AN EVALUATION REPORT OF THE
P.L. 480 TITLE II PROGRAM
IN MOROCCO

Submitted to
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by

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# TABLE OF CONTENTS

Note on the American Joint Distribution Committee  
.INTRODUCTION ix  
.SUMMARY AND RECOMMENDATIONS xi  
.I. THE NUTRITIONAL SETTING 1  
. Introduction  
. Health Status in Morocco  
. Mortality  
. Nutritional Status in Morocco  
. Food Production  
. Food Consumption  
. Nutritional Deficiencies and Vulnerable Populations 6  
.Title II in the Nutritional Setting 10  
.II. PROGRAM STRUCTURE 15  
. Program Design 21  
. Mother/Child Health 21  
. Food For Work 25  
. Other Child Feeding 41  
. Program Recipients 46  
. Participating Agencies 48  
. Government of Morocco 49  
. CRS/Morocco 52  
. USAID/Morocco 52  
. Inputs 54  
. Outputs 53  
.III. POLICY ANALYSIS 63  
. Government of Morocco and Title II 63  
. General Development Policy Framework 63  
. Title II in the Policy Framework 65  
. GOM Nutrition Policy 67  
. Compatibility of Goals, Policies and Practices Among Title II 70  
. Participants 70  
. Program Priorities 70  
. Policy Issues 70  
. Applications of Title II Guidelines 76  
. Centres Sociaux Educatifs Beneficiary Children 77  
. Unintended Family Recipients 78  
.IV. OPERATIONS AND MANAGEMENT ANALYSIS 81  
. Regulation and Control 81  
. Management System 81  
. Selection of Beneficiaries 84  
. Logistics 86  
. Costs and Budgeting 90  
. Monitoring and Evaluation 93  
. Centres Sociaux Educatifs 93  
. Other Projects 95
TABLE OF CONTENTS (Continued)

V. EFFECTIVENESS ANALYSIS  
<table>
<thead>
<tr>
<th>Sub-Heading</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Target Recipient Groups</td>
<td>97</td>
</tr>
<tr>
<td>Socioeconomic Perspective</td>
<td>97</td>
</tr>
<tr>
<td>Nutritional Status Perspective</td>
<td>99</td>
</tr>
<tr>
<td>Geographical Perspectives</td>
<td>102</td>
</tr>
<tr>
<td>Nutritional Impact</td>
<td>106</td>
</tr>
<tr>
<td>Nature of the Title II/Morocco Rations</td>
<td>107</td>
</tr>
<tr>
<td>Nutritive Value and Suitability of Rations</td>
<td>109</td>
</tr>
<tr>
<td>Impact of Rations</td>
<td>112</td>
</tr>
<tr>
<td>Nutrition Education</td>
<td>123</td>
</tr>
<tr>
<td>Measuring Nutrition Impacts</td>
<td>125</td>
</tr>
<tr>
<td>Socioeconomic Impact</td>
<td>128</td>
</tr>
<tr>
<td>Income Supplement</td>
<td>128</td>
</tr>
<tr>
<td>Vocational Training, Employment Creation and Income Generation</td>
<td>130</td>
</tr>
<tr>
<td>Social Development</td>
<td>132</td>
</tr>
<tr>
<td>Trade Impacts</td>
<td>133</td>
</tr>
<tr>
<td>Cost Effectiveness</td>
<td>134</td>
</tr>
</tbody>
</table>

VI. PROGRAM LINKAGES  
<table>
<thead>
<tr>
<th>Sub-Heading</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Centres Sociaux Educatifs and MOH Linkages</td>
<td>138</td>
</tr>
<tr>
<td>Title II Family Planning</td>
<td>145</td>
</tr>
</tbody>
</table>

VII. Appendix  
<table>
<thead>
<tr>
<th>Sub-Heading</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>147</td>
</tr>
</tbody>
</table>
PORTUGAL
SPAIN
MOROCCO
Ceuta
Oran
Cudiz
Algeciras
Gibraltar (U.K.)
Mediterranean
International boundary
Tangier
Larache
Souk el Arba du Rharb
Al Hoceima
Melilla (Sp.)
Gibraltar
Cádiz
Algeciras (Sp.)
Córdoba
Tetouan
Azrou
Oujda
Marrakech
Rabat
Meknes
KENTRA
Kenitra
Fès
Taza
El Jadida (Mazagan)
Settat
Safi
Benguérir
Beni Mellal
Ksar es Souk
Marrakech
Quarzazate
Oued Oued
Erfoud
Bou Arfa
Béchar
Algeria
El Aaiún
Hagunneria
Lerntid
Semara
Cabo Bojador
Guelta Zemmur
Villa Taguersimet
Cisneros
Bir Gandus
Marieville
Ismailia
Badia
Tarfaya
El Halo
Houma
Meknès
Noureddine
Nouadhibou
Guêria
Atar
Ajlouj
Guelma
Bir Mograin
Taguersimet
Guelta Zemmur
Mauritania
Mali
Canary Islands
(Sp.)
Atlantic Ocean
NOTE ON THE AMERICAN JOINT DISTRIBUTION COMMITTEE

The Title II program in Morocco includes the activities of two U.S. cooperating sponsors: Catholic Relief Services (CRS) and The American Joint Distribution Committee (AJDC).

The American Joint Distribution Committee's share of the program is a very small one compared to the range of efforts sponsored by CRS/Morocco. Totalling only about 284 metric tons of commodities and 4,000 recipients for FY 1979 -- about 0.6 percent of CRS/Morocco's Title II program levels -- the AJDC activities are made up of an MCH project, school funding and institutional feeding for elderly health cases.

The AJDC program is significant, however, because it serves the very limited (25,000 people) and isolated Jewish community of Morocco, a minority religious group which receives no direct assistance or support from the Government of Morocco and which has been tremendously diminished by emigration in the years since the 1967 Six-Day War in the Middle East.
The AJDC program is administered by a central staff of four, including two U.S. citizens, which works in cooperation with local Jewish communities throughout Morocco, though the major focus of the AJDC activity is in Casablanca and Rabat. AJDC has no official status with the Moroccan Government, but through Entraide Nationale the organization has been granted concession of duty-free entry for welfare supplies. The AJDC program financially supports the operation of a number of facilities established by various Jewish communities to serve the Jewish populations of Morocco, including primary and secondary schools, health centers and homes for the aged. Title II commodities channeled through AJDC to these institutions simply represent one of its lines of assistance. The total budget of the AJDC operation is about $1.25 million to $1.5 million annually, of which Title II food represents only about $80,000 or about 5.5 to 6.5 percent.

Based on field visits and interviews with the AJDC/Morocco staff, the Evaluation Team believes that the overall AJDC program is an effective and perhaps critical means of assisting the Moroccan Jewish community. The program is clearly not a "development" oriented effort in Food For Peace policy terms and, in fact, AJDC's Title II food allocation is considered to be humanitarian assistance by the Morocco/Food For Peace Office. Overall Title II support is not a major part of the AJDC program, as underlined above, and if withdrawn its loss could probably be absorbed from other AJDC sources of funding without major difficulty.
Because of the unique situation of the AJDC Title II recipients in Morocco, however, the USAID/Morocco Mission emphasized to the Team that it regards their link to the U.S. Food For Peace Program as important for political as well as humanitarian reasons and indicated that Title II programming decisions for AJDC will continue to be made on those grounds. Therefore the Evaluation Team, recognizing the special status and limited scope of Food For Peace assistance to AJDC/Morocco, has excluded the AJDC component of Morocco Food For Peace from the present evaluation report. Discussion of the Title II/Morocco program that follows refers only to CRS/Morocco related activities unless otherwise specified.
INTRODUCTION

This report was written by Robert R. Nathan Associates, Inc. (RRNA) in response to a request by the Food For Peace Office, U.S. Agency for International Development, to evaluate the Title II program in Morocco. The report was financed under contract AID/otr-C-1380. The Evaluation Team consisted of Mr. Roger W. Manring, Design and Evaluation Generalist and Team Leader; Dr. Jean-Claude Dillion, M.D., Ph.D., Nutrition Planner and Consultant to RRNA; and Mr. Raymond K. Panczyk, Program Generalist, of Catholic Relief Services/New York.

The evaluation study is based upon information obtained during a field trip to Morocco as well as upon documents and briefings provided by the Food For Peace Office of AID/Washington. The Team's field trip to Morocco took place between November 28 and December 20, 1978, and included in-country visits to Title II-supported activities in Rabat and Casablanca Prefectures, and in El Jadida, Marrakesh and Quarzazate Provinces. Activities in all three Title II/Morocco categories were visited: MCH, Food For Work, and Other Child Feeding. The itinerary of project sites visited was developed by CRS/Morocco at the Tea:.'s request, and was meant to present a representative profile of the Title II
program in Morocco. Additionally, the Team interviewed a wide range of persons in the GOM, in the USAID Mission in Rabat, in CRS/Morocco and in the American Joint Distribution Committee in Casablanca associated with or knowledgeable about the Title II program and the nutritional setting in Morocco. A list of persons contacted appears in Appendix A.

The Evaluation Team wishes to express its appreciation to the many individuals in AID/Washington, in the AID/Morocco Mission, on the staffs of CRS and AJDC in Morocco and in the GOM Ministries of Social Affairs and Health who assisted the Team members in their tasks. Special gratitude is reserved for Mr. Moise J. Melul who accompanied the Team on all in-country project visits and whose long experience with the Title II program proved invaluable, and to Mr. Lawrence Flynn, whose backstopping facilitated the Team's work in both Washington and Morocco.
Summary

Nutritional Setting

Data on Morocco's nutritional status are scarce. Nevertheless, many informed observers believe malnutrition to be an important problem despite Morocco's relatively high economic standing in the international community ($525 per capita GDP). One indicator is Morocco's extremely high infant mortality rate, about 130 infant deaths per thousand.

The malnutrition problem appears to encompass both inadequate calorie and protein intake, and vitamin and mineral deficiencies, especially iron and vitamin A. Nutritional deficiencies are greatest and most common among low income groups. Children from about 6 months to 3 years and pregnant and lactating women are believed to be the age groups most severely afflicted. One survey indicated that 40 percent of children 0 to 4 years may be moderately malnourished, and another 4 percent severely malnourished. Malnutrition is probably found throughout Morocco, but may be most common in rural areas and in the Southern and poor mountain provinces. The fact that Morocco has become a heavy importer of basic staples in this decade complicates the country's malnutrition.
and nutritional status problems.

Supplementary feeding programs appear appropriate for combatting malnutrition in Morocco, provided they can be properly focussed on vulnerable groups and critical regions, provide levels of assistance commensurate with nutritional requirements, and operate as part of an integrated effort combining activities to improve social, economic and health conditions. The Title II/Morocco program does not fully meet all these conditions, but represents a potentially valuable instrument to improve nutritional status in Morocco.

Program Structure

The Title II/Morocco program runs at 50,000 metric tons annually, and was USAID's third largest voluntary agency-based Title II country program in FY 1978. In FY 1979 the program will include nearly 615,000 programmed beneficiaries in three project categories.

MCH is the largest single project category with 31,000 metric tons and 450,000 programmed beneficiaries and is considered the priority activity by all Title II/Morocco participating agencies. MCH in Title II/Morocco is known as the Centres Sociaux Educatif project and is sponsored by Entrepide Nationale, a division of The Ministry of Social Affairs and Handicrafts. Its target group is children 2 to 5 years old and women of childbearing age. Its purpose is to improve nutritional status by nutrition and hygiene education. The CSE project has been expanded and developed through a USAID/Morocco OPG grant to the cooperating sponsor
Food For Work projects presently include over 15,000 metric tons and 130,000 beneficiaries. These projects attempt to provide vocational training and/or employment and income generating opportunities based on traditional feminine handicraft skills to girls and women through a variety of cooperative organizations. FY 1979 represents a shift in Food For Work activities. Title II support was withdrawn at the beginning of this fiscal year from a large and popular ouvroit girls training program in favor of new various handicrafts cooperatives to be established for young women and single heads of households. Entraide Nationale has opposed this move and wishes to re-establish support for ouvrois. Also, though USAID/Morocco and CRS/Morocco would like to establish a rural/community development emphasis in the Food For Work project, they have been unable to do so because Entraide Nationale accords such activities low priority.

Other Child Feeding involves over 3,000 metric tons and about 35,000 beneficiaries in two institutional settings, primary school age children in Societe Musulmane de Bienfaisance (SMB) orphanages and preschoolers in garderies day care centers. Title II food aid to SMBs is a high political priority for Entraide Nationale, but is of low importance to USAID/Morocco. Garderies represent a new emphasis for the GOM counterpart agency.
As GOM counterpart agency for Title II/Morocco, Entraide Nationale is responsible for internal transport and distribution of food aid, and for organizing the Title II-supported project activities. Within the GOM, Entraide's mandate is to serve as a "National Welfare Office" and focus upon the socioeconomically disadvantaged in Moroccan society. Through Entraide, Title II/Morocco is able to effectively reach a low-income group of recipients. Title II food aid is the foundation of most Entraide activities and its policymakers consider program directions to be a function of Title II availability.

Catholic Relief Services/Morocco is the Title II cooperating sponsor. It assists Entraide in the conceptualization of organization of Title II projects, and monitors the food distribution system. Thus CRS and Entraide enjoy a close working relationship.

The USAID/Morocco Food For Peace Office closely monitors the local Title II program, and has occasionally exerted great influence in shaping Title II/Morocco activities and objectives.

Policy Analysis

General GOM economic development policies have given effective priority to rapid industrial growth. Agricultural development and growth in food production have been modest. The GCM has no stated policy regarding Title II, but there is evidence that Title II activities are compatible with its goals: the rise of Entraide within the GOM bureaucracy, the
program's character as a low cost source of imported basic staples and the effect of Title II as an income supplement for low income families all conform to GOM policy orientation.

The GOM's commitment to improved nutrition as a national goal is unclear but some encouraging steps have been taken. These include first, the organization of an Interministerial Commission on Food and Nutrition (CIAFOU) to coordinate GOM policies and actions in the nutrition subsector; and second, the creation of a Nutrition Planning Cell (CEPEN), supported by USAID technical assistance, for planning and technical analysis. CEPEN has produced a chapter on Food and Nutrition for Morocco's current plan. While the importance of these two organizations tends to be dismissed by Title II participants, both deserve the strong support of USAID to help them realize their potential.

There is agreement among the participating agencies on purposes and priorities in the key Title II/Morocco M-7 project, but other important unsettled policy issues exist. The question of creating a strong "self-help" rural/community development component in Food For Work is one. This policy disagreement signals a perhaps fundamental difference of orientation between USAID and Entraide with CRS/Morocco somewhere in the middle: a commitment to economic development activities versus emphasis upon more welfare and relief-oriented action. This issue can nevertheless probably be resolved working through the existing CRS Entraide framework.
Title II as "interim assistance" is another policy issue, since neither Entraide Nationale or CRS/Morocco is planning for any kind of Title II phaseout. Replacement of Title II aid by local food resources in the foreseeable future does not appear to be a realistic possibility. If USAID/Washington is committed to reduction and withdrawal of Title II, a clear and firm time-phased program should be agreed upon by CRS/Morocco, Entraide Nationale and USAID. To clarify objectives, achievements and future directions, the participating agencies as a unit could also usefully perform a regular "evaluation and projection" of the Title II/Morocco program.

In general Entraide Nationale and CRS/Morocco attempt to adhere to USAID/Washington's Title II policies and guidelines in implementing the Morocco program. Departures from policy tend to concern the nature of recipient groups, but arise from Morocco's particular conditions. These departures include an MCH focus on children from 2 to 5 years old for interministerial policy considerations, and the fact that family sharing of rations beyond programmed beneficiaries is probably widespread throughout the program.

Operations and Management
Analysis

The Title II program is managed by Entraide Nationale and CRS/Morocco in close cooperation, through a system of joint reporting and joint decision-making on such key issues as relative provincial allocations of Title II assistance. The foundation of the management system is a series of
Entraide delegations in each of the provinces which control local project activities, and a team of CRS Field Auditors who check food distribution and storage at projects and provincial depots throughout the country.

Beneficiaries for the program must be persons who hold a "certification of indigence" issued by civil authorities; actual selection of individual project participants is performed by local government officials on the basis of relative economic need from among such persons.

The logistical system that Entraide has established is the most impressive feature of the Title II/Morocco program. It reaches provinces and prefectures and functions with reasonable efficiency. Record keeping for commodity movements and distribution is well developed. CRS/Morocco has continually sought ways to increase the efficiency of the system.

Both CRS/Morocco and Entraide maintain detailed cost accounts for their operations according to their GOM and CRS/New York requirements respectively. Neither organization has established accounting systems in which total Title II program costs or Title II project category by project category costs are identified. USAID/Morocco keeps its accounts on the Title II/Morocco program in the form of its Recipient Status Reports, which are tied to commodity volumes distributed.
Monitoring and evaluation of Title II/Morocco activities has been interpreted for the most part as an accounting fraction: commodity volumes moved, number of beneficiaries enrolled and project sites established. Critical examination of the relationship among inputs, outputs and desired impacts has not been regularly undertaken for Food For Work and OCF projects. MCH Centres Sociaux Educatifs, however, incorporate a procedure meant to monitor project impacts through monthly weight surveillance of enrolled children. Because of a vast range of other influences on a child's health and nutritional status, this weight surveillance is a fairly insensitive indicator of project effectiveness. Through CRS/Morocco's OPG to develop nutrition education, an attempt to measure the impacts of Centres Sociaux Educatifs activities has been conducted. The results have not been analyzed in detail using statistical techniques.

Effectiveness Analysis

Target Groups. Title II/Morocco serves a broad range of target groups: Centres Sociaux Educatifs mothers and preschool children in MCH; girls, young women, single female heads of households, blind and crippled persons, and certain Title II-related persons in Food For Work; preschool and primary school age children in Other Child Feeding.

From a socioeconomic perspective, these target groups are generally low income individuals for whom food assistance and other Title II outputs (vocational training, nutrition education) can be valuable if projects are effectively implemented. Nutritionally, the target groups appear fairly
appropriate. Title II coverage could be enhanced by widening the scope of the *Centres Sociaux Educatifs* target group to cover the whole of the 6 month to 3 year age interval.

Geographically, the Title II/Morocco program touches populations in all Morocco's provinces and prefectures. The location of project sites and province by province allocations are chosen largely upon administrative and logistical criteria, but have been fairly sensitive to economic need to the province level.

**Nutritional Impacts.** Title II rations are high in calories, proteins, vitamins and minerals and appropriate for what appear to be Morocco's nutritional deficiencies. The rations are also generally acceptable to beneficiaries.

If each ration were consumed by approximately the number of beneficiaries programmed by Title II/Morocco's designers, the rations would make a significant nutritional impact. Because rations are probably shared by all the members of a beneficiary family, their per capita nutritive value is substantially reduced. Family sharing probably most diminishes the value of the MCH rations, since the member of rations distributed per family is far less than the probable coverage family size. In most Food For Work projects the per capita nutritive value of the rations consumed probably more closely approximates the value intended. In Other Child Feeding projects, food sharing also appears to reduce the per capita nutritive value of rations.
The impacts of the rations also depend on the initial nutritional status of the beneficiaries. In the context of the group of children who are intended beneficiaries of the MCH Centres Sociaux Educatifs project, MCH rations probably help children in normal nutritional status and good general health to maintain that state, but do little to improve the nutritional status of children suffering from moderate malnutrition, and have no effect on severely malnourished children.

Improved nutritional status through nutrition education is the major thrust of the Title II/Morocco MCH Centres Sociaux Educatifs project. Effectiveness of the program has not yet been determined. CRS/Morocco has conducted a survey on this issue but additional analysis is required. Nutrition education should be a component of other Title II/Morocco project categories.

In general more internal analysis is called for to help determine nutritional impacts with priority upon the Centres Sociaux Educatifs. A thorough statistical examination of the 1975-78 CRS/Morocco OPG survey of the Centres Sociaux Educatifs program should be undertaken. Additional surveys to develop a better profile of the CSE beneficiaries/commodities would be useful. Various internal CSE procedures to help improve nutritional impact information could be established, including a pattern of home visits by CSE Monitrices.
Socioeconomic Impacts. The income supplement value of Title II rations to beneficiary families is the Title II/Morocco program's most clearcut impact. The Food For Work and MCH rations may each be worth about 60 DH per month to beneficiary families.

The vocational training, employment-creating and income-generating impacts of present Food For Work projects are unclear. No records or monitoring procedures on job placement or earnings of project trainees or cooperative participants have been developed to judge effectiveness of these projects in achieving their stated goals. Without attempts to perform such an analysis, the danger is that many Food For Work projects can easily become modest make-work activities held together only by Title II rations. Other socioeconomic impacts may also be associated with Title II/Morocco, including the influence of CSE and Food For Work projects in enhancing the status of women.

Cost Effectiveness. Cost effectiveness in Title II/Morocco is interpreted to mean moving large volumes of food to needy people with reasonable efficiency. Economic cost and impact data to permit more rigorous measurement of cost effectiveness have not been developed, but would probably be a valuable management tool.
Program Linkages

No close linkages exist between the Title II/Morocco program and other efforts in the nutrition subsector or in general economic development. Because nutritional status and malnutrition are part of a larger health status problem, lack of a close working relationship with the GOM Ministry of Health reduces the effectiveness of the priority MCH Centres Sociaux Educatifs project, as well as that of MOH programs.

The lack of CSE MOH linkages hinders the referral system that CSEs have attempted to establish for children identified by Monitrices to be in need of health care. It also removes the safeguard of periodic review of CSE health auxiliary functions (weight surveillance and referral recommendations) by trained health care personnel. The lack of linkages weakens MOH programs, in particular the MOH Vaccination program, to the extent that CSEs divert mothers and children from participation in MOH Mother-Child Health Centers (PSME) and dispensaries. Finally, because of poor working relationships with MOH, CSEs have attempted to divide the 0 to 5 year age interval with PSMEs and thus exclude critical segments of the most nutritionally vulnerable age group from CSE nutrition education and supplementary feeding activities.
The issue of CSE/MOH relationships should receive priority attention within the GOM. CIAN is the logical institutional context in which to raise the problem, and USAID/Morocco should encourage the participating agencies and MOH to seek discussion and resolution of the linkages question in the CIAN framework.

Also, within the USAID/Morocco Mission discussion of linking Title II food aid to family planning activities is underway. The proposal may be a means of enhancing the effectiveness of the GOM family planning program if the latter's poor performance to date has been largely due to lack of interest on the part of the Moroccan population. If poor performance has been more attributable to lack of GOM commitment, on the other hand, use of Title II rations in family planning activities does not appear advisable.

**Recommendations**

**General**

1. According to USAID policy the Title II program is meant to be interim assistance, but taking into consideration nutritional needs Title II food aid should be continued in Morocco for the next several years.

2. If USAID is committed to substantial reduction or withdrawal of Title II/Morocco in the near or medium term, however, USAID/Morocco, CRS/Morocco and Entraide Nationale should together establish a clear, firm and time-phased reduction/withdrawal plan, reflecting project and recipient
priorities and alternative sources of funding and commodities.

3. For internal planning purposes and to clarify local needs and conditions, the Title II/Morocco participating agencies as a unit should regularly perform a three-to-five year program "evaluation and projection." This exercise would analyze program and project problems and achievements, and would establish future directions, objectives and requirements.

4. To facilitate the above, it is recommended that the participating agencies internally establish and implement regular monitoring and evaluation procedures to critically examine substantive project impacts in relation to stated objectives.

5. Given the interdisciplinary nature of the malnutrition problem -- involving health, social and economic factors -- USAID should seek to strengthen the role of the interministerial CIAN and its related agencies (CEPEN, Nutrition Working Groups) as the key technical and decision-making bodies in the nutrition field.

   a. The Food For Peace Officer should act to make CIAN more aware of Title II objectives and operations in Morocco, and,

   b. Should seek CIAN involvement and counsel in all future Title II planning and programming decisions.

   c. CRS/Morocco should request the assistance of CEPEN in analyzing the results of its recent Central Socialx Educational impact study.
6. AID/Washington should explore with USDA the use of color banding or other more distinctive approaches to the marking of individual Title II commodity packages.

Project Category

MCH

Efforts to achieve collaboration between the Centres Sociaux Educatifs and GOM Ministry of Health activities should be encouraged as a matter of priority importance in the Title II/Morocco Program.

a. Agencies participating in the Title II program should be encouraged to view the commodity assistance as a means of achieving cooperation between the Centres Sociaux Educatifs and MOH activities and as an incentive to bring beneficiaries to take greater advantage of health services available.

b. CIAN is best equipped to deal with the policy issues of collaboration; however, as a point of departure for CIAN discussion, suggests that (1) children at the most vulnerable age (as determined by CIAN) be examined monthly at PSMEs as a pre-condition for receipt of Title II food rations and nutrition education at Centres Sociaux Educatifs; and that children considered to be at lower risk (as determined by CIAN) be examined periodically at appropriate MOH facilities (timing to be determined by CIAN), again as a pre-condition for receipt of CSE/Title II rations and nutrition education.

c. After achievement of cooperation between the Centres Sociaux Educatifs and MOH programs, the CSE target group should be shifted to fully cover children in the most nutritionally vulnerable age interval, by according priority to such children in new CSE enrollments.
2. The Title II MCH program should be better tailored to local nutritional needs.

a. CIAN and CEPEN should be encouraged to study nutritional deficits and requirements by province.

b. The Title II/Morocco participating agencies should be guided by the CIAN and CEPEN analysis in determining the number and location of Centres Sociaux Educatifs facilities and beneficiaries.

