient for replacement. At the time of the mission's visit, the Housing Development Corporation had spent EC\$1.2 million on repair and rehabilitation, partly financed by CDB. The sum of EC\$220,000, which CDB has agreed to provide, is still required for repair and rehabilitation of houses which were damaged.

99. Government housing suffered even greater damage than that of the Housing Development Corporation. Because of the shortage of funds many Government houses have not yet been repaired and, although structurally sound, are rapidly deteriorating. It is estimated that an additional EC\$1 million is needed to repair Government housing and the only contribution to such a programme so far agreed has been EC\$400,000 from CDB. Rural housing throughout the countryside also suffered massive damage. The mission was informed that some EC\$7.2 million will be made available for rural housing by the Government of Trinidad and Tobago as a very soft loan.

100. The massive damage suffered in Dominica was partially caused by failure in the past to ensure that construction materials and design were appropriate for a country experiencing tropical storms and hurricanes. Very few houses or public buildings had hurricane-proof roofing or windows. The mission was informed that, in the great haste to construct shelter for the large numbers of people left homeless by hurricane "David", many structures were erected without adequate safeguards in the event of another hurricane.

101. Unusually heavy rainfall in April 1981 caused severe damage to roads, crops and houses throughout Dominica. Hardest hit was the south-eastern section of the country.

1. Emergency housing

102. The evacuees (estimated at some 140) are presently sharing accommodation with relatives and friends. Every effort has to be made to provide these persons with homes as quickly as possible. The number of houses requiring urgent replacement, with the estimated cost of construction, is as follows:

<u>Village</u>	<u>No. of houses</u>	<u>Estimated cost (US dollars)</u>
Good Hope	12	67,000
Petite Soufrière	4	22,000
San Sauveur	5	27,500
Bagatelle	2	11,000
Gutter Villate	1	5,500
Total	<u>24</u>	<u>133,000</u>

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## 2. Housing programmes

103. The Housing Development Corporation, which is the Government agency for implementing its housing policies, has a broad spectrum of programmes to cater to the various needs, including sites and surveys schemes, core housing schemes, and developments which produce complete houses for sale or rent. At the present time it is estimated that between 1,000 and 1,500 houses per year will need to be constructed for the next five years in order to replace hurricane damage and temporary shelters constructed after the hurricane and to eliminate some of the housing backlog which existed at the time of the hurricane.

104. If the Housing Development Corporation is to carry out a broad-based programme to deal with the housing needs of the low-income groups, additional resources will need to be made available. The mission has estimated that \$US1.3 million is required by the Housing Development Corporation over and above existing pledges and programmes if the Government's low-income housing programme is to be carried out.

105. Given the Government's shortage of resources, policy will be directed for the next four years towards meeting low-income housing needs. Even with such a programme, however, there will continue to be a housing shortage for middle and upper income groups willing and able to pay economic rents but unable to obtain housing because there is no functioning commercial mortgage market in the country. For a number of years gross domestic savings in Dominica have been negative and financial institutions are fully extended. Indeed, in many cases they have been using advances from head offices and offshore associated banks. As a result, there is a shortage of funds even for economically viable housing schemes.

## 3. Commercial housing loans

106. There is a small but growing middle class with a demand for housing and able to pay rents which would allow commercial loans to be amortized. In addition, in the neighbourhood of the capital, there is land available for such housing. Indeed, a physical planning project was drawn up in 1972 for 58 acres of gently sloping land within one mile of Roseau's central business district. In total, some \$1.3 million will be required to carry out the housing scheme and the Government would welcome commercial financing for such a project.

## 4. Needs of existing housing projects

107. Immediately after hurricane "David", the then Government of Dominica negotiated a loan for EC\$2.5 million with the Royal Bank of Canada for the construction of 132 houses for families whose homes had been destroyed. The loan was for 10 years with interest at 7 1/2 per cent and a grace period of two years for construction. The Government has completed the construction of the houses using the funds provided. Unfortunately, the loan did not include funds for infrastructure within the housing areas, and although the houses have now been constructed and the loan repayments will soon commence, none of the houses are yet occupied and will remain empty until roads, drains, water and a sewerage system are provided.

108. In order to provide the necessary infrastructure at the four estates, some \$275,000 is needed. In this connexion the mission noted that, even if these funds are provided on a grant basis, it is unlikely that the target group will be able to pay rents which would meet the costs of servicing the loan. Unless the loan can be renegotiated or other sources of finance found, the Government will be forced to rent the houses at less than the cost of repaying the loans.

