

III. EFFECTS ON DEVELOPMENT

1. Effects on economic development

a) The situation prior to the hurricane

120. i) Recent economic performance. For various reasons, Nicaragua's economic performance has been showing signs of increasing weakness during the present decade within the context of an almost permanent crisis, which in the early part of the year continued to underscore the existence of serious problems in the economic system.^{13/} The main features of this crisis have been a high fiscal deficit and unusually large exchange losses,^{14/} which have been the primary causes of the extraordinary level of currency issues; the severe distortion of relative prices, of the various rates of exchange and of the persistent downward trend in the level of real wages and salaries in the formal sector; an intensification of the price spiral —which has been of a hyperinflationary nature since 1987-- and, finally, a severe shortage of foreign exchange and inadequate supplies of basic goods. In 1987, therefore, per capita income fell below its level of more than 30 years ago.

121. In view of this very complex situation and despite government efforts to overcome it, the country is now further than ever away from achieving the targets oriented towards the creation of a more equitable society which were set out in the programme formulated by the government in 1979. The government's ability to effectively manage economic policy began to diminish several years ago as a result of the serious obstacles it encountered. Still foremost among these obstacles are the military conflict which has been going on for eight years ^{15/} now and the trade blockade by the United States.

122. There is no doubt that the need to allocate human and financial resources to defence activities, to the detriment of the country's productive sectors, is one of the reasons why the level of activity in almost all sectors of the economy is low.

123. The severe macroeconomic imbalances currently affecting the Nicaraguan economy may be attributed to a number of causes. The imbalance in public finances is due, inter alia, to the fact that major investments have been undertaken which take a long time to mature. Moreover, the expenditures incurred in increasing the supply of educational and health services have put pressure on the limited resources available and have added increasing amounts to the fiscal deficit. The availability of external resources has been declining dramatically owing to the reduction in the supply of

exportable goods (whose current level is barely that of 1981) and the difficulties encountered in gaining access to sources of credit.

124. This deficit, combined with huge currency exchange losses, has given rise to a rapid monetization of the economy. The increase in the means of payment, together with the limitations affecting the supply of goods and services, has led in the last few years to continuous rises in prices, which have been becoming even sharper during the last few months of this year. This trend has had a negative impact on the standard of living of large sections of the population, as well as regressive effects which are conducive to speculation.

125. Indeed, the low level of domestic production of basic goods has made it difficult to provide an adequate supply of goods to the population and has hindered efforts to stock a sufficient amount of some basic items at official prices; this, in turn, has encouraged the creation of an extensive speculative market in goods and the proliferation of an informal employment sector. In addition, the exchange rate policy, which for several years had been based on an overvalued official exchange rate, gave rise to the emergence of a free market for foreign currency which operated at a rate of exchange that at one point was 200 times higher than the official rate.

126. ii) Economic performance in 1988. In February 1988, the authorities embarked upon a strict adjustment programme. The measures adopted were aimed at achieving a reduction of the deficit in terms of the gross domestic product and a contraction of the investments undertaken by the National Investment Fund (FNI), as well as the establishment of a single exchange rate which would restore the profitability of exports and thus help correct the severe distortions in relative prices between products for domestic consumption and those for export.^{16/}

127. Although the new monetary policy eliminated exchange losses and managed --to some extent-- to neutralize the excess currency in circulation which had been building up since 1983,^{17/} it failed to bring about the planned reduction in the global deficit. On the one hand, revenues --general sales tax and income tax-- declined in real terms on account of the reduction in economic activity and, on the other, operational costs continued to increase.

128. Moreover, some of the other measures adopted as part of the adjustment programme did not yield the desired results. In the first place, the administrative reorganization of the State apparatus did not produce the expected savings, and certain subsidies which were to be eliminated continued to be granted. Secondly, readjustments in wages and salaries required continuous increases in expenditure.^{18/} Thirdly, the devaluation of the córdoba had direct consequences for the current investment budget.