3. As CIAN's Working Groups develop new course materials and approaches to nutrition education, groups and organizations involved in the CSE projects should be encouraged to adapt and coordinate their nutrition education efforts with CIAN policy.

Food For Work (FFW)

1. Opportunities appear to exist for expansion of Food For Work activities with a more directly economic development emphasis than those currently underway in Morocco's Title II program.

a. USAID/Morocco should determine whether additional food aid beyond present AER levels would be available if valid economic development-oriented Food For Work projects can be identified.

b. The Food For Peace/Morocco Officer should actively assist CRS and relevant GOM agencies in identifying valid Food For Work projects with an economic development orientation.

c. CRS/Morocco should approach USAID/Morocco for grant assistance to support additional staff and operating expenses for the identification, preparation and monitoring of Food For Work projects.
with a rural development/economic development emphasis.

d. Given economic conditions and practices in Morocco, Food For Work projects which incorporate a cash payment with Title II commodity payments should be considered among potentially valid FFW activities.

2. The Title II/Morocco participating agencies should develop a program of nutrition education activities to accompany food distribution in Food For Work projects.

3. USAID/Morocco should determine whether USAID regulations and Title II food resources would permit -- with adequate controls -- reprogramming certain beneficiaries out of some present Food For Work projects which manifest minimal training or income-earnings potential into a general humanitarian food support category.

4. Food For Work Category (Cooperatives des Femmes Abandonnees, Cooperatives Youssoufia et OAPAM). Given the fact that these beneficiaries are apparently truly in need of FFW food aid, the present Title II commitment to them should be continued. However, the work or training activities in which these beneficiaries are obliged to participate should be reexamined in relation to the real employment and income generation value they represent. If this value cannot be demonstrated, then these cooperatives should be considered for support under another more appropriate category, such as general humanitarian assistance.

5. (Cooperatives d'Apprentissage). An analysis should be conducted of the real income producing and employment opportunities of participants, and the time required
for the cooperatives to reach self-sufficiency. Assuming the economic value of the cooperatives can be demonstrated, Title II food aid should be continued, but only for a clearly predetermined and fixed time period.

6. (Ouvroirs). Given the interest that the GOM has expressed in reestablishing Title II support for the ouvroir program, the value of the ouvroir movement should be re-examined by the Food For Peace/Morocco Officer. This re-examination should focus on at least the three following issues:

- the patterns of attrition and motivation for attendance in ouvoirs on the part of the participants since cessation of Title II food aid;
- value and record of ouvroir training in relation to real employment opportunities; and,
- the value of ouvroirs as a non-formal education effort for girls who might otherwise be excluded from organized education.

Other Child Feeding

1. Garderies. Given that this project is reportedly a priority for the Ministry of Social Affairs, Title II assistance should be continued for Garderies, if Morocco Title II resources permit, despite the fact that the nutritional status of this particular preschool population appears satisfactory. If support is continued, however, safeguards should be increased to ensure individual rations distributed are at a level commensurate with programmed quantities.
2. **SMB Orphanages.** Given the pattern of Title II support that has been established for SMBs and the scarce resources of these institutions, Title II food aid should continue to them and at a level consistent with the actual number of eligible primary school age persons enrolled.
CHAPTER I. THE NUTRITIONAL SETTING

Introduction

Malnutrition exists whenever food intake fails to match the body's requirements.

Nutritional deficiencies may be in the form of vitamin (particularly A, B complex, and D), mineral (particularly iron and iodine), protein or calorie deficiencies.

Protein-calorie malnutrition (PCM) is the most frequent form of malnutrition and constitutes one of the most severe health problems for children in Morocco.

The advanced forms of PCM are kwashiorkor (related to protein deficiency) and, more frequently, marasmus (insufficient intake of total food).

The problems of malnutrition and infection are closely interrelated in Morocco and elsewhere in the developing world. It has been well established that in developing countries infection and malnutrition are often simultaneously present in vulnerable populations, especially preschool
children, and that each reinforces the gravity of the other.\(^1\)

Infection has been recognized as a major factor in the precipitation of acute nutritional deficiencies, especially in chronically malnourished populations. This can be attributed to the fact that bacterial and some other infections often lead to increased loss of nitrogen in the body, to loss of appetite and thus reduced food intake, and to poor nutrient absorption. On the other hand, poor nutritional status tends to impair the body's normal defense mechanisms, thus reducing resistance to infection. One consequence is a high infection-related mortality rate among malnourished children. For such cases, malnutrition alone may not often be the immediate cause of death, but its debilitating effects render far more deadly the common infectious diseases of childhood such as gastro-enteritis, measles and respiratory infections.

In addition, especially among children, malnutrition may have effects on health status with severe long-term consequences. These effects may be physical (impaired growth and development), mental (diminished learning capacity), and economic (reduced productivity and working life).

In sum, because of the interaction between health and nutrition, any attempt to combat malnutrition must be closely linked to efforts to control disease. Similarly, programs to strengthen health status must be carefully integrated with activities to improve nutrition for either to be fully efficient and effective.

Health Status in Morocco

Information on the health status of the Moroccan population is collected by the Division of Health Statistics in the Moroccan Ministry of Public Health, but overall, data is fairly scanty. Table I-1 shows selected key health indicators for Morocco from 1966 and 1973. Since it appears that infants and preschool children in Morocco generally present the greatest health (and nutrition) status risk, the discussion that follows will focus on these two age groups.

Table I-1. Selected Health Indicators for Morocco

<table>
<thead>
<tr>
<th>Indicator</th>
<th>1966</th>
<th>1973</th>
</tr>
</thead>
<tbody>
<tr>
<td>Births/1000</td>
<td>46.1</td>
<td>46</td>
</tr>
<tr>
<td>Deaths/1000</td>
<td>18.7</td>
<td>16</td>
</tr>
<tr>
<td>Infant mortality/1000</td>
<td>149.0</td>
<td>130</td>
</tr>
<tr>
<td>Life expectancy at birth (years)</td>
<td>47.0</td>
<td>53</td>
</tr>
</tbody>
</table>

Source: 1966 - Ministry of Health Statistical Office

Mortality

Sample surveys conducted before 1973 have indicated that the infant mortality rate in Morocco was approximately 170 per thousand in rural areas and 100 per thousand in urban areas. In 1973 the rate for the whole country was reported
4.

to be 130 per thousand.¹

The high incidence of measles, malnutrition (see nutrition section), and poor sanitary conditions in urban as well as rural areas contribute significantly to the high infant mortality rate.

Upper respiratory infections and gastro-intestinal diseases accounted for over one third of recorded infant deaths as seen in Table I-2.

Table I-2. Infant Mortality and Causes of Death (1970)

<table>
<thead>
<tr>
<th>Cause of Death</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Congenital malformations, diseases of early infancy</td>
<td>18.64</td>
</tr>
<tr>
<td>2. Gastro-enteritis</td>
<td>12.75</td>
</tr>
<tr>
<td>3. Pneumonia, broncho-pneumonia</td>
<td>10.00</td>
</tr>
<tr>
<td>4. Other infection diseases</td>
<td>8.40</td>
</tr>
<tr>
<td>5. Tuberculosis, all forms</td>
<td>6.88</td>
</tr>
<tr>
<td>6. Heart diseases</td>
<td>6.08</td>
</tr>
<tr>
<td>7. Accident</td>
<td>3.43</td>
</tr>
<tr>
<td>8. Other respiratory diseases</td>
<td>3.30</td>
</tr>
<tr>
<td>9. Other diseases of the digestive system</td>
<td>2.81</td>
</tr>
<tr>
<td>10. All other diseases</td>
<td>27.71</td>
</tr>
<tr>
<td>TOTAL</td>
<td>100.00</td>
</tr>
</tbody>
</table>


These data are, however, incomplete since they represent only causes of death as recorded by MOH hospital facilities.

Morbidity statistics are far more complete than mortality data despite the fact that the private health sector does not always report to the Ministry of Health (MOH). These data are published in summary form in the Quarterly and Annual Human Health Bulletins of the MOH and in Maroc en chiffres, a publication of the Division of the Statistics of the Ministry of Planning. The present discussion will consider exclusively the morbidity in preschool children which constitutes the most vulnerable group.

The most common and important severe illnesses in infancy and early childhood in Morocco are diarrhea, respiratory infections, measles, pertussis (whooping cough), malaria, tuberculosis and tetanus. Illnesses occur about three times more frequently in the 0 to 5 age interval than at age 5-15.

Environmental factors such as adequacy of water supplies and toilet facilities are closely associated with the risk of infection in infancy and early childhood. Diarrheal diseases occur primarily from fecally contaminated food and water, and account for 40 to 50 percent of postnatal deaths in infants.

Socioeconomic factors such as education and family income also play a significant role in determining the health or nutritional status of the family; educational attainment of the mother is a powerful predictor of infant
mortality and morbidity. Low educational attainment is associated with a host of socioeconomic variables. low income, poor sanitation facilities and inadequate housing, among others.

The specific contribution of each of these factors to infant and child morbidity and mortality is impossible to assess. Therefore, any attempt to combat malnutrition in pre-school children must take into consideration three complementary forces: food, education and sanitation.

**Nutritional Status in Morocco**

At present data are scarce on the nutritional status of Morocco. A national nutrition survey to be conducted by the Ministry of Health in connection with the upcoming Moroccan Population Census in 1980-81 is expected to help remedy this situation. For lack of comprehensive information, no firm consensus exists among specialists on the precise characteristics and pervasiveness of malnutrition in Morocco. Nevertheless a significant number of informed national and foreign observers appear to believe that the country does have a nutrition problem, of which the general outlines can be suggested.

**Food Production**

Morocco is a food deficit nation. Rapid population growth, low productivity among the mass of small farmers who represent the bulk of agricultural activity, and variable rainfall have meant that domestic production is less and
less able to cover national food requirements.

The problem is particularly critical in the grain subsector. Wheat (bread wheat and durum), barley and corn are Morocco's basic dietary staples and approximately 80 percent of cultivated land is devoted to these crops. Prior to 1970, the nation was self-sufficient in basic grains in any normal cropping year. Since 1970, however, domestic grain utilization requirements have consistently outstripped domestic production capability, so that Morocco has become a net grain importer. This deficit has grown steadily throughout the decade and grain imports reached record levels of 1.9 million metric tons in 1977, an especially poor harvest year (Table I-3).

Domestic production has also been inadequate to meet needs in other key food areas. Vegetable oils, which are another mainstay of the Moroccan diet, have consistently been an import item over the last decade, despite the country's substantial olive production and increased output of other oilseeds. Sugar -- still another basic food for Moroccans -- and milk and milk products have also been constant import items, although a "sugar plan" involving rapid expansion of sugar cane cultivation has increased domestic sugar production.

Morocco's domestic production in some crop areas is sufficient to cover national consumption levels and generate substantial export volumes as well: notably citrus fruits, tomatoes and garden vegetables. In fact, in the 1950s and
Table 1-1. Morocco Total and Per Capita Grain and Wheat Production, Utilization and Human Consumption, and Total Grain and Wheat Imports and Exports, 1960-1978

<table>
<thead>
<tr>
<th>Period of Year</th>
<th>Grain Production</th>
<th>Grain Utilization*</th>
<th>Human Consumption</th>
<th>Grain Imports</th>
<th>Grain Exports</th>
<th>Wheat Production</th>
<th>Wheat Utilization*</th>
<th>Human Consumption</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>thousands of metric tons</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>kilograms</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1960-1964</td>
<td>3,142</td>
<td>4,100</td>
<td>2,770</td>
<td>310</td>
<td>225</td>
<td>305</td>
<td>353</td>
<td>239</td>
</tr>
<tr>
<td>1965-1969</td>
<td>3,531</td>
<td>4,727</td>
<td>3,575</td>
<td>1,210</td>
<td>111</td>
<td>120</td>
<td>334</td>
<td>246</td>
</tr>
<tr>
<td>1970-1974</td>
<td>5,600</td>
<td>5,844</td>
<td>4,800</td>
<td>1,110</td>
<td>111</td>
<td>150</td>
<td>304</td>
<td>224</td>
</tr>
<tr>
<td>1975-1979</td>
<td>2,042</td>
<td>2,042</td>
<td>2,042</td>
<td>1,023</td>
<td>1,023</td>
<td>251</td>
<td>317</td>
<td>228</td>
</tr>
<tr>
<td>1980-1984</td>
<td>6,410</td>
<td>5,995</td>
<td>4,045</td>
<td>1,623</td>
<td>1,623</td>
<td>241</td>
<td>315</td>
<td>132</td>
</tr>
</tbody>
</table>

* Includes animal feed and seed use plus losses and human consumption.

1960s, because of its output of these crops Morocco was a net agricultural product exporter. However since about 1973, food export volumes have remained roughly stable, while grain and other food import needs have soared. As a result, since 1974 food export revenues have no longer covered food import bills.

According to preliminary analyses prepared by GOM planners, the basic structure of Morocco's food deficit is likely to persist, at least over the short term, even with improvement in the rate of increase of Moroccan agricultural production. Projections to 1982 show that Morocco's output of grains, vegetable oils, sugar, milk and milk products and meat are all likely to continue to fall short of national needs, while only fruits, vegetables and pulses will both contribute substantially to exports and still meet domestic consumption requirements.¹

A policy of food importation does not necessarily entail poor nutritional status, so long as a nation's foreign exchange earnings are strong and its internal marketing and distribution systems are efficient. According to available data, Morocco has in fact been able thus far to import sufficient quantities of basic grains to maintain constant human per capita consumption levels, despite poor production years and continued rapid population increase (Table 1-3). But it is unsettling that Morocco must import

¹. CPREM (Collège de Planification et d'Etudes Nutritionnelles) draft chapter on Food and Nutrition prepared for the Fourth Economic and Social Development Plan, pp. 16-7.
such substantial volumes of all its basic staples, paying for these with its earnings in highly competitive and uncertain fruit and vegetable export markets and by drawing upon foreign exchange generated by other sectors (phosphate production), which have theoretically been earmarked for financing long-term economic development. Further, the situation does imply that in the event of loss of markets or declining world prices for Moroccan exports, Morocco's basic food availability and nutritional status could be threatened.

Food Consumption

The basic Moroccan diet depends heavily upon cereals, sugar and oils. It is a food consumption pattern which is fairly high in calories, but relatively low in animal-based protein or in vitamins, calcium and iron. Overall it has been estimated that carbohydrates provide nearly 75 percent of total calories in the average Moroccan's diet -- versus a recommended norm of about 60 percent -- while proteins and fats furnish respectively about 11 percent and 15 percent of total calories, versus their recommended norms of 13 and 25 percent.¹

Together, cereals and other non-animal products account for well over 90 percent of all calories consumed by Moroccans, and almost 86 percent of total protein intake as well. Cereals alone -- especially wheat, the basic staple -- contribute 57 percent of total calories, followed by sugar, providing 11.4 percent, and vegetable oils, providing about 7 percent (Table 1-4). The structure of this food is

¹. CEPEN, ibid., p. 4.
<table>
<thead>
<tr>
<th>Product</th>
<th>Calories</th>
<th>Proteins</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>K cal</td>
<td>Grams</td>
</tr>
<tr>
<td>Cereals</td>
<td>1,709.0</td>
<td>52.0</td>
</tr>
<tr>
<td>Pulses</td>
<td>59.7</td>
<td>3.7</td>
</tr>
<tr>
<td>Fresh vegetables</td>
<td>72.4</td>
<td>3.0</td>
</tr>
<tr>
<td>Fruits</td>
<td>76.0</td>
<td>6.8</td>
</tr>
<tr>
<td>Vegetable Oils</td>
<td>175.0</td>
<td>-</td>
</tr>
<tr>
<td>Sugar</td>
<td>291.5</td>
<td>-</td>
</tr>
<tr>
<td><strong>Subtotal non-animal products</strong></td>
<td><strong>2,383.5</strong></td>
<td><strong>59.5</strong></td>
</tr>
<tr>
<td>Meats</td>
<td>62.6</td>
<td>4.6</td>
</tr>
<tr>
<td>Fish</td>
<td>10.2</td>
<td>1.1</td>
</tr>
<tr>
<td>Eggs</td>
<td>4.7</td>
<td>0.3</td>
</tr>
<tr>
<td>Milk and milk products</td>
<td>90.0</td>
<td>3.9</td>
</tr>
<tr>
<td><strong>Subtotal animal products</strong></td>
<td><strong>167.5</strong></td>
<td><strong>9.9</strong></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>2,551.1</td>
<td><strong>69.4</strong></td>
</tr>
</tbody>
</table>

a. May not add to totals due to rounding errors.

particularly inadequate for small children who are not able to eat enough bulky staples foods to satisfy their nutritional needs.

At a national average level, per capita total calorie and protein requirements may well be covered in Morocco. However, as a national food consumption survey conducted in 1970-1971 by the Ministry of Planning demonstrates, the national averages mask important variations in consumption levels. According to the survey findings calorie intake in Morocco in the early 1970s ranged from about 55 percent of daily needs to 125 percent of daily needs. Also, protein intake among persons sampled was found to vary from about 77 percent of daily needs to 145 percent of daily needs.¹

Variations from national average consumption levels for calories or protein depend upon a number of factors. Socio-economic status is particularly important in determining the nature and level of an individual's food intake in Morocco. The 1970-1971 survey revealed, for example, that animal protein supplied only 11 or 12 percent of the total protein intake of agricultural workers who represent the vast majority of the labor force, but up to 41 percent of the total protein intake of professional workers. At a minimum it is considered desirable that animal protein represent about a fifth of total protein intake and a person is judged malnourished when less than 80 percent of daily needs are met. Additionally, based on recent analysis, the Cellule de Planification et d'Etudes Nutritionelle (CEPEN) -- the Government of Morocco's agency for nutrition planning --

suggests that for the roughly one-third of the Moroccan population who represent the country's lowest income groups, average calorie consumption may be below 80 percent of daily requirements, and that for the very lowest income classes -- roughly 15 percent of the total population -- average calorie consumption may drop to 60 percent of daily requirements. On the other hand, people in roughly the upper half of the Moroccan income distribution may cover 100 to 200 percent of their required daily calorie intake. Also, protein consumption by economic class is believed to follow a similar pattern to that of calorie intake.¹

Strong regional variations in Moroccan food consumption levels also exist. Recent elaboration of 1971 data on regional patterns of food availability and nutritional status performed by consultants to CEPEN indicate that all regions of Morocco may include substantial "populations at risk" -- groups within total regional populations whose food intake is in some manner less than recommended norms. Table I-5 presents estimates of regional populations at risk for inadequate protein and caloric intake. Clearly populations in the southern regions of Morocco tend to be most nutritionally disadvantaged.²

¹. CEPEN, op. cit., p. 4.
². J.S. McCullough and A.S. David, A Preliminary Analysis of Patterns of Food Availability and Nutritional Status in the Kingdom of Morocco (Research Triangle Institute: July 1977) Table 4, p. 17.
Table I-5. Estimated Populations at Risk for Inadequate Protein and Calorie Intake, by Region

<table>
<thead>
<tr>
<th>Economic region</th>
<th>Total population in thousands of persons (estimated 1975)</th>
<th>Protein inadequacy b</th>
<th>Calorie inadequacy c</th>
</tr>
</thead>
<tbody>
<tr>
<td>South</td>
<td>1,898</td>
<td>1,332 70.1</td>
<td>1,563 82.4</td>
</tr>
<tr>
<td>Tensift</td>
<td>2,625</td>
<td>1,377 52.4</td>
<td>1,502 52.2</td>
</tr>
<tr>
<td>Center</td>
<td>4,638</td>
<td>2,434 52.6</td>
<td>2,729 58.8</td>
</tr>
<tr>
<td>Northwest</td>
<td>3,395</td>
<td>1,852 54.2</td>
<td>2,077 61.1</td>
</tr>
<tr>
<td>North Center</td>
<td>2,121</td>
<td>1,217 57.4</td>
<td>1,394 65.7</td>
</tr>
<tr>
<td>Orientale</td>
<td>1,300</td>
<td>628 48.3</td>
<td>692 53.2</td>
</tr>
<tr>
<td>Center South</td>
<td>1,329</td>
<td>763 57.4</td>
<td>883 66.4</td>
</tr>
<tr>
<td>Total</td>
<td>17,306</td>
<td>9,603 55.5</td>
<td>10,840 62.6</td>
</tr>
</tbody>
</table>


b. Protein inadequacy defined as \( \frac{\text{protein intake}}{\text{RDA for protein}} \) less than 1.

c. Calorie inadequacy defined as \( \frac{\text{calorie intake}}{\text{RDA for calories}} \) less than 1.

Source: J.S. McCullough and A.S. David A Preliminary Analysis of Patterns of Food Availability and Nutritional Status in the Kingdom of Morocco (Research Triangle Institute: July 1977). Tables 5, 6 and 12.
Nutritional Deficiencies and Vulnerable Populations

Young Children

In general, research and observation seems to indicate that young children are the single most vulnerable population group in Morocco to the problems of inadequate and unbalanced food intake. Children between the ages of 6 months to 3 years in particular appear to be most affected, and show the greatest proportions of protein-calorie malnutrition or rickets of any group in Moroccan society.

A national nutrition survey conducted by the Ministry of Health in 1971 represents the most recent information available on nutritional deficiencies among children, and offers the basis for present opinions. The survey covered about 6,300 children 4 years of age or under. It demonstrated that although birth weights of Moroccan infants were not unusually low and that growth curves from birth to six months were normal, after six months increases in weight and height slowed considerably for many children through the age of thirty months. This slow growth pattern was attributed to the action of nutritional deficiencies -- protein-calorie malnutrition -- and childhood infections. In particular children between the ages of 10 and 27 months, which includes the critical weaning period, were found most severely affected. Overall, the survey estimated that during the 1970-71 period a total of over one million children in Morocco were probably suffering from second degree protein-calorie malnutrition and that approximately 115,000
children required medical treatment for severe malnutrition.