109. In recent years three of the major housing schemes in which the Housing Development Corporation was involved were Canefield, Bath Estate and King's Hill. At that time, in designing housing schemes, the general approach was to construct roads within housing schemes up to a sub-base level using the local material, "Tarrish". Experience with this material throughout the country has shown that such a foundation will only last for up to two years with normal maintenance. After two years the maintenance costs increase alarmingly and begin to approach the cost of the original construction of the sub-base. It is proposed to build 7.22 miles of road within these housing estates but to ensure that a bituminous wearing course is applied in order to extend the life of the roads and reduce the extraordinary high maintenance costs which are characteristic of roads constructed with "Tarrish".

110. The original design of the housing schemes was also deficient in that inadequate drainage was provided, which has contributed to the deterioration, and in some cases the disappearance, of the original roads. Included in the project, therefore, is the reconstruction, strengthening and lining of the drainage ditches. The total cost of the project is \$2.6 million.

111. In summary, the total funds needed to protect the existing housing stock, to repair and rehabilitate damaged housing, to cover the deficiencies in past housing schemes and to finance low-cost housing schemes to replace houses damaged by the hurricane is approximately \$4.3 million in addition to assistance already pledged or provided. There is also a need for \$1.3 million in commercial funds for middle and upper-income housing.

#### Industry

112. Dominica's industry is dominated by agro-based industries processing agricultural raw materials such as coconuts or limes into products for the domestic and export markets, complemented by small-scale enterprises for garments, crafts, building materials, soft drinks, etc. The industrial sector as a whole contributed only about 4 per cent of gross domestic product (GDP) in 1980.

113. The Government is anxious to accelerate industrialization through the Industrial Development Corporation (IDC) and the Agricultural and Industrial Development Bank (AID). These institutions, established in the early 1970s, are expected to play a pivotal role in providing potential investors with the services required to stimulate industrial development. IDC has already taken a number of steps to strengthen its investment promotion activities. From the end of October 1981, a team from an international consulting firm will assist IDC in launching an industrial promotion campaign, and IDC will publish an investment guide in the near

future. The manager of IDC will attend a one-year training programme in investment promotion offered by the investment promotion office of the United Nations Industrial Development Organization (UNIDO) in New York commencing in November 1981.

114. As part of its industrial estates development programme, IDC has already constructed 10,000 square feet of factory shells and an additional 20,000 square feet, presently under construction, are already committed. In 1981, IDC received applications from entrepreneurs in the fields of welding and metal fabrication, auto repairs, construction, furniture/mattress manufacture and lumber mill operation requiring at least 30,000 square feet of additional factory shells which would cost about \$750,000. IDC also intends to construct, at a cost of \$750,000, three factory shells of 10,000 square feet each at Airport Melville Hall, Canefield Airstrip and Portsmouth, designed for small industrialists and craftsmen. In addition, AID needs some \$500,000 for onlending to small businessmen. In total, an initial programme of \$2 million, largely to support small businesses and local entrepreneurs, is requested by the Government.

#### D. Health and sanitation

115. Dominica has a 230-bed hospital in Roseau, a 40-bed hospital in Portsmouth and a small 6-bed hospital in Marigot. In Marigot, construction of a new 16-bed hospital has been started, but work has temporarily been interrupted due to lack of funds. The total bed/population ratio for 1978 was 4.3 per 1,000. There are 12 health centres throughout the island and 44 clinics providing outpatient services.

116. The ratio of physicians per 10,000 population was 1.8 in 1978, the lowest in the Lesser Antilles. The ratio for graduate nurses was 14.5 per 10,000. The health centres and clinics are staffed by 40 district nurse-midwives and seven district midwives. They are supervised by a total of 10 health visitors. At present, Princess Margaret Hospital in Roseau has a total of 180 beds, with a percentage occupancy rate of 85.5. The average length of stay was 12.1 days.

117. The health status of the population of Dominica is among the lowest in the Lesser Antilles. The life expectancy at birth is 67.4 years (the lowest in the Lesser Antilles), and the percentage of children under five years of age with Grade 3 malnutrition is 1.8. From 1976 to 1979, Dominica reported 128 typhoid cases, with an average annual rate of 41.0 per 100,000 population, the greatest in the Lesser Antilles. Gastro-enteritis is also a common cause of morbidity among children 11 years and under.

118. The Government's immediate objectives are to rehabilitate the physical health facilities and to upgrade them according to the defined national plan, to establish a health planning process integrating preventive and curative medicine and environment health at the local and central levels, to provide a national scheme for programming and implementation of priority health programmes, and to improve the management of health services. A number of projects for external assistance in line with these objectives have been identified.