129. Although the economic reform programme attached high priority to the control of inflation, the general rate of price increases has continued to be hyperinflationary.^{19/}

130. Even before the hurricane struck, in addition to the aforementioned recession in economic activity, a contraction (also in real terms) was expected for 1988 as a whole in imports of goods and services and,

consequently, a very marked reduction in domestic supply was projected as well. With respect to overall demand, a decline was expected in the growth rate of all the variables, including that of investment in construction, an activity in which positive rates of increase have generally been recorded (see table 7). As set forth in the adjustment programme, public investments have been limited to on-going projects only.

131. Private consumption was expected to undergo a further and rapid decline in 1988 despite the positive, though very fleeting, effect of some measures adopted early in the year which increased the purchasing power of wages. The reappearance of inflationary pressures caused the incomes of wage-earners to deteriorate once again and hence had a dampening effect on private consumption.

132. The level of activity in almost all the productive sectors has been declining. As regards agricultural products for export, output fell in all cases. In contrast, an expansion was projected in virtually all items for domestic consumption, with the sole exception of sorghum.

133. It was expected that the value added in the manufacturing sector would again fall in 1988, although less markedly than in the preceding year. Prior to the hurricane, a contraction of 20% was forecast in almost all branches of production as the full impact of the difficulties which the Nicaraguan economy has been experiencing for years in connection with the modernization of its industrial infrastructure began to become evident.^{20/}

134. The adjustment programme had some negative implications for the manufacturing industry. In the first place, the abrupt demonetization of the economy in February created liquidity problems for business enterprises. Secondly, due to the successive devaluations, larger outlays are required to pay for imports.

b) The situation after the hurricane

135. i) Economic activity. The hurricane struck in the month of October when the country, as mentioned before, was in an extremely precarious economic situation. Within this context, the financial restructuring measures adopted during the year, which were in themselves very difficult to implement, continued to require a highly disciplined and stringent application of the country's economic policy, particularly in respect of expenditure. The disaster further reduced the manoeuvring room of the authorities in their efforts to proceed within the general guidelines of the adjustment programme that was being implemented.

136. While preliminary estimates of the effects of the hurricane on the gross domestic product for the present year --according to which it will fall by 9% instead of by slightly more than 7%, as had been previously calculated-- indicate that those effects were severe, they do not reflect its full impact, since some of its repercussions will begin to be felt only in 1989. The consequences on the different sectors of the economy are very different. Without doubt, the effect on output has been most severe in the agricultural sector, particularly in the production of basic grains (see table 7).

Table 7

NICARAGUA: EFFECTS OF HURRICANE JOAN ON GROSS DOMESTIC
PRODUCT GROWTH

| | Millions of 1980 córdobas | | | Growth rates | | |
|-----------------------------------|---------------------------|---------------------------------|--------------------------------|--------------|---------------------------------|--------------------------------|
| | 1987 | 1988 Before the hurricane | 1988 After the hurricane | 1987 | 1988 Before the hurricane | 1988 After the hurricane |
| <u>Gross domestic product</u> | <u>21 027.1</u> | <u>19 485.3</u> | <u>19 106.9</u> | <u>-1.0</u> | <u>-7.3</u> | <u>-9.1</u> |
| <u>Primary activities</u> | <u>4 572.9</u> | <u>4 417.1</u> | <u>4 130.3</u> | <u>-3.2</u> | <u>-3.4</u> | <u>-9.7</u> |
| Agriculture | 2 991.9 | 2 740.6 | 2 471.3 | 0.9 | -8.4 | -17.4 |
| Livestock | 1 423.8 | 1 509.3 | 1 495.0 | -12.6 | 6.0 | 5.0 |
| Forestry | 45.7 | 50.3 | 50.3 | 12.0 | 10.0 | 10.0 |
| Fishing | 111.4 | 117.0 | 113.7 | 22.2 | 5.0 | 2.0 |
| <u>Secondary activities</u> | <u>6 430.8</u> | <u>5 224.6</u> | <u>5 220.6</u> | <u>-0.8</u> | <u>-18.8</u> | <u>-18.8</u> |
| Manufacturing | 5 578.5 | 4 462.8 | 4 436.5 | -1.6 | -20.0 | -20.5 |
| Construction | 746.1 | 671.5 | 693.9 | 7.0 | -10.0 | -7.0 |
| Mining | 106.2 | 90.3 | 90.3 | -7.9 | -15.0 | -15.0 |
| <u>Tertiary activities</u> | <u>10 023.4</u> | <u>9 843.7</u> | <u>9 756.0</u> | <u>-0.2</u> | <u>-1.8</u> | <u>-2.7</u> |
| Commerce | 3 668.0 | 3 521.0 | 3 450.0 | -0.4 | -4.0 | -6.0 |
| General government | 2 496.5 | 2 496.5 | 2 496.5 | -0.5 | - | - |
| Transport and communications | 1 035.4 | 1 027.1 | 1 027.1 | -2.0 | -0.8 | -0.8 |
| Banks and insurance | 620.9 | 614.0 | 614.0 | -0.4 | -1.1 | -1.1 |
| Electricity and drinking water | 464.8 | 474.1 | 470.3 | -0.8 | 2.0 | 1.2 |
| Ownership of dwellings | 830.0 | 830.0 | 817.5 | 5.0 | - | -1.5 |
| Other services | 907.8 | 880.6 | 880.6 | -0.4 | -3.0 | -3.0 |