The survey also focused on incidence of malnutrition among Moroccan children 0 to 4 years by geographical region. Table I-6 presents these estimated incidence rates at the provincial level, adjusted according to 1976 provincial boundaries, and including urban/rural differentials and national averages. While changes in nutritional status may well have taken place since 1971, these data indicate that widespread malnutrition among young children probably exists in every province of Morocco, with greatest prevalence in the presaharan and mountain areas. Malnutrition appears to be somewhat less in the agricultural plains of the west and north and along the coast, as might be expected for these relatively richer food producing areas. Also, throughout the country young children living in rural areas are more likely to exhibit weaker nutritional status than young urban children.1

Besides protein-calorie malnutrition, the 1971 survey also revealed that rickets was an important nutritional problem among children in Morocco. Twenty-three percent of

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1. While not intended to be a sampling exercise, data reviewed by the Evaluation Team in one dispensary/PSME in Ouarzazate Province provide some additional interesting insights into the possible dimensions of the malnutrition problem in one poor and mountaneous area. Of the 957 children 0 to 4 years old examined at the facility between July, 1974 and September 1977: 27 percent showed normal weight for age; 49 percent showed first degree malnutrition; 22 percent showed second degree malnutrition; and 2 percent no record.
### Table I-6. Estimated Incidence of Malnutrition Among Young Children:
Percent of Children in 0 - 4 Year Age Group Afflicted by Moderate and Severe Malnutrition, by Region and Province, 1976^a^  

<table>
<thead>
<tr>
<th>REGION: Province</th>
<th>URBAN</th>
<th>RURAL</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>moderate</td>
<td>severe</td>
<td>moderate</td>
</tr>
<tr>
<td>SOUTH:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tarfaya</td>
<td>.40</td>
<td>0</td>
<td>.52</td>
</tr>
<tr>
<td>Tiznit</td>
<td>.40</td>
<td>0</td>
<td>.52</td>
</tr>
<tr>
<td>Agadir</td>
<td>.40</td>
<td>0</td>
<td>.52</td>
</tr>
<tr>
<td>Quarazzate</td>
<td>.49</td>
<td>.02</td>
<td>.62</td>
</tr>
<tr>
<td>TENTIFTE:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Essaouira</td>
<td>.37</td>
<td>.02</td>
<td>.43</td>
</tr>
<tr>
<td>Marrakesh</td>
<td>.35</td>
<td>.03</td>
<td>.51</td>
</tr>
<tr>
<td>Safi</td>
<td>.37</td>
<td>.02</td>
<td>.43</td>
</tr>
<tr>
<td>El Kala</td>
<td>.35</td>
<td>.03</td>
<td>.51</td>
</tr>
<tr>
<td>CENTER:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>El Jadida</td>
<td>.28</td>
<td>0</td>
<td>.29</td>
</tr>
<tr>
<td>Casablanca</td>
<td>.33</td>
<td>.01</td>
<td>.33</td>
</tr>
<tr>
<td>Serrat</td>
<td>.34</td>
<td>0</td>
<td>.31</td>
</tr>
<tr>
<td>Khouribga</td>
<td>.32</td>
<td>.02</td>
<td>.50</td>
</tr>
<tr>
<td>Beni Mellal</td>
<td>.36</td>
<td>.01</td>
<td>.46</td>
</tr>
<tr>
<td>Azilal</td>
<td>.36</td>
<td>.01</td>
<td>.46</td>
</tr>
<tr>
<td>NORTHWEST:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rabat</td>
<td>.33</td>
<td>.01</td>
<td>.33</td>
</tr>
<tr>
<td>Khemisset</td>
<td>.35</td>
<td>.03</td>
<td>.38</td>
</tr>
<tr>
<td>Kenitra</td>
<td>.35</td>
<td>.03</td>
<td>.38</td>
</tr>
<tr>
<td>Tanger</td>
<td>.25</td>
<td>.01</td>
<td>.18</td>
</tr>
<tr>
<td>Tetouan</td>
<td>.32</td>
<td>.05</td>
<td>.39</td>
</tr>
<tr>
<td>Chechaouen</td>
<td>.32</td>
<td>.05</td>
<td>.39</td>
</tr>
<tr>
<td>NORTH CENTRAL:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Al Hoceima</td>
<td>.25</td>
<td>0</td>
<td>.42</td>
</tr>
<tr>
<td>Taza</td>
<td>.37</td>
<td>.03</td>
<td>.54</td>
</tr>
<tr>
<td>Fez</td>
<td>.23</td>
<td>.07</td>
<td>.49</td>
</tr>
<tr>
<td>Boulemane</td>
<td>.23</td>
<td>.07</td>
<td>.49</td>
</tr>
<tr>
<td>ORIENTALE:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oujda</td>
<td>.29</td>
<td>.01</td>
<td>.46</td>
</tr>
<tr>
<td>Nador</td>
<td>.24</td>
<td>.04</td>
<td>.46</td>
</tr>
<tr>
<td>Figueira</td>
<td>.29</td>
<td>.01</td>
<td>.46</td>
</tr>
<tr>
<td>SOUTH CENTRAL:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kaar es Souk</td>
<td>.38</td>
<td>.02</td>
<td>.54</td>
</tr>
<tr>
<td>Kenitra</td>
<td>.35</td>
<td>.02</td>
<td>.38</td>
</tr>
<tr>
<td>Meknes</td>
<td>.35</td>
<td>.02</td>
<td>.38</td>
</tr>
<tr>
<td>SAHARA PROVINCES:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Laâyoun</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Smara</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Foum Zder</td>
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<tr>
<td></td>
<td>TOTAL</td>
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<td>.02</td>
</tr>
</tbody>
</table>

^a^ "Moderate Malnutrition" is defined as exhibiting between 40 and 61 percent of normal body weight; "Severe Malnutrition" is defined as below 40 percent of normal body weight.

all children examined manifested at least one clinical symptom suggestive of rickets and 4 percent were affected with clinically evident rickets. Since that time, however, an intensive preventive campaign was undertaken featuring distribution of doses of vitamin D to children at PSME centers.

It is presently believed that vitamin A deficiencies may also be a significant nutritional problem, leading to blindness and xerophthalmia in arid and semi-arid regions. Moreover, of particular concern given Morocco's high infant mortality rates, vitamin A deficiencies may also be an important factor complicating the cycle of childhood diseases in Morocco.¹

Pregnant and Lactating Women

In addition to young children, CEPEN has indicated that pregnant and lactating women are likely the second most notable nutritionally vulnerable group in the Moroccan population.² Studies conducted in 1967 suggest that women in the child bearing years suffer from iron deficiencies in particular, as well as possible deficiencies in protein, calcium and certain vitamins. Anemia due to inadequate iron among women of child-bearing age may be especially serious, and is aggravated by multiple pregnancies and often accompanied by intestinal parasites.

¹. CEPEN, Ibid., p. 7 bis.
². CEPEN, draft Food and Nutrition chapter, op. cit., p. 6.
Title II in the Nutritional Setting

If, as suggested, malnutrition is an important problem in Morocco, especially among young children and women of child-bearing age, and especially in certain provinces, might supplementary feeding programs be part of an appropriate response? The answer would appear to be a qualified yes, provided that such programs can first, be properly focussed on the most vulnerable groups; second, provide food assistance at levels commensurate with nutritional requirements; and third, form part of an integrated effort dealing with a host of medical, economic and social factors contributing to malnutrition among vulnerable groups.

In view of these prerequisites, while the Title II/Morocco program as a supplementary feeding activity appears to make a sigrificant economic (income supplement) contribution in Morocco, its purely nutritional effect is probably considerably less significant. Several factors contribute to reducing the present nutritional impact of supplementary feeding through Title II/Morocco. For one, the theoretical exclusion of children under 2 years from the Morocco MCH Title II target group means that the program's coverage of the apparently most nutritionally vulnerable population by its largest and priority activity is less than systematic. For another, location of and participation in Title II projects are decided largely by criteria other than nutritional need. In addition, the practice of family sharing of Title II rations means that the food supplement that ultimately reaches each programmed beneficiary is probably substantially less than intended. Finally, while the priority MCH project
makes a commendable effort to deal with the social and environmental factors involved in malnutrition, Title II/Morocco generally lacks linkages with mainstream health programs; malnutrition in Title II/Morocco is therefore not approached as part of a broad health status problem, and the efficiency of Title II supplementary feeding is decreased as a result.

At 50,000 metric tons annually the Title II/Morocco program is a sizeable undertaking in absolute terms. Given family sharing of rations, it may touch over 1.2 million people in Morocco, including perhaps as many as 200,000 women of childbearing age and 360,000 preschoolers. On the other hand, relative to the possible dimensions of Morocco's malnutrition problem, the program is still a limited effort. If, for example, 40 percent of Morocco's present roughly 3.4 million children 0 to 4 years are malnourished as evidence in the 1970-71 MOH survey tends to indicate, then at best the intended and unintended recipients of the Title II program can represent only about one quarter of the afflicted population of young children. Nevertheless the Title II program represents a potentially valuable instrument to improve nutritional status in Morocco, and every effort should be made to overcome its present limitations and enhance its effectiveness.
CHAPTER II. PROGRAM STRUCTURE

Program Design

A variety of projects makes up the Title II Food For Peace Program in Morocco. For FY 1979 these projects include Mother-Child Health (MCH), several Food For Work (FFW) activities, and Other Child Feeding (OCF) for orphanages and preschools. Despite the range of project activities involved, the entire Morocco Title II effort is a joint program of CRS/Morocco and Entraide Nationale, a major division of the GOM's Ministry of Social Affairs and Handicrafts.

Mother/Child Health

The MCH project with 450,000 planned recipients in FY 1979 is presently the largest component of the Morocco Food For Peace Title II program. MCH is also regarded by all the agencies participating in Title II -- Entraide Nationale of the Ministry of Social Affairs, Catholic Relief Services and USAID/Morocco -- as the high priority Title II project.

In Title II/Morocco MCH is known as the Social Education Centers or CCE (Centres Sociaux Educatifs) project. This is due to the fact that the Title II/Morocco MCH effort is organized not within the Ministry of Health and its regular
Mother-Child-Health or dispensary program as in many other Title II countries, but within the Entraide Nationale Division of the Ministry of Social Affairs and Handicrafts. This arrangement derives from the fact that the sponsoring agency's (CRS') operating agreement with the GOM is signed with Entraide Nationale, and because the Ministry of Health proved disinterested and ineffective in handling limited Title II food distribution through its PSME-dispensary structure in the early 1970s.

Beginning with a handful of Centers in 1972, a total of 250 CSEs were in operation at the end of FY 1978, with another 50 to be opened in FY 1979. The Centers, which are scattered nationwide, each enroll about 500 mothers -- 20 groups of 25 mothers each -- who present themselves once monthly to receive Title II food allocations. Rations are provided for the mother, for a child also enrolled in the project who accompanies her each month to the Center, and for a second child at home. The Title II food distribution provides an opportunity for monthly weight surveillance of the enrolled child, taken to be a general health status indicator and a basis for referral to MOH facilities in case of prolonged weight loss or lack of weight gain; and for nutrition and hygiene education in the form of group lessons to enrolled mothers. The centers are staffed by teams of 2 to 3 Monitriores who administer the food distribution and give the nutrition education sessions.

Of the three functions that the CSEs are now charged to perform -- channel for distribution of Title II food, point of contact for identification of basic nutrition/health
status problems, framework for conduct of nutrition education effort -- CRS, USAID and Entraide Nationale emphasize that the last activity is most significant. In fact, representatives of the three agencies agree that provision of nutrition education to participating mothers as a means of improving nutritional status is the fundamental purpose of the Title II/Morocco MCH project.

The expansion of the CSE project over the past five years has been in part a function of the availability of Title II commodities through CRS. But the evolution of the CSE concept from its early (1972) role as a simple food distribution point to its present broader focus results largely from an Operational Program Grant (OPG) made available by USAID to CRS/Morocco between 1975 and 1978 to establish a basic nutritional education program for Morocco. The $453,000 OPG funding was directed in particular toward creation of the Ministry of Social Affairs School of Nutrition in Marrakesh, the technical foundation of the CSE network. With OPG funds and CRS/Morocco participation, the School has developed 3 year's annual curricula for the CSE activities and has trained 500 Monitores who staff the CSE Centers through three annual month-long training cycles.

Additionally, OPG funds financed the training of 25 Provincial Monitores who supervise the CSE project through a short course at the National Institute of Nutrition of Tunis, Tunisia (NINT); and also financed three year degree programs at NINT for four Ministry of Social Affairs nutrition specialists, including the three core professors at the Marrakesh School of Nutrition. Finally, some OPG
funds also permitted purchase of various equipment and materials for the CSEs, notably audio-visual aids and teaching materials, and the weight chart cards issued to each mother of a child enrolled in the CSE project.

Food For Work

At present there are several different Food For Work activities underway in the Title II/Morocco program, most involving skills development for women. Two of these represent new initiatives dating from the beginning of USAID's FY 1979.

Cooperatives d'Apprentissage

The largest component of the present Food For Work project is a new effort, the Cooperatives d'Apprentissage, begun on October 1, 1978, under the sponsorship of Entraide Nationale. While some of these cooperatives are still being organized, in theory by the end of FY 1979 Title II food assistance will be extended to 117 of them -- one for each caidat or local administrative unit in Morocco. Most of the Cooperatives d'Apprentissage specialize in traditional female handicraft production of embroidered, knitted or sewn items. A few emphasize instead on-the-job training in non-traditional fields, notably hair-dressing. The Ministry is to support the new cooperatives with technical, organizational and marketing assistance.

According to CRS/Morocco, Entraide Nationale and USAID/Morocco, the purpose of the new Cooperatives d'Apprentissage
MAP OF MOROCCO

Title II Food for Work Project:
Planned "Cooperatives D'Apprentissage"
by Province, FY 1979

C. d'A. (117) 58,500 Beneficiaries
(Map based on 1976 provincial boundaries)
is to provide employment and income earning opportunities for the more accomplished graduates of Entraide Nationale's ouvroir project, a 3 year non-formal education effort for girls from low income families, focusing largely on teaching traditional handicraft skills. In fact in many cases, the new coops may simply represent an attempt to institutionalize loose working groups of ouvroir graduates who, prior to FY 1979, had continued to frequent the Entraide ouvroirs after completion of their training in order to engage in some joint commercial handicraft production activities and to continue to draw Title II rations. Many coops, for example, continue to gather in ouvroir facilities. Perhaps as a result, at this still early point in the new project, most of the Cooperatives d'Apprentissage observed in the field still appear to function more as ad hoc working teams rather than as formally structured cooperatives with well-defined production and marketing practices.

In theory the Cooperatives d'Apprentissage are to be operated under the guidance of the Handicrafts Division of the Ministry of Social Affairs and Handicrafts, the Ministry's other major division in addition to Entraide Nationale, and an agency which already has its own handicraft training and cooperative production program. In practice, however, Entraide Nationale seems to bear major responsibility for the planning, organization and functioning of the new coop project. Occasionally, though, members of previously existing Handicrafts Division cooperatives appear to have been included in the new project's Food For Work allocations.

Under the Food For Work project, members of the new
Cooperatives d'Apprentissage -- most of whom appear to be girls in their late teens or early twenties -- are to receive Title II rations for themselves and 4 family members as a kind of income supplement until such time as the organizations become better established and the members more self-sufficient. The original concept of the cooperatives calls for this Food For Work support for each individual member to last for a period of one year, after which time the designated food ration would be transferred to another (newly acquired) member of the cooperative. At this early stage of the project, policy makers in CRS and in the Ministry of Social Affairs and Handicrafts are unclear that this will be a practical pattern: they believe that longer term support for individuals may be needed and that in any case 7 or 8 years of support to cooperatives themselves may be required before the organizations become firmly established.

Cooperatives des Femmes Abandonees

Another new Food For Work project, just begun in FY 1979, focuses on organizing production cooperatives of indigent women who are heads of households through divorce, widowhood or labor emigration of spouses. About 35 coops are planned, and several have already been organized in the few months since the beginning of FY 1979. Production of traditional handicraft items for sale, especially rugs and embroidered and sewn materials, complemented by skills training in sewing and weaving, is the focus of activities for these women's cooperatives.
MAP OF MOROCCO

Title II Food for Work Project:
Planned "Cooperatives des Femmes Abandonnees"
by Province, FY 1979

C des FA (85) 42,500 Beneficiaries
(Map based on 1978 provincial boundaries)
Entraide Nationale and CRS/Morocco see these cooperatives as sources of employment and income for needy women who have little education or employable skills but are forced to support their families. Some Entraide and municipal officials also suggested that these "cooperatives of single woman heads of households" also represent an influence for the "emancipation of women from their traditional roles in society." Members of the cooperatives, all of whom pay a small monthly contribution to the operating expenses of their organizations, receive Food For Work rations for themselves and 4 dependents as an income supplement and an incentive to participate in the cooperative activities. They also receive technical help from Entraide, which provides some equipment and assistance in organization and skills training.

The cooperatives of "abandoned women" represent a new direction in the Morocco Food For Work project. While they are to be sponsored and organized by Entraide Nationale with assistance from CRS, the concept apparently originated with the USAID/Morocco Food For Peace Office in response to data demonstrating that Morocco's active female labor force (employed or seeking employment) has rapidly increased in recent years and that many new female labor force entrants are middle aged female heads of households -- probably divorced or widowed -- over 45 years old.¹ Entraide Nationale and local municipal authorities with which it cooperates have evidently made a strong effort to form the new coopera-

tives, but it is uncertain how committed either body will be to the long term life of the project, or whether the Cooperatives des Femmes Abandonnees are a strong priority in relation to other Entraide activities with Title II association -- especially the ouvroir program recently dropped from Food For Work support. In addition, some caidat-level officials maintain that the new cooperatives, useful as they may be for urban populations, are inappropriate in rural areas where women have opportunities to earn income in agricultural labor.

**Blind and Handicapped Cooperatives**

*Entraide Nationale* sponsors cooperatives for the crippled -- Youssoufias -- and the blind -- Organization Alaouite pour la Protection des Aveugles Marocains (OAPAM) -- as part of its general mandate to attend to the welfare of the neediest strata of Moroccan society. These cooperatives are meant to give blind and crippled persons and their families an opportunity to learn handicraft skills and to generate income by producing simple handicraft items for sale.

Food For Work rations at a family rate of a worker plus four dependents have been provided to the Youssoufia and OAPAM groups since 1970. In the present fiscal year 147 cooperatives representing about 4,000 recipient workers plus dependents will be supported.

The level of complexity of production and organization of the cooperatives appears to vary considerably -- members
of one Youssoufia in Casablanca produce artificial limbs, for example -- but many and perhaps most of the cooperatives are fairly modest efforts with relatively limited training opportunities, and involving production of baskets, articles of clothing or rugs. In many cases the actual blind or crippled members of cooperatives do not themselves participate in production or training activities but send members of their families instead.

Entraide Nationale and CRS/Morocco recognize that many of the OAPAM and Youssoufias have limited potential as economic units but maintain that the Food For Work support is an important income supplement to the families involved, and value the project on humanitarian grounds. USAID/Morocco on the other hand has desired to disengage Food For Work support from the Youssoufias and OAPAMs in favor of more clearcut training or production efforts.

Entraide Nationale Staff

Certain staff associated with Entraide Nationale who are involved in projects which receive Title II support also draw mostly Food For Work rations for themselves plus 4 dependents. These staff include the Monitrices responsible for the Centres Sociaux Educatifs, Monitrices responsible for OCF day care centers and personnel who do manual labor in the Entraide Nationale provincial warehouses where Title II commodities are stored. Food For Work rations in these instances represent partial compensation for services performed, and supplement whatever money wages beneficiaries also receive. The total number of recipients projected
within the category for FY 1979 is relatively limited: about 1,800 workers and 7,400 dependents.

**Ouvroirs**

One of *Entraide Nationale's* largest and most popular activities, the ouvroir project ceased to receive Food For Work commodities as of October 1, 1978. The USAID decision to drop Title II support for the ouvroir project is, however, still very much a live issue in the Title II/Morocco program.

As mentioned above, the ouvroir movement was a non-formal education program for girls from indigent families which was rapidly built up from January 1973 to include over 55,000 trainees by early 1978. The objective of the ouvroir program is to provide vocational training to develop marketable skills for young girls (8-22 years old) who have been bypassed by the formal educational system. These "marketable skills" for the most part feature feminine craft-oriented work such as embroidery, knitting, crocheting and dress-making.

Up to 2 hours of academic training per day in Arabic literacy, arithmetic and citizenship education is also theoretically included in the ouvroir curricula, but appears to be conducted with varying degrees of intensity from one ouvroir to the next.

Food For Work rations at the rate of 22.5 kgs. of flour and 1.75 kgs. of oil per month were granted to each ouvroir trainee until the beginning of FY 1979. For the CRS
MAP OF MOROCCO

Title II Food for Work Project:
Entretide Nationale "Oussoirs" by Province,
FY 1978

Oussoirs (255) 142,000 Beneficiaries
(Map based on 1978 provincial boundaries)
and Entraide Nationale sponsors of the ouvroir program, the Food For Work rations -- worth about 30 DH per month\(^1\)-- served as an incentive to indigent parents to send their daughters to take part in the project rather than to direct them toward alternative occupations, mainly in menial household employment in urban centers that might bring some income, however modest, to their families.

The association of Food For Work with the ouvriers has no doubt been a major factor in the rapid expansion of the ouvroir program. Consequently, the recent cutoff of Title II support for the ouvriers is seen to have disastrous consequences for the program by Entraide Nationale officials. Even in the few months since the withdrawal of support, approximately 40 percent of the ouvroir enrollment has dropped out according to Entraide estimates, and the loss is likely to be even higher when back rations owed trainees and currently being paid them run out. In addition to the training opportunities presumably lost, Entraide policy-makers maintain that the withering of the ouvroir program will have other serious social impacts as well by forcing many participating girls into prostitution and other socially undesirable activities. For all these reasons Entraide has made clear that it intends to press for reinstatement of Title II support for the ouvriers over the long-term, and that in the immediate future it wishes to reprogram food allocations for the new Cooperatives for Women and Cooperatives for Farmer Women that it is unable to organize in FY 1979 to benefit existing ouvroir trainees.

\(^1\) About $7.25 per month.
USAID's decision to drop Title II support for the ouvroir project was reportedly in large measure a result of the insistence of the Food For Peace/Morocco staff in FY 1977 and FY 1978. FFP/Morocco took the position that the ouvroir project had enjoyed Food For Work association for several years and should be sufficiently established and well regarded as a skills training program among the target population to function smoothly without food assistance. This point of view was also generally supported in January 1977 by a consulting team charged with studying non-formal education in Morocco. Moreover, the Food For Peace Office and the USAID/Morocco Mission believed that the ouvroir movement had drawn candidates away from a similar but perhaps more technically qualified female education program -- the Foyers Feminins of the Ministry of Youth and Sport -- upon which USAID had decided to concentrate its future technical assistance efforts in the field of female non-formal education. It is notable, however, that the USAID position was hotly contested by the Ministry of Social Affairs and Handicrafts, and that the intervention of the Minister influenced USAID's decision to postpone withdrawal of support to ouvroirs until FY 1979.

Some present USAID/Morocco staff members, and especially the present Food For Peace Office, are questioning the wisdom of dropping the ouvroir system from Title II activities.

1. Youssuf, et al., Ibid., pp. 33-34.
They believe for example that the weakened ouvroir project will be unable to supply sufficient numbers of trained graduates to the new Cooperatives d'Apprentissage and thus will threaten the success of that project. But it is likely that in addition to their convictions about the value of the ouvroir project the USAID mission staff and CRS/Morocco are also sensitive to the acute political problem that withdrawal of Title II assistance from the popular ouvroirs causes for Entraide Nationale throughout Morocco.

In the final analysis, the issue of the ouvroirs as a Food For Work activity would nevertheless appear to turn on their usefulness as an employment-oriented training experience for young girls from educationally and economically disadvantaged families, since that has been the project's stated objective and conforms to Title II Food For Work guidelines. On this point, however, neither Entraide Nationale nor CRS/Morocco nor USAID/Morocco has had systematic data—records of job placement, or statistics on earnings of graduates—on which to base a judgment.

**Economic/Community Development Projects**

So called "self help" projects, in which Food For Work rations are used to pay laborers in community development efforts to construct community infrastructure and small scale public works, were once a major element in the Morocco Food For Peace program. At its high point in the early to middle 1970s, economic/community development Food For Work projects involved as many as 4,000,000 man days of self help labor. Urban sanitation and cleanup, reforestation in rural
areas, and housing development were among prominent fields of activity.

Today these self-help Food For Work activities with a community development focus have nearly disappeared from the Morocco Food For Peace program. The one exception in the FY 1977 - FY 1978 period has been $63,000 in Food For Work rations which have supplemented a USAID OPG of $145,000 and various GOM and CRS inputs in undertaking erosion, irrigation and reforestation work in rural Figuig Province.

The decline in "self-help" efforts in the Morocco Food For Peace program may be due to several factors. First, Food For Work payments to laborers are strictly payments in kind, which potential participants apparently find less attractive than money payments or a mixture of money and commodity payments. Thus despite Morocco's high unemployment rates, enthusiasm for self-help Food For Work activities without accompanying cash payments is relatively low among many potential beneficiaries, especially in urban regions. This is true particularly in view of the fact that the Government of Morocco's Promotion Nationale and the cooperating World Food Program -- similar programs with local-level economic/community development objectives -- involve cash payments to participating laborers amounting to about 7 DH per day. Even in the Figuig rural development project mentioned above, moreover, workers received cash payment of 5 DH/day in addition to Title II rations.

Secondly, a number of the Food For Work self-help efforts in the early 1970s received technical assistance in
the form of project planning and skilled labor from Promotion Nationale. However, under charges of financial mismanagement and inefficiency, the Promotion Nationale program itself experienced some decline and disfavor in the recent past, so that for a few years it was no longer as useful a source of cooperation and assistance for Food For Work self-help activities.

Finally, since the mid-1970s the priority Food For Work category for Entraide Nationale has clearly been the ouvroir movement. Consequently, the Ministry of Social Affairs has been reluctant to accept or encourage programming of Food For Work category commodities into "self-help" projects where its control of implementation would be shared with several other government bodies (provincial administrations, Promotion Nationale), as opposed to expanding the ouvroir effort where it dominates control of and credit for project activities.

USAID/Morocco's staff in general regards self-help Food For Work for economic and community development projects as an area which has not been sufficiently explored or encouraged in the Morocco Food For Peace program. For its part, CRS/Morocco maintains that it would like to rebuild "self-help" as an important Food For Work component. Some effort was made to do so in early 1978 when CRS/Morocco, at USAID's urging, attempted to create a "reserve" of Title II rations for "self-help" Food For Work in six of Morocco's poorest provinces and requested their governors to develop appropriate projects. Unfortunately, no projects were officially presented, however, and the CRS/Morocco director
reports that he has not been able to determine why. Other observers suggest that while self-help projects were indeed developed by provincial governors, CRS/Morocco's vigor in following up the self-help requests in FY 1978 was reduced in that during this same period by the policy dispute between the Ministry of Social Affairs and Food For Peace/Morocco regarding withdrawal of Title II support for ouvroirs was at its height. CRS/Morocco, caught in the middle of this argument, was unprepared to push too strongly for new Food For Work allocations in self-help, an area of low-priority interest for Entraide Nationale, at a time when that agency's major Food For Work priority (the ouvroirs) was about to be dropped from Title II/Morocco.