1. Rehabilitation and construction of primary care facilities

119. Prior to hurricane "David", there was a network of 44 health clinics around the island. Many of these buildings have been either completely destroyed or were severely damaged by the storms. The eastern district, with an estimated population of some 8,000 people, is on the exposed windward side of the island and was one of the areas hardest hit by the hurricane. All four health clinics, three of which are Government owned, were seriously damaged. After the hurricane, a committee was appointed to consider the rehabilitation of the health services in Dominica. The committee felt that, in restoring the network of clinics, the opportunity should be taken to reorganize this network, thereby creating a more effective system for the delivery of primary health care services throughout the country.

120. For this purpose, the State has been divided into seven medical districts, one of which is the eastern district. Each district will be served by one district health centre and several smaller health clinics and every clinic will be staffed by a community nurse-midwife and a community health worker. The community nurse-midwife will administer the clinic and her duties will include operating maternal and child health clinics, giving community health instruction and providing basic health care.

121. As the delivery system for primary health care is organized on a district basis, with the functions of the district health centre and the health clinics complementing each other, it has been decided that the best approach will be to rehabilitate all health facilities in one district through one comprehensive project so that once the project is completed services can start operating under the new organizational structure for the whole district at the same time. The eastern district would be the first area for such a project, as it was one of the most severely hit areas with all health facilities seriously damaged. The long distance (30 miles) to the only referral hospital, which is situated on the west coast, and the extremely bad condition of the roads add to the urgency of restoring facilities in the eastern district.

122. This project consists of: construction of a district health centre at La Plaine, the construction of a health clinic at Riviere Cyrique/Morne Jaune, repairs to the health clinic at Delices, and repairs to the health clinic at Grand Fond.

<u>Cost estimate</u>	<u>U.S. dollars</u>
(i) District health centre - La Plaine	245 400
(ii) Clinic Riviere Cyrique	46 000
(iii) Clinic Delices	18 600
(iv) Clinic Grand Fond	17 000
Total cost	<u>327 000</u>

## 2. Construction of health centres at Marigot and Castle Bruce

123. This component provides for the construction and equipping of two district health centres on the east coast at Marigot and Castle Bruce, at a total estimated cost of \$491,000. These health centres will form part of the nationwide network of health centres and health clinics for the delivery of primary health care throughout the country.

## 3. Construction of health clinics at Bagatelle, Anse de Mai and Trafalgar

124. The Government wishes to construct health clinics at Bagatelle, Anse De Mai and Trafalgar. With the construction of these primary care facilities and staffing by the Government, a much wider range of health services will be provided to the communities. The estimated cost for the three clinics is \$151,000.

## 4. Redevelopment of Princess Margaret Hospital

125. The need for redevelopment of the Princess Margaret Hospital was recognized some 10 years ago. Hurricane "David" severely damaged the hospital and highlighted and aggravated existing deficiencies. The Government has now decided to seek funds for the redevelopment of the Princess Margaret Hospital in order to provide adequate support for its primary health care delivery system. Reconstruction of the main hospital consequently forms an integral part of the comprehensive plan to upgrade the island's system of health care, which is to be implemented over a period of three to five years.

### Deficiencies of the Princess Margaret Hospital

126. The existing hospital, constructed in 1956, was poorly designed on a sloping site with almost no provision made for expansion; many departments are now obsolete. Hurricane "David" intensified the deficiencies, of which some of the most important are: absence of an adequate casualty department, lack of an outpatient department, inadequate operating facilities, unacceptable sanitary standards in kitchen and laundry due to obsolete facilities, an open corridor connecting the wards and creating not only the risk of cross-infection hazards but also security problems, and an inadequate administration building.

127. The proposals deal with four major categories at an estimated cost of \$4.1 million:

- |   |   |
|---|---|
| (a) <u>Services:</u>                            | Kitchen and canteen, central sterile supply, laundry, maintenance workshop, boiler room, standby generator.         |
| (b) <u>Diagnostic and treatment facilities:</u> | X-ray, operating theatres, obstetric delivery suite, outpatient department, casualty department and medical stores. |
| (c) <u>Administration:</u>                      | Medical records, reception.   |
| (d) <u>Staff quarters:</u>                      | Doctors and Matron.   |

## 5. Water supply systems

128. The development of water supply systems in Dominica is based largely on a study carried out by the Pan American Health Organization (PAHO) and the World Health Organization (WHO) in 1967, but development has not kept pace with increasing demands. Water-borne diseases like typhoid and gastro-enteritis play an important role in the disease pattern of the country, which is mainly the result of low water standards in the rural communities and inadequate excreta disposal practices.

129. The Government plans to expand the existing water supply system so as to provide safe water for all residents. Project concepts have been developed for the villages of Glasgow, Bellevue Rawle and Eggleston/Giraudel. Technical assistance is required to strengthen the Central Water Authority, to provide on-the-job training and to assist in the development of water supply extension projects. The estimated cost of providing a water engineer for a period of 12 months is \$70,000.