Source: ECLAC, on the basis of data provided by the Department of Planning and the Budget (SPP).

137. In response to this new emergency situation, the priorities of economic policy were rapidly modified so as to attach greater importance to the supply of foodstuffs, medicines and other basic goods whose scarcity in the short term can be described as having reached dramatic proportions in a number of cases. In order to ensure the production of foodstuffs not only in the affected zone, but also nationwide, unprecedented efforts, which could intensify the country's financial imbalances, are required.

138. In 1988 production in the agricultural sector is expected to decline by 17%, a sharper drop than previously expected (a little over 8%). In the case of export products, earnings from coffee production will decrease as a result both of the direct losses sustained on the plantations and of damage to access roads.

139. In view of its decision to respond immediately to the needs of the affected population, the government is restructuring its priorities in such a way as to reincorporate peasants into the productive process in the shortest time possible, its goal being to achieve the recovery of the agricultural sector by August 1989. Another high priority task is that of hastening the repair of roadways to facilitate the harvesting of the coffee crop.

140. In the fisheries sector, the natural disaster will reduce the rate of growth much more than previously expected (2% instead of 5%), because of the damage to its infrastructure.

141. Income generated by industrial activities, which had already undergone a substantial decline since the early part of the year, will show a further slight decrease as a result of damage to sugar mills, rice mills and sawmills. Moreover, the damage to the electricity system will also affect manufacturing output.

142. The only economic sector in which activity is expected to decline less than was previously projected is the construction sector, as a logical consequence of the rehabilitation work.

143. It is difficult to predict how the gross domestic product will evolve in quantitative terms over the next year, bearing in mind that financial imbalances will become more pronounced and that the adjustment programme that was underway will —as discussed earlier— be the object of major changes in emphasis, whose precise nature has not yet been fully determined, as a consequence of the ravages caused by the passage of the hurricane. Nonetheless, even at this early date it can be said that production for export will be reduced due to the damage sustained by the plantations and to problems in harvesting.

144. ii) Public sector finances. The emergency measures and the subsequent assistance which will have to be provided to the affected areas make it even more difficult to reduce the fiscal deficit.

145. In the public sector, the adverse effects of the natural disaster will be severe in the remaining three months of 1988. According to preliminary calculations, emergency expenditures will increase the central government deficit by more than 13% over and above the original estimate. These

expenditures include 950 million córdobas in direct disbursements by the central government in response to the emergency (which could turn out to be even more after the data are consolidated) and the payment of more than 8 billion córdobas by the end of the year for the rehabilitation of roads, mainly in the coffee-producing districts (see table 8).