Other Child Feeding

Two projects fall in the Other Child Feeding category in the Morocco Food For Peace program.

Garderies-Day Care Centers

Food For Peace/Morocco has extended Title II support to a number of day care centers -- garderies -- for the past two fiscal years. These day care centers offer preschool education for young children, mostly of working parents. Until the beginning of FY 1979 about 45 garderies received Title II rations, and were for the most part institutions established and operated by the Moroccan League for the Protection of Children, a private organization receiving assistance and some material support from the Government of Morocco.
MAP OF MOROCCO

Title II Other Child Feeding Project:
Planned “Garderies” Day Care Centers a and SMB Orphanages b, by Province, FY 1979

- Garderies (155) 11,700 Beneficiaries
- SMB (114) 23,000 Beneficiaries

(Map based on 1978 provincial boundaries)

- Planned and existing.
- Existing.
Recently, however, Entraide Nationale has taken an interest in developing its own nation-wide program in preschool education. Entraide's plan is to complement the present group of garderies receiving Title II food aid by opening additional preschool institutions so that eventually each caïdat of Morocco possesses its own preschools. A total of 153 garderies has therefore been projected to be established by the end of FY 1979, and are included in this fiscal year's food budget requirements. Since October 1, 1978, a number of these Entraide garderies have already been organized and are beginning to function.

Catholic Relief Services/Morocco has apparently been instrumental in encouraging Entraide Nationale to become active in the preschool field. The CRS Assistant Director has, for example, helped to arrange support for the future Entraide program with the private Van Leer Foundation of the Netherlands, as well as from CRS/New York grant funds. Van Leer has agreed to finance preparation of 25 preschool teacher trainees for the Entraide Nationale project, and candidates are being identified to undergo a two year training cycle at the Institut St. Dominique of Casablanca.

The Title II food rations (flour and oil) for garderies provide ingredients to make bread or other foods which are served to participating preschoolers at noon and during an afternoon snack. In most garderies visited during the field trip, these were supplemented by other locally provided foods.
SMB Orphanages

One of Entraide Nationale's earliest responsibilities as an agency of the Government of Morocco has been to aid the Societe Musulmane de Bienfaisance (SMB), an organization that sponsors orphanages for poor children and adolescents who are orphaned or from homes with unfavorable family situations (cas sociaux). Most orphanages serve males only, from roughly primary school age through late teen years. Entraide Nationale now provides substantial budgetary support for the SMB orphanages including payment of teacher and administrative salaries, purchase of equipment and most other running expenses. This SMB effort is regarded as an important program by the Moroccan population generally, and is a strong priority for Entraide Nationale.

Title II food assistance to the SMBs includes flour and oil which are used to make bread by bakers under contract to SMBs. Occasionally other commodities such as milk or rice are also included in the SMB Title II allocations. The food assistance rations are part of the regular food supply of the SMBs, and in essence represent a budgetary support for the institutions. Given Food For Peace guidelines, Title II support is theoretically directed only toward SMB children up through primary school age, and a few years ago USAID/Washington reduced the total SMB allocation accordingly, from a level which covered the entire SMB population.

FFP/Morocco appears to regard the SMB effort as relatively unimportant in relation to the overall goals of the Title II program, but recognizes its political importance to
Table II-1. Title II/Morocco Program: Estimated Intended Recipient Levels, FY 1978 and FY 1979

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<tr>
<td>Subtotal</td>
<td>24.5</td>
<td>4.3</td>
</tr>
<tr>
<td>TOTAL</td>
<td>564.6</td>
<td>100.0</td>
</tr>
</tbody>
</table>

a. May not add to totals due to rounding.

Source: RRNA
Entraide Nationale. CRS/Morocco, on the other hand, focuses on the fact that the SMB recipients are generally truly in need of whatever assistance can be rendered and supports the SMB program on that basis. Moreover, CRS/Morocco has occasionally aided the SMB institutions out of its own (non-Title II) resources, mainly by donating shipments of clothing to SMB youngsters.

Program Recipients

The Title II/Morocco program is directed at a range of beneficiary groups. These include: mothers and preschool children in the MCH project category; adolescent females and young women (Cooperatives d'Apprentissage), mature female heads of households (Cooperatives des Femmes Abandonnees), and blind and handicapped workers, as well as dependents of all these groups, in the Food For Work category; and day care preschoolers and children and adolescents in the category of Other Child Feeding. However, given the mandate of Entraide Nationale to serve the poorest strata of Moroccan society, all the beneficiary groups are characteristically made up of individuals drawn from low income families.

For FY 1979 in all approximately 614,700 recipients have been programmed by CRS/Morocco and Entraide Nationale for participation in Title II food assistance. This level represents an increase of about 9 percent over the constant FY 1978 and FY 1977 recorded number of 564,600 recipients.
Within both Fiscal Years 1978 and 1979 the (MCH) Centres Sociaux Educatifs project represents the most important single group of intended Title II recipients (Table II-1). Moreover, as the priority effort within the Title II/Morocco program the MCH recipient group of women of child-bearing age and their related CSE enrolled children under the age of 6 years now amount to 450,000 persons and account for over 73 percent of total Title II/Morocco recipients, up from 375,000 persons or a share of about 66 percent in each of FY 1978 and FY 1977. The MCH Morocco program is reported to be very much in demand among potential participants, with some CSE Monitrices indicating 10 or more applications for admission to Centers for every woman enrolled. Nevertheless, the CSE numbers are fairly tightly controlled so that the actual number of women who are estimated to attend Centres Sociaux Educatifs and draw Title II ration seems to be very close to programmed levels.

Food For Work workers and dependents will number about 130,000 persons in FY 1979 and thus now make up about 21 percent of all intended Food For Peace beneficiaries. This represents a reduction from FY 1978's recipient levels in the Food For Work category: an estimated 165,100 persons or over 29 percent of all that year's total intended recipients of Title II rations. Withdrawal of Title II support for the ouvrières, which accounted for about 140,000 intended beneficiaries in FY 1978 -- and which has not been entirely offset by the FY 1979 startup of the Cooperatives d'Apprentissage and Cooperatives des Femmes Abandonnées, together grouping about 161,000 intended recipients -- is responsible for the decline in Food For Work recipient
levels.

Other Child Feeding activities have increased between FY 1978 and FY 1979 both in terms of absolute and proportion-

al numbers of intended recipients in the Title II/Morocco program. OCF recipients in this fiscal year will number about 34,700 children, or 5.6 percent of all intended recipients. This increase is due to the projected buildup in Entraide's garderie preschool program in FY 1979, for the total number of recipients in SMB's programmed for Title II support is projected to remain static.

It should be noted, however, that in addition to these intended Title II recipients, a significant number of unintended recipients also consume Title II rations as well. This situation arises not from any organized abuse of the Title II system, but simply from the general Moroccan social pattern of family sharing of available food. The size of this unintended recipient group is uncertain, but may range from 400,000 to over 600,000 persons. (see "Application of Title II Guideline" in Chapter III).

Participating Agencies

Agencies involved in the PL 480 Title II program in Morocco include the Government of Morocco, chiefly through Entraide Nationale of the Ministry of Social Affairs and Handicrafts but also through the provincial administrations responsible to the Ministry of the Interior; CRS/Morocco the cooperating sponsor for Title II; and USAID.
Government of Morocco

Entraide Nationale

Entraide Nationale serves as the principal counterpart agency with CRS/Morocco for the Title II program, and in that capacity has signed CRS' local operating agreements on behalf of the Government of Morocco. Specifically, Entraide is responsible for securing the duty free entry of Title II commodities, for port clearance and for inland transportation of food from port to provincial distribution points. It also has responsibility for port and provincial storage of food and for arranging transport from provincial warehouses to final project sites. Entraide also acts as a liaison for CRS/Morocco with other Government agencies and offices.

Entraide has taken the lead within the Government of Morocco in planning, organizing and implementing the project activities -- CSEs, ouvroirs, etc. -- which serve as a framework for distribution of Title II commodities. In this role it works closely with CRS/Morocco as well as with Provincial Governors and local sub-provincial administrative units. A major Entraide activity in this regard has been the establishment and operation -- with the CRS/Morocco USAID support -- of the School of Nutrition in Marrakesh which serves as the training center and technical base for the Morocco (MCH) Centres Sociaux Educatifs project.

Within the Moroccan Government, Entraide Nationale's function is to serve as a "National Office of Welfare" for
many of the Government's efforts to assist the socially and economically disadvantaged in Moroccan society: orphans, the blind, the crippled and the poor. All of the clients it assists, including those in the Title II/Morocco program, are accordingly required to possess a carte d'indigence, a certification by local government authorities that the individual's family is "legally poor."

Entraide's connection with the Title II program and with CRS/Morocco has been critical to its entire function as an agency. Presently Entraide's estimate of the local value of Title I commodities is about 83 million DH, or $20 million, which represents 38 percent of all resources (218 million DH) associated with the operations of Entraide sponsors. When estimated expenditures by Entraide for the direct administration, transport/handling and distribution of Title I commodities are added to their local value, the Title II program accounted for nearly half of Entraide's budgeted resources in FY 1978. Moreover, the tie with Title II has been important to Entraide's status within the Moroccan government. The CRS/Morocco director points out, for example, that in the years since CRS and Entraide have worked together in Title II the Entraide operation has steadily grown from a relatively minor office, supported in part as a Royal Charity, to a full Ministry of Social Affairs and Handicrafts of which the Entraide (social affairs) function forms a major division.

Ministry of Social Affairs policy-makers recognize and appear to welcome the important role that Title II food has played in their operations. Thus, one senior ministry
official frankly stated to the Evaluation Team that the Ministry considers the scope and volume of its future activities to be in large part a function of the availability of Title II rations and the CRS presence.

**Ministry of the Interior**

The Ministry of the Interior has jurisdiction over the various provincial administrations of Morocco through their Provincial Governors. Local administrative units of government at the subprovincial level are also controlled by the Interior Ministry.

*Entraide* and CRS/Morocco's Title II activities throughout the country go on with the consent and cooperation of the Provincial Governors and all the local officials responsible to them. This relationship involves not only moral support but often material support as well. While the intraprovince transportation of Title II commodities is organized and supervised by *Entraide Nationale*, the actual payment for this transport is to be paid by the Ministry of the Interior.

Local governments also participate in the implementation of several individual Title II-supported project activities, mainly by providing buildings and paying utilities. Many *Entraide* projects in particular benefited for this kind of assistance from the local units of government. Additionally, provincial and local administrations have in the past played a critical role in the formulation and execution of various economic development or community infrastructure projects.
supported by Food For Work commodities.

CRS/Morocco

CRS/Morocco plays the critical role of cooperating sponsor for the Title II program. CRS/Morocco's functions range from working with Entraide to determine commodity requirement levels and to conceptualize projects which will use Title II foods, to monitoring and auditing the food distribution system that Entraide has established. Equally important, CRS/Morocco works closely with the USAID mission in Rabat to handle the administrative requirements of Title II, including programming and reporting documentation.

The working relationship which CRS/Morocco has established with Entraide Nationale is by all indications a very close and mutually advantageous one. The present CRS/Morocco director emphasizes that his program exists to "aid (the country's) poor and needy"; accordingly, through Entraide Nationale he has found both an appropriate client group plus a reasonably effective structure for commodity distribution. Entraide, for its part, looks to CRS/Morocco for access to the Title II commodities which are at the core of its operation, and apparently also considers CRS/Morocco as a partner in designing and executing projects.

USAID/Morocco

USAID provides all Title II food supplies for Morocco and pays the international transport costs of the commodity shipments. In addition, with its current Rabat Food For
Peace Office staff -- a Food For Peace Officer and a Food For Peace Specialist plus a shared Administrative Assistant -- the USAID mission monitors the program through regular contact with CRS/Morocco and frequent consultation with Entraide Nationale staff.

Much of the Food For Peace Office's monitoring effort appears to be devoted to administrative details such as ship arrivals, internal transport of commodities and verification of ultimate distribution. However, the Morocco FFP Office has also considered itself more than an administrative agent or a spokesman for USAID/FFP/Washington, and has on occasion taken an active role in influencing the objectives and directions of the CRS/Morocco and Entraide Nationale projects employing Title II rations. This activist approach has been most recently exemplified in USAID's decision to cut off support for the ouvroir movement and in the development of the Cooperatives des Femmes Abandonnees concept.

The Morocco Food For Peace Office is presently in transition, with the very recent installation of a new FFP Officer who is still familiarizing himself with the local terrain and program details. This process is simplified by the fact that the Food For Peace Specialist, a Moroccan citizen with over twenty years service, possesses a broad knowledge of the program's history and provides an experienced perspective on present Food For Peace activities.
Inputs

Title II foods, their transport and handling, the staff and related staff-support or administrative costs, local cash contributions and the facilities which serve as project sites/distribution points are the major inputs to the Title II program in Morocco. Based on rough estimates of the value of these inputs, in FY 1978 the Title II program represented a total expenditure in the range of $31.6 million, and in FY 1979 it may reach a total value of about $32.4 million, in constant dollars1 (Table II-2).

The value of food commodities -- including international transport costs -- represent approximately three quarters of total Title II program inputs in FY 1978. Transport and handling of commodities within Morocco, including port charges and warehousing, accounted for about 9 percent of input costs. Costs of agency (Entraide Nationale, CRS/Morocco and USAID), staff and materials directly related to the Title II program apparently made up approximately 12 percent of program inputs.2 Local contributions in the form of monthly dues paid by MCH mothers and ouvroir trainees amounted to somewhat more than 3 percent of the total value.

1. All U.S. dollar figures cited are based on an FY 1978 exchange rate of 4.15 DH = $1.
2. Entraide Nationale's FY 1978 budget categories do not permit a clear allocation of the portion of that agency's resources which represent direct inputs to the Title II program. Thus a figure of about $3.5 million cited by CRS/Morocco in recent annual "program plans" as the Entraide Nationale expenditure for "administration" (staff, services and materials) in support of CRS/Morocco programs has been adopted as Entraide's contribution to Title II, exclusive of transport and warehousing expenditures.
### Table II-2. Input Analysis: Estimated Inputs to the
Morocco Title II Program from All Sources,
FY 1978 and FY 1979

<table>
<thead>
<tr>
<th>Source</th>
<th>Input Category</th>
<th>FY 1978 (estimated)</th>
<th>FY 1979 (projected)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>quantity</td>
<td>value ($ million)</td>
<td>quantity</td>
</tr>
<tr>
<td><strong>USAID</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Title II Commodities</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Soy fortified flour</td>
<td>29,205 m/t</td>
<td>7.91</td>
<td>23,552 m/t</td>
</tr>
<tr>
<td>Vegetable oil</td>
<td>3,995 m/t</td>
<td>4.15</td>
<td>3,709 m/t</td>
</tr>
<tr>
<td>Tofu paste</td>
<td>4,203 m/t</td>
<td>1.60</td>
<td>5,400 m/t</td>
</tr>
<tr>
<td>Wheat-soy blend</td>
<td>2,339 m/t</td>
<td>2.80</td>
<td>5,400 m/t</td>
</tr>
<tr>
<td>Rice</td>
<td>5,049 m/t</td>
<td>1.87</td>
<td>5,400 m/t</td>
</tr>
<tr>
<td>Non-fat dried milk</td>
<td>4,950 m/t</td>
<td>7.49</td>
<td>5,817 m/t</td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
<td>49,824 m/t</td>
<td>23.82 ($ million)</td>
<td>49,204 m/t</td>
</tr>
<tr>
<td><strong>Entraide Nationale</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Port handling, Marketing</td>
<td>na.</td>
<td>.41</td>
<td>na.</td>
</tr>
<tr>
<td><strong>Ministry of Interior</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Port to province</td>
<td>na.</td>
<td>1.26</td>
<td>na.</td>
</tr>
<tr>
<td>Intra-province</td>
<td>na.</td>
<td>1.26</td>
<td>na.</td>
</tr>
<tr>
<td><strong>Staff and Related Costs</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Entraide Nationale</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Central, provincial and</td>
<td>4,308d persons</td>
<td>1.51</td>
<td>2,500d persons</td>
</tr>
<tr>
<td>Program staff</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>USAID</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CRS Morocco staff and</td>
<td>5 persons</td>
<td>.12</td>
<td>5 persons</td>
</tr>
<tr>
<td>Support</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>USANP</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Food for Peace office</td>
<td>3 persons</td>
<td>.10</td>
<td>3 persons</td>
</tr>
<tr>
<td>Monitoring</td>
<td>750 persons</td>
<td>(.31)</td>
<td>900 persons</td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
<td>5,066 persons</td>
<td>3.73</td>
<td>3,408 persons</td>
</tr>
<tr>
<td><strong>Program Beneficiaries</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Local Cash Contributions</td>
<td>na.</td>
<td>1.1</td>
<td>na.</td>
</tr>
<tr>
<td><strong>Provincial governors</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>and Local Administrators</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>557 project/distribution</td>
<td>unknown</td>
<td></td>
<td>796 project/distribution</td>
</tr>
<tr>
<td>sites</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td>$31.58 million</td>
<td></td>
</tr>
</tbody>
</table>

a. CRS Morocco Title II program only.
b. AEH approved levels, including FY 1978 add-on rice and NYRM volumes.
c. Based on commodity values per metric ton, including estimated ocean freight charges, cited in CRS/Morocco annual report for FY 1979.
d. Full justification.
e. For add-on, paid from local cash contributions.

Source: Estimates prepared by KMDA based on Entraide Nationale, CRS/Morocco budgetary data and interviews.
of Title II inputs. In FY 1979 it is likely that the relative shares of input categories within the total Title II program will remain at roughly the same levels.

The contribution of the Government of Morocco to the Title II program appears to have been as much as $6.5 million in FY 1978, or nearly 20 percent of the value of all inputs. This figure does not include the value of infrastructure -- buildings, utilities and some equipment -- furnished by provincial and subprovincial authorities to Title II activities as project sites/distribution points. *Entraine Nationale's* expenditures account for the largest part of the GOM total contribution. Besides commodity transport and handling costs, these inputs range from Title II -- related support for the École de Nutrition in Marrakesh, to payment of the provincial "delegations" involved in supervising Title II related projects, and to a budgetary contribution of nearly $100,000 for operation of the CRS/ Morocco office, including the salaries of its Moroccan staff. The recent withdrawal of the ouverture project from Title II may reduce the total *Entraine Nationale* levels of staff and other resources directly involved in Title II activities, but this decline will be offset somewhat by the agency's efforts in initiating the assorted new "cooperatives" during FY 1979.

The *sociations* (dues) paid by the various program beneficiaries within each project activity exceeded $1 million in FY 1978 and will rise to over $1.5 million in FY 1979. The 2 DH monthly contribution paid by (MCH) mothers at centres infantiles *societies* will account for more than half of FY 1979 *sociations*. These monies are used to pay the
full salaries of CSE Monitrices plus the regular operations of CSE centers. Cotisations paid monthly at a rate of 5 DH to 10 DH by the members of the various Food For Work cooperatives serve to purchase materials and meet cooperative running expenses.

Given the organization of available data, it is difficult to allocate total program input costs to the various Title II project categories. However, assuming that non-commodity project inputs are roughly proportional to the volumes of Title II commodities by project, the value of project by project inputs might approach the following levels:

<table>
<thead>
<tr>
<th></th>
<th>FY 1978</th>
<th>percent</th>
<th>FY 1979</th>
<th>percent</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$ million</td>
<td></td>
<td>$ million</td>
<td></td>
</tr>
<tr>
<td>MCH</td>
<td>21.11</td>
<td>66.9</td>
<td>23.17</td>
<td>71.6</td>
</tr>
<tr>
<td>Food For Work</td>
<td>8.34</td>
<td>28.1</td>
<td>7.24</td>
<td>22.4</td>
</tr>
<tr>
<td>Other Child Feeding</td>
<td>1.60</td>
<td>5.1</td>
<td>1.97</td>
<td>6.0</td>
</tr>
<tr>
<td></td>
<td>31.58</td>
<td>100.0</td>
<td>32.38</td>
<td>100.0</td>
</tr>
</tbody>
</table>

a. may not add to totals due to rounding errors.

From Entraide Nationale's perspective, the only notable input constraint to the present Title II program is the availability of food rations: with greater commodity volumes other inputs could be found to serve larger numbers of beneficiaries. From the point of view of CRS/Morocco and the USAID mission, however, Entraide Nationale's human resources are already strained at the present Title II program level. CRS/Morocco's Director and Assistant Director, as well as the USAID/Morocco Mission Director all underlined the fact that Entraide Nationale is spread very thinly in mid-level
management and technical staff, especially in its central administration. Thus although present Entraide staff are eager and hard-working, shortage of trained personnel coupled with rigidly hierarchical procedures in Moroccan public administration occasionally make the Ministry of Social Affairs a very slow moving bureaucracy. One solution to this problem might be a USAID technical assistance and training project for the Ministry and Entraide in management and operations, which is currently under discussion within the Mission and CRS/Morocco.

**Outputs**

Food rations are the primary outputs of the various Title II/Morocco projects. With the exception of the Other Child Feeding projects where flour and oil are general ingredients for institutional meals or are baked into bread by bakers under contract to the institutions, all rations are distributed in bulk to beneficiaries.

In FY 1978 approximately 46,600 metric tons of food rations were distributed in the Title II/Morocco program. The MCH project accounted for 57 percent (26,551 tons) of all rations distributed, with Food For Work projects and Other Child Feeding representing 37 percent (17,211.4 tons) and 6 percent (2,362.3 tons) respectively. In the present fiscal year, ration distributions are projected to climb to a total of about 49,300 metric tons. MCH rations (31,050 tons) will make up 63 percent of the total distributions, followed by Food For Work accounting for 31 percent (15,132 tons), and Other Child Feeding, again representing about 6
percent (3,102 tons) of the total (Table II-3).

In addition to food rations, the Food For Peace program is meant to generate a number of other important outputs. Chief among these are the nutrition education activities which are the focal point of the Centres Sociaux Educatifs (MCH) project. These activities take the form of group lessons given by CSE Monitrices to mothers assembled at the Centers. A general format is followed in which Monitrices make a brief presentation on a nutrition or hygiene related topic, attempt to elicit discussion and then conduct a demonstration with mothers' participation involving food preparation or highlighting the major points of the lesson. Posters, flanel boards and other teaching aids reinforce the discussion.

Weight surveillance and general health observation for enrolled children and mothers is another desired output of the CSE (MCH) project. Children are weighed monthly by CSE Monitrices and results recorded on a weight record chart carried by mothers for their CSE-enrolled children in which deviation from the normal weight ranges is illustrated graphically. The trends of these weight records and visual observation by Monitrices are meant to provide a basis for grossly identifying health status problems in individual children and mothers who are then to be referred to Ministry of Health facilities.

Skill development aimed at enabling various Title II beneficiaries to work and to earn money, thus raising their family's and their own standard of living, is another major
<table>
<thead>
<tr>
<th>Commodity</th>
<th>MCH FY'78</th>
<th>Food for Work FY'78</th>
<th>Other Child Feeding FY'78</th>
<th>Total Program FY'78</th>
</tr>
</thead>
<tbody>
<tr>
<td>Soy Fortified Bread Flour</td>
<td>9013.3</td>
<td>15,979.7</td>
<td>2211.8</td>
<td>27204.8</td>
</tr>
<tr>
<td>Vegetable Oil</td>
<td>2173.4</td>
<td>1,225.8</td>
<td>333.8</td>
<td>3733.0</td>
</tr>
<tr>
<td>Soy Fortified Rolled Oats</td>
<td>3162.3</td>
<td>-</td>
<td>-</td>
<td>3162.3</td>
</tr>
<tr>
<td>Wheat Soy Blend</td>
<td>3772.5</td>
<td>-</td>
<td>-</td>
<td>3772.5</td>
</tr>
<tr>
<td>Non-Fat Dried Milk</td>
<td>3714.2</td>
<td>-</td>
<td>-</td>
<td>3714.2</td>
</tr>
<tr>
<td>Dried Peas</td>
<td>2.6</td>
<td>-</td>
<td>12.9</td>
<td>15.5</td>
</tr>
<tr>
<td>Rice</td>
<td>4712.7</td>
<td>5.9</td>
<td>304.3</td>
<td>5022.9</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>26,551.0</td>
<td>17,211.4</td>
<td>2862.8</td>
<td>46,625.2</td>
</tr>
</tbody>
</table>

a. Recorded actual distribution to recipients for FY 1978 and projected distribution for FY 1979. Includes CRS/Morocco program only.

intended output of the Morocco Food For Peace program. Virtually all Food For Work activities -- including the ouvroir movement -- incorporate a set of training activities which will theoretically produce income-generating skills in participants. Given the predominance of females among the target groups of the various Food For Peace cooperatives and ouvroirs, most training has emphasized traditional (female) crafts of sewing, knitting, crocheting, embroidery, rug weaving and the like.