## 6. Sewage collection and disposal

### Public sewerage

130. Roseau and its suburbs Goodwill and Canefield are the only areas in the country partially served by a public sewerage system, but only about 30 per cent of the houses are connected to the sewer mains. Raw sewage is being discharged directly into the sea. During high tides and heavy groundswells, the outfalls get blocked causing back flow of the mains in low-lying areas. For the rest of the population, septic tanks and pit latrines are in use for sewage collection and disposal.

131. Hurricane "David" aggravated the existing problems. Prior to the hurricane, some 38 communal latrines were in use all over the island, of which 34 were destroyed or severely damaged by the storms. To date, only 15 are back in use. In an effort to deal with the problems created by the improper disposal of excreta, and thereby to promote health, a private latrine programme was launched in 1965. Of the 7,000 pit latrines in use before the hurricane, about 2,000 were destroyed by "David".

132. The Government requires financial assistance for the rehabilitation of the communal sanitary facilities and for the private latrine programme and technical assistance for the upgrading and expansion of the existing sewerage systems. The latrine project could be operational within one month of receipt of materials and equipment. The estimated cost is \$US 144,000.



## 7. Solid waste management programme

133. The method of collection and disposal of solid waste in Dominica constitutes a major public health hazard. The problems are caused by increasing urbanization and inadequate disposal practices. The towns of Roseau and Portsmouth are the only communities served by an organized collection and disposal system. Over the past decade, refuse dumping operations have had to be shifted some 10 times from one site to another under pressure from citizens directly affected by the crude disposal methods in use: dumping on open grounds with occasional burning. The present landfill site on the north bank of the Roseau river near the Copthall-Trafalgar Road junction was initially intended for six months' use. That was two years ago. Refuse from the villages along the west coast is dumped near the seashore of the river banks. In the inland and east coast villages, residents dispose of their refuse in the fields by composting, burning or burial.

134. However, the increasing population aggravated the problems associated with these types of disposal. The development of a solid waste management programme for the Roseau region is essential.

135. Improvement in the management of solid waste in Dominica requires external assistance, both financial and technical. This assistance would include a survey of solid waste production and identification of suitable sanitary landfill sites, the development of landfill sites and of collection procedures, the promotion of a community education and participation campaign, and the provision of solid waste collection and disposal equipment. The estimated cost is \$US 795,000.

### E. Education and training

136. Quantitatively, the Dominica educational system is quite impressive for a developing country. At the primary level, the enrolment ratio stands at 100 per cent during the 10 years of compulsory education and there is equal participation of boys and girls and of urban and rural children throughout the system. Dominica has 58 primary schools, 8 secondary schools, a teachers' college, a technical college and a sixth form programme. At present, the total enrolment is 21,712.

137. Qualitatively, the situation is very different. Only 163 out of 547 primary schoolteachers and 22 out of 110 secondary school teachers have training. The course content, methodology and examinations are strictly oriented towards university entrance. Only 20 to 25 per cent of those children who sit the Common Entrance Examination (11+) progress to secondary level education. The rest remain in the three upper forms of the all-age primary schools, later dropping out as unskilled youth at 15 years. Only 20 per cent of the lower secondary students pass the General Certificate of Education enabling them to continue secondary education. The G.C.E. "0" level examinations reduce the enrolment by another 30 per cent, so that, after 14 years of education, out of 22,000 pupils the system produces annually 5 to 10 candidates with qualifications for entry to university.

138. A UNESCO/World Bank Co-operative Programme Survey Mission has recently completed a detailed examination of the educational sector in Dominica. The report of the survey will be available by the end of 1981 and is expected to contain an integrated programme for the development of education, including the identification of a number of projects for financing by the international community.

139. However, as a result of a series of natural disasters, which include extensive damage resulting from hurricanes "David", "Frederic" and "Allen", there is a pressing need to reconstruct and rehabilitate a number of schools. The Government has further identified a number of related areas for priority assistance in education.

#### 1. School-building programme

140. The Government of Dominica relies entirely on external assistance for capital expenditure. Fully 96 per cent of recurrent expenditure in education is absorbed by staff emoluments. It has therefore been impossible to replace equipment and teaching material destroyed by the hurricanes. There has been a rapid deterioration in school buildings, and many schools lack desks, chairs, sanitary facilities and water. In one major primary school, with a shift system of 1,000 pupils in the morning and an equal number in the afternoon, there is no water, no sanitation, insufficient chairs and desks, and no security on doors and windows. Unemployed youth wander in and out by day and night, leading to acute disciplinary problems, excessive noise and general disorder.