146. In the medium term, the financial position of the central government is expected to worsen. On the one hand, the greater expenditures related to rehabilitation and reconstruction will create strong pressures for an increase in domestic financing, unless resources are made available from abroad. On the other hand, no increases in tax revenues are expected until economic activity in general, and exports in particular, recover (see table 8).

147. iii) The external sector. As regards exports for the 1988 calendar year, the projected figure of US\$218 million may not change significantly, since the major part of some exports, such as those of coffee, have already been carried out. The level of imports of goods --estimated at US\$833 million-- is likely to increase, depending on the volume of foreign assistance which may arrive.

148. The full impact of the damage will be felt in 1989, inasmuch as a decrease in potential exports of approximately US\$27 million is expected. On the other hand, the imports required for reconstruction during 1989 are expected to reach about US\$74 million (see table 8).

149. The possibilities of financing a trade deficit higher than that of last year will be limited due to the greater decrease in foreign exchange earnings from exports and the difficulties which may well be encountered in attempting to obtain lines of credit for an amount 8% higher than in 1988.

150. The prospects in the medium term are similarly bleak. On the one hand, the volume of exports is expected to decrease on account of the damage sustained by products intended for the international market. On the other hand, it will be necessary to import considerable quantities of equipment and materials in order to carry out the reconstruction work (see table 8).

151. iv) Price levels. While in quantitative terms the effects of the hurricane on gross domestic product do not exceed 2%, it must be recognized that they limit the options for controlling inflation.

152. It seems unavoidable that the effects of the hurricane will further accelerate the rate of inflation in the economy. Firstly, the food shortages that will be experienced due to the damage done to basic grain crops will place severe pressures on prices from April to July.

153. Secondly, the adjustment programme --one of whose objectives was to control inflation-- will be even more difficult to implement. Indeed, emergency expenditures are increasing the operational costs of the public sector, raising its direct expenditures and adding to the deficit of the central government, which, as already mentioned, has primarily been financed through the issuing of currency.

Table 8

NICARAGUA: SHORT- AND MEDIUM-TERM EFFECTS OF THE DISASTER ON THE
PUBLIC AND EXTERNAL SECTORS

| | 1988 | | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 |
|--|----------------------|-----------------------|--------|--------|--------|--------|--------|-------|
| | Before the hurricane | After the hurricane | | | | | | |
| <u>Public finances</u> ^{a/} | | | | | | | | |
| (millions of córdobas) | | | | | | | | |
| Current expenditures | 110 395 | 119 345 ^{b/} | | | | | | |
| Capital expenditures | 17 723 | 17 723 | | | | | | |
| Total expenditures | 128 118 | 137 068 | | | | | | |
| Fiscal deficit | 67 214 | 76 164 | | | | | | |
| Increase in capital expenditure | | | 60 900 | 46 200 | 33 200 | 22 200 | 16 600 | 5 500 |
| Percentages of 1988 capital expenditures | | | 243 | 161 | 87 | 25 | -6 | -68 |
| <u>External sector</u> | | | | | | | | |
| (millions of dollars) | | | | | | | | |
| Exports of goods | 218 | 218 | | | | | | |
| Imports of goods | 883 | 883 | | | | | | |
| Trade deficit | 665 | 665 | | | | | | |
| Loss of potential exports | | | 27 | - | - | - | - | - |
| Additional import requirements | | | 74 | 56 | 39 | 27 | 20 | 7 |
| Percentage of 1988 imports | | | 8 | 6 | 4 | 3 | 2 | - |

Source: ECLAC, on the basis of official figures.

^{a/} Central government only. Figures are given in córdobas at October 1988 values.

^{b/} Includes emergency expenditures reported by 15 November, plus the increase in expenditure by the Ministry of Communications and Transport for road repairs.

154. Finally, the speculative factor, which had declined somewhat as a result of the application of the monetary measures already discussed, will probably gain ground again.