In addition, some Food For Work projects are intended to provide immediate opportunities for income-earning through application of skills developed. Handicraft production teams organized in some cooperatives and ouvroirs and a cardboard box-making cooperative for indigent women in Rabat, are notable examples.
CHAPTER III. POLICY ANALYSIS

Title II operations in Morocco represent an interaction of the policies and internal practices of the Government of Morocco (GOM), CRS and USAID. The impact of the Title II program in Morocco depends upon a harmony of purpose and approach among these three major participants. In this chapter key policy issues influencing Title II activities will be explored.

Government of Morocco and Title II

General Development Policy Framework

GOM economic development policy over the last ten or more years has been nominally based on simultaneous agricultural and industrial development objectives, but with effective priority accorded to the latter in the form of large scale capital-intensive projects. Agricultural investments have focussed largely on irrigation infrastructure and certain intensive crop production programs (e.g. sugar cane), concentrated in limited geographical areas. For the most part these programs have bypassed the mass of Morocco's small farmers.
The overall result of this development strategy has been relatively high economic growth rates (6.5 percent per year during the past plan 1973-1977), heavy investment requirements for large scale capital projects, a modern sector contributing 65 percent of GDP but accounting for only 23 percent of employment, but little improvement in the broad agricultural sector. In fact, domestic food production continues to lag increasingly behind national requirements, so that basic cereal imports in 1975-1978 have averaged nearly four times 1965-1969 average import levels, and per capita production has slipped to pre-1930 standards. In part, lack of progress in the agricultural sector has apparently been due to a capacity for absorption far below levels of investment funds budgeted, but it is also true that key agricultural development issues have not been vigorously addressed, among them land tenure reform, degeneration of grazing lands and declining productivity of livestock, rationalization of agricultural price and subsidy structures, and others.

One consequence of the GOM push for industrialization has been relatively fewer resources for the social services, especially social services in rural areas. The government spends 5 or 6 times as much to provide social services, water and electricity in urban areas as it does in the countryside. This emphasis has in turn helped to encourage rapid urbanization and urban growth is estimated at 5 to 6 percent per year.
At present the GOM has apparently entered a period of pause and austerity prompted by its record trade deficit in 1977, inflation (12 percent in 1977) and the mounting expenditures of its war in the western Sahara, reported to have tripled since 1975 to reach $722 million in 1978. The ambitious 1978-1982 Fourth Development Plan was postponed as a result of this pause, and a "transitional" three year plan for 1978-1980 was drafted during 1978 to replace it.¹

Title II in the Policy Framework

At a national economic planning level the GOM has no stated policy regarding the Title II program. This is to be expected, since the bread flour and grain-based components of Title II commodities represent less than 3 percent of the estimated 1.4 million tons of grain and wheat imported into Morocco in 1978. There is evidence, however, that the GOM finds the presence of the Title II program compatible with its general policy objectives.

First of all, the evolution of Entraide Nationale within the GOM bureaucratic structure may be one indicator of the government's support for Title II. During its 20 year association with Title II and probably in part because of the resources made available by that association, Entraide Nationale has been raised from a minor government office to

the key division of a full Ministry. This rise in status of Entraide's program -- much of which depends critically on Title II inputs -- suggests that the highest GOM policy makers have in effect given support to the Title II effort as it is implemented in Morocco, and acknowledged the program's compatibility with their own goals.

Title II/Morocco's character as a food import program would in particular seem to be compatible with GOM food policy, however limited the Title II contribution may actually be relative to total needs. Despite rapidly increasing population and uncertain domestic production, per capita human grain and wheat consumption for Morocco has remained amazingly constant over the past twenty years (Refer to Table I-3, Chapter I). Clearly government policy favors large scale importation of grain, especially bread wheat, to maintain a stable per capita supply of this basic staple. Consequently the availability of Title II commodities at no direct cost to the GOM would appear to conform conveniently to this policy orientation.

Additionally, the character of the Title II program as an income supplement at the family level may also be attractive to GOM policy makers. Many observers underline serious economic disparities which exist between income classes, regions and urban versus rural residents in Morocco, and believe that income gaps are increasing. If, as some specialists have stated, an overriding GOM goal in the face of these trends is simply to hold "an equilibrium among the different social and political forces at work so that stability can be maintained, at least for a while, along
familiar and traditional lines,\textsuperscript{1} then Title II rations funneled through \textit{Entraide Nationale} as an income supplement to the poorer strata of Moroccan society are a useful and highly visible GOM policy instrument.

**GOM Nutrition Policy**

The extent of the Moroccan Government's commitment to improved nutrition as a national goal is not yet clear. Nevertheless a number of policy measures taken in the last several years should be encouraging to USAID/\textit{Food For Peace} and to the participating agencies in Title II/Morocco.

An Interministerial Commission on Food and Nutrition (CIAN) has existed in Morocco since 1959, but was largely dormant until the mid 1970s. In recent years CIAN has begun to come to life, however, and has been expanded to include 15 member Ministries, including the Ministry of Social Affairs. The CRS/Morocco Director dates the beginning of CIAN's revitalization to initiation of the \textit{Entraide Nationale}/CRS \textit{Centres Sociaux Educatifs} project and establishment of the School of Nutrition in Marrakesh. The USAID nutrition planning project discussed in 1975 and 1976 and implemented in 1977 undoubtedly had an influence as well.

CIAN's role is to coordinate the policies of the range of GOM Ministries independently active in the nutrition sector, and to develop a nutrition strategy for Morocco. The full Commission works through a Consultative Council, in which a representative of the Ministry of Health serves as Executive Secretary. In 1978 CIAN organized three working groups representing all its members to study various nutrition questions: nutritional objectives and program coordination; training, public information and nutrition education; and food production, marketing, technology and legislation. A proposal has also been made to create provincial committees to assist in carrying out a unified national nutrition strategy.

In addition to CIAN, the GOM has also created a Nutrition Planning Cell (CEPEN) in the Ministry of Planning. CEPEN has been supported by USAID through a technical assistance project in 1977 and 1978. The organization is meant to serve as the technical planning arm of CIAN, and to conduct and analyze surveys and studies in the nutrition field.

CEPEN has had two major achievements to date. The first has been the drafting of a nutrition chapter for the present national plan document. The chapter formulates nutrition objectives, suggests the outline of a nutrition subsector strategy and proposes a number of technical studies to be undertaken. The chapter is a beginning, and a potentially significant one, toward focusing the GOM on vigorously combating malnutrition in Morocco. CEPEN's second major achievement has been the successful organiza-
tion and execution of a major national nutrition conference held in Rabat in early 1978, a conference which involved all segments of the GOM and participation of international specialists as well.

At this early stage, neither CIAN nor CEPEN is fully operational in the sense of achieving influence on the day-to-day operations of the GOM, and there is some tendency among managers of the Title II participating agencies to dismiss the significance of the two bodies as a result. However, whatever their start-up difficulties, CIAN and CEPEN do represent a logical institutional framework for nutrition planning and for creating much-needed linkages between the individual initiatives of various ministries active in the nutrition subsector.

Consequently the two bodies merit the full support of Title II participants. This support should include efforts to tap the technical resources that CIAN and CEPEN represent for analysis and problem solving related to the Title II program. Definition of ways to achieve linkages with the MOH and assistance in analysis of the Centers Socials - Education impact (OPG) study are immediate issues which could be proposed to CIAN and CEPEN respectively in order to begin demonstrating such support.
Compatibility of Goals, Policies and Practices
Among Title II Participants

Program Priorities

In two key areas there is a strong consensus among Entraide Nationale, CRS/Morocco and USAID on goals, practices and policies in the Title II program. These include, first, the priority emphasis of all three participants on reaching low income beneficiaries in Title II activities; and, second, the priority all three participants accord to the (MCH) Centres Sociaux Educatifs project that is the largest component of the Title II/Morocco program. These priorities are both stated in policy and reflected in daily operations. Together they form an invaluable point of departure for cooperation and for qualitative development of the Title II program in Morocco.

Policy Issues

"Self-Help" Projects

There are, however, other policy issues which make for possible disharmony among Entraide, USAID and CRS/Morocco. The use of Title II rations to promote community and economic development projects -- so called "self-help" projects -- is one such issue. As noted previously, the Moroccan Food For Peace Office and USAID/Washington have periodically pressed for a reallocation of Food For Work activities into more directly productive, preferably agricultural, or rural development related projects. The withdrawal of support for
ouvroirs proposed in FY 1977 and FY 1978 was regarded as a potential source of commodities within present Title II/Morocco program levels to be redirected to these projects.

*Entraide Nationale* has resisted restructuring Food For Work toward self-help, first, because the ouvroir project has been its highest priority within the Food For Work category and, secondly, because the highest policy-makers of the Ministry of Social Affairs reportedly do not consider such economic/rural development activities central to the Ministry's mandate. CRS/Morocco, on the other hand, claims interest in reestablishing a strong self-help component as Food For Work, but is undoubtedly reluctant to go counter to the wishes of the Ministry of Social Affairs on the issue.

The self-help project question signals what is perhaps a fundamental difference of orientation between *Entraide Nationale* and USAID. In principle USAID regards the Food For Work program as a framework in which to undertake activities that will have long-term development impacts. Food rations are an incentive to individuals to participate in such activities, a means to an end. *Entraide*, on the other hand, while perhaps not unmindful of the desired socioeconomic development dimension of Food For Work, focuses at least as strongly on the immediate welfare implications of these activities: Title II food distribution as supplements to family income. Given *Entraide's* history and mandate as a welfare agency, the difference of emphasis is understandable, but it means that *Entraide* is probably not fully sensitive to the potential of Food For Work as a
vehicle for development. The difference of emphasis also means that Entraide's standards as to what constitutes a valid development-oriented project within Food For Work are far less rigorous than those of USAID.

Nevertheless it would appear that opportunities exist to direct an increasing share of Food For Work commodities toward self-help activities. The rural water supply program currently under discussion in USAID/Morocco is a notable example of a potentially suitable project, and a Food For Work role in this effort merits particular attention. It is likely that the Food For Peace Officer can also identify many other potential projects, especially in the 11 "poor provinces" so designated by the GOM.

The question arises whether revitalizing self-help Food For Work projects should be undertaken by working around Entraide Nationale. It has been suggested for example that a second U.S. voluntary agency should be encouraged to establish itself in Morocco alongside CRS, creating ties with GOM agencies other than the Ministry of Social Affairs and serving as a Title II channel for activities important to USAID but of low priority to Entraide. On balance, however, so long as Morocco's share of total Title II commodities remains at roughly present levels, it would still appear more efficient to work through the established CRS and Entraide framework, especially in view of the effective distribution system it represents. Entraide has demonstrated flexibility in the past and it is likely that the agency can be persuaded to consider more carefully the value of involvement in self-help economic/rural develop-
ment activities. In such an arrangement the Ministry of Social Affairs would of course continue to operate the food distribution system and would participate in the selection and organization of projects to be supported.

**Title II as "Interim Assistance"

As a matter of policy, Title II Food For Peace support is meant to be "interim assistance to reach specific objectives..." (emphasis added). Accordingly most USAID/Morocco planning documents reflect the supposed temporary nature of Title II assistance. USAID/Morocco's 1978 Country development strategy statement shows, for example, a phase-down of Title II aid by FY 1983 to about 15 percent of FY 1978 levels.

From the Entraide Nationale and CRS/Morocco side, however, there is no indication of any planning for an eventual phase-out of Title II. Quite to the contrary, all evidence in the Ministry of Social Affairs and CRS/Morocco points to a continuing reliance on Title II assistance, and, if possible an expansion of present commodity levels. Equally important, it is likely that if Title II rations were to be withdrawn from currently supported projects at any time in the foreseeable future, the existence of such projects would be threatened. While the GOM might support some current Title II project activities at a reduced level, it is also probable that the GOM response to a Title II phase down would be to simply look elsewhere for replacement food aid.
If Title II is truly meant to be interim assistance in Morocco until local food supplies can be generated to support project activities, then a realistic action plan must be prepared by USAID/FFP, CRS/Morocco and the Ministry of Social Affairs and other GOM agencies working together. This plan would be based on an analysis of project priorities, desired recipient levels, availability of GOM resources and the role of external and local food assistance in project activities. It would represent a consensus of all participant agencies on the direction and long term role of Title II in Morocco. Obviously, CIAN would at some point consider the issues involved in this action plan and would relate the plan to overall the GOM nutrition objectives and strategy.

**Shifting USAID Priorities and Local Program Planning**

USAID/Washington, from its global perspective on the Title II program, has occasion to alter the program's policies and priorities as a reflection of overall experience and requirements. In some instances these shifts may seem arbitrary and unjustified from the point of view of any one Title II country and may in fact disrupt what host governments and U.S. voluntary agencies consider sound and valuable projects.

In Title II/Morocco, the GOM and CRS/Morocco believe that changing USAID priorities have occasionally had serious consequences. The outstanding example has apparently been the withdrawal of Title II support for the School Feeding program in July 1975, in a rather abrupt manner. In this
case, although the Ministry of Education had undertaken a long-term capital program to develop school feeding facilities, and although the project was functioning smoothly with large school garden and nutrition education components, USAID support was curtailed, reportedly without adequate warning, when primary school children were de-emphasized by USAID/Washington as a Title II target group. The GOM has since found some alternative support for School Feeding (World Food Program) but the program now runs at only about 50 percent of its former Title II levels.

No easy solutions exist for the problem of shifting USAID/Washington Title II priorities. Nevertheless Food For Peace/Washington has also occasionally proven flexible in adapting its global policies to local conditions and needs where a reasonable justification for doing so can be provided.

In the context of Title II/Morocco, perhaps one useful approach to responding to changing Food For Peace/Washington priorities and policies over the long term would be for the local participating agencies (CRS/Morocco, Entraide Nationale and USAID Morocco) to analyze formally and systematically -- as a unit and on a regular basis -- local conditions, needs and how the Title II/Morocco program responds or can respond to them. This analysis might take the form of a 3 to 5 year Title II program evaluation and projection, updated as required. It could include a clear statement of local needs and related Title II/Morocco objectives, a detailed qualitative and quantitative assessment of recent progress and problems and current operations, and a projection of future
actions. In a sense this analysis would elaborate and extend the CRS/Morocco Program Plan and the FFP/Morocco budget submission, but to a far more useful analytical level since both the documents appear to be fairly pro forma and since preparation of the proposed "evaluation and projection" would involve Entraide Nationale's full participation.

This exercise could be valuable on two levels. First, the program evaluation and projection could provide a comprehensive framework in which to analyze the local implications of any shifts in global USAID/Washington Title II priorities, as well as to explore local requirements which might justify exception to global priority changes. Also, and perhaps more important, a thoughtful and serious program evaluation and projection, conducted regularly, should prove to be a highly useful internal planning and evaluation tool for all three Title II Morocco participant agencies.

Application of Title II Guidelines

CRS/Morocco and Entraide Nationale both appear conscientious in trying to adhere to the general Food For Peace Title II guidelines in the Morocco program. In addition, the Morocco Food For Peace Office conducts an active oversight effort based on frequent field trips to project sites to ensure that prescribed Title II procedures and principles are applied in day-to-day project operations.
Some departures from general guidelines do exist, however, though generally these would appear to be for good cause. The most important departures concern ages of (MCH) *Centres Sociaux Educatifs* beneficiary children, and the problem of unintended family recipients of Title II rations.

*Centres Sociaux Educatifs*

**Beneficiary Children**

In the (MCH) *Centres Sociaux Educatifs*, the intended recipient groups are women in the childbearing years, children in the 2 to 5 year age interval to be enrolled in CSE's and a group of non-enrolled preschool children at home. The focus on 2 to 5 year old children for CSE enrollment varies somewhat from the global Title II guidelines, which direct greatest emphasis to children up to the age of three years. This is an age interval which Food For Peace policy-makers have assumed to be generally at greatest nutritional risk, and insofar as Morocco is concerned, probably correctly so given available evidence.

However, in the case of Title II/Morocco, this departure from guidelines is not an arbitrary one, even though it diminishes the potential nutritional impact value of the CSE program. Rather, the departure has been a conscious attempt on the part of *Entraide Nationale* and CRS/Morocco to defuse Ministry of Health criticisms of CSE "competition" with that Ministry's priority PSME program, which is aimed at children 0-2 years. Even so, however, approximately 10 to 20 percent of children enrolled in *Centres Sociaux Educatifs*
may be two years or under, based on spot checks performed by the Evaluation Team during the field trips to CSEs.

The problem may be best approached through efforts to create better linkages with Health's PSME program, as discussed below (Chapter VI). If effective cooperation of the CSE and PSME programs can be developed, it should then be possible to give priority to mothers with younger children in new CSE enrollments, thus gradually shifting emphasis to full coverage of the critical 6 month to 3 year age group, which appears most vulnerable to malnutrition in Morocco.

Unintended Family Recipients

Morocco's Title II allocations are computed on the basis of a given number of rations for a given number of beneficiaries. In order to realize the intended nutritional impact of the total allocation, the number of persons who actually consume Title II rations must approximate this number of projected beneficiaries.

In the Morocco/Title II program, food rations distributed quite likely benefit a substantial number of unintended as well as intended recipients. The problem arises because according to social custom in Morocco, Title II commodities received, for example, by a mother at a Centre Sociaux Educatif would not commonly be reserved in Moroccan households for the mother and the two children under 6 years old for which these rations are programmed in the Food For Peace MCH concept, but would be consumed by the entire family. The present average family size of CSE mothers is unknown.
Assuming, however, that it may range from 5.5 persons per family (the Moroccan national average) to 7 persons per family (as indicated by a 1975 CRS/Morocco sampling of CSE mothers\(^1\)) then at a minimum 375,000 and perhaps more likely 600,000 unintended recipients will receive a share of Title II rations distributed under the MCH category in FY 1979 in addition to the project's 450,000 intended beneficiaries.

This "unintended family recipient" problem is perhaps most serious in the context of the Centres Sociaux Educatifs effort, a project where the number of rations distributed is considerably lower than the probable number of people in the average recipient family. However, because all the Evaluation Team's conversations with recipient CSE mothers, Entraide Nationale staff and CRS/Morocco field inspectors indicate that such sharing is the rule rather than the exception; it is a problem which clearly does exist for this priority project.

CHAPTER IV. OPERATIONS AND MANAGEMENT ANALYSIS

The intent of the Operations and Management analysis is to review the internal workings of the Title II program and to assess performance of several key management functions. Accordingly, the Evaluation Team examined four major categories of program operations: program regulation and control, including selection criteria for recipients; logistics, namely commodity distribution and storage; cost and budgeting; and monitoring and evaluation.

Regulation and Control

Management of the Title II program, in the sense of regulation and control of Title II-supported project activities and food distribution, appears relatively effective. CRS/Morocco and Entraide Nationale perform this management function in close cooperation.

Management System

The basis of the CRS/Entraide management system is a network of Entraide Nationale "delegations" stationed in each of the provinces and "prefectures" (Rabat and Casablanca) These delegations are responsible for the local implementation of Entraide policies and projects. The delegations are
headed by *delegues* (delegates) who supervise all provincial *Entraide* operations, aided by *Directrices* or *Directeurs* (Directors) who are responsible to the delegates for each of the major project categories within the province: *Centres Sociaux Educatifs*, *Ouvroirs*, and the like. Provincial *Entraide* delegations also generally include a provincial accountant, and secretarial or other support staff. The delegations are responsible vertically to *Entraide Nationale*’s headquarters within the Ministry of Social Affairs in Rabat. They also answer horizontally to the Governors of the Provinces where they operate and work closely with representatives of the Governors at sub-provincial levels.

CRS/Morocco’s role in the management system focuses on overseeing the movement of Title II commodities. It controls the flow of commodities from the U.S. to Morocco through its quarterly "Calls Forward" and generally supervises commodity shipments within Morocco, although *Entraide Nationale* bears actual operating responsibility. A team of four CRS/Morocco field auditors who continually visit project sites throughout the country enables CRS/Morocco to keep abreast of project activities and movement of Title II commodities beneficiaries. Field auditors are able to visit every project site approximately per year. At both the project and provincial levels they verify ledgers, determine food stock balances, examine warehouse conditions, review qualitative problem areas and interview project staff recipients.
Coordination of the CRS/Morocco Entraide management effort is achieved by an integrated reporting system in which monthly reports from Entraide port and provincial staff of the status and distribution of commodities are forwarded to CRS as well as to Entraide headquarters and in which monthly CRS/Morocco field auditor reports are forwarded to the Ministry of Social Affairs. The system is reinforced by the fact that the CRS/Morocco Director and Assistant Director enjoy a long-standing personal relationship with the Minister of Social Affairs and key Entraide staff, and contacts between the two agencies are informally maintained on a daily basis.

USAID/Morocco, through frequent field visits of its FFP staff and contacts with CRS/Morocco and Entraide, assures that basic Food For Peace guidelines and regulations are observed in the functioning of the Title II/Morocco program. However, within USAID guidelines issues of local policy and operating procedure related to the Title II program are decided by Entraide Nationale and CRS/Morocco in close consultation. For example, on the key question of the annual shares of total commodities to be allocated by province, Entraide and CRS/Morocco jointly determine the general location of project/distribution points and the ceiling number of beneficiaries for each. Further, as noted earlier, CRS/Morocco has been instrumental in assisting Entraide Nationale plan, organize, and execute new Title II project activities in relation to USAID priorities.

Overall management staff within CRS/Morocco and Entraide appears fairly well informed of the details of the Title II
activities they sponsor. The relative scarcity of program managers and mid-level staff in both agencies requires that they be familiar with the full range of Title II operations. However, much of the attention of managers appears to focus on the details of control of distribution of food rations — how much, when, to whom. This focus naturally derives from a desire to comply with USAID's accounting requirements for Title II, and is understandable. But one consequence is that less energies have been devoted to critically examining the stated objectives of Title II supported projects in Morocco, and assessing progress toward achieving those objectives.

Selection of Beneficiaries

Procedures and criteria for selection of the individual beneficiaries of Title II rations are an especially significant issue in program regulation and control. As the Title II program currently functions, this selection procedure takes place at two levels.

According to Government of Morocco policy, the beneficiaries of Entraide Nationale activities are to possess a carte d'indigence, certifying that their families are legally poor. This certificate is issued by local (caïdat) government authorities to applicant families, theoretically on the basis of income and family situation. As far as could be determined by the Evaluation Team, no objective income criteria are applied to applicants, but rather the decision hinges on a recommendation made by the mukadam or neighborhood official, in the locality where the applicant family
lives. Because the mukadym is officially charged with such civil matters as birth and death registration for his neighborhood or village, he is presumed qualified to judge the real need of families requesting indigent status from his area. Thus the first step in admission to a Title II-supported program is the securing of this certificate of indigence.

The number of families possessing the certificates far exceeds the beneficiary ceiling for Title II rations in any region of Morocco. A second selection procedure for entry to Title II supported projects must take place. Within certain guidelines established by Entraide (i.e. children enrolled in CSEs are to be 2 to 5 years old with priority given to those in poor health), the actual selection of individuals to participate in CSEs, ouvriers or the various cooperatives is again performed by local government authorities, reportedly using such criteria as relative need, and number of children in the family.

Based on the Team's field trip observations, the Title II recipients who emerge from this selection procedure are overall a relatively low income group in fact as well as in theory. This statement certainly applies to CSE mothers and children, to families enrolled in crippled and blind cooperatives, to women in Cooperatives des Femmes Abandonnees and to many girls and young women in the handicraft cooperatives. Only in the case of preschool children in day-care garderies might the relative socioeconomic status of Title II beneficiaries be frequently questioned based on visual impressions. Some abuse of the carte d'indigence might
exist -- reports are heard of cards being bought and sold --
but it does not appear that such abuse is systematic in
relation to most Title II supported projects.

From USAID's point of view, one advantage of the
present selection procedures is that they enable CRS/Morocco
and Entraide to identify recipients who do indeed meet the
Agency's own priority socioeconomic criteria for Title II
assistance. Quite likely present beneficiaries do very
often represent the poorest classes in Moroccan society.
However, it should be recognized that at no point in the
recipient selection process as it presently stands is any
explicit judgment made by technically qualified persons as
to the nutritional and health status of individual program
beneficiaries. Thus if the Title II program were to be more
finely targeted in an effort to achieve an effective
nutritional impact upon individuals within a given population
group or region, the present selection system for beneficiaries
would be inadequate.