141. Nineteen primary school buildings with an enrolment of 3,745 pupils were completely destroyed by the hurricanes, major damage was done to 21 buildings and an additional 21 suffered minor damage. The furniture in the schools has been completely destroyed. Although various donors have initiated construction and repair of schools or have given a commitment to do so, six schools remain to be reconstructed and others urgently need repairs. In order to monitor the ongoing and proposed school construction programme, specialized technical assistance will be required.

142. The Government has identified the following projects for urgent implementation:

(a) Funds for construction of seven new schools: Bellevue Chopin, Scottshead, Petite-Savanne, Morne Jaune Infants, Warner, Snake Coe and Bath Estate Roseau. Estimated cost: \$1.8 million.

(b) Funds to repair and rehabilitate four schools (Roseau Boys' School, Dominica Grammar School, Portsmouth Secondary School and Giraudel). Estimated cost: \$150,000.

(c) Purchase of school equipment and furniture, including schoolbooks and texts for the unstocked school libraries. Estimated cost: \$500,000.

(d) Funds to cover costs of a school architect and an engineer to visit Dominica periodically to monitor school construction and advise on the establishment of a schools' facilities unit within the Ministry, including counterpart fellowships abroad.

## 2. Agricultural education

143. Recovery and diversification of agricultural production will be the primary economic thrust in Dominica during the next few years. The overriding importance of the agricultural sector to the economy of the country makes it imperative that skill training in agriculture at the technician level be provided within the tertiary level education framework.

144. The extremely difficult communications infrastructure caused by very poor roads, inadequate public transport and inclement weather would suggest that, rather than setting up one agricultural college in Roseau, four agricultural training centres be set up to service secondary level students and adults throughout the country. Courses would be practically oriented towards the transfer of cognitive knowledge and experimental procedures, but with a heavy bias on practical skill training. The centres would be an extension and further specialization of courses now being offered in the new junior secondary programme. The centres would be equipped with modern agro-industrial equipment and tools.

145. The Government is urgently requesting funds for the following projects:

(a) Construction and equipping of four agro-industrial centres, including specialized materials and equipment. Estimated cost: \$800,000.

(b) Fellowships to train eight agricultural technicians within the region, including costs of seminars and workshops. Estimated cost: \$150,000.

## 3. Junior secondary schools and the technical college

146. The Government has embarked on a programme of industry promotion, especially small businesses and agro-industries, using local materials and crops. If these development efforts are to be successful, the youth must be given skills related to industry and vocational pursuits. The new Junior Secondary Educational Programme will offer a strong programme in vocational skills. For the majority of students who will come from the three final years of all-age primary schools, it is expected that junior secondary schools will provide them with skills.

147. The Technical College will provide further-on-the-job training. The new programme consists of six main groups of vocational training, varied according to the needs of the locality in which they are taught (food production, construction, garment production, machine-shop welding, arts and crafts, services). The first teachers will be skilled workmen and craftsmen and women in the communities to supplement the small number of vocational teachers in the system. There will be

workshops to train local craftsmen in teaching. This important reform (which concerns 6,000 pupils or 75 per cent of enrolment at upper primary and lower secondary levels) will require short training courses for craftsmen, materials, equipment and tools.

148. The Clifton Dupigny Technical College is the principal technical vocational training institution in Dominica with approximately 90 full-time students in two-year craft level courses (building, mechanical, electrical, automotive trades, secretarial studies and agriculture). Students enter from the all-age primary or the secondary schools. The buildings at the college require extensive maintenance, extension and repair. Hurricane "David" destroyed considerable machinery, the masonry workshop, the college van and materials. There are insufficient hand-tools, materials and supplies.

149. The staff, while academically suitable, lack practical industrial experience so that courses tend to be theoretical and there is little liaison with the industrial-commercial sectors. In order to co-ordinate the national training schemes, the Government proposes to set up a national advisory board on technical education and industrial vocational training. Finally, four multi-purpose workshops should be set up to provide technician training at post-secondary level.

150. The Government has identified the following projects for international assistance:

(a) Funds to purchase materials, equipment and tools for 20 primary and junior secondary schools (carpentry, farming, masonry, auto maintenance, food production, small and outboard engines). Estimated cost: \$500,000.

(b) Funds to construct and equip four multi-purpose workshops (St. Joseph, Portsmouth, Londonderry and Grand Bay), including tools and materials. Estimated cost: \$800,000.

(c) Funds for the repair, maintenance and upgrading of Clifton Dupigny Technical College. Estimated cost: \$250,000.

(d) Consultancy services to assist the Government in setting up the national advisory body on technical vocational training. Estimated cost: \$6,000.