155. In short, in all probability the disaster will have the following immediate consequences on the principal macroeconomic variables: it will increase the decline in the gross domestic product for 1988 by about 2%, thereby reducing the already low level of per capita income, and it will augment the government deficit as a result of expenditures to meet emergency requirements, but it will not immediately bring about a significant increase in the external sector deficit on account of a larger volume of imports. In the medium term --if no co-operation or financing is received from abroad--, while it is feasible to expect a recovery in some productive sectors, public sector finances may well deteriorate even further as a consequence of the additional investments required for rehabilitation and reconstruction tasks, and the balance of payments will exhibit greater imbalances because of the need to import and the inevitable decrease in exports. All of this could reinforce the inflationary trend which was in evidence before the disaster.

156. Without doubt, the government will be obliged to re-examine its goals of restoring macroeconomic balances, which will require more drastic measures and greater sacrifice on the part of the entire population.

2. Effects on living conditions

157. The population in the areas most directly affected by the hurricane is unfortunately that which has the lowest indexes for food and nutrition, health, education, social security, access to water and sewerage services, etc. (see table 9), despite the strenuous efforts in the field of social welfare undertaken by the government since 1979.

158. As indicated in table 10, only between 3% and 5% of the accumulated capital assets of these sectors was lost. However, their replacement entails serious problems due to the volume of investment required and the capacity existing in the country to finance it.

159. Were it possible to allocate to reconstruction activities all the resources which are earmarked each year for public social investment, the destroyed assets could be replaced within a period of from 0.1 to 38 years, depending on the sector in question. On the other hand, if only those resources which traditionally have been assigned to social investment in the zones affected by the hurricane were to be used for reconstruction, then the replacement period would be even longer and would range from 2 to 376 years, depending on the sector (see table 10).

Table 9

NICARAGUA: STANDARD OF LIVING INDICATORS IN THE MOST AFFECTED REGIONS ^{a/}

| Indicators (1987) | Country total | Region IV | Region V | Region VI | South Atlantic Autonomous Region | Special Zone III |
|--|---------------|-----------|----------|-----------|----------------------------------|------------------|
| <u>Food and nutrition</u> | | | | | | |
| Annual farm egg sales (units per capita) | 49 | 92 | 8 | 5 | ... | ... |
| Annual sales of chicken meat (pounds per capita) ^{b/} | 6.6 | 31 | 0.08 | 0.27 | ... | ... |
| Value of ENABAS sales of basic grains (thousands of córdobas per capita) | 22.5 | 31.9 | 18.1 | 14.7 | ... | 1.3 |
| <u>Health</u> | | | | | | |
| Hospital beds per 100 000 inhabitants | 135 | 132 | 104 | 100 | 166 | 163 |
| Number of health stations (per 100 000 rural inhabitants) | 27 | 25 | 22 | 20 | 36 | 60 |
| Malaria. Positive blood samples per 100 000 inhabitants | 466 | 83 | 379 | 849 | 2 119 | 305 |
| <u>Drinking water and sanitation</u> | | | | | | |
| Drinking water. Population served (percentages of the total population) | 49 | 54 | 24 | 34 | 2.4 | 14.6 |
| Drinking water connections per 10 000 inhabitants | 647 | 778 | 265 | 333 | 39 | 170 |
| Sewer connections per 1 000 inhabitants | 27 | 12 | 0.46 | — | — | — |
| <u>Transport and communications</u> | | | | | | |
| All-weather highways (kilometres per 10 000 inhabitants) | 13.3 | 11.1 | 20.1 | 28 | 9.5 | 19.3 |
| Telephone exchange capacity (capacity per 10 000 inhabitants) | 172.5 | 100.0 | 64.5 | 70.2 | 41.3 | 24.3 |
| <u>Education</u> | | | | | | |
| Public and private primary schools (per 100 000 inhabitants) | 105 | 91 | 158 | 164 | 73 | 119 |
| Students enrolled in primary schools (per 10 000 inhabitants) | 1 624 | 1 653 | 1 432 | 1 518 | 1 338 | 1 326 |
| Public library users (percentage of population) | 6.4 | 8.8 | 2.3 | 8.8 | 8.4 | — |

Table 9 (concl.)