**Logistics**

Morocco's Title II food distribution and storage
procedures, as a system, is perhaps the most impressive
aspect of the program's operation. The system is, of course,
still subject to carelessness and human error, but neverthe-
less appears to be conceptually sound and reasonably
efficient.
At present program levels, CRS/Morocco imports about 50,000 metric tons of Title II commodities per year representing about 45 ship arrivals annually. Approximately 60 percent of shipments arrive through the port of Casablanca with the balance flowing through the Port of Tangiers. Upon arrival, Entraide Nationale secures customs entry of commodities and takes charge of ship offloadings. Newly arrived commodity shipments are stored dockside in Port Authority warehouses (e.g. Regie d'Accostage du Port de Casablanca).

Entraide has "Shipment and Transit Officers" stationed at both Casablanca and Tangiers who receive the commodity arrivals and supervise their movements into and out of the ports. These officers dispatch food to the provinces according to "Quarterly Distribution Lists" which are drawn up by CRS/Morocco -- and approved by the Director of Entraide Nationale -- on the basis of provincial and port food balances, current beneficiary levels and observation of project activities as reported by CRS end-use checkers. Shipments from the ports to Entraide provincial warehouses are effected by truck or rail, normally under contract with the National Transport Office, a government agency.

In the provinces or Rabat Prefecture, shipments are received at Entraide provincial warehouses and are then transported as soon as possible to storage areas at project sites. In Casablanca Prefecture, commodities are transferred directly from the port authority warehouse to individual project site storage facilities. Food stocks are then broken down into individual rations by Entraide Staff and
distributed monthly to project beneficiaries.

At several stages in the distribution network quantity verification and reporting procedures have been set up to generate information to CRS and Entraide to monitor the system and keep losses under control. Overall the quality of this record-keeping for commodity movements -- in the Ports, in CRS/Morocco Rabat headquarters, in the provinces, and at the ultimate CSE, Food For Work and other distribution points -- is striking. Monitrices at CSE Centers in particular have apparently been strongly indoctrinated as to the necessity of maintaining accurate and up-to-date accounts of their food stocks and distribution activities.

Storage facilities exist throughout the distribution system and appear to be adequate so long as the regular flow of commodities is maintained. Storage procedures have been established by CRS/Morocco and are usually observed at least as far as keeping commodities in protected areas, off floors and in manageable stacks are concerned. Often, however, commodities appear to be piled against walls where potential moisture damage is increased, contrary to CRS/Morocco instructions.

Based on Recipient Status Reports for FY 1978, total commodity losses in the system amounted to about 762 metric tons out of nearly 51,000 metric tons shipped from the United States. Ocean freight losses totaled about 235 metric tons or about 0.5 percent, while internal losses -- commodities lost or damaged in storage or internal transport -- amounted to a reported 527 metric tons, or about 1 percent.
Measures are being taken which should reduce commodity losses in FY 1979. Notable among these has been the hiring in late FY 1978 of a new independent surveyor in the Port of Casablanca to verify cargo counts and off-loading procedures. Additionally, USAID's re-initiation of the use of cardboard cartons rather than sacks to ship non-fat dried milk is expected to be helpful in reducing damage volumes for that commodity and is heartily supported by CRS/Morocco. Finally, the CRS/Morocco Director points out that the present USDA commodity coding system for Title II could also be improved to further diminish mis-shipments and losses. This system distinguishes different commodities by different geometric shapes printed on food sacks, but because the markings are relatively small size and printed in one color, they are not sufficiently distinctive and frequently lead to loading errors. He advises that a banding system, using bands of different colors to mark different commodities, be considered for Title II shipments.

On the whole there do not now appear to be serious structural bottlenecks subject to CRS or Entraide modification within the Title II/Morocco logistics system. The major problem has been to keep the movement of commodities regular. Some factors do exist which periodically create delays and inefficiencies and have disrupted the distribution of rations.¹ Availability of in-country transport has upon occasion been one of these, but is related to forces beyond Entraide and CRS control: seasonal shortages of trucks in

¹ Such delays account for the roughly 3,000 metric ton shortfall in actual versus approved commodity levels in FY 1978.
the Moroccan citrus exporting season; and government transport policy which requires Entraide as a public agency to be charged lower rates than other shippers, thus decreasing the priority of Title II truck loads for the National Transport Office. Also, slowness in Entraide reporting from the provinces occasionally creates inefficiencies, but this problem is recognized by the Entraide Director and the Minister of Social Affairs and attacked accordingly.

Moreover CRS/Morocco is continually seeking improvements in the distribution system. To increase efficiency in the ports it has, for example, developed a simplified import procedure with Entraide whereby customs clearance for Title II commodities is secured on an annual volume basis, thus shortening paperwork for individual shipments. Another procedure has also been initiated by CRS in which U.S. freight forwarders telex CRS/Morocco at the departure of each locally bound Title II ship with information on ETAs, volumes and cargoes, so that customs formalities can be initiated in advance of vessel arrivals.

**Costs and Budgeting**

Each of the participating agencies in Title II/Morocco has its own set of budgets and cost accounts. These are not, however, structured in such a way as to permit an easy assessment of the total cost of the nationwide Title II operation, especially when analyzing Entraide's contribution to the Title II program as distinct from its other activities. Thus the cost data on inputs (Table II-2) are rough estimates derived from several sources.
In the case of Entraide Nationale, detailed and by all appearances reliable costing and budget data are developed for the total agency operation in line with Government of Morocco requirements. Accounts exist at all levels of the agency, from project sites through provincial delegations to the Director's Office. Although Title II-supported activities figure very heavily in Entraide's total operation, it is nonetheless difficult to define with much precision just what proportion of the organization's various costs can be allocated to Title II-related projects. Data for Entraide's costs in transporting and handling commodities appear fairly firm, for example, but allocating parts of the agency's personnel, equipment, materials and general administrative budget to Title II is much less certain.

Given the apparent state of Entraide records it is likely that the organization could with time produce a fairly accurate accounting of its Title II contribution. Until the present evaluation, it has not had occasion to consider this, and has not viewed such information to be a critical management tool. It is likely that Entraide's notions of achieving cost effectiveness have less to do with management information or management systems than with appointing dynamic individuals to provincial delegate positions who will be resourceful in finding ways to implement projects on very limited budgets.¹

¹. It should also be noted that Entraide Nationale and other Government agencies are apparently somewhat hesitant to make detailed budget and cost data public. This has been attributed to, among other reasons, the fact that Morocco is in a de facto state of war due to the Sahara crisis.
CRS/Morocco also keeps detailed and up to date cost accounts for all its operations and is audited regularly by CRS/NY internal auditors. While CRS/Morocco's total effort can be more or less wholly allocated to the Title II program, the organization's cost and budgeting procedures are not set up to determine costs of various categories of projects (Food For Work, MCH, Other Child Feeding), in which it is involved.

For CRS/Morocco the concept of cost effectiveness in terms of CRS or total Title II cost per beneficiary or per ration has not been developed. CRS/Morocco staff explained to the Evaluation Team that so long as accurate and timely data can be generated to assure that commodity flows and distribution are efficient, then it will follow that the Title II program will be reasonably cost effective. If choices among project categories had to be made on some cost-effective basis then measures could be constructed, but such decisions have thus far been taken on other grounds. In the meantime CRS/Morocco would be reluctant to take on additional accounting requirements for the Title II program, given what it considers to be an already heavy reporting load.

Food For Peace/Morocco maintains, up to date, accessible and well-organized records on the Title II program. Central to its Title II files are the Recipient Status Reports. These appear, however, to be maintained on the basis of recorded commodity flows and distributions, rather than on commodity volumes and recorded counts of actual recipients together. While USAID has detailed data on its costs and
Budgets for its own participation in Title II, it has not as a matter of procedure sought to assess the total Title II costs of all participating agencies at the program or project level.

Monitoring and Evaluation

Ideally, monitoring and evaluation procedures should be a normal component of Title II program management. Utilized on a regular basis by participating agencies themselves, the procedures should provide program managers with insights into impacts: the relative success of their project activities in moving toward objectives.

Centres Sociaux Educatifs

Some monitoring and evaluation tools have been incorporated in the Title II/Morocco program, in the context of its Centres Sociaux Educatifs effort for MCH. This project features a monitoring exercise as a basic activity, in the form of the monthly weighing sessions conducted for enrolled children. Under this system, as long as a CSE child maintains a weight within the normal range for his/her age, then it is assumed that the supplementary feeding, nutrition education and general health observation that CSEs offer are having some positive impact, however difficult to quantify precisely, on the child's health and nutrition status.

This weight surveillance may be too limited an indicator by which to judge whether CSE activities have any real impact on nutritional status. Given the range of complicating
factors involved -- for example the probable family sharing of Title II rations, the absence of systematic home visits by Monitrices to judge the frequency with which nutrition education lessons are applied, and the important influence of a family's health and hygiene practices on its nutritional status -- a direct linkage between CSE food distribution and nutrition education and normal weight is difficult to assume. The link may indeed exist, but it is also true that satisfactory weight for CSE children may be maintained by factors quite unrelated to CSE activities.

However, the CSE weight surveillance does represent an honest attempt to continuously monitor project's impacts upon one group of beneficiaries, and by all indications the weighing procedure is consistently implemented in CSEs and records are carefully maintained. Furthermore, assuming that a child demonstrates a lack of weight increase, or a weight loss, then the weighing procedure does provide a useful basis for referral to a health facility -- which highlights the importance of the CSE MOH cooperation.

Additionally the CSE project has also undertaken a formal, large-scale survey in an effort to measure CSE impacts in connection with implementation of the project's recently completed OPG. The survey involved data collection on weight-for-age and weight-for-height on a sample of children enrolled in 26 CSEs during a baseline period in the spring and summer of 1975 and/or during an end-of-project phase in the spring of 1976. Twenty-four hour dietary recall interviews of 345 CSE mothers were also conducted during the two periods. Rough comparisons were made of the
weights-for-age of a group of children in 1978 with the weights-for-age of a group of older siblings, as recorded in 1975 when these latter were at an age roughly equivalent to that reached by their younger brothers and sisters in 1978. Responses to the survey of dietary recall were also compared between 1975 and 1978.

Larger percentages of children in the normal weight-for-age range and increases in the percentages of responses indicating improved dietary practices were demonstrated by the surveys, and were interpreted as evidence of impacts of the CSE project. While no real detailed statistical analysis has been undertaken for the surveys, other than these rough computations, the data they have generated may indeed be valuable and merit examination using statistical techniques. One approach to this task might be to request assistance from CEPEN statisticians for detailed analysis.

Other Projects

For the Food For Work and Other Child Feeding projects in the Title II/Morocco program, monitoring and evaluation has been interpreted as purely an accounting function. Monitoring and evaluation efforts have therefore focussed nearly exclusively on factors such as commodity quantities moved, total beneficiaries annually enrolled and project sites established. The system which has been created to monitor these factors is effective, and CRS/Morocco and Entraide Nationale managers are clearly conscious of the progress achieved and problems encountered in these areas.
On the other hand none of the participating agencies (Entraide, CRS/Morocco or USAID/Morocco) have set up procedures designed to examine systematically and on a regular basis the substantive impacts assumed for projects. No serious or sustained attempts to analyze the nutritional or socioeconomic development value of Food For Work or other projects for beneficiaries have been undertaken, for example. Substantive monitoring and evaluation has been confined to short-term efforts: the present study, the Youssef analysis of non-formal education for women in 1977, and aspects of occasional USAID IGA reports. Project managers in the participating agencies appear to judge the usefulness of much of the Title II/Morocco program on the basis of accounting data alone (commodity volumes, numbers of beneficiaries and project sites) and to accept uncritically the relationships assumed initially among inputs, outputs and desired impacts.
CHAPTER V. EFFECTIVENESS ANALYSIS

The Title II program in Morocco is intended to improve the nutritional and socioeconomic status of its beneficiaries. This chapter assesses impacts in these areas.

Target Recipient Groups

The food rations, nutrition education and vocational training that are the major intended outputs of Title II/Morocco are directed toward specific beneficiary groups. These intended recipients include mothers and preschool children in the MCH category; female adolescents, young women, female heads of households, blind and handicapped persons, and Entraide and other Title II program employees under the Food For Work category; and preschool and primary school age children under the Other Child Feeding category.

Socioeconomic Perspective

From the perspective of the economic needs of the individuals concerned, the range of target groups included in the Title II program is a reasonable one. The fact that Entraide Nationale, the Title II counterpart agency, is responsible as a GOM entity for serving the disadvantaged segments of Moroccan society facilitates focusing the Title
II program on needy beneficiary groups.

The mechanisms *Entraide* uses to identify the specific poor and disadvantaged individuals who participate in Title II-supported projects appear effective in practice, and are judged satisfactory by all concerned, including CRS/Morocco and USAID/Morocco. Both the *carte d'indigence* procedure at the level of the general selection of *Entraide* clients and the practice of relying upon local level government administrators to choose specific individual Title II project participants incorporate subjective but evidently appropriate income, family status and other socioeconomic considerations.

Additionally, the kinds of socioeconomic objectives which have been established for Title II/Morocco projects to accompany supplementary feeding activities are appropriate in relation to the target groups involved. The MCH *Centres Sociaux Educatifs* project focuses on mothers and young children and attempts to provide nutrition and hygiene education to improve nutritional status of poor families. Various Food For Work projects focus on population groups -- female adolescents, young women, and single female heads of households -- who are largely outside the mainstream of the cash economy and established educational system but who are being increasingly called upon to find formal employment and earn cash incomes. Accordingly these projects hope to provide vocational training which will lead to development of marketable skills. Finally, Title II support for *jardin* preschoolers and SME orphans is meant, respectively, to encourage the development of preschool education and to reinforce a reportedly priority institution in Morocco.
On the whole, then, the Title II/Morocco supported project activities do appear to reach the target groups for which they are intended. Moreover, these target groups are generally low income individuals for whom the Title II rations and other outputs can be valuable assistance. And finally, the socioeconomic objectives underlying "other outputs" (i.e., provision of nutrition education or vocational training) are logical as conceived in relation to the needs of target groups, even if not fully or effectively implemented in practice.

**Nutritional Status Perspective**

As noted earlier in discussing the nutritional setting of the Title II/Morocco program, detailed and recent data on Morocco's nutrition status do not exist. Based on the information that is available, however, it appears that some serious nutritional deficiencies are present, in terms of inadequate calorie and/or protein intake and certain vitamin or mineral deficiencies, among others. Moreover, it appears that these nutritional deficiencies: (a) touch all regions of Morocco, but some areas to a greater extent than others; (b) are most likely to be found in lower income groups; and (c) are most concentrated among young children in the 0 to 4 age group (and especially among children in the 6 to about 36 months interval), and among women in the child-bearing years.

Given this rough profile of Morocco's nutrition status, in general terms the Title II/Morocco program's target group is reasonably fitting. First, at a program level, since the
total Title II effort appears to reach a genuinely low income stratum in Moroccan society, the overall Title II/Morocco target group can be assumed to include segments of the national population likely to be nutritionally disadvantaged. But second, at a project level, several of the various project category recipient groups also appear to be appropriate in terms of Morocco's nutritional needs.

The priority MCH Centres Sociaux Educatifs project in particular focuses on segments of the most nutritionally vulnerable populations, young children and women of childbearing age. However, because Entraide policy excludes children under two years of age, CSE efforts bypass a portion of the children in the most nutritionally critical age range of 6 months to 3 years. Thus, as emphasized previously, the CSE target group is too restricted in age for maximum potential nutritional impact. Of course, the present arrangement is based on interministerial considerations, and in practice 10 to 20 percent of CSE enrolled children are under two years old. Nevertheless to increase the potential of the project as a nutrition intervention, a widening of the target group to include younger children would be desirable.

Some recipients in Title II/Morocco project categories other than MCH Centres Sociaux Educatifs are also associated with priority target groups from a nutrition status perspective. Young women and female heads of households in Food For Work cooperatives and some garderie preschool children fall within the nutritionally most vulnerable groups, for example, although their participation in the Title II program arises more from socioeconomic than nutritional criteria. However,
apart from the 30,000 or so individuals in these two groups, the other roughly 135,000 intended Food For Work and Other Child Feeding Title II recipients are not high priority populations from the point of view of nutritional need.

While Title II/Morocco is thus reasonably well targeted at the level of general populations (i.e., to low income groups) and broad project beneficiary groups (i.e., CSE women in the childbearing years and their young children) it should be recognized that within those populations the program is not explicitly directed to meeting greatest nutritional needs. No attempt to examine nutrition status enters into the selection of individual project participants, for example, or into the general allocation of Title II commodities among provinces. Given the limitation of Title II/Morocco resources in relation to the magnitude of the broad program and project category groups they are meant to serve, a truly efficient attack on malnutrition would require detailed consideration of nutrition status in the selection of provinces, localities and individuals upon whom to concentrate Title II efforts. Eventually, with the assistance of CIAN, CEPEN and Ministry of Health technicians, such an analysis of nutritional needs at all levels might be brought to bear on Title II program/project planning and implementation by participating agencies.
Geographical Perspectives

In terms of broad geographical coverage, the Title II/Morocco program touches populations throughout all of Morocco's 34 provinces and 2 prefectures. According to FY 1979 programming, by the end of this fiscal year one or more MCH Centres Sociaux Educatifs and one or another of the various forms of cooperatives in the Food For Work project category will be installed in every province and prefecture of the country. Additionally, according to present plans, Other Child Feeding support will be extended to SMBs and garderie day care centers in all provinces/prefectures except in those newly acquired Saharan provinces of Boujador and Smara.

The allocation of Title II beneficiaries and commodities by province and prefecture for FY 1979 is presented in Table V-1. The largest single Title II recipient province is Marrakesh with over 51,000 beneficiaries and over 4,500 metric tons of commodities for FY 1979. As opposed to its approximate share of national population -- about 6.3 percent -- Marrakesh will receive about 9.2 percent of all Title II/Morocco commodities and will represent about 8.6 percent of the total number of intended Title II beneficiaries in this fiscal year. All told, about 21 provinces or prefectures have been allocated Title II commodities and beneficiaries equal to or greater than the approximate shares represented by their populations in the Morocco national totals. Fifteen provinces and prefectures will be allocated commodities less than proportional to their shares of the national population.
<table>
<thead>
<tr>
<th>Province/Prefecture</th>
<th>Beneficiaries 1</th>
<th>Share of national population 2</th>
<th>MCH</th>
<th>Food or Work</th>
<th>Other Child Feeding</th>
<th>Total</th>
<th>Food or Work</th>
<th>Other Child Feeding</th>
<th>Total</th>
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<td>3.27</td>
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<td>2.74</td>
<td>828,000</td>
<td>464,436</td>
<td>77,778</td>
</tr>
</tbody>
</table>

### Notes

a. Based on 1976 population estimates, adjusted to include populations of Boujadour, Smara and Saoura Provinces.

b. Intended number of Beneficiaries only.


d. May not add to totals due to rounding errors.

Sources: RAM based on data provided by CRS/Morocco.
The allocation of Title II commodities and beneficiaries among provinces is reportedly determined by Entraide Nationale and CRS/Morocco in large part as a function of logistical and administrative considerations. Nevertheless, in terms of apparent provincial-level economic need these allocations have been fairly sensitive, whether consciously or not. In 1977 the GOM declared 11 provinces as "poor" in order that they be accorded priority attention in government activities. As Table V-2 demonstrates, in all but two cases -- the provinces of Khemisset and Taza -- Title II/Morocco allocations of beneficiaries and commodities for FY 1979 are more than proportional to the importance of these provinces in terms of their shares of national population. In some cases, notably the provinces of Figuig, Errachidia, Ouarzazate and Khenifra, the relative Title II concentration of effort is especially striking.

All the provinces of Morocco include both urban centers and rural areas. While no data are available on the distribution of Title II supported projects between urban and rural locations, reportedly the division is roughly equal, at least for the Centres Sociaux Educatifs.

Overall the geographical implantation of MCH, Food For Work and Other Child Feeding day care centers within and among provinces is a question that merits additional study by Title II participating agencies. Thus far, as noted above, location of project sites has been largely based on administrative and logistical criteria, although at the provincial level these may have included some attention to relative economic need as well. There should, however, be
Table V-2. Relative Participation of Morocco's Eleven "Poor Provinces" in the Title II Program, FY 1979

<table>
<thead>
<tr>
<th>Province</th>
<th>Share of National Population</th>
<th>Share of Beneficiaries</th>
<th>Share of Commodities</th>
</tr>
</thead>
<tbody>
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<td>2.13</td>
<td>2.07</td>
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<td>Chaouen</td>
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<td>.60</td>
<td>.58</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>21.97</strong></td>
<td><strong>30.11</strong></td>
<td><strong>29.43</strong></td>
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</tbody>
</table>

Source: From Table V-1.
procedures to assure that relative nutritional and economic needs of target groups are explicitly considered in both provincial and subprovincial allocations of Title II resources.

Once it is determined, for example, with help from CEPEN, that certain localities have serious nutritional deficiencies, Title II aid through the MCH Centres Sociaux Educatifs and other projects could be concentrated in these localities. If the Title II tonnage level is restricted, then it may be advisable to close or reduce the program in areas with relatively less serious nutritional or economic needs in order to serve needier localities. It would also be desirable to prepare a list of criteria used to select new project sites and to make this documentation an integral part of the program records. One result of this kind of detailed analysis might eventually be, for example, a higher proportion of MCH Centres Sociaux Educatifs and other project efforts in rural areas.

**Nutritional Impact**

The effectiveness of the Title II program as a nutrition intervention is a function of a range of variables. These variables include, among others, the size and composition of the rations distributed, the general acceptability of the rations to beneficiaries, the size of the actual consuming population, the suitability of the rations in view of existing nutritional deficiencies, and the nutritional status and general health of beneficiaries.
Nature of the Title II/Morocco Rations

For each of the three project categories in the Title II/Morocco program, a different ration is distributed. These rations differ both in size and in commodity combination. As a result each ration represents a different nutritional contribution.

For the MCH category three full rations are distributed monthly to the mothers participating in Centres Sociaux Educatifs. For FY 1979 each ration consists of 450 grams of vegetable oil, 1.3 kilos of soy-fortified flour, and 1 kilo each of soy fortified rolled oats, wheat soya blend (WSB), rice, and non-fat dried milk.

In the Food For Work category five rations are distributed monthly to each worker participating in a FFW project activity. The total represents supplementary feeding for the worker plus four family members. Presently each ration includes 9 kilos of soy-fortified flour and 700 grams of vegetable oil.

Finally, in the Other Child Feeding category, each intended beneficiary, whether resident of an SMB orphanage or garderie preschooler, is allocated the same monthly ration. In the OCF framework distributions are made to institutions rather than directly to beneficiaries. The OCF monthly ration for each beneficiary consists of 700 grams of soy oil, 6 kilos of soy-fortified flour and 1 kilo of non-fat dried milk. Table V-3 summarizes the monthly commodity quantities to be distributed to individuals and
Table V-3. Morocco Title II Program, Per Capita and Family Ration Allocations, FY 1979 Approved Levels

<table>
<thead>
<tr>
<th>Ration</th>
<th>MCH Per capita</th>
<th>MCH Family</th>
<th>FFW Per capita</th>
<th>FFW Family</th>
<th>OCF Per capita</th>
<th>OCF Family</th>
</tr>
</thead>
<tbody>
<tr>
<td>Soybean oil</td>
<td>.45</td>
<td>1.35</td>
<td>.70</td>
<td>3.5</td>
<td>.70</td>
<td>--</td>
</tr>
<tr>
<td>Soy fortified flour</td>
<td>1.30</td>
<td>3.90</td>
<td>9.00</td>
<td>45.0</td>
<td>6.00</td>
<td>--</td>
</tr>
<tr>
<td>Soy fortified oats</td>
<td>1.00</td>
<td>3.00</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Wheat soya blend</td>
<td>1.00</td>
<td>3.00</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Rice</td>
<td>1.00</td>
<td>3.00</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Non-fat dried milk</td>
<td>1.00</td>
<td>3.00</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>5.75</strong></td>
<td><strong>17.25</strong></td>
<td><strong>9.70</strong></td>
<td><strong>48.5</strong></td>
<td><strong>6.70</strong></td>
<td>--</td>
</tr>
</tbody>
</table>

a. Three rations based on mother enrolled in Centre Social Educatif plus two children.
b. Five rations based on FFW project participant plus four family members.
families under the respective Title II/Morocco project categories.

Based on discussions with field staff personnel and with a number of recipients, it is the Team's judgment that reportedly the commodities which make up Title II rations are generally acceptable to beneficiaries. Soy-fortified flour and soy oil are especially appreciated, though some of the blended products (notably wheat soy blend) are not entirely in line with present consumer tastes. However, there has been growing acceptance of some Title II ration items that are not normally a large part of the Moroccan diet -- soy-fortified rolled oats, for example. Also, CSE Monitrices report that sessions dealing with recipes for preparation of Title II commodities are among the most popular CSE lessons.

Nutritive Value and Suitability of Rations

The nutritive value of rations varies by project category. The nutritional contribution of each per capita ration in each of the project categories is presented in Table V-4.