(e) Fellowships (20) to upgrade technical/vocational teachers. Estimated cost: \$90,000.

#### 4. Adult education and literacy

151. The Government of Dominica is fully aware of the need to provide adult education and literacy programmes for the large group of illiterate and semi-literate urban and rural youth and adults. Although there are several ongoing adult education, literacy and community development programmes, no national co-ordinated programme has yet been initiated.

152. There is an urgent need to train local personnel to conduct a statistical survey on literacy as a prerequisite to setting in motion a national adult education and literacy programme. Technical assistance will be required to train local staff and to tabulate and analyse the data collected in the survey. A follow-up phase will train literacy workers, carry out literacy and numeracy training in the communities and produce printed and audio-visual materials for the programme.

153. The Government has identified the following projects for donor financing:

(a) A specialist to train local personnel to conduct a literacy survey. Estimated cost: \$5,000.

(b) Technical assistance to tabulate and analyse statistical data and to develop strategies for a national literacy programme, including the conducting of a training seminar. Estimated cost: \$8,000.

(c) Consultant services and material to assist local specialists in the production of equipment and materials for the literacy programme. Estimated cost: \$75,000.

#### 5. Educational planning and administration

154. Many delays and difficulties in the Ministry of Education can be attributed to weak management and administration. Planning functions, such as data collection and use, time-tabling, budgeting and policy planning, are not carried out. In order to improve the efficiency of the Ministry, seminars and workshops are urgently needed to up-grade Ministry officials in modern management techniques.

155. The Government has identified the following projects for donor financing:

(a) Funds to hold a seminar/workshop in educational planning and management techniques, including provision of a specialist for 3 man/months. Estimated cost: \$21,000.

(b) Fellowships to train staff in educational planning, administration and management abroad. Estimated cost: \$20,000.

(c) Funds to purchase a minibus and a van for delivery of furniture and equipment, emergency transportation, carrying of children. Estimated cost: \$30,000.

#### 6. Status of women

156. The Government of Dominica, conscious of the important role that women must play in the socio-economic development of the nation, gives high priority to the promotion of full and equal participation of women in all aspects of national

life. Special emphasis should be given to the role that women are playing and will play in the development of adult education and literacy programmes. Urgently needed are materials and equipment for use in literacy and adult education groups such as the Social Centre and those identified by the Women's Desk.

157. The Government has identified the following project for immediate funding: equipment and materials for conducting training sessions and community development activities on adult education and literacy. Estimated cost: \$10,000.

F. Summary of assistance required

158. In summary, the following assistance is required:

	<u>(Thousands of US dollars)</u>
<b>A. <u>Agriculture</u></b>	
1. Support to the Dominica Banana Growers' Association	8,800
2. Expansion of the livestock programme and relocation of the livestock farm	167
3. A land-use and conservation pilot project	569
4. Rehabilitation and extension of feeder roads	21,000
5. Lime replanting	860
6. Cadastral survey - Phase I	135
<b>B. <u>Transport</u></b>	
1. Road rehabilitation	32,920
of which (a) West Coast Road	4,000
(b) Central Road	1,500
(c) South roads	4,000
2. Bridges	3,533
3. Mobile rock crusher	200
4. Road maintenance unit	
(a) Equipment	3,937
(b) Operating costs	1,600
5. Communications	72
6. Port	1,000
	/...

(Thousands of  
US dollars)

C.	<u>Housing and industry</u>	
1.	Emergency housing	133
2.	Housing programmes	1,300
3.	Commercial housing loan	1,300
4.	Needs of existing housing projects	2,875
5.	Industry	2,000
D.	<u>Health and sanitation</u>	
1.	Rehabilitation and construction of primary care facilities	327
2.	Construction of health centres	491
3.	Construction of health clinics	151
4.	Princess Margaret hospital	4,100
5.	Water supply systems (consultant)	70
6.	Sewage collection and disposal	144
7.	Solid waste management	795
E.	<u>Education and training</u>	
1.	School building	2,700
2.	Agricultural education	950
3.	Junior secondary schools and the technical college	1,646
4.	Adult education and literacy	88
5.	Educational planning and administration	71
6.	Status of women	10

#### IV. ASSISTANCE BEING PROVIDED

159. The General Assembly, in resolution 35/102, and the Economic and Social Council, in resolution 1981/49, urged Member States and international organizations to provide assistance for the rehabilitation, reconstruction and development of Dominica and requested the Secretary-General to keep the Assembly informed of the results achieved in the implementation of resolutions 35/102 and 1981/49. Information on assistance being provided to Dominica is given in tables 5 and 6.