| Indicators (1987) | Country total | Region IV | Region V | Region VI | South Atlantic Autonomous Region | Special Zone III |
|--|------------------|-----------|----------|-----------|---|------------------------|
| <u>Social security</u> | | | | | | |
| Population covered by INSSBI (each 1 000 inhabitants) | 105 | 51 | 32 | 46 | 64 | 52 |
| Child development centres (each 10 000 inhabitants) | 11 | 10 | 1 | 5 | 13 | 13 |

Source: ECLAC, on the basis of information from the Anuario Estadístico de Nicaragua, 1987, in press; National Institute of Statistics and the Census (INEC), 1988. Several tables.

a/ The location of each region is given in map 2.

b/ The figure for Region V corresponds to 1983; for Region VI, to 1984.

Table 10

NICARAGUA: INDICATORS OF THE SOCIAL COST OF THE HURRICANE

| Sector | Percentage of damage to accumulated stock a/ | Reconstruction period (years) | | Examples of construction deferred due to reallocation of funds to reconstruction d/ |
|----------------------|---|-------------------------------------|---|---|
| | | Allocating all sector investment b/ | Allocating investment earmarked for affected regions c/ | |
| Health | 3.1 | 4.2 | 61 | 10 fully-equipped health centres (with new beds) |
| Education | 4.8 | 2.2 | 24 | 370 new schools (furnished) |
| Housing | 2.7 | 37.5 | 376 | 17 648 new medium standard dwellings |
| Water and sanitation | ... | 0.1 | 2 | 2 292 ^{e/} household drinking water connections |

Source: ECLAC, based on information provided by the Department of Planning and the Budget (SPP), Ministry of Health (MINSA), Ministry of Education (MED), National Institute of Statistics and the Census (INEC), Nicaraguan Institute for Land Studies (INETER), Nicaraguan Institute of Water Supply and Sewerage (INAA) and reports by regional Presidential delegates.

a/ Based on October 1988 prices. Data on the value of accumulated capital stock in the water and sanitation sector were not available.

b/ Assuming that the entire national investments of the sector were assigned to reconstruction; estimates based on actual 1981-1988 figures.

c/ Assuming that only the traditional levels of investment (1981-1988) in the regions affected by the hurricane were assigned to reconstruction.

d/ Examples of new construction which will not be undertaken in the sector because of the need to allocate all such funds to reconstruction.

e/ Includes the cost of associated public service facilities.

160. Even assuming that the entire national investment budget could be devoted to replacing the assets which had been available to the various social sectors, it is clear that it could well take many years to attain an acceptable level of normalcy in the living conditions of the population affected by the hurricane.

161. This further underscores the need for the international community to express its solidarity and to co-operate with the Nicaraguan people in order to avoid a further deterioration in their living conditions.

IV. INTERNATIONAL CO-OPERATION REQUIREMENTS

1. Justification

162. As mentioned in the foregoing sections, the natural disaster caused by hurricane Joan resulted in considerable direct damage and will produce a number of adverse effects in the medium term.

163. Fortunately, the loss of life was not as great as might have been expected, thanks to the efforts made by the government to evacuate and protect the population. Nonetheless, there was considerable damage in terms of the nation's capital assets, its natural resources and the production of goods for export and for domestic consumption. The greatest losses of all, however, were sustained by the most disadvantaged groups of peasants and small-scale tradespeople, whose living conditions and family-based economies were the most seriously affected by the natural disaster.

164. The country is now required to make unforeseen expenditures in order to rehabilitate and replace --instead of increasing-- its capital assets, at unit costs that will be much higher than the original value of the assets which were damaged or destroyed.

165. This occurs precisely at a time when the Nicaraguan economy is severely depressed due to the fact that its external sector is being seriously affected by the continuance of the economic blockade on its exports and by other unfavourable conditions and as a result of the need to allocate a considerable proportion of public expenditure to defence. In addition, it occurs at a time when the government has already embarked upon a programme of adjustment and stabilization aimed at restoring basic macroeconomic balances, the first results of which have barely begun to be felt.

166. Emergency expenditures and the requirements of rehabilitation and reconstruction will place even greater burdens on public sector finances --since expenditures will necessarily increase and public-sector revenues decline-- and on the balance of payments as a consequence of the increase in imports and the decrease in exports.