In light of the kinds of nutritional deficiencies that many observers believe to be common in Morocco -- protein or calorie malnutrition deficiencies in certain vitamins such as vitamin A among young children, or in minerals such as calcium or iron, especially among adult women -- the composition of individual rations appears to be appropriate. On a per capita daily basis all rations provide a significant
Table V-1. Composition of Morocco Title II Per Capita Rations, by Project Category and Commodity Combination, Including Approximate Nutritional Contribution (Selected Major Nutrients), FY 1979 Ration Levels

<table>
<thead>
<tr>
<th>Project category/commodity</th>
<th>Ration (gm)</th>
<th>Calories (Kcal)</th>
<th>Protein (gm)</th>
<th>Vitamin A (IU)</th>
<th>Calcium (mg)</th>
<th>Iron (mg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Soybean oil</td>
<td>450</td>
<td>3,978</td>
<td>--</td>
<td>--</td>
<td>2,746</td>
<td>65</td>
</tr>
<tr>
<td>Soy fortified flour</td>
<td>1,300</td>
<td>4,641</td>
<td>160</td>
<td>11,466</td>
<td>2,746</td>
<td>65</td>
</tr>
<tr>
<td>Soy fortified oats</td>
<td>1,000</td>
<td>3,750</td>
<td>210</td>
<td>59</td>
<td>810</td>
<td>53</td>
</tr>
<tr>
<td>Wheat soy blend</td>
<td>1,000</td>
<td>3,600</td>
<td>200</td>
<td>59</td>
<td>810</td>
<td>53</td>
</tr>
<tr>
<td>Rice</td>
<td>1,000</td>
<td>3,631</td>
<td>67</td>
<td>--</td>
<td>240</td>
<td>590</td>
</tr>
<tr>
<td>Non-fat milk</td>
<td>1,000</td>
<td>3,631</td>
<td>359</td>
<td>309</td>
<td>13,080</td>
<td>29</td>
</tr>
<tr>
<td><strong>Monthly Total</strong></td>
<td>5,750</td>
<td>23,231</td>
<td>996</td>
<td>28,414</td>
<td>24,366</td>
<td>945</td>
</tr>
<tr>
<td><strong>Daily Total</strong></td>
<td>192</td>
<td>774</td>
<td>33</td>
<td>947</td>
<td>812</td>
<td>32</td>
</tr>
<tr>
<td><strong>Food for Work:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Soybean oil</td>
<td>700</td>
<td>6,188</td>
<td>--</td>
<td>--</td>
<td>19,008</td>
<td>450</td>
</tr>
<tr>
<td>Soy fortified flour</td>
<td>9,000</td>
<td>32,130</td>
<td>1,440</td>
<td>79,380</td>
<td>19,008</td>
<td>450</td>
</tr>
<tr>
<td><strong>Monthly Total</strong></td>
<td>9,700</td>
<td>38,318</td>
<td>1,440</td>
<td>79,380</td>
<td>19,008</td>
<td>450</td>
</tr>
<tr>
<td><strong>Daily Total</strong></td>
<td>323</td>
<td>1,277</td>
<td>48</td>
<td>2,646</td>
<td>634</td>
<td>15</td>
</tr>
<tr>
<td><strong>Other Child Feeding:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Soybean oil</td>
<td>700</td>
<td>6,188</td>
<td>--</td>
<td>--</td>
<td>12,672</td>
<td>300</td>
</tr>
<tr>
<td>Soy fortified flour</td>
<td>6,000</td>
<td>21,240</td>
<td>960</td>
<td>52,920</td>
<td>12,672</td>
<td>300</td>
</tr>
<tr>
<td>Non-fat milk</td>
<td>1,000</td>
<td>3,631</td>
<td>359</td>
<td>309</td>
<td>240</td>
<td>29</td>
</tr>
<tr>
<td><strong>Monthly Total</strong></td>
<td>7,700</td>
<td>31,059</td>
<td>1,799</td>
<td>53,229</td>
<td>12,912</td>
<td>329</td>
</tr>
<tr>
<td><strong>Daily Total</strong></td>
<td>357</td>
<td>1,035</td>
<td>44</td>
<td>1,774</td>
<td>430</td>
<td>11</td>
</tr>
</tbody>
</table>

c. Estimated on a 30-day month.

Source: RNNA.
energy contribution, from 774 calories daily to 1,277 calories daily. Additionally, because of the use of fortified and blended commodities (soy-fortified flour and rolled oats, wheat soy blend, etc.), all per capita rations furnish substantial quantities of protein and important vitamins and minerals. It is also notable that because non-fat dried milk is included in MCH and Other Child Feeding rations, both cereal and animal base protein are provided. While the vitamin and mineral value of rations outlined in Table V-4 is limited to only Vitamin A, calcium and iron, it should be emphasized that all rations are also rich in such nutrients as B complex vitamins, ascorbic acid, phosphorus, sodium and potassium as well.

The suitability of the Title II/Morocco rations is of course a relative matter, tied to the strengths and weaknesses in the nutritional status of the program's target populations at any one time. The food consumption and nutrition survey to be conducted in connection with the upcoming 1980-81 Moroccan National Population Census will provide up-to-date and more detailed insights on Morocco's nutritional status than is presently available. Results of that survey will also provide a basis for review of the makeup of Title II rations in Morocco for the 1980s; but in the meantime the present composition appears nutritionally appropriate.
Impact of Rations

Theoretical Impact

Given their nutritive content, the various "title II/ Morocco rations theoretically represent a substantial feeding supplement for the individuals who receive them, at least on a per capita ration basis.

Assuming that each daily ration is actually consumed by the single individual for whom it is intended by USAID planners, and that this individual is a good initial nutritional and health status, the designated rations in all project categories may provide from 30 percent to 70 percent of daily calorie requirements and from 44 to as much as 100 percent of daily protein requirements, depending upon the class of recipient. The rations could also furnish more than the full complement of iron required for many classes of recipients, including as much 175 percent of the recommended daily allowance for adult MCH recipient women, and well over half the daily requirements for calcium. Tables V-5 through V-7 present the theoretical daily per capita nutritive contributions of the three different rations for selected representative classes of recipients, assuming consumption of a single ration by a single recipient over a month's time.
Table V-5. MCH Project Title II Ration as a Percent of Recommended Daily Allowance for Selected Nutritional Requirements by Classes of Recipients, FY 1979 Ration Levels

<table>
<thead>
<tr>
<th>Dietary requirements</th>
<th>Adult woman 23-50 years</th>
<th>Pregnant 23-50 years</th>
<th>Lactating 23-50 years</th>
<th>Child 1-3 years</th>
<th>Child 4-6 years</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calories (Kcal)</td>
<td>38.7</td>
<td>31.7</td>
<td>31.0</td>
<td>59.5</td>
<td>43.0</td>
</tr>
<tr>
<td>Protein (gm)</td>
<td>95.7</td>
<td>43.7</td>
<td>66.7</td>
<td>144.3</td>
<td>110.7</td>
</tr>
<tr>
<td>Vitamin A (Iu)</td>
<td>23.7</td>
<td>18.9</td>
<td>15.8</td>
<td>43.4</td>
<td>37.9</td>
</tr>
<tr>
<td>Calcium (mg)</td>
<td>112.0</td>
<td>67.7</td>
<td>67.7</td>
<td>112.0</td>
<td>112.0</td>
</tr>
<tr>
<td>Iron (mg)</td>
<td>175.0</td>
<td>175.0</td>
<td>175.0</td>
<td>210.0</td>
<td>315.0</td>
</tr>
</tbody>
</table>

a. Nutritive value of ration as calculated in Table V-4.
Source: RRNA.
Table V-6. Food for Work Title II Ration\(^2\) as Percent of Recommended Daily Allowance\(^b\) for Selected Nutritional Requirements, by Classes of Recipients, FY 1979 Ration Levels

<table>
<thead>
<tr>
<th>Classes of recipients</th>
<th>Percent of RDA</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Adult woman 23-50 years</td>
</tr>
<tr>
<td>Calories (Kcal)</td>
<td>63.9</td>
</tr>
<tr>
<td>Protein (gm)</td>
<td>104.3</td>
</tr>
<tr>
<td>Vitamin A (IU)</td>
<td>66.2</td>
</tr>
<tr>
<td>Calcium (mg)</td>
<td>79.2</td>
</tr>
<tr>
<td>Iron (mg)</td>
<td>83.3</td>
</tr>
</tbody>
</table>

a. Nutritive value of ration as calculated in Table V-4.
Source: RRNA.
Table V-7. Other Child Feeding, Title II Ration\textsuperscript{a} as Percent of Recommended Daily Allowance\textsuperscript{b} for Selected Nutritional Requirements, by Classes of Recipients, FY 1979 Ration Levels

<table>
<thead>
<tr>
<th>Dietary requirements</th>
<th>Day Care child 4-6 years</th>
<th>SMB male 7-10 years</th>
<th>Child/adolescent 11-14 years</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calories (Kcal)</td>
<td>57.5</td>
<td>43.1</td>
<td>40.0</td>
</tr>
<tr>
<td>Protein (gm)</td>
<td>146.7</td>
<td>122.2</td>
<td>100.0</td>
</tr>
<tr>
<td>Vitamin A (Iu)</td>
<td>71.0</td>
<td>53.8</td>
<td>35.5</td>
</tr>
<tr>
<td>Calcium (mg)</td>
<td>53.8</td>
<td>53.8</td>
<td>35.8</td>
</tr>
<tr>
<td>Iron (mg)</td>
<td>110.0</td>
<td>110.0</td>
<td>61.1</td>
</tr>
</tbody>
</table>

\textsuperscript{a} Nutritive value of ration as calculated in Table V-4.

\textsuperscript{b} Based on "Recommended Dietary Allowances," U.S. National Academy of Sciences, 1974.

Source: RRNA
Effect of Possible Ration Sharing

It should be emphasized, however, that the nutritional contribution of Title II rations illustrated in Tables V 5-7 are potential maximum contributions. If the assumption of "one recipient consuming one ration" is relaxed, then the potential nutritional impact of the rations diminishes. This assumption is, moreover, a critical one, because given the practice of general family sharing of available food supplies, rations distributed in all Title II/Morocco projects are by definition consumed by a greater number of recipients than intended by the program's designers. Consequently Tables V-8 and V-9 demonstrate possible effects of assuming that Title II rations distributed in the context of the MCH and Food For Work projects are shared equally by all members of recipients' families. For MCH, rations are assumed to be consumed by a 7 member family with 5 living children, one over 14 years, since this was once judged to be the size and structure of a typical Centre Social Educatif family.¹ For Food For Work, rations are assumed to be divided among a hypothetical 6 member family, a number which is realistic in view of the reported national average Moroccan family size of 5.5 persons.

For MCH project rations, it is evident that the assumption of family sharing substantially cuts the rations' nutritive value in several critical nutritional categories, including total calorie consumption, although for proteins

Table V-8. MCH Project Title II Rations as Percent of Recommended Daily Allowance\(^a\) for Selected Nutritional Requirements, Assuming Family Sharing\(^b\), FY 1979 Ration Level

<table>
<thead>
<tr>
<th>Dietary requirement</th>
<th>Adult male 23-50 years</th>
<th>Adult female 23-50 years</th>
<th>Adolescent female 15-18 years</th>
<th>Male adolescent 11-14 years</th>
<th>Child 7-10 years</th>
<th>Child 4-6 years</th>
<th>Child 1-3 years</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calories (Kcal)</td>
<td>12.3</td>
<td>16.6</td>
<td>15.8</td>
<td>11.8</td>
<td>13.8</td>
<td>18.4</td>
<td>25.5</td>
</tr>
<tr>
<td>Protein (gm)</td>
<td>25.2</td>
<td>30.7</td>
<td>29.4</td>
<td>32.1</td>
<td>39.2</td>
<td>47.0</td>
<td>61.3</td>
</tr>
<tr>
<td>Vitamin A (iu)</td>
<td>0.8</td>
<td>10.1</td>
<td>0.8</td>
<td>0.8</td>
<td>12.3</td>
<td>16.2</td>
<td>20.3</td>
</tr>
<tr>
<td>Calcium (mg)</td>
<td>43.5</td>
<td>43.5</td>
<td>29.0</td>
<td>29.0</td>
<td>43.5</td>
<td>43.5</td>
<td>43.5</td>
</tr>
<tr>
<td>Iron (mg)</td>
<td>76.1</td>
<td>76.1</td>
<td>76.1</td>
<td>137.0</td>
<td>137.0</td>
<td>137.0</td>
<td>91.3</td>
</tr>
</tbody>
</table>

b. Assumes equal sharing of three MCH rations among a 7-member family.

Source: RRNA
Table V-9. Food for Work Project Title II Rations as Percent of Recommended Daily Allowance\textsuperscript{a} for Selected Nutritional Requirements, Assuming Family Sharing

<table>
<thead>
<tr>
<th>Dietary requirements/family size</th>
<th>Adult male 23-50 years</th>
<th>Adult woman 23-50 years</th>
<th>Female adolescent 15-18 years</th>
<th>Male adolescent 11-14 years</th>
<th>Child 4-6 years</th>
<th>Child 1-3 years</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calories (Kcal)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6 person</td>
<td>39.4</td>
<td>53.2</td>
<td>50.7</td>
<td>38.0</td>
<td>59.1</td>
<td>81.9</td>
</tr>
<tr>
<td>OAPAM/Youssoufia</td>
<td>21.9</td>
<td>29.6</td>
<td>28.2</td>
<td>21.1</td>
<td>32.8</td>
<td>45.5</td>
</tr>
<tr>
<td>Protein (g/m)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6 person</td>
<td>71.4</td>
<td>87.0</td>
<td>83.3</td>
<td>90.1</td>
<td>133.1</td>
<td>173.9</td>
</tr>
<tr>
<td>OAPAM/Youssoufia</td>
<td>39.7</td>
<td>48.3</td>
<td>46.3</td>
<td>50.5</td>
<td>74.1</td>
<td>96.6</td>
</tr>
<tr>
<td>Vitamin A (Iu)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6 person</td>
<td>44.1</td>
<td>55.1</td>
<td>44.1</td>
<td>44.1</td>
<td>88.2</td>
<td>110.3</td>
</tr>
<tr>
<td>OAPAM/Youssoufia</td>
<td>24.5</td>
<td>30.6</td>
<td>24.5</td>
<td>24.5</td>
<td>49.0</td>
<td>61.3</td>
</tr>
<tr>
<td>Calcium (mg)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6 person</td>
<td>66.0</td>
<td>66.0</td>
<td>44.0</td>
<td>44.0</td>
<td>66.0</td>
<td>66.0</td>
</tr>
<tr>
<td>OAPAM/Youssoufia</td>
<td>36.7</td>
<td>36.7</td>
<td>24.4</td>
<td>24.4</td>
<td>36.7</td>
<td>36.7</td>
</tr>
<tr>
<td>Iron (mg)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6 person</td>
<td>69.4</td>
<td>69.4</td>
<td>69.4</td>
<td>69.4</td>
<td>125.0</td>
<td>83.3</td>
</tr>
<tr>
<td>OAPAM/Youssoufia</td>
<td>38.5</td>
<td>38.5</td>
<td>38.5</td>
<td>38.5</td>
<td>69.4</td>
<td>46.3</td>
</tr>
</tbody>
</table>

\textsuperscript{a}. Based on "Recommended Daily Allowances," U.S. National Academy of Sciences, 1974.
\textsuperscript{b}. Assumes equal sharing of five Food for Work rations among a 6-member family. For OAPAM/Youssoufia families, assumes equal sharing of effective OAPAM/Youssoufia ration -- about 55 percent of nominal Food for Work ration -- among a 6-member family.

Source: RRNA
and various minerals the rations still represent a significant supplement. On the other hand, in the Food For Work category, because the number of rations provided -- 5 per family -- approximates what may be the average national family size, the assumption of family sharing hardly reduces the nutritive value of the rations for most projects.

The OAPAM/Youssoufia cooperatives are perhaps the one Food For Work exception where the practice of ration sharing makes a difference. In this case, however, the problem stems from the fact that the Title II allocation to OAPAM/Youssoufia cooperative has been reduced in the last two years from 36,000 beneficiaries (7,200 workers plus 28,800 dependents) to 20,000 beneficiaries (4,000 workers plus 16,000 dependents). Nevertheless OAPAM/Youssoufia participant families have reportedly informally agreed to share the reduced quantity of rations now available among the original number of beneficiaries, thus reducing each effective ration received by about 45 percent (Table V-9).

The question of sharing a given number of rations among a larger than intended number of beneficiaries also arises in the Other Child Feeding project, and makes the nutritional impact of Title II rations difficult to assess. For the SMB orphanages, for example, the allocation of rations is meant to represent the number of primary school age children resident in the institutions. The flour, oil and milk provided under Title II is combined with food stocks purchased out of the regular SMB budgets and served to the overall SMB population. Because, however, (a) the total SMB population of all ages has reportedly grown while the total
Title II ration volume has remained constant, and (b) the financial resources of SMBs have reportedly increased less than proportional to rising food costs and to total SMB population growth, the effective Title II ration for any individual SMB primary school age child has no doubt steadily declined. Hence real Title II nutritional impacts in SMBs probably stand well below the theoretical impacts outlined in Table V-7.

Similarly, the real nutritional contribution to garderìes day care centers is also unclear. Ration volumes should be adequate for the real number of beneficiaries, in that a full year's commodity supply for the full complement of 117 planned day care centers has been budgeted in FY 1979, even though the program is just getting underway, and many planned centers are not yet established. But in the case of the 45 or so garderìes which have already been receiving Title II support over the past few years, the Evaluation Team observed posted menus which call for preparation of 30 grams of bread per day per child plus use of oil in salad or cooking. Leaving aside the question of distribution of milk budgeted for CCF preschoolers, these bread and oil allocations represent about 400 calories and 7 grams of protein, which is substantially less than intended under the planned per capita daily ration of the two commodities.
Differential Impacts: Importance of Initial Nutritional Status

Nutritional impact of the Title II activities does not depend on the absolute size and nutritive content of the rations alone. It is a function of the value of those rations in broader context of a given recipient's overall nutritional status, including the total volume and nutritive value of the non-Title II food he or she consumes, and the general state of his or her health. Inadequate or poor quality food intake and poor health tend to decrease the body's efficiency in utilizing food consumed and thus raise the levels of supplementary feeding required in order to improve nutritional status. Supplementary feeding at the Title II ration levels outlined above may therefore be expected to have differential nutritional impacts depending upon the habitual diet and state of health of the recipients concerned.

The issue of the general nutritional and health status of recipients as an influence in the nutritional impact of Title II feeding activities is perhaps most critical in relation to the 300,000 young children who are intended beneficiaries of the Centres Sociaux Educatifs project, since they represent a target group which is probably more vulnerable to nutritional deficiencies than are other segments of the population at large. In view of the size and nutritive content of the effective (family-shared) MCH ration, three alternative levels of potential nutritional impact are likely.
For a child of normal nutritional status and good general health, the calorie and protein supplement provided by the Title II ration probably has a beneficial effect in preventing protein-calorie malnutrition and other deficiencies. On the other hand, for children already suffering from moderate malnutrition as a result of poor and inadequate diet, the impact of the MCH Title II ration is more limited. The Title II feeding may help to prevent such children from slipping into severe malnutrition, but is unlikely to be sufficient to restore normal nutritional status. Finally, for children afflicted by severe malnutrition the Title II MCH ration is definitely insufficient. Restoration of health and nutritional status are, at this level, a clinical problem calling for medical attention including rehydration and carefully controlled supplementary feeding procedures.

Assuming that the nutritional status of young children of CSE families is distributed as was the nutritional status of children 0-4 years throughout Morocco in 1970 and 1971 (Table I-6), one might estimate that for about 56 percent of the 300,000 FY 1979 target group children of CSE mothers (168,000 children), pre-family-shared Title II rations help to maintain a normal nutritional state; for 40 percent of such children (120,000 children) the rations prevent severe malnutrition but do little to improve a moderately malnourished state; and for a possible 4 percent of CSE target group children (12,000 children) who may be severely malnourished, the rations have no effect. These estimates are of course very imprecise, but they serve to underline that the nutritional impact of the Title II rations will vary within and among the target groups.
Nutrition Education

Within the Title II/Morocco program, nutrition education is directed at only one category of beneficiaries, the mothers enrolled in the (MCH) Centres Sociaux Educatifs. Improved nutritional status through nutrition education is, however, meant to be the major impact of this largest and priority project for Title II/Morocco by the participating agencies.

The CSE Monitrices are responsible for organizing and presenting nutrition education to their assembled groups of CSE mothers. The Monitrices follow a standard nutrition education curriculum for the Centres Sociaux Educatifs which has been developed at the Ministry of Social Affairs' Marrakesh School of Nutrition. Since 1975 the curriculum has evolved to three different annual cycles of lessons, one lesson for each month. Through a sequence of annual month-long seminars, the School of Nutrition regularly trains groups of Monitrices in the use of each year's curriculum, and in simple administrative procedures for the CSEs.

Actually the CSE nutrition education program is broader than nutrition alone, and touches on health and hygiene and various home economics concerns. Topics included in the CSE curriculum to date include types and values of food, food storage and preparation, weaning practices, advice on pregnancy, breastfeeding, child development, infant hygiene and others.
The Monitrices are fairly young, often in their late teens or early twenties, and many are unmarried. Most have a primary school education certificate, and in a number of cases, a degree of formal education above the primary level. Their preparation at the Marrakesh School of Nutrition is aimed at their level of education and the curriculum upon which their teaching activities are based is simplified and highly structured.

The real impacts of the CSE nutrition education effort are difficult to determine. An attempt has been made to do so in the form of a dietary survey of CSE mothers administered by CSE Provincial Directrices in January and May, 1978 in connection with the final report of CRS/Morocco's nutrition education OPG. CRS/Morocco considers the results of this survey compared to baseline data gathered in 1975 to be fairly encouraging. It points in particular to the fact that mothers' responses in 1978 represented "significant" increases in consumption of "growth foods," vegetables and fish over 1975 levels, which is interpreted to demonstrate that mothers have absorbed CSE nutrition lessons. While the survey has not been statistically analyzed, the data generated appear to represent a good beginning for a more detailed and systematic assessment of the appropriateness of CSE nutrition education topics and teaching methods.

Other categories of beneficiaries in the Title II/Morocco program do not now receive any nutrition education to accompany food ration distribution. However, it appears that nutrition education activities in the context of the assorted Food For Work cooperatives in particular could be
useful. *Entraide Nationale* and CRS/Morocco might consider developing a nutrition education curriculum for Food For Work beneficiaries, and perhaps relating this curriculum to the mass media nutrition education campaign that the Ministry of Health is currently preparing.

**Measuring Nutrition Impacts**

It should be clear from the above discussion and from "Monitoring and Evaluation" (Chapter IV) that measurement of nutrition impacts in the Title II/Morocco program is very uncertain given present evaluation procedures and available data. Nevertheless, action might be undertaken to strengthen measurement of program effectiveness.

Within Title II/Morocco, greatest attention should be given to analyzing impacts of the *Centres Sociaux Educatifs* project, since improved nutritional status is the primary CSE focus, since CSE is the priority Title II/Morocco activity, and since some efforts to evaluate effectiveness have already been made. First of all, a thorough analysis of the 1975/1978 survey of CSE mothers and children should be conducted by a technically competent body, examining survey structure and sampling procedures as well as information obtained. The Team suggests that CRS/Morocco and the School of Nutrition in Marrakesh enlist the assistance of CEPEN and perhaps academic resources (*Institut Hassan II*) in this regard. This analysis may well produce valuable data for broad economic and nutrition planning in Morocco, as well as insights into the usefulness of the CSE project.
In addition, a more precise picture of the current CSE beneficiary population and community context is necessary to improve measurement of project impacts. Some data in this regard was gathered in the 1975 CRS/Morocco baseline survey for CSEs, but it appears that these could be updated and elaborated. After examination of data gaps and utility of information available in the 1975/1978 survey, a second survey might be undertaken, possibly including a statistical sample of present CSE families to develop an updated idea of family size, age structure, food consumption patterns and personal and environmental health practices. This could also be accompanied by a "community survey" performed by CSE Monitrices to develop a better profile of the characteristics and needs of communities presently served by Centres Sociaux Educatifs. Such a survey would not be technically complex and would emphasize description rather than analysis: rural or urban location, availability of health and other social services, existing water supply and waste disposal systems, seasonal food availability and food prices, housing, sources of employment and the like.

Also several refinements could be made in the procedures and types of information presently collected at the CSEs to improve project evaluation and activity analysis. The MCH Centers now record only weight for age, and it is suggested that height also be recorded at the time that the child is enrolled in the program and every six months thereafter. Moreover, in visiting several CSEs, the Team noted that the Monitrices' registers do not always explain reasons for a child's withdrawal from the project: whether this was due to a family's having left the area, for example, or to the
death of the child, this information is critical to any statistical analysis of the project. Additionally, it is likely that more anthropometric information concerning beneficiaries could be sent from CSEs to the provincial level for later provincial or national analysis of the project's target group.