160. The Government prepared a list of projects for which funding had been negotiated or assistance had been pledged for the meeting of the Caribbean Group for Co-operation and Economic Development held in June 1981. The mission was provided with a list (table 5) of those projects for which external funding had been pledged or provided, including the source of assistance. The specialized agencies and organizations within the United Nations system were requested by the Secretary-General to provide information on the assistance they were providing to Dominica. Information supplied to the Secretary-General is summarized in table 6.



Table 5

Projects for which funding negotiated

A. Ongoing projects

(Thousands of dollars)

<u>Projects</u>	<u>Total cost</u>	<u>Negotiated external funding</u>	<u>Source</u>
Banana rehabilitation and development	9 190	8 840	United Kingdom of Great Britain and Northern Ireland, Caribbean Development Bank (CDB), United States of America, European Development Fund (EDF)
Tree crop restoration and diversification	493	493	United Kingdom
Miscellaneous forestry projects	1 561	1 561	United Kingdom, International Labour Organisation (ILO)
Pilot plant propagation centres	376	376	United Kingdom
Melville Estate - equipment	105	105	United Kingdom
Miscellaneous projects	369	369	United Kingdom
Agricultural production credits	200	181	Caribbean Development Bank (CDB)
Farmers' improvement credit III	444	444	CDB
Agricultural and industrial credits I and II	296	296	CDB
Emergency food crops	230	230	United States Agency for International Development (USAID), Canadian International Development Agency
Agricultural development (Processing)	54	54	EDF
Agricultural credits	1 725	1 520	International Fund for Agricultural Development (IFAD)
Fisheries development	296	296	Caribbean Food Corporation
Feeder roads I and II	1 952	1 712	CDB
Factory buildings II and III	647	564	CDB
Small industry credit II	154	154	CDB
Public Works Department plant and equipment I and II	525	525	United Kingdom, CDB
Prison repairs	70	70	United Kingdom
Portsmouth jetty equipment	43	43	United Kingdom
Canefield airstrip	413+	413+	United Kingdom, France
Road equipment, I, II, III	462	462	United Kingdom
Portsmouth - Capuchin Road	303	303	United Kingdom
Construction of police stations	184	184	United Kingdom
Portsmouth Pier	450	450	Canadian International Development Agency
Roseau Port repairs	213	213	Canadian International Development Agency
Rehabilitation of Canadian-built facilities	607	607	Canadian International Development Agency
Road rehabilitation	860	860	EDF, ILO

Table 5 (continued)

<u>Project</u>	<u>Total cost</u>	<u>Negotiated external funding</u>	<u>Source</u>
Roads and seawall repairs	1 475	1 475	USAID
Pichelin Primary School	118	118	United Kingdom
Woodford Hill, Atkinson Schools	243	243	United Kingdom
Third country training	690	690	Canadian International Development Agency
School rehabilitation	683	683	Canadian International Development Agency, USAID
Educational development	500	500	USAID
Junior Secondary Programme	260	236	United Nations Educational, Scientific and Cultural Organization (UNESCO)
Technical assistance training	288	288	EDF
Student loans	120	120	CDB
Schools water supply	370	307	United Nations Children' Fund (UNICEF)
Landrover ambulances	163	163	United Kingdom
Princess Margaret Hospital repair and improvement	430	Part	USAID, United Kingdom
Housing materials	2 800	2 800	USAID
Self-help I and II	985	985	United Kingdom
Mission-administered funds	383	383	Canadian International Development Agency
Micro projects	480	160	EDF
Special development activities	270	270	USAID

B. New projects

Citrus rehabilitation	718	675	CDB
Line cultivation and rehabilitation	978	978	United Kingdom
Essential oils development	281	281	EDF
Land settlement and rural development	5 330	Part	EDF
Coconut rehabilitation and expansion	6 310	5 048	Canadian International Development Agency
Forestry development II	1 416	1 416	United Kingdom, USAID
Ornamental plants production and marketing	300	250	CDB
Agro-processing facilities	1 099	772	United Nations Development Programme (UNDP), CDB
Industrial nursery	660	600	CDB
Marketing facilities	550	500	CDB
Factory shells IV	555	500	CDB
Agricultural and industrial credit III	1 000	1 000	CDB
Tourism promotion and marketing	106	106	EDF
Development of botanical garden and national park	232	211	ILO
Rehabilitation of deep-water port	3 000	3 000	CDB
Road rehabilitation	7 600	6 840	Canadian International Development Agency
Road reconstruction and maintenance	13 074	Part	USAID, EDF
Bridge construction	811	730	CDB

Table 5 (continued)