167. Even if Nicaragua were to earmark for reconstruction all the financial resources which it has traditionally allocated to investment, it would still take many years to build its capital assets back up to the level that existed prior to the disaster. Moreover, this would mean leaving aside important economic and social development projects which are under execution or which were about to be initiated.

168. This shows that Nicaragua does not have the capacity to attend, simultaneously and by itself, to both the requirements of reconstruction and the long-term efforts required to achieve sustained development and improve the living conditions of its population. There is, therefore, no doubt that the solidarity and co-operation of the international community are indispensable in order to reduce the sacrifices of the Nicaraguan population.

2. Objectives and characteristics of the co-operation required

169. An assessment of the damage caused and of the economic and social consequences of the disaster has made it possible to define the following objectives with regard to international co-operation:

a) To restore the assets and economy of the peasantry, and the general living conditions in the affected regions;

b) To replace the capital assets and the natural resources which were destroyed or damaged; and

c) To restore --and even to improve-- the productive and export capacity of the affected sectors.

170. The amount of the co-operation required to fulfill these objectives is estimated to be approximately US\$500 million, spread over a period of from three to five years beginning in 1989. Such co-operation should be additional to --and not a replacement for-- the co-operation currently being received by the country for its regular development programmes and projects.

171. Such co-operation should consist of donations and very soft-term loans as regards repayment periods, grace periods and interest rates if it is to achieve its expected results.

172. In view of the severe shortage of foreign exchange and of the limited availability of strategic inputs --such as fuel and cement-- for reconstruction, it should also be possible to use such loans to finance the importation of these project components which would normally be paid for by disbursements in local currency.

173. Finally, donors --whether bilateral or international sources-- should expedite their traditional procedures for the evaluation of projects and approval of loans and donations, as well as make them more flexible, in view of the urgent need to undertake the tasks of rehabilitation and reconstruction.

3. Specific co-operation requirements

174. It is not necessary to wait until complete rehabilitation and reconstruction programmes and projects have been drawn up in order to be able to indicate the fields in which international co-operation is required as soon as possible. The diagnostic study presented in this document clearly identifies the areas, sectors and geographic districts which should be given priority attention. In addition, the government is engaged in the formulation of requests for the financing of specific projects within the framework of the above-mentioned priorities.

175. The annex to this document describes proposed technical and financial co-operation projects relating to the various stages of rehabilitation and reconstruction. This does not mean, however, that they should follow a strict chronological order since, in many cases, they will have to be undertaken simultaneously on a complementary basis.

176. In practice, the co-operation activities involved in the rehabilitation work differ from those envisaged in connection with the task of reconstruction in that the former will have to be concluded within a maximum period of nine months in order to permit the resumption of both national and family-based economic activity, whereas the latter could be completed within a longer time period.

177. During the rehabilitation phase, co-operation is required in supplying foodstuffs as well as inputs to ensure next year's production, the maintenance of minimum health conditions, and the rehabilitation of roads and bridges in order to permit the timely transport of crops; technical co-operation is also needed to reorient economic policies and to formulate reconstruction projects.

178. During the reconstruction phase, co-operation will be required to rebuild or repair the assets destroyed in all sectors of the Nicaraguan economy. Although the project profiles for the reconstruction phase are presented by economic sector, it is necessary to bear in mind that these are not isolated initiatives. In fact, a comprehensive geographical logic underlies these projects whereby a number of different projects, in combination with one another, would permit the reconstruction of given localities, as in the cases of Bluefields, El Rama and Corn Island, among others.

179. In the annex to this report, project profiles are presented for each one of these phases in order to illustrate the concrete needs for co-operation in connection with rehabilitation and reconstruction which the international community could provide. The annex also includes a number of projects or initiatives designed to prevent or reduce the damage which similar phenomena could cause in the future.

Notes

1/ See R. Jovel, Economic and Social Consequences of Recent, Major Natural Disasters in Latin America and the Caribbean, International Seminar on Regional Development Planning for Disaster Prevention, Nagoya, Japan, 1986.