It appears that CSE Monitrices could be used far more actively than at present to help assess effectiveness of the project. In particular, the Monitrices could be encouraged to establish a pattern of informal home visits to participating mothers, a practice not presently followed by Monitrices. Performed regularly, these home visits would serve to gain insights into how successfully and consistently mothers apply nutrition education lessons and other CSE counsel, and into food, sanitation and child care problems and possible CSE project responses.

The combination of more extensive analysis of existing data, generation of additional information through new surveys and improved information gathering activities as the CSE facility level should help to determine the usefulness of CSE project efforts to date, and to provide a better foundation for future planning.
Socioeconomic Impact

The value of Title II rations as an income supplement and various vocational training and/or employment creation activities are the Title II/Morocco program's major potential socioeconomic impacts.

Income Supplement

Clearly the distribution of food rations through the Title II/Morocco program represents an important income supplement to beneficiary families. In fact this "income supplement effect" is probably the single most clear-cut impact of the Title II/Morocco program.

The value of the monthly ration distribution of Title II commodities undoubtedly varies throughout the country, but based on the Evaluation Team's interviews, it appears that the *Centres Sociaux Educatifs* mothers' three MCH rations together are worth about 60 DH per month (about $15), while the five *Food For Work* rations distributed to a *Cooperative d'Apprentissage* or *Cooperative de Femmes Abandonnees* participant and her family are equivalent to about 59 DH per month ($14.75). The breakdown of these estimates is shown in Table V-10.

Income distribution figures are not available for Morocco. If, however, one judges the roughly 60 DH value of the respective Title II rations against the official Moroccan minimum wage of about 8 DH per day for an unskilled worker, the rations represent about 35 percent of the monthly income.
Table V-10. Estimated Value of Monthly Food and Food For Work Rations to Recipient Families, FY 1979 Ration Level

<table>
<thead>
<tr>
<th>Unit price</th>
<th>Total monthly recipient family ration (kg.)</th>
<th>Value of total ration (DH)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>MCH</td>
<td>FFW</td>
</tr>
<tr>
<td>Soy fortified flour</td>
<td>1.2</td>
<td>3.9</td>
</tr>
<tr>
<td>Soy fortified rolled oats</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Wheat soy blend</td>
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<td>3</td>
</tr>
<tr>
<td>Non-fat dried milk</td>
<td>9</td>
<td>3</td>
</tr>
<tr>
<td>Soybean oil</td>
<td>3</td>
<td>1.35</td>
</tr>
<tr>
<td>Rice</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Total</td>
<td>--</td>
<td>17.5</td>
</tr>
</tbody>
</table>

a. Based on Entraide Nationale estimates in El Jadida Province, urban centers.
that a laborer can bring home to his family. Further, since the rations are a supplement in kind, they are even more valuable than fixed cash payments would be in the framework of Morocco's current inflation rate of roughly 12 percent.

**Vocational Training, Employment Creation and Income Generation**

All of the Morocco Food For Work activities nominally establish skills development through vocational training and/or creation of opportunities for employment and income generation as project objectives, with a focus on girls and women. However, for lack of on-going monitoring systems and data, no evaluation of Food For Work impacts in these areas is possible.

The Food For Work activities have been successful in attracting participants. At its peak in FY 1978, the *ouvroir* vocational training movement involved about 55,000 girls, while the present cooperatives and Title II program-related jobs CSE and garde*re* day care Monitrices, Entraide warehouse staff supported by Food For Work rations will represent "employment opportunities" for about 26,000 people by the end of the present fiscal year. While these figures are impressive, it should be recognized that participation in the Food For Work cooperatives and *ouvroirs* cannot necessarily be equated with real employment or effective vocational training. The availability of food rations -- a substantial income supplement, as emphasized above -- is apparently in itself a significant incentive to take part regardless of the real value of skill training or income earning opportu-
nities presumably present in Food For Work projects.

In terms of socioeconomic development objectives, the danger in present Food For Work projects is that without consistent attempts to examine Food For Work training and cooperative production activities against their real employment and income generating value, it is easy for cooperatives and ouvroirs to slip into modest make-work organizations, held together only by Title II aid. Some of the target groups presently involved in Food For Work may indeed merit Title II assistance on income supplement grounds alone, without attempting to justify ration distribution as an incentive for vocational training or a temporary wage supplement, but the issue should be confronted as an explicit policy decision. To ensure, then, the effectiveness of Food For Work cooperatives -- and the usefulness of ouvroirs -- as vehicles for vocational training, employment creation and income generation, Entraide Nationale, CRS/Morocco and USAID should begin to make a concerted effort to measure the impacts of these projects against stated development objectives.

Of course, in the case of the newly created FY 1979 cooperatives, assessment of impacts is premature, but internal CRS/Morocco and Entraide monitoring and evaluation procedures could be established to permit future analysis. This monitoring would concentrate on such issues as the level of earnings of cooperative members by type and location of cooperative, cooperative income in relation to alternative employment possibilities, member attrition, skill levels, training and time period required to reach self-sufficiency.
For the ouvroirs, which have operated on a large-scale for several years, an attempt to measure impacts would now be worthwhile, but no data have yet been gathered or procedures established to permit this. Entraide officials can cite examples of individual girls or women who have participated in ouvroir training and later found good employment, but no records have been kept on the general success of ouvroir graduates in obtaining jobs based on their training, the kinds of jobs they have found, the earnings realized and so on. It would appear that any decision to reestablish support to ouvroirs should be undertaken on the basis of such an analysis.

Social Development

Many of the Title II/Morocco projects may have certain qualitative, social development impacts that are difficult to isolate and measure, but may be real nonetheless. These impacts might include effects on personal and community attitudes, especially in the realm of improving the status of women. The experiences of women and girls in participating in CSE educational activities, in possibly achieving some income-earning capabilities through the Title II/Morocco program, even in attaining an economic status as a family's link to its Title II income supplement could all contribute in this respect.

The provision of non-formal education in basic literacy and arithmetic and other academic subjects for persons who have been bypassed by Morocco's formal education system is a social development impact which Title II program participating
agencies claim for several Food For Work projects, especially for the ouvroir movement. The goal is a reasonable one, particularly in view of the high non-enrollment and school attrition rates among females in Morocco. However, while there is some evidence that an educational (academic skills) program has been established for some ouvroirs, based on the Team's field trip observation, these activities are not widespread nor are they a dominant component in the ouvroirs where they do exist.

Trade Impacts

It should be emphasized that whatever its nutritional impacts, a supplementary feeding program such as Title II does have an effect on Morocco's international trade levels. Because the pace of the country's growth in total agricultural production (2 percent per year) has not kept up with its annual rate of increase in population (3 percent per year), Morocco has increasingly become a heavy importer of its staple foods, as noted earlier. Faced with a serious and growing trade deficit in the 1970s, any addition to the total national availability of basic staples such as Title II's shipments of flour, vegetable oil and non-fat dried milk has been useful in economic terms. Of course, the present roughly $24 million annual Title II assistance levels are limited as a proportion of total trade flows: they probably represent less than 5 percent of the value of total basic food imports and perhaps 1.5 percent of the value of the FY 1978 total trade deficit. Nevertheless, they do mean some savings to Morocco in scarce foreign exchange resources.
Cost Effectiveness

Given, first, the limitations of the Title II/Morocco data on project category costs, and, second, the uncertainties of the ultimate nutritional and various socioeconomic impacts of Title II/Morocco activities, cost effectiveness is not presently a meaningful yardstick for the program.

The total projected program cost for Title II/Morocco in FY 1979 will be about $32.18 million, including ocean transportation and all other expenditures. With a total of 614,700 intended beneficiaries, this figure is equivalent to about $52.68 per capita per annum. On a project category basis, the FY 1979 per intended recipient costs of Title II all appear fairly similar:

<table>
<thead>
<tr>
<th>Project category</th>
<th>Annual per recipient cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>MCH (Centres Sociaux Educatifs)</td>
<td>$51.49</td>
</tr>
<tr>
<td>Food For Work</td>
<td>$55.69</td>
</tr>
<tr>
<td>Other Child Feeding</td>
<td>$56.77</td>
</tr>
</tbody>
</table>

As has been indicated earlier, CRS/Morocco appears to consider the Title II/Morocco program to be "cost effective" in the context of its own criteria: moving large volumes of commodities with reasonable efficiency to large numbers of people who are in need and who would not otherwise have access to equivalent volumes of food of equal quality. At present a more rigorous analysis of Title II/Morocco cost effectiveness would depend upon more precise measurement of Title II impacts than available data now permit, and upon development of more detailed project by project economic
cost information than the participating agencies have found useful or desirable.

Eventually, however, Title II/Morocco will probably find it necessary to formulate cost effectiveness measures of its activities in order to meet USAID/Washington's needs for analysis of the global impact of Title II resources. And in doing so, Title II/Morocco participating agencies are likely to discover that these measures are an immediate and valuable internal management tool as well. Creation and implementation of procedures for thorough and regular internal analysis of impacts of Title II/Morocco projects would be an excellent beginning on developing cost effectiveness measures relevant to all interested parties.
Chapter VI. Program Linkages

The present Title II/Morocco program is exclusively concentrated in Entraide Nationale's field of operations and does not have close ties with any other GOM or foreign donor programs involved in nutrition and health improvement or general economic development. This is not, however, out of the ordinary for nutrition subsector programs in Morocco: efforts of the Ministries of Health, Agriculture and others active in the nutrition field appear to operate with little inter-program or project coordination. Reversal of this trend has been the major reason for the creation of CIAN. Nevertheless in the context of the priority MCH Centres Sociaux Educatifs project, this absence of linkages -- and specifically linkages with the Ministry of Health -- influences project effectiveness and is a cause for concern.

Additionally within USAID/Morocco there has been discussion of the feasibility of forming a Title II linkage in a new direction, by tying Title II rations to family planning activities in Morocco. Both of these issues are examined below.
Centres Sociaux Éducatifs and MOH Linkages

The CSI project and the efforts of the Ministry of Health should be complementary and closely integrated. From the CSE side, it is important to recall that malnutrition is closely associated with intestinal infections and other diseases, so that any efforts aimed at combating malnutrition through supplementary feeding or other activities can only be effective within a broad framework of medical coverage. Similarly, from the MOH side it should be emphasized that health and nutritional status are not simply a function of medical efficiency and clinical treatment, but depend upon a range of social, economic and environmental factors as well, including the kinds of dietary and personal and family hygiene practices that CSEs attempt to improve.

The foundation of the Ministry of Health program for the health care and nutritional status of the most vulnerable population groups in Morocco is the PSME network (Protection de la Santé de la Mère et des Enfants) which cares for pregnant women and children up to two years of age. PSME physical facilities are considered good, and various levels of medically trained personnel staff these centers. There are approximately 377 centers throughout the country. In addition, 30 mobile PSME units are being operated as an extension to the present PSME structure and further increases in such units are being considered. All of this represents a general strengthening of the PSME infrastructure which has taken place only over the past four to five years.
The PSME centers, however, do not attract the number of mothers and children that they should attract for preventive medicine purposes. In practice, usually only very sick children are brought to the centers. Even in the case of undernourished children, who require a period of follow-up care, the PSME personnel have difficulty in assuring that the mother will return with the child for a sufficient number of visits. Vaccination programs, although well planned, also suffer from this problem of insufficient attendance and follow-up visits.

PSME personnel are trained in nutrition education, but, again, for what may be lack of incentive, mothers with well babies do not regularly attend the nutrition education sessions that are offered at the PSME centers. All told, it is estimated that only 13% of the children in the 0-2 age range are seen at the PSME centers.

The PSMEs are part of a larger MOH structure of dispensaries and hospitals which operates throughout Morocco, and is responsible for the health status of the population over 2 years of age. The dispensary/hospital system emphasizes curative health care, but also sponsors some preventive programs. In general these preventive activities suffer from the same kinds of attendance and follow-up problems as those of the PSMEs.

The Centres Sociaux Educatifs presently operate alongside the PSMEs and other MOH efforts in all the provinces of Morocco. Table VI-1 presents the location of CSE and PSME facilities by province. However, no systematic points of
### Table VI-1. Estimated Number of Ministry of Health PSMEs and Ministry of Social Affairs Centres Sociaux Educatifs, by Province FY 1979

<table>
<thead>
<tr>
<th>Province</th>
<th>Urban</th>
<th>Rural</th>
<th>Mobile</th>
<th>Total</th>
</tr>
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<td>Agadir</td>
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<td>10</td>
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<td>Bou Salem</td>
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<tr>
<td>Boumane</td>
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<tr>
<td>Casablanca</td>
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<td>--</td>
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<td>Chaouen</td>
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<td>Fez</td>
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<td>4</td>
<td>7</td>
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<td>6</td>
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<tr>
<td>Tazmalt</td>
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<td>5</td>
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<td>Tata</td>
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<td>2</td>
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<tr>
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<td>213</td>
<td>164</td>
<td>80</td>
<td>300</td>
</tr>
</tbody>
</table>

a. Listed with Oujda.
b. Information not received.

Source: Ministry of Health and CRS/Morocco.
contact exist between the two structures. Ministry of Social Affairs and CRS/Morocco policy makers claim to have attempted to correct this situation, including requesting MOH comment on the Marrakesh School of Nutrition curriculum and trying to arrange a referral system whereby sick children identified in CSEs would obtain rapid access to medical care in nearby MOH facilities. They have not been successful. In any event, at present many key Social Affairs and CRS/Morocco staff appear more disposed to be competitive or even combative than cooperatives where MOH and CSE relationships are concerned.

The reaction of MOH personnel to the CSE project has been negative since CSE creation in 1972, especially the reaction of leading technical and policymaking staff. The MOH position has been based, first, on the fact that CSE Monitricus are essentially non-technical personnel with no more than a few weeks training in nutrition and low general educational achievement, who have assumed responsibilities in a technical field with important health status implications. MOH personnel also stress, secondly, that CSE food distribution activity has tended to divert critical parts of the population away from the MOH system, and in particular away from the PSME program. MOH staff also believe that the CSE child weight surveillance and nutrition/hygiene education activities have tended to mislead their uninformed client group into believing that they are receiving adequate health care. In fact it was in response to the criticism that CSEs draw women and children away from PSME centers that Entraide Nationale and CRS/Morocco, reportedly by
interministerial agreement, excluded the PSME target group from the CSE effort, focusing instead on children 2 to 5 years old.

The non-cooperation between the Centres Sociaux Educatifs and the MOH program can have several important and negative results for CSE beneficiary mothers and children. First, without a strong operating-level relationship between CSES and MOH facilities there is little guarantee that the referrals counseled by CSE Monitrires will actually be carried out by mothers, thus diminishing the practical effect of the whole weight surveillance procedure. Based on field trip observations and interviews, moreover, it is felt that referrals do not operate very efficiently or are given priority attention by MOH staff when they do arrive.

Secondly, even where referrals might work smoothly, there is evidence to believe that the weight surveillance procedures are not always implemented thoroughly. Again based on field trip observations, weighing procedures appear to be correctly conducted in CSES, but in several cases the follow-up questioning and referral of mothers whose children demonstrated weight loss or lack of weight gain was inadequate or never pursued. Weight surveillance is a health auxiliary function but without quality control and adequate involvement by trained health personnel on a regular basis, it is possible that seriously ill children pass through the CSE system without their mothers being alerted to take proper action to secure medical care and believing that their children's health needs have been met.
Thirdly, in a related vein, CSE food distribution may indeed draw mothers and children away from MOH programs, and CSE activities may give these mothers an impression that they are participating in an "alternative" health care system. This means that MOH coverage is diminished, and that, in particular, the MOH vaccination program is weakened. While CSE Monitrices are directed to withhold food distribution from mothers whose children have not been vaccinated so as to strengthen incentives to participate in the MOH vaccination program, this does not appear to happen in practice. In one provincial urban center, for example, 8 of 18 children in an afternoon CSE session observed in a field visit had no vaccination whatsoever; while in another more rural CSE, 10 of 20 children had no vaccination.

Fourthly, the fact that the CSEs have shaped their target group around the ages 2 to 5 years to avoid overlapping with PSME children means that at least half of the nutritionally most vulnerable age interval in Morocco is officially excluded from the CSE program of nutrition education and supplementary feeding. Given that a good portion of the mothers of these children probably do not attend the PSME nutrition education and health surveillance program either, then many children in the critical age interval of one to two years may be missed by both of the two parallel systems. If the CSEs and PSMEs can find a way to work cooperatively, each coordinating its functions with the other, then it would be possible and natural for the CSE target group to be officially widened to cover the whole of the most vulnerable age group of children aged 6 months to three years.
The issue of establishing linkages between the *Entraide Nationale* CSE project and the Ministry of Health programs is of course a high level policy matter. Because it influences the effectiveness of both the CSE and MOH activities in nutrition and health, it deserves priority attention within the Government of Morocco.

Given the nature of the problems involved, the question of CSE-MOH linkages and cooperation appears to be a logical issue to be brought to the attention of CIAN. Accordingly it would be valuable for USAID to strongly encourage the Title II participating agencies (CRS/Morocco and *Entraide Nationale*) to join with MOH in seeking discussion and resolution of CSE-MOH linkages issues within the policy forum that CIAN can provide.

Clearly there are possibilities for coordinating the CSE and MOH activities to their mutual benefit. One could envision, for example, MOH assistance to CSE in best locating facilities and identifying target groups for greatest nutritional impact. Eventually, MOH medically trained personnel might also occasionally be present at CSE facilities to strengthen CSE lessons on nutrition, hygiene and child care. Additionally, availability of Title II food aid managed by CSE might be used as an incentive to increase participation by key population groups in MOH programs: in a more cooperative atmosphere between CSE and MOH, the prerequisite of vaccination in order to obtain CSE enrollment could be made effective, for example, and regular attendance at certain essential MOH clinics and programs could be set as a precondition for monthly receipt of Title II rations.
Title II and Family Planning

The possibility of linking Title II commodity distribution to family planning programs is presently under discussion within USAID/Morocco. The Food For Peace Officer emphasizes, for example, that elsewhere in Africa distribution of Title II commodities has been a very successful means of boosting attendance at family planning clinics, and suggests that the rations might be similarly effective in Morocco.

The usefulness of a Title II association to family planning activities deserves continued analysis. USAID has assisted a Ministry of Health National Family Planning Program in Morocco since 1968, but progress has been slow. Recent public statements by the King Hassan II regarding the gravity of Morocco's population problem and the need for attention to family planning do, however, improve the immediate prospects for a serious GOM effort, and warrant intensified USAID support for the program.

An effective role for Title II commodities in USAID support for family planning is still unclear. Some USAID/Morocco documents¹ suggest that the problem in family planning has not been one of low interest and demand within the Moroccan population, but rather of inadequate services due to GOM unwillingness to allocate the resources required. If this is the case, then use of Title II food aid to encourage participation in family planning programs would seem

meaningless. On the other hand, if the poor record of family planning programs results from lack of incentive on the part of target groups to participate in activities -- and in particular from lack of continued participation on the part of family planning acceptors -- then Title II rations might indeed be effective in strengthening family planning projects. In this latter case a pilot Title II-family planning association on a government-government basis would be an interesting experiment.
APPENDIX. LIST OF PERSONS CONTACTED AND FACILITIES VISITED DURING MOROCCO FIELD TRIP

Persons Contacted: Rabat

Catholic Relief Services/Morocco

L. Sanborn, Director
C. Sanborn, Assistant Director
L. Bourassa, Program Assistant
F. Bruno, Program Assistant
L. Maiza, Field Auditor
A. Siad, Field Auditor

Government of Morocco

Ministry of Social Affairs and Handicrafts

M. Lahlou, Director of Social Affairs
O. Oudghiri, Director of Entraide Nationale
M. Dref, Assistant to the Director of Entraide Nationale
Z. Alaoui, Program Officer, Entraide Nationale
A. Cherkaoui, Nutrition Specialist, Entraide Nationale
A. Abdi, Entraide Nationale Delegate, Rabat Prefecture

Ministry of Public Health

Dr. A. Laraqui, Secretary-General
Professor Alaoui, Director of Technical Affairs
Dr. A. Belhaj, Chief of Services, Mother-Child Health

Ministry of Planning

K. Madoudi, Statistician, CEPEN
M. Rullson, Agricultural Economist, CEPEN (RTI Technical Assistance)
J. Teitelbaum, Nutrition Planner, CEPEN (RTI Technical Assistance)
Hassan II Agronomy and Veterinary Institute

M. Essatara, Head, Department of Nutrition and Food Economics
M. Jourahi, Professor of Nutrition and Food Economics

U.N. Agencies

L. DeVos, UNICEF
A. Petracchi, World Food Program

USAID/Morocco

H. Flemming, Mission Director
E. Griffel, Assistant Mission Director
M. Ward, Program Officer
G. Wood, Food For Peace Officer
M. Melul, Food For Peace Specialist
P. S. Gibson, Health Officer
W. Trayfors, Population Officer
J. Smith, Human Resources Officer

U.S. Embassy

F. Paison, Agricultural Attache

Partial List of Persons Contacted During Site Visits: Casablanca and Provinces

Casablanca Prefecture

M. Dine, Entraide Nationale Provincial Delegate
M. Jaidi, Chief, Transit Service, Entraide Nationale
Capt. Benjelloun, Independent Maritime Surveyor, Port of Casablanca
M. Samoil, Director American Joint Distribution Committee/Morocco
C. Levy, Program Officer, AJDC/Morocco
M. Amsellem, Director of Asile des Vieillards, Casablanca (AJDC)
J. Amar, Director of CRT Vocational School
M. Cohen, Director of School Assistance Program (AJDC-supported schools)
El Jadida Province

M. Bendella, First Khalif
A. Fajri, Caid assigned to Municipality
B. Zouhri, Khalif, First Arrondissement
A. Kacimi, Entraide Nationale Delegate
Z. Malki, Entraide Nationale Provincial Directress, CSE Project
K. Zrari, Entraide Nationale Provincial Directress, Women’s Cooperatives
M. Raja, Khalif du Pacha, Azemour
H. Taibi, Caid, Sidi Bennour

Province of Marrakesh

A. Semmat, Entraide Nationale, Provincial Delegate
L. Semmat, Directress, Marrakesh School of Nutrition
G. Majbar, Nutritionist, Marrakesh School of Nutrition
A. Kamri, Nutritionist, Marrakesh
B. Najiba, Nutritionist, Marrakesh School of Nutrition
F. Belaouchi, Nutritionist, Marrakesh School of Nutrition
M. M. Barek, Caid, Amizmiz
M. Saifi, Chief of Cercle

Ouarzazate Province

M. Kabadj, Entraide Nationale Delegate
D. Rimada, Midwife, Mission Anglaise Sidi Saoud II
Dr. Habiba, Entraide Nationale

List of Site Visits

Rabat Prefecture

Cooperative Entraide Nationale - Le Carton
SMB/Rabat
Garderie Douar-Doum
Garderie Youssoufia
Social Development Complex - Oued Akrech (CSE and related facilities)
Casablanca Prefecture

Port of Casablanca
SMB Foyer des Jeunes Filles
Centre d'Education et du Travail CIL
Social Development Complex - Heure Joyeuse (CSE and related facilities)
Ecole ORT (boys and girls sections)
L'Aide Scolaire (AJDC-supported)
Asile des Vieillards (AJDC-supported)

El Jadida Province

CSE El Jadida I and II (El Jadida Center)
Provincial Warehouse, Entraide Nationale, (El Jadida Center)
Ouvroirs and Cooperatives d'Apprentissage (El Jadida Center)
Cooperative Youssoufia (El Jadida Center)
Garderie Lalla Asmaa (El Jadida Center)
Cooperatives des Femmes Abandonnees (El Jadida Center)
SMB/El Jadida (El Jadida Center)
Ouvroirs (El Jadida Center)
Provincial Hospital (Ministry of Public Health)
CSE Azemmour
SMB/Azemmour
CSE Sidi Bennour
SMB/Sidi Bennour
Dispensary, Sidi Bennour (Ministry of Public Health)

Marrakesh Province

School of Nutrition, Ministry of Social Affairs
CSE Kaour
CSE Daoudate
Garderie Daoudate
Ensemble Artisanal
Ouvroirs and Cooperatives, Marrakesh Center
Provincial Warehouse
CSE Amizmiz
SMB/Amizmiz
Ouvroirs and Cooperatives des Femmes Abandonnees Amizmiz
Ouarzazate Province

CSE Mission Anglaise Sidi Saoud II
CSE Sidi Daoud
CSE UNFM
CSE Tassoumaat
Ouvroirs and Cooperatives
SMB/Ouarzazate
Garderie Sidi Daoud
Dispensary/PSME Douar Chems (Ministry of Public Health)
Urban Health Center Tassoumate (Ministry of Public Health)
Provincial Hospital (Ministry of Public Health)