<u>Project</u>	<u>Total cost</u>	<u>Negotiated external funding</u>	<u>Source</u>
Geothermal energy study	174	174	European Investment Bank (EIB)
Electricity rehabilitation, conservation and expansion I	663	593	CDB
Hydro-electrification study	250	250	EIB
Rehabilitation of water supply facilities	105	93	CDB
Water catchment development and conservation	3 479	3 131	Canadian International Development Agency
Construction of public buildings	505	505	United Kingdom
College of further education	130	130	United Kingdom
Junior secondary programme	666	607	UNESCO
Repair and improvement of health centres	1 233	1 233	Various
Vector control	133	126	Pan American Health Organization (PAHO)
Public sanitary facilities	100	100	Trinidad and Tobago
Housing rehabilitation	250	222	CDB

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Table 6

Assistance being provided by organizations and agencies

Organization

- UNCTAD Dominica is a beneficiary and participates in the UNDP-financed/UNCTAD-executed (in association with IMCO) project CAR/80/001 and RLA/79/051 entitled "Regional shipping in the Caribbean" (cost: \$846,000; headquarters, Saint Lucia).
- UNICEF A sum of \$23,000 is available for programme support in 1981.
- UNDP A sum of \$1.36 million was allocated during 1977-1981 for projects in planning, agriculture, health and education. Also \$250,000 was made available following hurricane "Allen" in 1980 for food production. The allocation for 1982-1986 has been increased to \$2.3 million. Dominica also receives assistance under the Caribbean Multi-Island Programme with a budget of \$4.5 million for 1982-1986. Further, it benefits from the UNDP-financed regional programme CARICOM as well as from the activities of the Caribbean Group for Co-operation in Economic Development.
- WFP Assistance worth \$59,000 has been provided.
- UNFPA Assistance has been provided since 1972 for the installation of a nation-wide family planning programme. In 1981 assistance was provided for the 1981 Population and Housing Census. Programme expenditures through 1980 came to \$490,000 and commitments for 1981-1982 amount to \$98,000.

Agency

- ILO A Special Works Programme, worth \$12,000, is under implementation. Also, a training workshop in woodcraft is being established and a training course for engineers and administrators was held in January 1981. The Regional Adviser on Management Development undertook a mission in March 1981. Further, assistance is being provided under the regional and subregional programme consisting of the Automotive and Heavy Equipment Maintenance Accelerated Training Project and the Multi-Island Social Security Project. The services of the regional advisers were also provided. Under the ILO regular budget, assistance is being made available for the development of occupational health and safety programmes.
- FAO Two projects relating to fishing (\$45,000) and agriculture (\$113,000) were approved following hurricane "David" in August 1979. Another project for livestock (\$53,000) was approved in November 1980 following hurricane "Allen".

Table 6 (continued)

Agency

- UNESCO \$50,000 was provided for school repairs following hurricane "David" and another \$50,000 following hurricane "Allen". In addition, in accordance with General Conference resolution 1/07, a major project is being organized for the educational development of individual countries of the region, including Dominica. The over-all objectives of the Major Project are: (a) Provision of a minimum of 8 to 10 years' general education to all children of school age by 1999; (b) Eradication of illiteracy before the end of the century and development of adult literacy; (c) Improvement of the educational system.
- WHO The major area of co-operation is a programme of Health Services Reconstruction. Fifteen technical co-operation activities are envisaged during 1981 in support of the development of health services infrastructure, 20 technical co-operation activities are planned in support of the Health Delivery Services Programme, and 11 technical co-operation activities are envisaged in support of the development of health support services.
- World Bank Bank project assistance has so far been channelled through loans to the Caribbean Development Bank. An economic mission recently visited Dominica and its report was presented to the annual meeting in June 1981 of the Caribbean Group for Co-operation in Economic Development.
- IMF In December 1979 Dominica purchased the equivalent of SDR 950,000 under the Fund's tranche policies in the form of emergency assistance. At the same time Dominica purchased the equivalent of SDR 950,000 under the Fund's Compensatory Financing Facility, together with its reserve tranche of SDR 475,000. In February 1981, Dominica purchased an additional SDR 1.950 million under the Fund's Compensatory Financing Facility. In February 1981, the Fund's Executive Board approved Dominica's request for an extended arrangement covering a period of three years in an amount equivalent to SDR 8.6 million. In addition, Dominica has received a cumulative SDR 0.6 million in SDR allocations.
- UPU Postal organization and training were provided, consisting of a consultant's mission, one fellowship and equipment.
- ITU Assistance was made available for a study of the establishment of an emergency network for natural disasters.

Table 6 (continued)

Agency

WMO	As an executing agency of UNDP, WMO is providing assistance to the national meteorological service.
IFAD	Loans amounting to \$1.46 million were provided during 1978-1980. Also, a technical assistance grant amounting to \$256,000 was made available.

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