2/ The population's needs during this emergency period are being met by means of prodigious efforts on the part of the Nicaraguan government, along with some limited international assistance. Nonetheless, due to the nature of the disaster, immediate rehabilitation activities (that will take until August 1989) must be undertaken, as will be discussed in a later section.

3/ It was preceded by hurricane Gilbert, which caused heavy damage in Jamaica, Mexico and the United States.

4/ Tropical cyclones are classified according to their wind velocity, as follows: tropical depression: up to 55 kilometres per hour; tropical storm: 55 to 117 kilometres per hour; and hurricane: over 117 kilometres per hour.

5/ Direct communication from the Director of the National Hurricane Center in Miami.

6/ According to information and statistics provided by the National Hurricane Center, numerous hurricanes and tropical storms have traversed Nicaraguan territory as they moved westward, with those of 1911, 1933 and Irene in 1971 deserving special mention. Only four of them have actually reached the Pacific, and only two (Irene and another in 1887) appear to have crossed the Isthmus on a course located to the south of latitude 12°.

7/ This was the official exchange rate at the time of the disaster.

8/ This table was prepared on the basis of data taken from recent population surveys conducted by the municipalities, as well as from reports concerning the population sectors which sustained various types of damage during or after the disaster.

9/ The average replacement cost for an urban housing unit having 65 square metres of floor space is estimated at 4.8 million córdobas, while such a unit in rural zones is calculated to have a replacement cost of 1.5 million córdobas.

10/ A total of 44% of the cost corresponds to imported materials. This should be borne in mind when selecting reconstruction technologies.

11/ The following figures were used for these calculations: coffee: 2 000 hectares at US\$1 250/ha per production year; basic grains: 1 500 hectares at US\$750/ha per production year; basic grains: 2 500 hectares at US\$500/ha per production year, and highlands: 4 000 hectares at US\$200/ha per production year.

12/ This estimate is based on a charge of US\$12 per cubic metre of wood and on the assumption that 17 cubic metres of usable timber exist per hectare over an area of 500 000 hectares.

13/ See ECLAC, Notas para el estudio económico de América Latina y el Caribe, 1987, Nicaragua (LC/MEX/L.76), March 1988.

14/ Up to February 1988, the monetary authorities were absorbing heavy currency exchange losses as a result of the subsidization of imports, which, for the most part, were paid for at the official exchange rate, whereas the exchange rate paid to exporters was higher and operated as a support price.

15/ It is estimated that during the period 1980-1987 --according to official figures up to the month of August 1988-- the armed conflict had resulted in a total of 56 700 casualties as well as very considerable property damage and production losses.

16/ During the month of February the official exchange rate was abruptly devalued; if the currency conversion is taken into account, the parity was changed from 0.07 to 10 new córdobas. After minor modifications, the córdoba stood at 80 córdobas to the dollar in the month June and subsequently rose to 180 in August and September, 320 in October and 550 in November. While up to July the parallel exchange rate did not exceed the official rate by a great deal, the gap began to widen after July to the point where a rate of 2 000 córdobas to the dollar was reached in early November.

17/ The currency conversion provided for the exchange of 1 000 old córdobas for one new córdoba up to an amount not exceeding 10 million old córdobas. Bank deposits were converted in the same way, except that an adjustment factor was applied to such deposits in accordance with the length of time that had elapsed since the deposit was made.

18/ While these wage increases amounted to 30% in June, 140% in September, 35% in October and 78% in November, on the whole they were nonetheless far below the increase in consumer prices.

19/ This has largely been due to the fact that the measures designed to correct price distortions, which have principally been based on the exchange rate policy and the relaxation of price controls, have had an immediate inflationary effect.

20/ The marked obsolescence of equipment, as well as the damage caused by the use of raw materials of inappropriate specifications, has seriously affected the functioning of the industrial sector in Nicaragua. In turn, this sector was required to adapt to the new economic policy adopted in February and reinforced in June, which has made its adjustment difficult in the short term.